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Assessment of the Socioeconomic Aspects of Street Vendors in Dhaka City: Evidence from Bangladesh

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Abstract

In Bangladesh, informal sector plays a prominent role in terms of their contribution to employment generation and poverty alleviation. Street trading constitutes a significant part of this sector involving street vendors as the key players. Nonetheless the roles of the vendors are ignored and their vulnerable condition is never emphasized. This paper tries to investigate the present status of different street vendors in Dhaka City with the aim of assessing the socio-economic conditions and business issues conducting a field survey of vendors engaged in fruit, vegetable, tea and other food items selling through in-depth personal interview using 3-Stage sampling method. This Study indicates that poverty, migration from rural area, low education, exorbitant supply of labor and large family size are the major driving forces of carrying out this business. According to this survey, Personal savings is the single most important source of financing the vending business. Selling assets and lending from cooperative society are the two other major sources of financing the business representing the absence of formal credit facilities for these poor street vendors. This article also reveals the importance of social capital in street vending and the excessive work hour of the vendors and lack of opportunities of alternative formal employment evident from their fulltime working status even in the presence of political instability, natural calamity or financial crisis.

Keywords: street vendor, informal sector, personal savings, socio-demographic profile, social capital

1. Introduction

In Dhaka, like any other megacities of south Asia and Africa, street trading is most prevalent phenomenon. A cursory view of Dhaka city with overwhelming number of street vendors demonstrates the role of this activity as a sponge that absorbs exorbitant number of surplus labor. It is reported unofficially by several hawker association that around 2.5 lakh street vendors ply their business on the capital cities' public sidewalks in recent years which has increased from 90,000 in 2005 resulting an emergence of new avenue for urban poor to support themselves and their families. As a consequence of rapid urbanization, inadequate opportunities of formal work place and perpetually increasing population of Dhaka city, compels unskilled people to engage themselves in street trading which entails small capital to start and there is low barriers to entry and flexible work hour. In Dhaka, these vendors run their business under inhospitable conditions, without basic facilities coupled with the fear of harassment and damage to their goods. Notwithstanding, street vendors are noticeable in all over the Dhaka city, the main hub of these vendors are prevalent in Motijheel, Baitul Mukarram, Gulistan, Shahbagh and New Market Areas. Vendors are exposed to political unrest and extortionists. Their business are at stake due to frequent eviction from their workplace, therefore, the vendors of new market reported that they have to pay 200 taka a month to a gang that shares that amount with law maker. In other areas such as Baitul Mukarram, GPO and Purana Paltan vendors pay the police Tk 5 daily to avoid harassment. Street vendors of Bangladesh were more vulnerable than those in the neighboring countries due to poverty, lack of space for vending and lack of awareness about their rights (Bhowmik, 2005). They are also deprived of institutional credit facilities that could help them increase their income. Street trading has been creating employment opportunities for the urban unskilled poor and migrated rural poor workers together with expanding the market for cheap products contributing to poverty alleviation. Despite of this contribution to the economy, street trading is causing inconvenience to the pedestrians and vehicle to ply on the street due to haphazard settlement of these vendors. The main problem resulting from increasing street vending is the overcrowding and it leads to encroachment of

the public places and roads. Congestion and pollution of city environment in terms of garbage are also linked with this. In this connection, problems relating to theft, hoodlum, pick pocketing, crime are linked with increasing street vending activities.

Therefore, street trading in Dhaka city is treated as illegal activity and vendors are swept away by the lawmaker wherever they are found. This uncertain eviction of the business coupled with the limited access to capital, inadequate local infrastructure and harassment by the local authorities set a negative impact on their business.

2. Objective of the Study

The specific objectives of this study are to examine street vendors' income levels, access to finance, working hours as well as working status, level of education and impact of social capital.

3. Background of the Study

Street trading is a growing urban phenomenon in Dhaka city, visible at different places in stationary or moving form. Hence, they are defined as traders who sell goods to the public without a permanent premise to conduct business (Bhowmik, 2005). Those self employed workers in the informal sector recognized as street traders who do not have a fixed, permanent concrete arrangement to sell their goods and services (Shaha, 2011).

They are the most vulnerable and marginalized fragment of urban poor. Despite, they play a dynamic role to meet the demand of urban dwellers in Dhaka, providing cost effective and durable items together with generating income and employment opportunities for large number of inhabitants resulting an important earning source of their families (Suraiya & Noor, 2012). Not only in Bangladesh, in kathmandu, Nepal, street vending rendered as a prominent source of earning livelihood for rural people in urban area along with serving urban poor providing goods in cheaper price (Timalsina, 2011; Adhikari, 2011). In addition to these benefits, it strengthens the economy by providing products to the markets that are produced in small and large scale industries. Street vending plays a vital role in economic development contributing in reducing poverty, generating employment and increasing social mobility. (Nirathron, 2006; Njaya, 2014). Alternatively, street trade considered as a feasible livelihood due to its small start up cost, flexible working hours and low barrier to entry (ILO & Wiego, 2013).

Considering the employment context, many street vendors work long hours at the same site on daily basis while other vendors move to two or more sites to grab the opportunity to sell to different types of customers. Some of them carry out this occupation as a primary source of income, others as part time, keeping open an opportunity to earn extra income. A variety of employment statuses can be found among street vendors as well. Most vendors work as independent self-employed entrepreneurs, either with or without employees. There are also many vendors who work for helping family members, and some work as employees of informal or even formal enterprises (Andringa & Kies, 1989).

In Southeast Asia, the average earnings of a vendor may be three to ten times more than the minimum wage and they are often comparable to the wages of skilled laborers' employed in the formal sector (Andringa & Kies, 1989). Through regression analysis, it has been found that business experience, and initial capital is two key factors that positively affect sales revenue of street trader in Dhaka city. Formal education, however, does not have any significant impact on business performance. Lack of security and problems in the supply of raw materials are two major problems as perceived by the vendors (Muzaffar, Huq, & Mallik, 2009). Most of the street vendors are unskilled and low-educated. In Dhaka, majority of the traders completed their secondary level of education (Suraiya & Noor, 2012) where as in Mumbai and Tamil Nadu in India, the average year of schooling of the vendors are below primary years of schooling. (Shaha, 2011; Karthikeyan & Mangaleswaran, 2013)

The number of women street vendors is increasing in Dhaka city. This is because women who do not have any other way to meet the subsistence needs of their families enter into the informal sector like street vending. But street vending is a non-traditional and male-dominated job and there is an earning gap between men and women vendors (Khanam, 2006). In West Africa women entrepreneurship is dominant in the informal sector, and women entrepreneurs engaged in the cowpea street food sector can earn incomes 4 times to 16 times higher than the minimum legal wage in Niamey and Kumasi, respectively. Incomes earned from these entrepreneurial activities contribute directly to health, education and needs of their families (Otoo, Fulton, Ibro, & Lowenberg-DeBoer, 2009). Furthermore, in Cambodia and Mongolia, street trading treated as a viable choice for poor entrepreneurial women and those who are excluded from formal employment to support their families. In Africa, this sector is mainly dominated by female (Nirathron, 2006; ILO & Wiego, 2013). Majority of the female vendors of Kokhrajhar district in India aged between 40 to 50, married and income earned between 4000 to 8000 indian rupees, more likely to be exposed to health hazard (Basumatary, 2013).

The main problems that the street vendors faced both during their start-up and operation of their activities were lack of working places, harassments and eviction from selling place by police and private shop guardians, lack of market, non-profitability of the business, lack of credit, lack of freedom and social security during operation of their business and cleanness of their working environment. Moreover, they have to borrow money from moneylender at a high interest rate for their economic activity and social security, bribing the legal authorities. Long working hour and unsecured work place coupled with excessive rent seeking by local authorities result indecent working environment for street vendors (Shaha, 2011). Street trading involve small earning, high risk, especially for the fresh vegetable and fruit seller and regular occupational and physical hazard as a result of unhygienic market condition. They also indentified that the street vendors are highly exposed to economic downturn and political unrest (ILO & Weigo, 2013).

Notwithstanding, street vendors plays a dynamic role in economic development, they are also liable for some unfavorable visible effects such as lack of formalization and weak management system, which create problems in urban areas by producing street garbage and gathering crowd on the footpath in Dhaka (Suraiya & Noor, 2012). Issues relating to urban management and controlling over the deteriorating city environment due to increase vending activities are, of course, challenging for urban governance. Therefore, there are confrontations between authorities and vendors over licensing, taxation, encroachment of public places and pavements and on increasing social problems in Kathmandu Metropolitan City (Timalsina, 2011).

In this section the background of the study is being illustrated. The paper then continues with a discussion of methodology and sampling used to conduct the research and then goes on explaining the socio-demographic and economic characteristics of the street vendors from the primary data obtained from the questionnaire including both closed and open ended questions formulated and developed by the authors. The paper moves forward with illustrating various types of problems faced by the street vendors. Finally, the study concluded with policy implications.

Conceptual Framework
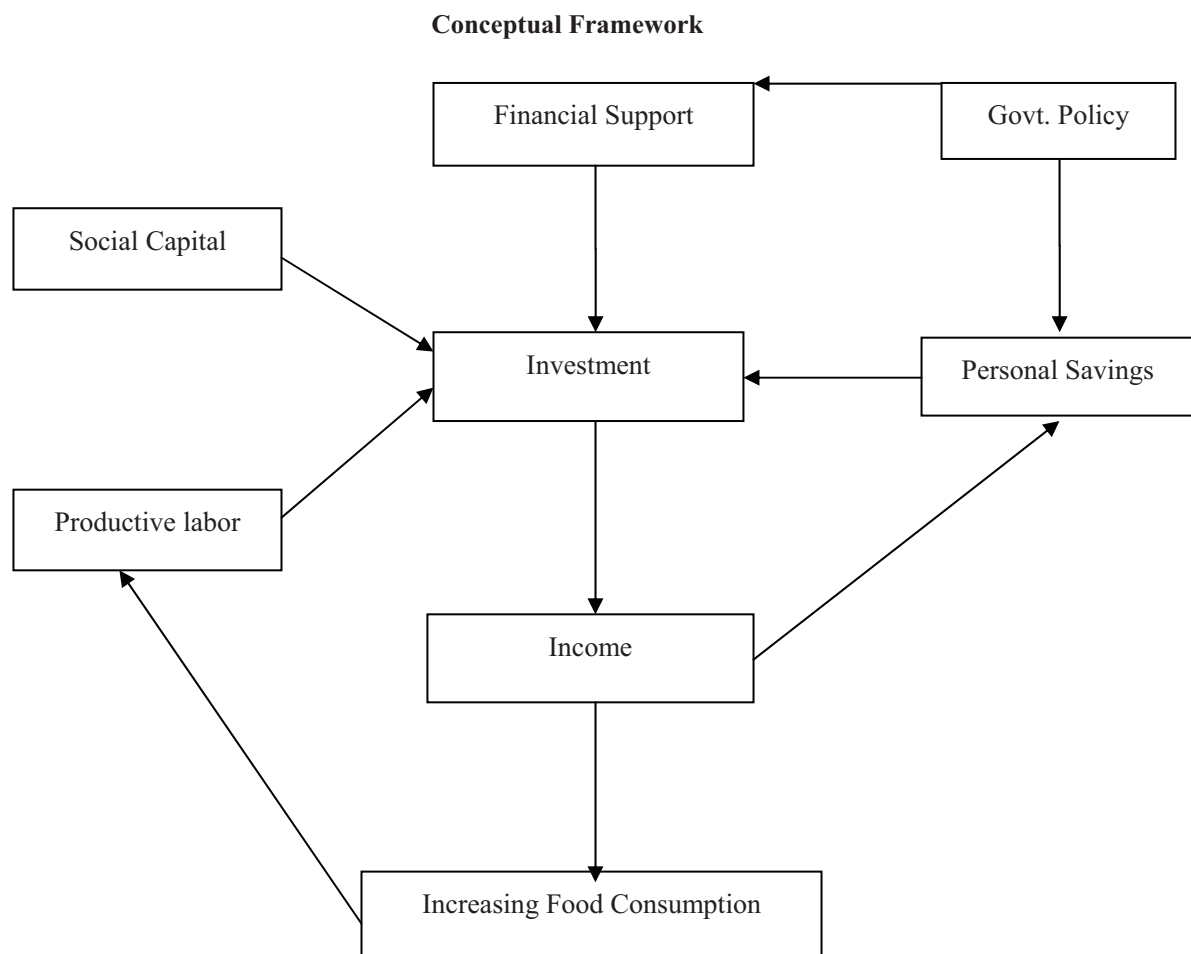
Figure 1. Conceptual Framework for Improvement of the livelihood of Street Vendors

Adopted and modified from Mahmud et al. (2014)

4. Research Methods

The component or unit of analysis of the present study are the individual street vendor in Dhaka metropolitan city. Static vendors, who have a specific space for their activity (though the space is not officially recognized by the government) are participants in the present research. Dhaka has been selected according to its rapid urbanization, massive commercialization, geographical location and other certain characteristics such as employment status and wide spread formal retail chain and street trading among all major cities in Dhaka. The city of Dhaka was also selected because of its diversity in terms of economic activities as well. A survey for the study was conducted from March 2015 to May 2015. A structured questionnaire with closed and open-ended questions is used in accordance of the objective of the study exploring the current situations of street vendors. Personal interviews with 136 individual street vendors were conducted. These one to one correspondences helped in achieving an understanding of the common issues.

4.1 Sampling

Since the present research paper is mainly primary data based, three stage (3-Stage) sampling method has been designed to draw sample. In the first stage, When population is scattered over the region and complete lists of the total population is not available, 'cluster' helps to obtain easily for sampling (Murthy, 1967). In 1st Stage Unit, Dhaka has been divided into nine parts (Cluster), such as, Farmgate, Panthapath, Khathalbagan, Kafrul, Mirpur, Mohakhali, Jatrabari, Gazipur and Banani in terms of volume of street vendors due to unavailable list of street vendors in Dhaka. These clusters are selected at random by using geographical map of Dhaka city. Since street vending profession is heterogeneous in nature, stratification method helps to make homogeneous group in that group of workers. In each cluster, street vendors have been divided into twelve 'stratum' such as vegetables vendors, fruits vendors and cigarettes, tea, tobacco leaf (pan), chocolates, chewing-gum, lozences, cakes, breads, biscuits and banana. According to the heterogeneous number of street vendors in each part, 'quota' has been fixed to draw sample from each stratum since population was unknown (Ahuja, 2011). This quota depends on the volume of street vendors of each part and street vendors have been selected at random within each 'quota' from each 'cluster'. This study covers 136 samples from the eight places in Dhaka Metropoliton city.

5.

5.1 Demographic and Social Profile

Table 1. Socio-demographic profile

Indicators		Tea Stall Vendor (%)	Vegetable Vendor (%)	Fruit Vendor (%)
Age	15-25	4 (7.84)	16(32.65)	3 (8.33)
	26-35	27 (52.94)	26 (53.06	16 (44.44)
	36-45	17(33.33)	5 (10.2)	14 (38.89)
	45-60	3(5.88)	2 (4.08)	3(8.33)
Marital Status	Married	43(84.31)	38(77.55)	36(100)
	Unmarried	6(11.76)	11(22.45)	0
	Separated	2(3.92)	0	0
Education	No education	4(11.43)	0	2 (7.69)
	primary education	12(34.29)	17 (40.48)	6 (23.08)
	Secondary	17 (48.57)	25(59.52)	16(61.54)
	Higher secondary	2(5.71)	0	2 (7.69)
Family Size	2 to 4	18 (35.29)	24(51.06)	18(50)
	4 to 6	26 (50.98)	21(44.68)	8 (22.22)
	6 to 8	4(7.84)	1(2.13)	7 (19.44)
	8 to 10	2(3.92)	1(2.13)	3 (8.33)
	10 to 12	1(1.96)	0	0
Number of earning members	Only earning member	30(78.95)	29(59.18)	19(55.88)
	Working partner	8(21.05)	20 (40.82)	15(44.12)
	Total	51(100)	49(100)	36(100)

Note: Calculation is done by using data from authors' own survey of 2015

The informal sector in Dhaka city are highly diversified in nature. Vendors may get engaged in fixed location activities or mobile and semi-mobiles activities. Although street vending is undertaken by women and men of all

ages, but the majority of the vendors are concentrated between the ages of 26-35. Around half of the vendors of tea stall (around 52.94%), vegetable (around 53.06) and fruit (44.44%) are aged 26 to 35, with the proportion declining after age 45. By comparison, around 30 % of vendors involved with tea and fruit selling while only 10 % are engaged in vegetable selling within the age group 36 to 45, indicating higher involvement of (32 %) of vegetable vendor of age 15 to 25 than other vendors. Moreover, this advocates that the economically active age group is participating in street trading reflecting the high unemployment levels in the country.

Street vending is a more important source of employment among married person than among unmarried and majority of them are only earning member. With respect to marital status, highest proportion of vendors of these above mentioned products are married, suggesting that married people carry out this occupation to support their families. In terms of family size, around 50 % of the tea vendors belong to the group of 4-6 number of members in family while half of the respondents of vegetable and fruit sellers have 2 to 4 number of members in their family.

Considering the education level of vendors it is evident from the data (see Table 1), the low-educated people chose street vending as occupation. It is revealed from our study that around half of the tea stall, vegetable and fruit vendors (around 48%, 59% and 61% respectively) have completed secondary education. Hence, they do not possess the education level to find highly paid, decent employment in the formal sector and force to join to the informal sector.

5.2 Economic Profile

The income of street vendors depends on the products they sell, and it varies from product to product, from location to location, and also in terms of the volume and terms of trade. The daily income of the street vendors is given in Table 2 in taka. It is evident that all type of vendors are poor as majority of the vendor's daily income is between 300 to 800 (around 35 % for tea, vegetable and fruit vendors).

Table 2. Economic profile

Indicators	Column 1	Tea Stall Vendor (%)	Vegetable Vendor (%)	Fruit Vendor (%)
Income	300-800	18 (35.29)	18(36.73)	12(33.33)
	900-1400	6 (11.76)	8(16.32)	4(11.11)
	1500-1900	8 (15.68)	7(14.28)	9 (25)
	2000-2400	5 (9.8)	8(16.32)	6 (16.66)
	2500-2900	3(5.8)	2(4.08)	2 (5.5)
	3000-3500	11 (21.56)	6(12.24)	3 (8.33)
Source of capital	Own savings	28 (54.9)	20(44.44)	20(55.55)
	Spouse savings	4(7.84)	3(667)	3(8.33)
	Selling asset	5(9.8)	6(13.33)	4(11.11)
	Money from in-laws	4(7.84)	1(2.22)	2(5.56)
	Borrowing from friends	3(5.88)	4(8.89)	0
	Lending from Shomiti	3 (5.88)	4(8.89)	4(11.11)
	Loan from merchant		2(4.44)	3(8.33)
	Loan from NGO	0	4(8.89)	0
	Others	4(7.84)	1(2.22)	0
Labour	No Additional Labour	30 (58.82)	20(39.22)	39.22
	Additional Labour	21 (41.18)	31 (60.78)	60.78
Average working Hour	3 to 7	4(7.84)	0	0
	8 to 11	4(7.84)	10(20.83)	1(2.78)
	12 to 16	37(72.55)	26(54.17)	32(88.89)
	17 to 21	6(11.76)	12(45)	3(8.33)
Impact of Social Capital	No	16(31.37)	14(28.57)	8(22.22)
	Yes	35(68.63)	35(71.43)	28(77.78)
Work Status	Full time	43(86)	37(84.09)	31(86.11)
	Part time	7(14)	7(15.91)	5(13.89)
Total		51(100)	49(100)	36(100)

Note: Calculation is done by using data from authors' own survey of 2015

Though, 21%, 12% and 8% of tea, vegetable and fruit vendors respectively earn between 3000 to 3500 taka daily indicating discrepancy between income earning. The street vendors of tea & others (tobacco leaf, chocolate, lozence, cigarette, bread, banana, chewing-gum, biscuit), fruit and vegetable vendors of Dhaka city manage their own source of capital from variety of sources (see Table 2). They get capital from either own savings, spouse savings, selling assets or can borrow money from in-laws, local cooperative society or shomity, friends or take loan from local money lender, merchant, NGO and other sources. We observe almost 55% of the tea vendors operates their business from own savings which is the major source of running business constituting more than half of the total respondents (See Table 2).

Savings of the spouse and money from in-laws are another important source of business fund implying that 7.84% of the tea and other street vendors run their business from these sources.5.8% vendors take loan from friends and local cooperative society/shomity. Another important observation is that 9.8% people from the sample run the business from selling the assets, second most important source of funding which is an indication of transferring from other urban informal occupations and/ migrating from rural area of Bangladesh. (See table 2) Considering the case of vegetable vendors, own savings is the most important source of funding, implying 44% of the vendors manage funding from own savings. Selling assets constitutes 13.3% of the street vendors funding and 8.89% of vegetable vendors borrow from their friends, shomity and NGO. For fruit vendors own savings is the most important source of funding implying 55% of the street vendors set up their business from own savings. Other important sources include selling assets and borrowing money from shomity (11.11%) and savings of the spouse and loan from merchants (8.33%) are two other mention worthy source of business. Finally it can be concluded that own savings or equity participation is the most crucial factor for running street vending business. Two most other important sources of financing include selling assets and borrowing from local cooperative society or shomity.

It is found from this survey that the informal sector entrepreneurs may not confined only to oneself and family labor. They also employ wage earners if needed. In this connection it can be added that most of the vendors think hiring extra labor may increase their monthly income. Surprisingly 60.78 % of the vegetable vendors and 60.78% of the fruit vendors think that extra labor would have significant positive effect on their income. However, 58 per cent of the respondents think that adding extra labor would not add to their income for tea & other vendors. We also tried to find out the opportunity cost of doing vending businesses. Most of the tea & vendors answered that they wanted to give a stationary shop or fruit shop or vegetable shop or would have purchased land in rural area or remained satisfied with present state of affairs. The important observation to note is that most of them wanted to engage themselves in this street vending in either way possible due to their knowledge of profitability of this business and family tradition. A large number of the businesses are being run on a basis of single proprietorship followed by a very small segment of partnership.

An interesting fact is revealed regarding the effectiveness of social capital by considering the neighborhood, kinship, friendship, and known people in account on daily sale. Majority of the buyers of the vendors are regular customers including rickshaw & car drivers, students of schools, colleges, people of the local area, tenants, businessmen and day laborers. Since majority of the customers are regular it can be inferred that neighborhood, friendship, kinship or social capital played a significant role in earning extra income which is being supported by our data. Vendors are reported to have given discount to their regular customers since social capital plays a major role in their business. The overwhelming proportion of the respondents reported about the efficacy of social capital (around 68.6% 71.4% and 77.7% of tea, vegetable and fruit vendors respectively). They have to rely exclusively on social networks for running their business.

It is evident from the data regarding average working hour on daily basis that 72.5%, 54.17% and 88.89% of the tea & others, vegetable and fruit vendors respectively work 12 to 16 hours respectively on average daily.11.76%, 45% and 8.3% of the tea & others, vegetable and fruit vendors work from 17 to 21 hours respectively on average. Majority of tea, vegetable and fruit street vendors (around 80 per cent) are running these businesses on the basis of primary occupation.

6.

6.1 Problems Encountered by the Street Vendors

A lack of capital is the main hindrance in setting up the vending business. In the absence of adequate and sufficient source of fund, vendors are unable to maintain the level of stock and in this process they lose customers and are also unable to meet their own daily needs. The owners of the small businesses are often also might be discouraged to borrow since they know their future stream of income might be lower than their assets (collateral). These businesses also suffer from inefficient managerial skill, lacking risk assurance and

transportation problem. They failed to obtain loan from established formal financial institutions due to their failure to meet the obligations to manage the collateral. Therefore, we have found in our survey that a small percentage on average 6% for vegetable and fruit vendors of the owners of small businesses start their businesses by borrowing from the local money lenders at a comparatively higher interest rates. Adverse economic situation negatively affects street vending business.. We have to stop unnecessary eviction for sake of the beautification of the city. If eviction becomes unavoidable government need to suggest an alternative place for the street vendors before eviction takes place. Due to inclement weather, strike majority of the vendors of Dhaka city are reported to have suffered a loss in their income. Consequently, these businesses also suffer from inefficient managerial skill, lacking risk assurance and transportation problem. If transportation system is disrupted, fuel prices is increased, power outages can have adverse affect on the business. They become victim of harassments by officials especially the polices, extortionists, arrests and bribes. They also suffer from poor infrastructural arrangement Majority of the respondents (62%) reply that lack of the storage problem forced them to waste their products because they are left with excess of stock at the end of the day.

On the other hand 20% of them are reported to have received bonus on selling cigarettes. If vendors can submit a larger number of empty packets of cigarette they would get bonus. Once people get accustomed and experience progress and monetary benefit in their businesses they restrain themselves from crime, smuggling, non-market activities & other unsocial activities.

6.2 Conclusion and Policy Implications

- National urban planning should be integrated with street vending businesses' needs and regulations. Participatory approaches can be potentially useful in the successful empowerment of the street vendors of informal sector of Bangladesh. Moreover, we have to accept the right to vend as a part of civil right. Furthermore, we have to protect the usual natural markets where vendors and customers have interacted for a long time. The government of Bangladesh needs to implement a national law on street trade which would clearly uphold the rights of the vendors.

- Through the representation of municipalities, vendors and hawkers association,NGOs and cooperatives they can express their needs, problems and inform government about the deprivation of any of their civil rights. In this way they can incorporate themselves in national policy consultation process.

- The street vendors are usually educated at the secondary level according to our field study which is not a disappointing picture. But what is more important is to make the vendors more educated since higher education can develop their sense of doing business in a better way by managing and improving their source of capital, increasing the level of investment, maintaining proper hygiene and more importantly improving their attitude and behavior with the customers thereby securing a sufficient amount of customers which is known as social capital making their business less vulnerable in the face of natural calamity,political instability or financial crisis. Since hundred percent of the respondents of the sample are the only earning member of their families, necessary steps should be taken to ensure certain level of income.

- It is expected that the government to assist themselves either financially or can help boost the infrastructural development so that their business is uninterrupted. This can be done only if the government gives more attention and spend money to redesign the Dhaka city with the help of modern urban planners where the vendors will not sit on footpath, pavement or in front of railway stations or on road and jeopardize the communication and transportation process.

- In addition, as a result of transient nature and small scale of the informal activity authentic, disaggregated information on time is required to locate these type of businesses with the help of Government to ensure appropriate development of skills through capacity-building activities and financial assistance as required.

- The government should come forward to create, enact and enforce legislation for the street food vendor practices, their working conditions and food handling in close association with consumer participations.

- Proper supply of water, sanitation and waste management services in the natural markets should be engaged by local waste collectors and municipal personnel should be engaged in the management of services. Special markets can be allowed for women vendors.

- As storage is one of the major problems encountered by the street vendors, government can take proper initiative to create storage or can give monetary incentive to the vendors to maintain proper storage to minimize the loss. On the other hand, NGOs can take necessary steps to help the vendors in this regard.

To conclude, this paper is an attempt to add to the existing literature on the informal sector of Bangladesh economy and reveals information often neglected, unrecorded and unrecognized. Bangladesh is yet to emphasize

the policies on growth of the informal sector partly due to the non-recognition of activities of the informal sector. The goal was to bring into spot light the significance of the informal sector on the development of the economy of Bangladesh. Since street vendors contribute to the urban economy of Bangladesh as customers, distributers of goods, generators of jobs and provide services to the public proper and the size of the informal sector is expanding day by day as the contribution of agriculture to GDP is decreasing and due to massive migration from rural area to urban area, proper emphasis & attention should be given to the informal sector's role in the development policy of Bangladesh.

Acknowledgements

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Invariance of Organisational Citizenship Behaviour Measurement Model across Institutions in Malaysia

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Abstract

Organisational Citizenship Behaviour (OCB) is a discretionary behaviour that benefits organisations and their members. Even though OCB has been broadly researched over the years in the US, the measurement of OCB has received rather limited deliberation particularly in Asian contexts like Malaysia. This study tests the adequacy of the OCB measurement model and analyses the invariance of the model of 417 respondents in two Malaysian institutions. A three–dimensional OCB model was found to be adequate after having been subjected to Confirmatory Factor Analysis (CFA). As a result of discriminant validity, the two dimensions of OCB 'helping' and 'civic virtue' were found to measure the same thing. Consequently, the two dimensions were merged and named 'concern'. Although the factors were found to have acceptable reliability and validity with very few modifications, there is a need to further test the model with different and larger samples. This study also shows that the CFA model experienced invariance across institutions. The results have practical implications for recruitment and training managers to utilise the instrument as well as to pay more attention to the importance of cultivating OCB among staff of the sampled institutions.

Keywords: organisational citizenship behaviour, measurement model, confirmatory factor analysis, construct validity, invariance analysis

1. Introduction

Organisations require employees to transcend the formal requisites of the job role and be capable to act as 'good soldiers'. OCB has a reflective impact on the performance of individuals in the organisations. Performance becomes amongst the most important factors for success and demarcates the top performers from the underachievers (Rotundo & Sackett, 2002). The term OCB was coined by Bateman and Organ in 1983 while in 1988 Organ defined it as, individual behaviour that is unrestricted, indirectly or ambiguously identified by the formal reward system and that, in the aggregate, supports the effective operation of the organisation. The three dimensions of OCB are helping, civic virtue and sportsmanship. Despite the popularity of OCB studies in industrial and organisational psychology, the measurement of OCB has received relatively limited consideration particularly in Malaysia (Lo & Ramayah, 2009). The purposes of this study are twofold: (1) to establish the construct validity of OCB and (2) to cross-validate its measurement invariance across institutions.

1.1 OCB Relationships with Other Constructs

In accordance with the relationships between OCB and other constructs, meta-analyses and reviews reveal that OCB is related with many indicators of organisational and group effectiveness (Podsakoff & MacKenzie, 1997; Podsakoff, Whiting, Podsakoff, & Blume, 2009). Superiors auspiciously assess their employees' OCB in relation to their overall promotion and job performance (Podsakoff, MacKenzie, & Hui, 1993; Podsakoff et al., 2009). OCB also facilitates affirmative working surroundings, which attract and retain the employees of those particular organisations (Organ, 1988).

In addition, OCB promotes the functionality and effectiveness of a work unit or organisation so long as employees are educated on its importance. In support to this, Hoffman, Blair, Meriac, John and Woehr (2007) examined the relationships between task performance and OCB and attitudinal variables with OCB. Their results reveal that a one-dimensional OCB model relates to both variables with a strong relationship between OCB and attitudes.

1.2 OCB Relationships with Mediating Effects

Efficacious leadership may contribute to the progress of more vigorous perceptions of organisational and individual instrumentalities which then leads to OCB. In relation to this, Jiao, Richards and Zhang (2011) assessed how perceived organisational instrumentality (the belief that OCB contributes to the functionality and effectiveness of the work unit or organisation) and perceived individual instrumentality (the belief that the employees' own interests is important to OCB) related to the employees involvement in OCB and the ways in which it mediates the leadership effect on OCB among mid-sized financial company of 161 supervisor–subordinate dyads in China. The results show that perceived organisational instrumentality variance explained in OCB was beyond perceived individual instrumentality. In addition, perceived organisational and perceived individual instrumentalities are partially mediated the relationship between leadership (transformational leadership and contingent reward) and OCB.

1.3 Validating the OCB Measure

Few studies have sought to validate the OCB measure. Becker and Randall (1994) assessed the validity of OCB against an objective behavioural criterion after examining the factor structure of a revised version of OCB. Factor analysis suggests that this revised version of OCB has only conscientiousness and altruism dimensions. The results show that the 16 restaurant managers in the fast food service industry assess and perceive subtle components of job performance with reasonable accuracy. In addition, Hoffman et al. (2007) used Confirmatory Factor Analysis (CFA) to determine OCB dimensionality and tested its construct validity. Their results support the idea that a single factor OCB model was strongly related to task performance although they are distinct to each other. Furthermore, the shared variance of OCB with 'attitudinal correlates' is beyond 'task performance'. Based on these validation studies, it is hypothesised that:

Hypothesis 1: The OCB measurement model with three-factor structure is construct valid.

In accordance with the invariance analysis, Tayyab (2005) analysed the OCB invariance across two types of employees in Pakistan. The results revealed the equivalency of the items across permanent and contingent employees. It means that item content was identified in exactly the same way in both groups of employees whereby each group responded to the scale items in a similar conceptual frame of reference. Furthermore, Lievens and Anseel (2004) found clear support that the measurement structure of OCB had relative invariance across peer ratings of 215 employees and supervisor ratings of 259 subordinates in a Flemish part of Belgium within a Dutch-speaking context. Based on these researches, the second hypothesis was formed stating:

Hypothesis 2: There is relative invariance of the OCB measurement structure across institutions.

Thus, the present study hypothesises that helping behaviour, civic virtue and sportsmanship dimensions of the OCB would be related positively to the quality and quantity of the organisational performance. Consequently, this study analyses the adequacy of three OCB factors CFA model together with its invariance analysis across institutions.

2. Method

2.1 Respondents

The respondents were 560 staff members from two educational institutions in Malaysia whom were selected based on cluster sampling. Kerlinger and Lee (2000) stated that cluster sampling is the most effective sampling method for a large number of small clusters. A total of 560 questionnaires were disseminated to both institutions (280 questionnaires each institution) with at least eight questionnaires for each cluster. After cleaning up the data

using SPSS, the remaining samples were 417 from a total of 467 completed questionnaires which were gathered at the end of the data collection process. Thus, only 74.5% questionnaires were usable for this study. The respondents consisted of 32.8% males and 67.2% females. The mean age was 36.54 (SD = 9.73) with 27 missing cases. In terms of educational level, 35.55% hold secondary schools certificates, 30.15% were diploma holders, 13.72% were bachelor degree holders and 20.58% attained post-graduate degrees (9 missing cases).

2.2 Research Instruments

The Organisational Citizenship Behaviour (OCB) questionnaire developed by Podsakoff et al. (1997) was used. It consists of 13 items measuring three dimensions which were: helping behaviour with seven items, civic virtue with three items and sportsmanship with three items. Responses were rated on a Likert Scale format, with answers ranging from 1 for 'strongly disagree' and 7 for 'strongly agree'. All of the sportsmanship items were reversed-coded. The internal consistency of the items was deemed reliable as the Cronbach's alpha was .804 (Hair et al., 2010). Table 1 shows the descriptive statistics and list of items of the OCB measure used in this study.

Table 1. The descriptive statistics and list of items of the OCB measure

Construct	Abbreviation	Items	M	SD
Helping	ocb1	Help each other out if someone falls behind in his/her work.	4.78	1.563
	ocb2	Willingly share your expertise with other crew members.	6.26	.891
	ocb3	Try to act like peacemakers when other crew members have disagreements.	5.62	1.107
	ocb4	Take steps to try to prevent problems with other crew members.	6.06	.944
	ocb5	Willingly give of your time to help crew members who have work-related problems.	5.85	.986
	ocb6	'Touch base' with other crew members before initiating actions that might affect them.	5.59	1.140
	ocb7	Encourage each other when someone is down.	6.16	.910
Civic Virtue	ocb8	Provide constructive suggestions about how the crews can improve their effectiveness.	6.16	.864
	ocb9	Is willing to risk disapproval to express your beliefs about what's best for the crews.	5.53	1.275
	ocb10	Attend and actively participate in team meetings.	5.91	.987
Sportsmanship	ocb11	Always focus on what is wrong with the situation, rather than the positive side.	4.10	1.952
	ocb12	Consume a lot of time complaining about trivial matters.	5.47	1.735
	ocb13	Always find fault with what other crew members are doing.	5.89	1.603

2.3 Normality

The normality of the model is based on skewness and kurtosis. The value of skewness must be smaller than 3 (< |3|) (Chou & Bentler, 1995) and the value of kurtosis must be smaller than (< |10|) (Kline, 2011). Several outliers and the lowest loading items will be eliminated from the analysis until the normality is obtained.

2.4 Confirmatory Factor Analysis

CFA of the Structural Equation Modeling version 18 AMOS model-fitting program was applied to test the validity of items and constructs as well as to test the research hypotheses. The maximum likelihood estimation (MLE) method was utilised for the estimation of parameters. The overall model fit was assessed by using four indices of the model goodness-of-fit: (1) the chi-square statistics; (2) the comparative fit index (CFI); McDonald and Marsh (1990) stated that CFI values close to 1 indicate a very good fit; (3) the minimum value of the discrepancy between the observed data and the hypothesised model divided by degrees of freedom (CMIN/DF) or normed chi-square. Marsh and Hocevar (1985) described that the minimum fit function for CMIN/DF of an acceptable fit is between 2 and 5 ($2 \leq \chi 2/df \leq 5$); (4) the root mean-square error of approximation (RMSEA) was also presented. Browne and Cudeck (1993) demonstrate that RMSEA of smaller than 0.08 (<0.08) as a reasonable error of approximation. In addition RMSEA of between 0.08 to 0.10 indicates a mediocre fit

(MacCallum et al., 1996) and would not employ a model with a RMSEA greater than 0.1 (> 0.1) (Browne & Cudeck, 1993). The modification of the model was also conducted and discussed.

2.5 Construct Validity

The employment of factor loading, composite reliability (CR) and average variance extracted (AVE) were proposed by Hair, Black, Babin, Anderson and Tatham (2006) to determine the convergent validity. Factor loading for the parameters equals to or greater than 0.5 (≥ 0.5) and the composite reliability equals to or greater than 0.7 (≥ 0.7) were recommended by Hair et al. (2006). The AVE reading values should be greater than 0.5 (>0.5) as advocated by Fornell and Larker (1981). For discriminant validity analysis, this study employed the AVE of a latent variable to compare with other squared correlation latent variables or constructs. The AVE of the constructs should be greater than the other squared correlation latent variable or constructs (AVE > SV) (Kline 2011).

2.6 Invariance Analysis

The study cross-validate the model across two institutions using Invariance analysis. The hypothesised model was estimated using the covariance matrix derived from the data. In this manner, the estimation procedure fulfilled the underlying statistical distribution theory, and yielding estimates of desirable properties. The method used was SEM multi-group analysis. The moderating effect of the multi-group analysis of the model was tested to ensure the efficacy of the measurement model across institutions.

3. Results

3.1 Normality

The normality of the data distribution showed that all skewness and kurtosis values were smaller than 3 (< |3|) and 10 (< |10|) respectively. Therefore, no major violation on the normality of data distribution was observed.

3.2 Confirmatory Factor Analysis (CFA)

In this study, the original OCB measurement model was structured based on Podsakoff's (1997) conceptualisation of OCB with three dimensions. Figure 1 shows the hypothesised OCB measurement model with its parameter estimates.
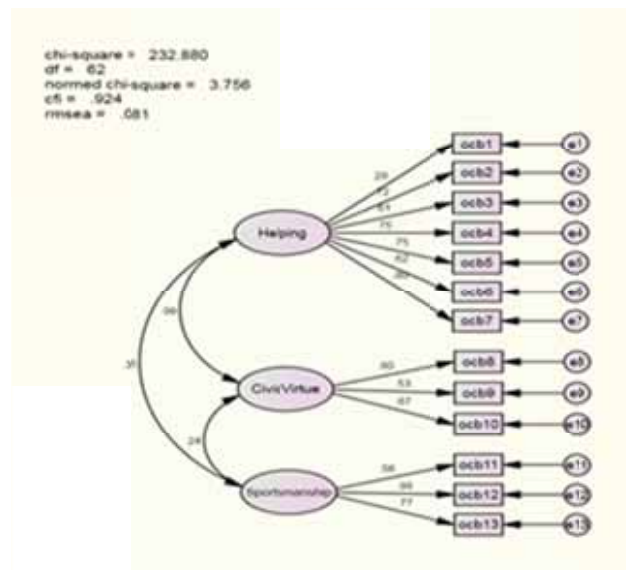
Figure 1. The hypothesised OCB measurement model with three-factor structure

The results of the goodness-of-fit of the OCB original model showed that normed chi-square (CMIN/DF) was 3.756, the CFI was 0.924 and RMSEA was 0.081. Table 2 shows the adequacy of the OCB measurement model.

Table 2. The Adequacy of the OCB Measurement Model

χ^2	Df	CMIN/DF	CFI	RMSEA
232.880	62	3.756	0.924	0.081

In this model, the correlation between 'helping' and 'civic virtue' was high (0.99) (Gaskin, 2012). As a result, both 'helping' and 'civic virtue' were merged as this high correlation indicated that they actually measuring the same thing (Gaskin, 2012). The new name given to the new construct was 'concern' as majority of the items reflected this quality. Similarly, the OCB1 and OCB9 were deleted because of their low loading estimates. Figure 2 shows the final revised OCB model with two-factor structure: concern and sportsmanship.
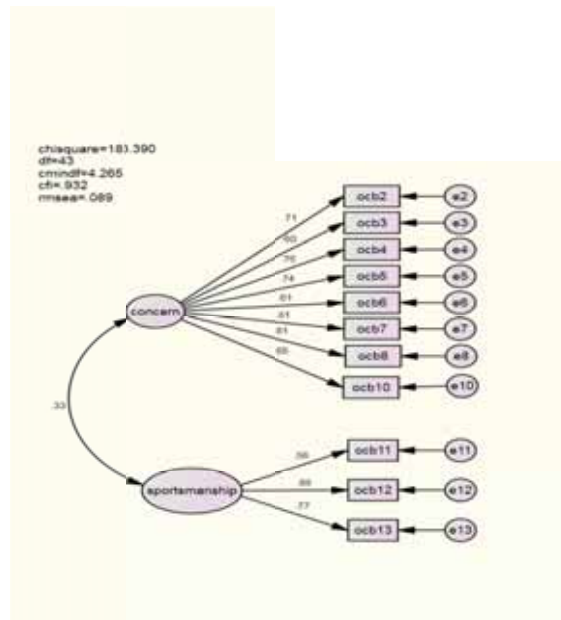
Figure 2. The final revised OCB model with two-factor structure

3.3 Construct Validity and Reliability

In this study, the factor loading for the parameters ranged from 0.560 to 0.880, with all the parameters were above 0.5 (>0.5). The composite reliability ranged from 0.791 to 0.893, were greater than 0.7 (>0.7). Furthermore, the AVE readings range from 0.515 to 0.566 where the values were greater than 0.5 (>0.5). For discriminant validity, the squared correlation or shared variance of 'concern' and 'sportsmanship' was 0.1089, therefore the AVE is greater than the SV (AVE > SV). Thus, all results fulfilled the AVE, CR and discriminant validity of the model. Generally, the measurement model was fit and fulfilled the construct validity as depicted in Table 3.

Table 3. Construct Validity of the Organisational Citizenship Behaviour

Construct	Item	Factor Loading	Construct Validity	
			Composite Reliability (CR)	Average Variance Extracted (AVE)
Concern	ocb2	0.700	0.893	0.515
	obc3	0.610		
	ocb4	0.760		
	ocb5	0.750		
	ocb6	0.610		
	ocb7	0.810		
	ocb8	0.810		
	ocb10	0.660		
Sportsmanship	ocb11	0.560	0.7911	0.566
	ocb12	0.890		
	ocb13	0.770		

3.4 Invariance Analysis (Multi-group Analysis)

In this study, the measurement model was further tested for institution-invariant through baseline and constrained

model multi-group analysis. A simultaneous analysis on both institutions was conducted, first without constraining the measurement model from which was derived a baseline Chi-square value. Figure 3 shows the baseline model for the invariance analysis for both institutions.
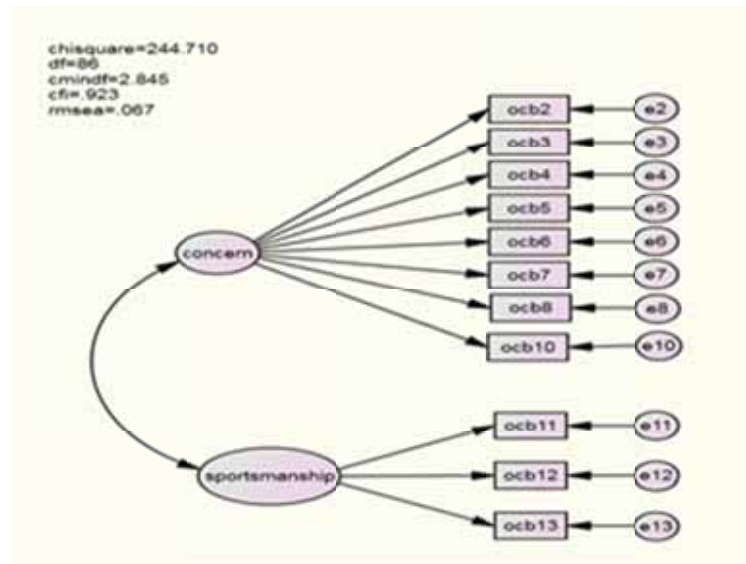
Figure 3. The baseline model for the invariance analysis across the two institutions

Next, all loadings were constrained to be equal for both groups. The analysis of this constrained model produced another Chi-square value, which was finally tested against the baseline value for statistically significant differences (Ahmad, Madarsha, Zainuddin, Ismail, & Nordin, 2010). The fit statistics of the constrained model were then checked. Figure 4 shows the constrained model. The goodness-of-fit indices showed that the model was parsimonious and had a good model fit with the $\chi^2/df = 2.709$, CFI = 0.921 and RMSEA = 0.064 (MacCallum et al., 1996; Marsh & Hocevar, 1985; McDonald & Marsh, 1990).
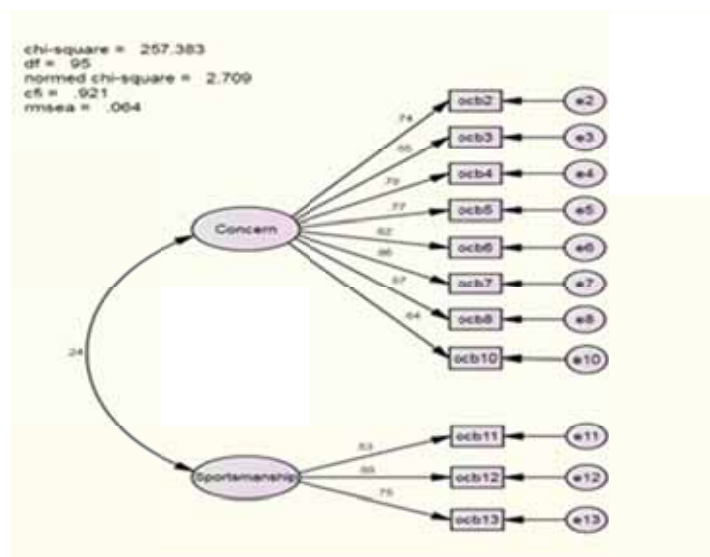
Figure 4. The constrained model

Table 4. Results of the Invariance Analyses

Overall Model	χ^2	df	Critical-value	$\Delta\chi^2$
Unconstrained	244.71	86	23.589	12.673
Fully constrained	257.38	95		

*Statistically significant at .005

Based on Table 4, the invariance test across both groups resulted in a statistically insignificant change in the Chi-square value, Chi-square (df =9) = 12.673, $p>$ .005. Simply said, the difference in the Chi-square values between the baseline model and the constrained model did not produce a poorer-fit model (Kline, 2011). The loadings did not vary significantly across institutions. It can thus justifiably conclude that the institution did not interact with the underlying traits to influence the staff members' responses to the indicators of OCB. This suggests that institution is not a moderating variable.

4. Discussion and Conclusion

This study investigates the dimensionality of OCB measures through confirmatory factor analysis across institutions in Malaysia. There were 417 respondents in this study. This study assessed the OCB measurement model with the three dimensions of helping, civic virtue and sportsmanship. In testing construct validity, there is a strong support for the discriminant validity issue for the two factors 'helping' and 'civic virtue'. In order to unravel this issue, these two constructs were combined into 'concern'. This scenario suggests that 'helping' and 'civic virtue' are in fact a similar attitude, experienced simultaneously by respondents in this research. It indicates that the two constructs are moulded together when staff members of both institutions were fulfilling their job responsibilities at their respective organisations. In other words, 'helping' comes together with 'civic virtue' and vice-versa. Hence, an organisation may deduce that staff members of both institutions with 'helping' behaviour are also those with 'civic virtue', which means staff members who possess the attitude of 'helping', also feel a strong sense of deep concern and active interest towards their organisations. Based on this finding, human resource managers of both institutions can use the findings to introduce new training programmes that use modules structured specifically to improve the new construct 'concern'. The 'concern' combines 'helping' and 'civic virtue', therefore, the module should consider matters related to 'helping' and 'civic virtue' as one construct. In addition to test the adequacy of the model, this study also sought to analyse the invariance of the OCB measurement model across two institutions. It was found that the measurement structure of the OCB was relatively invariant across these different sample groups. Therefore, the core idea is that the forms of citizenship behaviour observed signify well for the equivalence of OCB ratings across institutions. Future studies can include respondents from more than two institutions, so that the findings can be generalised to a wider group in a given population. Examining the invariance of OCB scales across different nature of institutions may be an interesting avenue for future research. In conclusion, this study provides support for both research hypotheses.

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Customer Engagement Factors in Facebook Brand Pages

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Abstract

India is relatively new in adopting social media and this paper try to identify the factors influencing customer engagement in Facebook brand pages. The main source of data used in this article is from Facebook's insight data. The 134 selected Facebook Brand Pages were monitored regarding both the brand's activity (posts) as well as the consumers' interactions with the brand's activity (likes, comments, etc.). The Fanpage Karma, a social-media monitoring tool was used to collect the data. A conceptual framework is provided that helps to understand the factors influencing the consumer engagement in Facebook brand pages. This paper proposes an empirical model based on Indian Facebook brand pages, which can help in increasing the brand engagement in Facebook brand pages.

Keywords: brand engagement, customer engagement, Facebook pages, brand community, social media, marketing

1. Introduction

Customer engagement (CE) in the marketing literature is a new phenomenon, which has recently received considerable attention. Customer engagement in social media has become a particularly important topic as the abundance of social media channels such as Facebook, Twitter, YouTube, etc. as well as a vast number of customer support forums and online communities provide many opportunities to reach consumers to make companies more noticeable and interact with customers. Customer engagement is defined as "a customer's behavioral manifestation toward a brand or firm" (Van Doorn et al., 2010). Brodie et al. (2011) proposes that engaged customers have a key role in enhanced business performance by providing word-of mouth (WOM) about the products, services and brands.

Consumer engagement has been one of the most widely discussed topics in the social media research (Menezes, 2013). Facebook brand page activity may potentially influence engagement. Brand can post an item of content on its page, and reach is the number of people who receive an impression of a piece of content. Interactions are when a user likes, comments on or shares the content. Reach depends on several factors, like number of fans, number of interactions and number of friends that fans of a brand page have. Brands have to provide content that fit needs of the customer, in order to engage the customer, by clicking the like button or responding to the brand's message. Facebook activity is related to number of posts and what kind of content is been posted.

India's Internet population is 288 million, as of 2014 with around 20% penetration rate (Internet Live Stats, 2014). According to comScore (2013), social networking's is the second fastest growing activity in India after entertainment. India has approximately 118 million social media accounts in 2014 (we are social, 2015). According to a survey conducted by IPSOS (2012), 66% in India post questions, ideas and pictures on brands' social networking sites. Khan, (2014), India is the second largest country on Facebook users. Delhi has the greatest number of Facebook users in India, followed by Mumbai, Bangalore. Around 90% Facebook users in India are younger than 35 years of age. 71% users on Facebook users (in India) belong to 19-35 years age group (Khan, 2014). Around 75% of Facebook users in India are Male.

India is relatively new in adopting social media customer engagement and this paper try to develop a research framework for Indian scenario. This study focuses on understanding the customer engagement with Indian brands in Facebook brand pages. This study helps to identify the key factors, which influence the customer engagement in, Facebook brand pages. This paper examines how the Indian brands is using the social

networking platform like Facebook to create valuable brands by providing an overview on the types of activities the brands undertake, the types of interactions and the implications this has on brands.

2. Literature Review

2.1 Brand Community on Facebook

A brand community is a group consists of individuals who are specialized, non-geographically bound community based on a structured set of social relationships among admirers of a brand (Muniz & O'Guinn, 2001). A brand community allows followers to share information about the brand to others. Brand communities facilitate interactions through exchange of opinions about the brand or a particular product among consumers, thus engaging their members in a form of word of mouth communication (McAlexander et al., 2002). Further, a brand can become an informational resource for the members of the community and provide customer service. Creating a strong brand community is a key step in developing a strong relationship marketing strategy.

Facebook's emergence as an important marketing channel due to brand pages as they establish direct communication with their fans and customers. Due to popularity of social media websites, several companies are using social networking sites to support the creation of brand communities (Kaplan & Haenlein, 2010; Muniz & O'Guinn, 2001). Facebook fan pages allow a brand to create an online community of brand users through the social networking site. Communities in Facebook are formed around Facebook Pages and Facebook Groups. The people who "like" the page (who pressed the Like button on the page) become fans. When a user clicks the like button, a link to this Page will appear on the user's timeline. There are six types of posts to choose from on Facebook page: video, photo, Link, Question, Event and Text (Olczak & Sobczyk, 2013). Photos along with questions create lot interactions and drive engagement among fans. Brand community members join a community based on either the positive or negative feelings they have towards a brand (Wilimzig, 2011). Further, individuals choose to join a Facebook brand community because they are loyal to that brand. Other motivations for joining these brand communities are economic benefits, such as discounts, and entertainment. Providing exclusive deals and discounts available only to members of the Facebook brand community is an incentive for individuals to join the community (Vorvoreanu, 2009). Syncapse (2013) report found the 42% like a brand page to get a coupon or reward. Weman (2011) found that consumers are not joining brand communities to make new friends or socialize and connect with strangers.

Facebook Page enables three interactions features connected with each post, such as: like, share and comment. When a user likes a post, this means that also other users can see that he has liked it (including their friends). The more likes the post gained, the higher value it has in the context of Page marketing value. Share feature makes it possible to publish someone's post on own profile (Time-line) or Page's. This is the way content goes viral in social media. The most engaging are comments – a feature that enables Facebook users sharing their thoughts about the post (Olczak & Sobczyk, 2013). This feature might be risky, if a dissatisfied customer attacks the company, criticizing its products or service. It can damage brand reputation, if there's no proper reaction from the Page moderator. Almost every major brand and company in India has a Facebook Page.

2.2 Customer Brand Engagement

In digital era, the term "consumer engagement" typically refers to the ways in which consumers engage with brands through digital channels, such as the brand's website, blogs, social networking sites, and videos. The term 'engagement' is defined as a mental state of enjoyment of the representation of an action or object (Laurel, 1993). The Consultancy defines engagement as "an outcome of repeated interactions that strengthen the emotional, psychological, or physical investment a customer has in a brand" (Mollen & Wilson, 2010, p. 919). Many other researchers define engagement as the simple act of participating in an online environment (Harden & Heyman, 2009; Solis, 2010). The engaged users metric can be found within Facebook Insights at both the Page and post levels. Engaged users aren't just limited to brand fans; anyone who engages with Brand Page is an engaged user. The page engagement is calculated by dividing absolute interactions (likes, comments, shares) by total fans. The number of comments, likes and shares is not an absolute measure, but is related to the number of page fans at the moment of posting, a ratio to the number of fans was used as more accurate engagement measure (Robinson, 2014).

Customer engagement is a psychological state, but can be manifested into action (Van Doorn et al., 2010 p. 13). Bowden (2009) defines customer engagement as a sequential psychological process that customers move through to become loyal towards a brand. Brodie et al., (2011) makes an extensive analysis of definitions and conceptualizations of the term engagement in social sciences and management disciplines, and the term customer engagement in the marketing and service literature. All the customer engagement behaviours are proposed to comprise five dimensions: valence (positive or negative), form and modality, scope (temporal and geographic),

nature of impact and, finally, customer goals. Customer engagement has also been explored as a new perspective in the field of customer management (Verhoef, Reinartz, & Kraft, 2010). Vivek (2009) examines various disciplines including psychology, sociology and management and defines consumer engagement as - the intensity of consumer's participation and connection with the organization's offerings, and/ or organized activities.

Cvijikj and Michahelles, (2013) formulated a conceptual framework in which they propose that digital engagement on a social network depends on several elements like: (1) the type of content published, ie the nature and content of the messages; (2) the post format, which could be understood as the message's wrapper; and (3) the time of publication, which refers to the chronological or psychological timing of the post. Reitz (2012) study examined how perceived Facebook Company page features (i.e., perceived information quality, perceived enjoyment and perceived interactivity) predicted online consume engagement, loyalty and purchase intent. 233 online surveys were collected from U.S. Facebook users who "like" companies on Facebook to test the online consumer engagement framework. The research findings shows that perceived Facebook characteristics influence online consumer engagement, which influences loyalty and ultimately purchase intent. Vivek et. al., (2012) studies shows that participation and involvement serves as antecedents of CE, while value, trust, effective commitment, word of mouth, loyalty and brand community involvement are potential consequences.

2.3 Conceptual Framework of Consumer Brand Engagement

Brand Engagement is the total number of fans interacting with brand page marketing content. Ehrenberg-Bass Institute studies demonstrated that only 1 percent of Fans of the biggest brands on Facebook are actually engaging with brands (Creamer, 2012). Engagement rate is the ratio of likes, comments and shares per day and fan during a certain period. Most Facebook brand pages show very low engagement values. Total number of fans potentially a direct effect on customer engagement. This proposition is based on Menezes (2013 studies, number of fans will foster more engagement, as more customers have access to brand related content, allowing for more chances to interact with the brand. Customer reach has a significant negative impact on customer engagement; the results show that engagements are strictly content related (Menezes, 2013). A report by SocialBakers suggests that in general more fans means lower engagement rates, except for the fashion industry (Allen, 2012). According to previous studies the number of fans doesn't influence brand engagement.
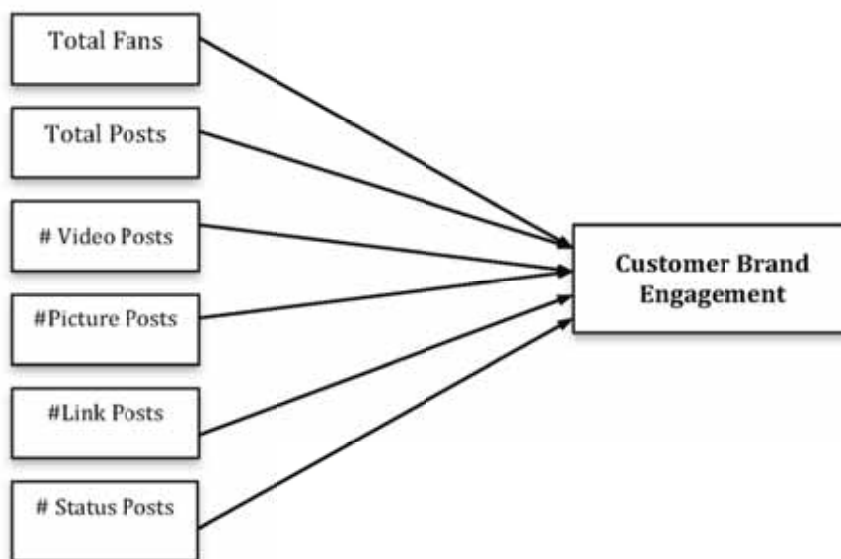
Figure 1. Conceptual framework of customer engagement

Huber, Landheer, Probst and Reisser (2011), studies shows that posting on company wall page increase the number of daily active users on a fan page. The number of daily company wallposts, and the number of daily company comments all have a significant positive impact on the number of daily active users on the fan page. Moreover, the studies show the impact of different media types and find that photo and app wallposts lead to a

higher number of daily active users than status and link wallposts. Photos touch people on an emotional level and are thus more often shared by users (Huber, Landheer, Probst, & Reisser, 2011). In addition, photos can increase the credibility of content and attract more attention than text. Moreover, the studies show the impact of different media types and find that photo and app wallposts lead to a higher number of daily active users than status and link wallposts.

A study by social media analytics company Fanpage Karma reveals that there are remarkable differences in engagement rates between categories (Fanpage Karma, 2013; Socialbakers, 2012). These studies show that the most engaging brands on Facebook belong to the following categories: sport, automobile, alcohol, airlines and services. Leung (2012) analysed the impact of post formats on generated engagement. He analysed the content of the Facebook pages of 12 hotels and found that links were the most commonly used post format (37.9%), followed by images (30.5%), plain text (28.7%) and video (2.9%). Cvijikj and Michahelles (2013) research study provides a coherent model which explains (1) the relation between individual content characteristics as factors that influence the level of brand engagement, and (2) the relation between engagement and (a) loyalty, (b) WOM communication, (c) growth and (d) community size. The proposed model is empirically evaluated, based on the large dataset consisted of all activities over two months on the top 100 Facebook brand pages in the Food/Beverages category. The key motivators for customer participation on online social media are learning benefits, social integrative benefits, personal integrative benefits and hedonic benefits.

3. Methodology

Our empirical investigation is implemented on Facebook, which is the largest social media platform in the world. Many top brands now maintain a Facebook page from which they serve posts and messages to connected users. This is a form of social media marketing that has increasingly become a popular and important channel for marketing. In order to collect the data and test the hypotheses established for this study, a sample of 134 Indian brands was selected using three important criteria: Active Official Facebook Brand Page, number of Indian fans and B2C brand. The list of brands to be considered was chosen from TRA's India's most attractive brand list.

The number of fans was also used as a selection criterion for this study. The leading Indian brands based on number of local fan count were checked using Social Bakers (2014) list. Upon visiting Facebook, a search was conducted to find the official page for each of the 150 brands. We searched each brand on Facebook to determine if it had an Indian Facebook page and how many fans it had. We identified 134 brands with a Facebook fan base of more than 100,000 fans. The time period of the data collection is between January 2014 to December 2014. 10169 posts were analyzed during this period and its engagement score is calculated based on number of likes, shares and comments.

4. Results

Table 1. Brand and its associated industry

Industry	Number of Brands	Percentage	Total Fans as on December 2014	Average Number Fans per brand	Growth Rate (Yearly)
Airlines	6	4.5	4067517	677920	18.47%
Apparel	7	5.2	9336188	1333741	10.09%
Automobile	14	10.4	34362468	2454462	21.41%
Consumer Electronics	5	3.7	12838630	2567726	13.17%
Electronics - Mobile	5	3.7	32527990	6505598	31.22%
Watches	3	2.2	2256780	752260	9.92%
Bank	8	6.0	13768724	1721091	26.56%
Beverages – soft drinks	4	3.0	39531477	9882869	8.97%
Beverages - Spirits	5	3.7	21701528	4340306	10.52%
FMCG Food	13	9.7	44786273	3445098	12.89%
Retail Food	5	3.7	24688685	4937737	16.53%
Health	5	3.7	6256514	1251303	14.68%
Beauty	18	13.4	61277090	3404283	38.13%
Detergent	2	1.5	2784578	1392289	2.68%

eShop	8	6.0	29504729	3688091	38.48%
Retail	6	4.5	26815350	4469225	19.89%
Sporting Goods	6	4.5	16183314	2697219	18.17%
Telecom	6	4.5	40560200	6760033	19.23%
Travel	8	6.0	5253322	656665	5.75%
Total	134	100.0	428501357	3197771	

The results of the statistical analyses conducted for this study are summarized below. Firstly, descriptive statistics on the data analyzed is provided, followed by a summary of the regression analysis results. The 134 brands used for the study was categorized into their respective industry.

The Table 1 presents the characteristics of the brand and its associated industry. The fan reach on Facebook is number of users actually manifested their interests for a brand and for consuming content from that brand via its profile page on a Facebook. The table 1 presents the number of total number of fans following the Facebook pages of each industry. Pepsi India has the highest number of fans, which is followed by Nivea, Sunsilk, Tata Docomo, and Samsung Mobile India. Average number of total fans is found to be higher in soft drink industry followed by telcom industry. Mobile brands and beauty brands shows the highest growth rate in fans in year 2014.

Table 2. Facebook brand page activity (posts)

Industry	Status	Video	Picture	Link	Offer	Total Posts	Average Posts per Brand
Airlines	340	72	2178	283	0	2873	479
Apparel	16	49	2916	22	0	3003	429
Automobile	43	776	8721	146	1	9687	692
Consumer Electronics	83	99	3339	142	0	3663	733
Electronics - Mobile Phone	32	323	2784	118	0	3257	651
Watches	1	36	643	13	0	693	231
Bank	55	157	3135	179	2	3528	441
Beverages – soft-drinks	21	80	738	32	0	871	218
Beverages - Spirits	21	154	1524	33	0	1732	346
FMCG Food	115	164	7204	42	0	7525	579
Retail Food	452	114	5145	52	136	5899	1180
Health	3	41	993	4	0	1041	208
Beauty	186	276	10636	6303	0	17401	967
Detergent	12	46	794	5	0	857	429
eshop	227	207	19035	4318	1	23788	2974
Retail	47	61	3522	48	7	3685	614
Sporting Goods	102	58	1938	49	0	2147	358
Telecom	37	300	2921	125	0	3383	564
Travel	26	121	6223	289	3	6662	833
Total	1819	3134	84389	12203	150	101695	759

Table 2 presents the Facebook activates in their brand pages. It is related to the total number of posts during the data collection period. The post type is also listed in the table, status, photo, links, video and offers. Average post per brand is calculated by dividing the total post by the total number of brands studied in selected industry. Facebook enables users to interact with any kind of content on its platform: likes, comments and shares. A brand that posts a lot of content that is of little interest to its fans will be incrementally 'filtered out' of their news feeds by Facebook's algorithms. It's clear from Table 2 that most number of post are from online retailers and food retailers brands.

Brands need fans to continuously interact with their content to generate presence in their news feeds. Table 3 shows that highest brand engagement in electronic retailers and lowest engagement rate is for soft-drinks brands. The highest average an interaction per post is related to mobile phone brands and lowest is related to travel brands eshops post the most followed by retail food industry. Post interactions are measured using like, comments and number of shares. The total number of posts of 134 selected brand pages is 12,925 and total interaction is 21,591,353. Average interaction is highest for offers and least for links. 89.5% of the posts are photos, which is followed by videos.

Table 3. Facebook brand page interactions

No.	Industry	Total Fans	Total posts	Likes	Comments	Shares	Total Interactions	Average Interactions per post	Interactions per fan
1	Airlines	677920	479	229960	8515	9860	248334	519	0.37
2	Apparel	1333741	429	169248	2218	2314	173779	405	0.13
3	Automobile	2454462	692	1851019	22745	47118	1920881	2776	0.78
4	Consumer Electronics	2567726	733	683010	15875	27673	726557	992	0.28
5	Electronics - Phone	6505598	651	3693257	76582	72245	3842084	5898	0.59
6	Watches	752260	231	69615	2266	4161	76041	329	0.10
7	Bank	1721091	441	765545	15969	32128	813642	1845	0.47
8	Beverages-softdrinks	9882869	218	75478	17573	8281	101332	465	0.01
9	Beverages-Spirits	4340306	346	794128	14125	45432	853684	2464	0.20
10	FMCG Food	3445098	579	603364	109212	30577	743152	1284	0.22
11	Retail Food	4937737	1180	2812327	100337	55400	2968064	2516	0.60
12	Health	1251303	208	633432	7486	10573	651491	3129	0.52
13	Beauty	3404283	967	1015512	46313	45055	1106880	1145	0.33
14	Detergent	1392289	429	499102	14212	10501	523815	1222	0.38
15	eshop	3688091	2974	3050087	104897	55936	3210920	1080	0.87
16	Retail	4469225	614	682063	11081	8602	701746	1143	0.16
17	Sporting Goods	2697219	358	278605	3429	6104	288137	805	0.11
18	Telecom	6760033	564	2374288	62816	38653	2475757	4391	0.37
19	Travel	656665	833	149000	3930	12126	165056	198	0.25
20	Total	62937915	12925	20429040	639577	31257	21591353	1671	0.34

Table 4 presents to type of post and the total interactions. Table 4 shows that Picture has the most number of post interaction, which is followed by link. If we look at the average likes, Offer and Video has the highest number of likes. Comment is highest for status and offer and video has the highest number of shares. The results show's that photos and offers increase the average customer interaction. 83% of the post is picture type and Offer is only used by few brands. But Average likes and comments is highest for offers, which is followed by video posts.

Table 4. Type of post and post interactions

	Likes	Comments	Share	Total
Status	385878	187941	6641	580460
Video	5347341	118123	309846	5775310
Picture	136643879	4463052	3400091	144507022
Link	7901620	492621	432803	8827044
Offer	639516	16534	39004	695054
Total	150918234	5278271	4188385	160384890

Table 5 shows the type of post and its average interaction. Average interaction is considerable higher for offers, which is followed by photos and link. 82.98% of the post from the sample is picture type, which is followed by Link and Video.

Table 5. Type of post and average post interaction

	Status	Video	Picture	Link	Offer
Average number of Likes	212	1668	1605	645	4263
Average number of comments	103	37	52	40	110
Average number of Shares	4	96	40	35	260

Table 6. Customer engagement model summary

Variables	Beta	t	Sig
(Constant)	0.369	4.798	0.001
Total Fans	0.001	-2.916	0.004
Total No. Video Posts	0.005	3.607	0.001
Total Posts	0.001	4.510	0.001

A regression analysis was conducted according to the proposed conceptual model for customer engagement. The model using the selected variable was found to be significant (F=14.643; p=0.001), with a low model fit, resulting in a R^2 of 0.271. The result shows that number of links post and status posts variable of the conceptual model is not a significant factor to increase brand engagement. Number of fans following, number of videos posted and total number of posted is associated with customer engagement. Overall the research results show the consumer engagement depends on Facebook activities like total fans, total number of videos posted and total number of posts on the wall page. The total number of posts in brand page is considered as the most important factor to increase consumer engagement in Facebook fan pages.

5. Conclusions

An encouraging number of Indian brands had established an official Facebook page at the time this study was conducted. Several Indian brands have significantly large numbers of users who "like" them, which suggests that the brand is popular but the sheer number of likes does not definitively measure sales figures or purchase intentions. Companies are using Facebook for a variety of purposes but the focus seems to be more on trying to develop relationships with consumers rather than on simply providing information. The research shows that the key determinants for consumer engagement are content-related and frequency of brand posting activities and not on number of fans following the page. The paper is an initial attempt to develop a theoretical framework for customer engagement and further research is required to better understand several aspects of the framework. Future research can also investigate more Indian brands and compare it with other countries engagement rate. The paper develops a conceptual model of customer engagement that improves understanding of the concept and provides the foundation for strategies to increase their engagement in Facebook Pages. The results presented in this paper are limited to Indian Facebook brand pages only.

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Appendix A. Brand Page Interactions in year 2014

No.	Brand	Total Fans	Total posts	Likes	Comments	Shares	Total Interactions	Average Interactions per post	Interactions per fan
1	Timex India	1,41,638	327	60563	1095	1103	62761	192	0.44
2	Yamaha Motor India	1,62,321	1536	429850	32007	19883	481740	314	2.97
3	Trendin.com	1,65,935	494	12567	2179	598	15344	31	0.09
4	Sonata	1,72,398	199	31904	3793	1797	37494	188	0.22
5	Air India	1,92,849	154	142796	7888	14448	165132	1072	0.86
6	Whirlpool	2,10,662	664	128660	3283	5672	137615	207	0.65
7	Zodiac	2,20,827	988	97210	1473	1129	99812	101	0.45
8	Sterling Holidays	2,23,683	899	233284	2136	14937	250357	278	1.12
9	Taj Mahal Tea	2,35,508	227	35993	949	1309	38251	169	0.16
10	Cox and Kings India	2,40,999	1178	155907	2355	8613	166875	142	0.69
11	Lux India	2,59,488	403	114632	7700	1447	123779	307	0.48
12	IndiGo	3,21,795	540	115552	10444	9214	135210	250	0.42
13	Standard Chartered India	3,39,569	358	308752	3249	5096	317097	886	0.93
14	ING Vysya Bank	3,48,103	318	138773	17485	7668	163926	515	0.47
15	Park Avenue	3,77,305	210	28463	1240	896	30599	146	0.08
16	Thomas Cook India	4,11,058	684	86097	3055	3394	92546	135	0.23
17	EaseMyTrip.com	4,15,566	515	65275	3220	33903	102398	199	0.25
18	Cinthol godrej	4,53,656	144	21155	2770	887	24812	172	0.05
19	Countryclub	4,70,081	1052	148416	2794	17378	168588	160	0.36
20	Lufthansa India	4,83,391	569	506738	9089	12486	528313	928	1.09
21	Lee India	5,23,349	277	62664	434	1203	64301	232	0.12
22	Johnnie Walker India	6,04,163	382	1434138	15887	153144	1603169	4197	2.65
23	CitiBank	6,45,810	29	145696	464	551	146711	5059	0.23
24	SBI	6,69,038	824	357245	20722	57833	435800	529	0.65
25	L'Oreal India	6,89,983	166	156516	1496	1119	159131	959	0.23
26	Wrangler	7,33,453	350	211580	2338	3982	217899	623	0.3
27	FlySpiceJet	7,45,828	782	378630	10591	10191	399412	511	0.54
28	AirAsia India	7,51,551	487	65425	5508	4350	75283	155	0.1
29	Vicks India	7,63,954	162	670774	6964	5846	683584	4220	0.89
30	John Players	7,68,073	505	74850	4189	1743	80782	160	0.11
31	Foster's India	8,33,000	346	344327	6330	26317	376974	1090	0.45
32	Via.com	9,45,176	714	67016	1764	9156	77936	109	0.08
33	Frooti	10,26,315	4	160	21	1	182	45	0
34	Wildcraft	10,92,899	330	318002	2302	18295	338598	1026	0.31
35	Ariel India	10,98,092	280	260909	10367	3557	274833	982	0.25

No.	Brand	Total Fans	Total posts	Likes	Comments	Shares	Total Interactions	Average Interactions per post	Interactions per fan
36	Bacardi India	10,98,843	359	329701	31184	9961	370846	1033	0.34
37	Olay India	11,67,427	226	1440376	15251	9521	1465148	6483	1.26
38	Lifebuoy	12,14,306	96	93601	2951	17606	114157	1189	0.09
39	Amul	12,27,406	463	728467	114378	115737	958582	2070	0.78
40	Club Mahindra	12,27,571	1232	279218	14783	6895	300896	244	0.25
41	Monte Carlo	12,42,469	456	69174	842	844	70860	155	0.06
42	Colgate Max Fresh India	12,67,130	149	158100	1163	733	159996	1074	0.13
43	Mentos	12,85,303	2148	855739	872938	81491	1810168	843	1.41
44	VodafoneIN	12,90,541	110	42440	14875	3145	60460	550	0.05
45	McDonalds India	12,94,127	765	435846	39881	11214	486941	637	0.38
46	Bajaj Pulsar	13,06,624	369	1110852	25272	45013	1181137	3201	0.9
47	Mahindra Adventure	13,19,188	388	156786	1333	2732	160850	415	0.12
48	Oriflame	13,20,885	1067	814107	38713	54108	906929	850	0.69
49	Pantene India	13,80,455	183	1234396	12462	5900	1252758	6846	0.91
50	Basics Life	14,07,692	356	723548	5289	6336	735173	2065	0.52
51	Snickers India	14,26,263	3	780	2	0	782	261	0
52	Jet Airways	15,72,103	341	170618	7568	8468	186654	547	0.12
53	Surf Excel India	16,86,486	577	737295	18057	17444	772796	1339	0.46
54	Mahindra Verito	17,06,293	335	519908	3813	3123	526843	1573	0.31
55	Sunfeast Dark Fantasy	17,16,345	709	1172546	15561	62217	1250324	1764	0.73
56	Oral B India	18,05,125	153	588044	8505	7132	603681	3946	0.33
57	Harley-Davidson India	18,23,183	2005	6858116	34081	236736	7128933	3556	3.91
58	Sony	18,92,085	749	565893	11426	17655	594974	794	0.31
59	Titan	19,42,744	167	116378	1909	9582	127869	766	0.07
60	Elle 18	19,56,504	677	2634792	42385	52951	2730128	4033	1.4
61	LG	19,72,070	626	1088213	24479	28217	1140909	1823	0.58
62	Maruti Suzuki Ritz	19,93,312	394	152111	3335	2511	157957	401	0.08
63	MTS India	20,02,192	568	178179	23183	1778	203140	358	0.1
64	7UP India	20,27,537	262	68609	2003	1964	72575	277	0.04
65	Garnier India	20,55,527	878	697388	28956	6451	732795	835	0.36
66	Puma India	20,55,627	66	116160	990	858	118008	1788	0.06
67	Head & Shoulder India	20,73,618	260	1843510	25599	17856	1886965	7258	0.91
68	Mahindra XUV500	21,14,854	324	3224839	31768	55767	3312374	10223	1.57
69	Jaguar India	21,35,313	372	3392553	19095	91361	3503009	9417	1.64
70	Kitkat	21,60,138	231	418356	12949	41929	473234	2049	0.22
71	Volkswagen India	21,61,967	162	571721	8213	3463	583397	3601	0.27
72	Mountain Dew India	21,62,506	188	107442	7707	8998	124147	660	0.06
73	Mahindra Xylo	21,92,667	407	707895	5385	3908	717188	1762	0.33
74	Pantaloons	21,99,582	904	219775	4662	1525	225962	250	0.1
75	Colgate India	22,11,157	311	1074676	11552	23442	1109670	3568	0.5
76	HDFC Bank	22,99,531	546	210969	10834	26330	248133	454	0.11
77	Garnier Men India	23,51,478	1096	452915	17361	4488	474764	433	0.2
78	Dove	23,53,741	44	1861	12	822	2695	61	0
79	Reliance Digital	23,82,803	530	1495920	20172	9790	1525882	2879	0.64
80	Lakme	24,36,444	9628	3259492	549031	548871	4357395	453	1.79
81	Reebok India	27,10,705	753	63390	4021	1582	68993	92	0.03
82	Cadbury 5 Star	27,77,777	282	996224	17539	10796	1024559	3633	0.37
83	Snapdeal	28,51,903	855	160506	63175	23509	247190	289	0.09
84	Meri Maggi	28,61,340	216	676286	30003	17156	723445	3349	0.25
85	Gillette India	28,67,716	126	1933020	20525	22390	1975935	15682	0.69
86	BMW India	29,57,612	721	1230555	14105	44453	1289113	1788	0.44
87	Axis Bank	29,68,346	554	2336761	24451	35850	2397062	4327	0.81
88	HDFC Life	31,37,411	600	144973	4699	4440	154112	257	0.05
89	Mahindra Scorpio	32,50,402	273	4188406	42930	73285	4304621	15768	1.32

No.	Brand	Total Fans	Total posts	Likes	Comments	Shares	Total Interactions	Average Interactions per post	Interactions per fan
90	ebay India	33,08,052	1495	1560553	50976	48502	1660031	1110	0.5
91	ICICI Bank	33,60,916	299	2481194	45846	119254	2646294	8850	0.79
92	Woodland	33,80,079	626	483528	4379	6078	493985	789	0.15
93	Jabong	33,93,169	6325	1736943	32888	20009	1789841	283	0.53
94	Adidas Cricket	34,00,662	293	367233	6360	6897	380490	1299	0.11
95	Kurkure	34,30,544	1555	990740	270728	14018	1275487	820	0.37
96	Xolo	34,51,252	680	2800112	54222	35469	2889803	4250	0.84
97	Nike Cricket	35,43,342	79	323316	2520	2912	328748	4161	0.09
98	Audi India	36,71,738	271	1129844	11162	26252	1167258	4307	0.32
99	Maybelline India	37,29,859	1660	3126549	55494	47916	3229959	1946	0.87
100	Tata Nano	38,27,053	620	421371	10395	8977	440743	711	0.12
101	Lays India	38,32,212	310	9127	9127	9556	27810	90	0.01
102	Panasonic India	39,06,895	742	1123540	25889	63528	1212957	1635	0.31
103	Pizza Hut India	39,08,310	508	1752602	31812	44814	1829229	3601	0.47
104	Oreo India	39,35,249	684	524695	14646	5496	544837	797	0.14
105	Flipkart	42,38,171	1201	3183585	112629	74524	3370738	2807	0.8
106	Ponds	42,75,185	444	279721	7249	10098	297069	669	0.07
107	AmazonIN	43,82,512	1519	705767	93534	74768	874069	575	0.2
108	Lifestyle International	46,00,637	747	330353	14394	9956	354703	475	0.08
109	Cadbury Dairy Milk	46,45,372	133	1337377	20201	37120	1394698	10486	0.3
110	Samsung India (Durables)	48,56,918	882	508744	14296	23292	546332	619	0.11
111	Sony Mobile India	50,21,251	754	3478300	44188	76172	3598660	4773	0.72
112	Hyundai India	50,59,129	1898	1976246	76862	44914	2098023	1105	0.41
113	Café Coffee Day	51,13,652	504	945598	17965	31133	994696	1974	0.19
114	Bingo!	51,37,781	440	118525	40761	1732	161018	366	0.03
115	HTC India	52,30,792	526	1192852	25583	19907	1238342	2354	0.24
116	Levis India	54,70,712	217	640794	5008	6400	652202	3006	0.12
117	Yepme Shopping	55,33,032	10304	15097052	419709	145344	15662105	1520	2.83
118	Junglee.com	56,31,955	1595	1943720	64085	60235	2068040	1297	0.37
119	Airtel India	59,40,448	838	803724	34476	24643	862843	1030	0.15
120	Microsoft Lumia India	65,02,399	238	942153	61877	41001	1045031	4391	0.16
121	Shoppers Stop	65,47,470	807	326025	11046	3372	340443	422	0.05
122	Domino's Pizza India	69,60,696	3031	4398652	298400	53697	4750749	1567	0.68
123	Idea	72,46,179	551	7140685	126019	47824	7314528	13275	1.01
124	KFC India	74,11,900	1091	6528939	113626	136142	6778707	6213	0.91
125	Kingfisher World	75,47,606	479	1853818	16917	36222	1906957	3981	0.25
126	Fasttrack	96,77,166	341	996756	10924	20634	1028315	3016	0.11
127	Aircel India	98,37,688	973	4591645	141826	63860	4797331	4930	0.49
128	Cornetto (IN)	1,03,50,543	351	14869	920	247	16036	46	0
129	Smirnoff India	1,16,17,916	166	8654	305	1515	10474	63	0
130	Samsung Mobile India	1,23,22,296	1059	10052870	197038	188674	10438582	9857	0.85
131	Tata Docomo	1,42,43,152	343	1489054	36519	90668	1616241	4712	0.11
132	Sunsilk	1,45,91,281	285	174000	5496	8561	188057	660	0.01
133	Nivea	1,60,99,537	18	1190	174	5	1369	76	0
134	Pepsi India	3,43,15,119	417	125702	60559	22162	208423	500	0.01
	Total	**42,85,27,717**	**103085**	**151700433**	**5301695**	**4208325**	**161210452**	**1564**	**0.38**

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Entrepreneurial Engagement Choice and Credit Constraints: Empirical Analysis of Urban Informal Microentrepreneurship in Sri Lanka

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Abstract

Microenterprise approach is increasingly acknowledged and policy based approach that recognizes micro entrepreneurs as the core of the informal sector, which needs to be assisted to start at entrepreneur level or to become growing, self-sustaining businesses to signify its contribution to economic growth and development in the global south. This study investigated the existence, effects of credit constraints and the determinants of entrepreneurial engagement choice taking a sample of 300 micro entrepreneurs who reside in underserved settlements in Sri Lanka. Accordingly, whether the entry choice is constrained by the availability of credit is empirically examined in a multivariate setting, applying discrete choice model on the conceptual basis of the theory of occupational choice. It was found a positive correlation between wealth and the probability of starting a business which implies that initial wealth determines the amount of capital required for business startups thus providing evidence of financial constraints. Initial wealth, education, tradition, trained or parent's occupation and previous employment reported as important predictors on the probability of starting a business as a self employed or entrepreneur compared to subsistence activities. This study provides useful insights for policy makers to plan their activities to promote entrepreneurship in the urban informal sector in the country rather than formulating ad-hoc policies to provide fixed financial assistances on mis specified targets.

Keywords: micro entrepreneurs, financial constraints, wealth, multinomial logit model, urban informal sector, Sri Lanka

1. Introduction

The microenterprise approach is often justified and increasingly being acknowledged as the most viable path to achieve economy's growth through generation of income, wealth and employment, reduction of poverty, (Daniels, 1999; FIELD, 2012); provision of the seedbed of industrialization (Grosh & Somolekae, 1996) and generally promoting social, economic and human development in developing as well as developed world (Mullei, 2002; Levy & Bradburd, 1995; World Bank [WB], 2013). Therefore, the microenterprise approach to the informal sector has been identified as a policy based approach that recognizes micro entrepreneurs as the major part of the informal sector (Gunatilaka, 2008). It is stressed that they should be dynamic, growing and self-sustaining businesses to signify their contribution to foster economic growth, generate productive additional employment, and reduce deprivation (Gunatilaka, 2008; Mead & Liedholm, 1998; Pisani & Patrick, 2002; WB, 2013).

In brief, microenterprise graduation is the key to this accepted or suggested development path in moving the economy ahead (WB, 2002; Levy, 1991; Daneals, 1999). But the stylized fact, in low income countries is the presence of a large number of micro enterprises with subsistence activities which rarely make the transition to the formal sector as entrepreneurs (Gollin, 2008, Woodruff, 2012). The reasons behind this nature may be attributed to their activity selection, entry choice, future vision, objectives of starting the business, resource availability, including adequate financial access, educational level, skills acquired, poverty level and so on (Cunningham & Maloney, 2001; Daniels, 1999; Kuzwila, 2005; Mead & Liedholm, 1998; Roy & Wheeler, 2006; Shaw, 2004). Careful investigation of these factors shows that most of these impediments should be corrected at the starting stage and it can be done providing correct assistance for the entry-stage choice.

As it is reported in the global literature the most widely documented facts that constraint informal entrepreneurship in the developing countries are skills and initial capital requirements (Cunningham & Maloney, 2001; Desai, 2010; Fields, 1990; Naudé, 2010). In this respect, there is a vast literature that examines the transition into self employment and credit constraints (Evans & Jovanovic, 1989; Evans & Leighton, 1989; Magri, 2011; Mondragon-Velez, 2010). However, the most crucial fact whether credit matters in determining the entry-stage and the determinants of entrepreneurial entry have not been in consideration so far.

Informal microenterprises are ubiquitous in the urban sector serving as the major source of employment in Sri Lanka (Arunatilake & Jayawardena, 2005; Ebert, 1999; Gunathilake, 2008; Hettige, 1989; Nanayakara, 2006). It is estimated that more than 45 percent of the urban poor in the country depends on microenterprise activities (RUSP [Relocation of Underserved Settlements Project], 2009). Some anecdotal evidences reveal a lack of access to credit as a major impediment for microenterprise activities in the urban informal sector in the country (Sevanatha, n. d.) while some studies done on micro entrepreneurship claimed credit access and skill would be significant complementary factors that constraint the graduation of micro enterprises (De mal et al, 2008; Fairoz, Hirobumi, & Tanaka, 2010; Sumanasena, 2005). However, none of the studies have investigated the impact of financial constraints and the factors that determine the micro enterprise entry-stage choice.

Quantification of the credit effect and the other factors that determine entry-stage or engagement choice is crucial for correct policy signals in order to channel scarce resources to the correct targets and thereby achieve prospected economic growth in a developing country like Sri Lanka. Therefore, this study aims to explore the existence and the impacts of financial constraints and other related factors on entrepreneurial engagement choice in the urban informal sector in Sri Lanka. It was found that the micro entrepreneurs are credit constrained in their entrepreneurial entry choice. Specifically, this study makes its novel contribution by addressing the following research questions;

(1) Are micro entrepreneurs credit constrained in their entry-stage choice?

(2) To what extent does the financial constraint matter at entrepreneurial entry?

(3) What are the other significant contributors of entrepreneurial entry?

2. Literature Review

The degree of accessibility of capital markets or the role of credit in becoming entrepreneurs differs amongst the economic theorists. From the classical and even the old neo classicist's point of view, there is no issue or constraints on credit where the capital market is assumed to be perfect. According to them capital market is imperfect. Entrepreneurs only for those who have a certain level of reputation can borrow from this market due to asymmetric information. Alfred Marshal assumes that the capital market is perfect to borrow, but the entrepreneur working on borrowed capital has a disadvantage in the operation of his venture: he needs to bear an additional cost for the banker in order to compensate for his 'personal' risk. Therefore, Marshal stressed the need of having some sort of wealth is very advantageous to become an entrepreneur. Schumpeter works on the assumption of the perfect working of capital markets. However, "innovations can be equally well supported by own wealth as by credits. If they are supported by own wealth, the entrepreneur fulfills two jobs: the entrepreneur's job and the banker's job" (Schumpeter, 1949 as in Praag, 1999). The capital market viewed in the Knight's economy is imperfect. According to him, entrepreneurs need wealth; at least enough to pay production factors their guaranteed remuneration. However, Knight (1971) acknowledges the possibility of the entrepreneur being able to convince a banker of the accuracy of his judgments in order to borrow the capital required. Kirzner, an Austrian thought, agrees with Schumpeter in this respect. Entrepreneurship is not restricted to persons who own resources themselves. 'But it is still correct to insist that the entrepreneur qua entrepreneur requires no investment of any kind' (Kirzner, 1973, p. 49). Funds are supplied by capitalists as long as the entrepreneur is in a position to finance the necessary interest payments. Synthesizing these main theories of entrepreneurship with testable hypotheses, Praag (1999) implied that one of the possible impediments to entrepreneurship is lack of capital or liquidity constraints and there by an ownership of initial capital or wealth is advantageous on entry and the success of entrepreneurship where there is imperfect capital market.

Accordingly, one of the ways to identify financial constraints is to look at the importance of household wealth in the decision to become an entrepreneur. In the absence of correlation between wealth and entrepreneurial talent, wealth should matter in this decision only for financially constrained households (Evans and Jevonic (1989). Because provided that they have the ability to obtain capital as the price takers in capital market, the decision to start a new venture should not depend on the prospective entrepreneurs' personal wealth endowment. Following this, many prior academic studies have focused on the importance of liquidity constraints to entrepreneurs through wealth. However, they yield contradictory results and still in debate.

Numerous studies have found a positive relationship between wealth and entering entrepreneurship, and interpret this as evidence of the existence of liquidity constraints following Evans and Jevonic (1989). Evans and Leighton (1989) first found that the probability of entrepreneurial entry is roughly independent of age and labor market experiences. They used the data from the National Longitudinal Survey of Young Men for the period from 1966 to 1981 and the Current Population Survey for the period from 1968 to 1987. Further, they presume that potential entrepreneurs are liquidity constrained because the size of net worth was reported to be positively correlated with the odds of being an entrepreneur. In their study, Evans and Jovanovic (1989) revisited Evans and Leighton (1989) work and interpret the positive relationship between wealth and starting a business as evidence of the existence of liquidity constraints by using the self employment concept. They analyzed the effects of family net assets on the probability of becoming self employed and found the evidence that liquidity constraints bind.

Mondragon-Velez (2010) estimated a life cycle model of occupational choice, including human capital heterogeneity and found wealth as a key element of the occupational decision at the individual level in the USA. This finding is also supported by Lazear (2002). Further, in a different angle, Cressy (2000) extends the Evans and Jovanovic (1989) model to include uncertainty and risk, and finds that decreasing absolute risk aversion can explain the positive relationship between wealth and entrepreneurship. Magri (2011) provided the evidence on household wealth matters in the decision to become an entrepreneur in Italy.

A key requirement to study the relationship between wealth and entrepreneurship is a measure of wealth that is not endogenous to the entrepreneurial decision. The norm comes because the wealth from the prior period could be artificially high since the household has been saving specifically to fund a new business enterprise. Therefore, a various forms of wealth proxies have been tested in the literature. In this respect Evans and Leighton (1989), Gentry and Hubbard (2001), and Lel and Udell (2002), Quadrini (1999) had shown that wealth or proxies matter in the entrepreneurial decision showing a positive relationship between wealth and entrepreneurship transition vice versa. Combining family assets with the inherent as wealth Holtz-Eakin, Joulfaian, and Rosen (1994a, 1994b) advance that wealth significantly positively impacts on the probability of entrepreneurial choice. Moreover, they propose that liquidity constraints significantly affect entrepreneurial failure as well.

Blanchflower and Oswald (1998) use the recent receipt of an inheritance as a way to deal with the potential endogeneity of wealth. The rationale is that if potential entrepreneurs face liquidity constraints (or owing a substantial capital stock is significant in enterprise entry), then the receipt of an inheritance should loosen the constraint and have a positive effect on the propensity to start a business. The findings showed that such receipts are not only statistically significant but also quantitatively important supporting monotonic relation of wealth and entrepreneurship. Lindh and Ohlsson (1996) support this suggesting that Swedish individuals who have received an inheritance or won the lottery are more likely to be self-employed.

Despite many studies have interpreted the positive relationship between wealth and entrepreneurship as evidence of liquidity constraints, some studies have questioned this claim. Hurst and Lusardi (2004), for example, examined the relationship of household wealth and entrepreneurial entry using business ownership in the Panel Study of Income Dynamics from 1984 to 1994 and found no relationship between wealth and entrepreneurial entry for most of wealth distributions. According to them the positive relation existed only for households in the top 5 percent of the wealth distribution. Further, they argue that for the majority of households starting a business, the capital requirements are of such a size that liquidity constraints are not binding.

It is shown that the role of liquidity constraints on entrepreneurship has presented a persistent puzzle for scholars. It is possible that these contradictory results may be related to the relative importance of different types of financing. Entrepreneurs need startup capital to invest in their projects as well as operating capital to finance everyday expenses. Presumably, individuals with very high levels of wealth should have enough finances to cover both these capital needs.

Besides liquidity constraints, a considerable portion of the literature revealed the impact of other covariates such as family background, parental wealth or inherited experience on the propensity to be self-employed and the probability of self-employment entry. It is sometimes not easy to extricate the impact of liquidity constraint matters of family environment and is certain that individuals who are coming from entrepreneurial families are likely to fall in to the same field than their counterparts. In many instances these people benefit from parental wealth, intergenerational links and business experience, hence face less financial constraint on setting up their own businesses (Burke, FitzRoy, & Nolan, 2000; Dunn & Holtz-Eakin, 2000). Davidsson and Honig (2003) support this idea. They found that formal education, previous work experience, having entrepreneur parents as well as social and family ties as robust predictors of entrepreneurial entry probability.

From the demographic point of view, the individual's occupational choice towards entrepreneurship is basically determined by his or her basic physical characteristics (Bonte, Falck, & Heblich, 2009), productivity, and the stock of human capital and thereby age. Once the age is taken, ability to store and process information, solve problems, deal with complexity, adjust to new situations, and develop strong social ties and business networks (called tacit knowledge) (Kaufman & Horn, 1996; Ryan et al., 2000); change risk aversion, time discounting over the life cycle and hence there is a golden age of entrepreneurship in human lifespan (Bonte, Falck, & Heblich, 2009). However the effect size, type of functional form and the effectiveness of the significance varies highly (Blanchflower & Meyer, 1994; Blanchflower, 2000; Evans & Leighton, 1989; Delmar & Davidsson, 2000; Mueller, 2006) while some studies find it is insignificant (Evans & Jovanovic, 1989). When gender impact is considered in terms of entry choice, it was found that men are more likely involved in entrepreneurial activity than women in developed country setting (Minniti, Arenius, & Langowitz, 2005; Reynolds et al., 2002) while women are prominent in developing countries (Daniels, 1999; De Mel & Woodruff, 2010; Mead & Liedholm, 1998).

Almost all of the above studies have been conducted in the developed countries and the dependent variable is binary in nature representing the transition into entrepreneurship. Therefore, this study makes its contribution analyzing a sample from a developing country and more specifically the urban informal sector (urban underserved settlements), which has not been in consideration so far. Further the conventional binary response variable extended into polychotomous advancing the research in order to represent the high heterogeneity within the urban underserved sector in terms of entrepreneurial entry and to address the contemporary need of examining covariates of entrepreneurship rather than mere subsistence activities.

3. Theoretical Framework

The theoretical model that used in this study is from Evans and Jovanovic (1989). Considering the works done by Lucas (1978) and Jovanovic (1982), they postulate that there is a positive relationship between the probability of becoming self-employed and the wealth of the entrepreneur due to financial constraints provided that there is no correlation between skills and wealth. Accordingly, agents in the economy differ from their initial wealth endowment (w) and their ability level (φ). Knowing the skill level and the capacity to invest, the occupational choice of the agents depends on the comparative advantage that they gain from running a firm in an unconstrained market. However, with market imperfections and especially with capital constraints the optimal gain depends on the cost of capital. Since the potential capital borrowing is limited by initial wealth endowments, the occupational choice eventually depends on access to capital and thereby wealth. If a household chooses to operate at subsistence activity, it requires no rental capital. And the skill is irrelevant because they use no technology. When market interest rate is r, their expected net income (y) is,

$$y^s(w) = \delta + rw \tag{1}$$

where rw is the return on the household wealth (w) and δ is a productivity parameter. This rate of change in productivity (δ) is assumed constant along the subsistence sector.

But if the household use technology and pay capital rentals as an entrepreneur (with skill φ uses k amount of capital) the output (Y) is given by,

$$Y = \phi k^\alpha \varepsilon \tag{2}$$

Where $\alpha \in (0, 1)$ is the elasticity of output with respect to capital and the term ε is log normal disturbance reflecting a productivity shock, independent from φ and w, with positive support, mean 1 and variance σ^2. At the end of the period household will earn a net income of,

$$y = \phi k^\alpha \varepsilon + r(w - k) \tag{3}$$

If w < k, the entrepreneur is a net borrower and r (w - k) is the amount that he should pay at the end of the period. A households can borrow only up to an amount which is some fixed proportion of their initial wealth, (η- 1) w, but cannot exceeds it. The most that can be invested in their entrepreneurial business is then equal to ηw, where the parameter η satisfies η≥ 1 and assumed to be equal for everyone.

If the interest rate, r, is equal for everyone and further for simplicity the lending rate and the borrowing rate is assumed to be equal, the entrepreneur's optimal investment capital then solves for his expected profit maximization problem

$$max\{\phi k^\alpha + r(w - k)\} \qquad s.t. \; 0 \le k \le \eta w$$

at an interior maximum that leads to solution,

$$k^* = (\phi\alpha)^{1/(1-\alpha)} r^{-1/1-\alpha} \tag{4}$$

As long as the entrepreneur is unconstrained this will be the feasible solution. It implies that

$$\eta w > \left(\frac{\phi\alpha}{r}\right)^{1/(1-\alpha)}$$

An entrepreneur will be unconstrained if his ability ϕ satisfy

$$\phi \leq r \propto^{-1} (\eta w)^{\left(1/1-\alpha\right)} \equiv \overline{\phi} \tag{5}$$

Similarly, the unconstrained condition implies that his initial wealth w must satisfy

$$w \geq \eta^{-1}(\phi \propto r^{-1})^{1/(1-\alpha)} \equiv \overline{w} \tag{6}$$

Entrepreneurs will be unconstrained only if their ability is low enough for a given level of wealth as shown by the Equation 5.5. This indicates that holding household wealth constant, borrowing constraints are more likely to bind for higher skilled households. And as implied by Equation 6, for a given level of ability, entrepreneurs are unconstrained only if their initial wealth is high enough. Therefore the actual financial constrained entrepreneurs are those with initial wealth below the critical threshold $\overline{w}$ or with ability higher than $\overline{\phi}$. For these households, the maximization constraint will be binding so that they will invest ηw in their entrepreneurial business, even though they would like to invest more.

Entrepreneurs' expected net entrepreneurial income therefore takes the following form.

$$y^{E,SE}(w, \phi) = \begin{cases} (1-\alpha)\left(\frac{\phi\propto}{r}\right)^{1/(1-\alpha)} + rw & if \ w \geq \overline{w} \\ \\ \phi(\eta w)^{\alpha} + (1-\eta)rw & otherwise \end{cases} \tag{7}$$

This clearly implies that household chooses entrepreneurship only if their expected profit from doing so exceeds what they would get by staying in the subsistence. In other words, they become entrepreneur only if their comparative net earnings, $y(w,\phi) = y^E(w,\phi) - y^S(w)$ or $y(w,\phi) = y^S(w,\phi) - y^{SE}(w)$ is positive. However when comparative gain function is derived as,

$$y(w, \phi) = \begin{cases} (1-\alpha)\left(\frac{\phi\propto^{\propto}}{r^{\propto}}\right)^{1/(1-\alpha)} - \delta & if \ w \geq \overline{w} \\ \\ w(\phi\eta^{\alpha}w^{\propto-1} - \eta r) - \mu & otherwise \end{cases} \tag{8}$$

It $y(w,\phi)$ does not depend on the initial wealth w when wealth endowment is higher than the critical wealth threshold $(\overline{w})$. This implies that the decision on starting stage the business for wealthier households is an invariant of their capacity to get funding but their skill. On other hand it implies that having high skills is not enough to become an entrepreneur whereas a minimum level of initial wealth is also required for this purpose. On the assumption of that there is no correlation between initial wealth and skill level the probability of entry choice is correlated with initial wealth only when there are credit constraints. In order to examine whether urban informal micro entrepreneurs are credit constrained at their entrepreneurial entry choice this preposition has been explored utilizing the multinomial logistic model.

4. Research Methodology

4.1 Sample Design and Data Collection

Data were taken from a multi stage cluster sample of 300 micro entrepreneurs who reside in urban underserved settlements in Colombo. From 48 administrative wards of the Colombo Municipal Council (CMC) the most Underserved Settlements [USS] concentrated 6 wards were selected at first. From the selected wards seven geographical clusters were selected and then a total of 12 enumeration areas were selected representing each cluster. Finally a random sample of micro entrepreneurs was considered. Registered list of micro entrepreneurs is not available for the informal sector as usual in many other countries. Therefore, in the selected localities, randomly chosen business places were approached and the questionnaire was administered. However the survey

team was advised and properly guided to minimize bias within the enumeration area and keep diversity of selecting observations. The main survey tool for the study was a questionnaire which consisted close ended questions. Self administered method was used for a part of the field survey whilst interview method played the major role. Consistency was checked for two methods before inputting into the data analysis. Data cleaning, validation and the models were estimated using the facilities available in SPSS 16.0.

4.2 Empirical Model for Entrepreneurial Entry Choice

The empirical approach stemming from the above conceptual model is a discrete choice based on random utility theory. Since the outcome variable is defined as unordered and with multiple choices, Multinomial Logistic model (MNL) which specified below is estimated for the odds of wealth across entrepreneurial choices. If j indicates the category a microenterprise owner falls into. In this framework, it is allowed the categories in a choice set to take on three values (j = 0, 1, 2) for subsistence, self employed and entrepreneur in entrepreneurship engagement levels respectively.

Considering the choice set of the current study with three elements (0, 1, 2): choice of starting subsistence activity (0), self employed (1) or entrepreneur (2), the random utility model can be written as,

$$Subsistance: U_0 = x\beta_0 + \varepsilon_0$$

$$Self\ employed: U_1 = x\beta_1 + \varepsilon_1$$

$$Entrepreneur: U_2 = x\beta_2 + \varepsilon_2$$

As it is assumed that $\varepsilon_0, \varepsilon_1, \varepsilon_2$ are independent and follow Gumbel distribution. Then the probability that a person choosing alternative *i* rests on the probability that the utility of alternative *i* exceeds the utility of all the other choices, the probability that an individual choose to start each activity can be demonstrated as,

$$P_0 = P(U_0 > U_1, U_0 > U_2) = \frac{e^{x\beta_0}}{1 + e^{x\beta_0} + e^{x\beta_1}}$$

$$P_1 = P(U_1 > U_0, U_1 > U_2) = \frac{e^{x\beta_1}}{1 + e^{x\beta_0} + e^{x\beta_1}}$$

$$P_2 = P(U_2 > U_0, U_2 > U_1) = \frac{e^{x\beta_2}}{e^{x\beta_0} + e^{x\beta_1} + e^{x\beta_2}}$$

As it stands, the cumulative logistic distribution function in a non-linear form, the model's parameters are identified in logits which gives very technical interpretation of the coefficients. Thus, it could be changed by some linear transformation and an identical set of estimated probabilities would result. The standard normalization employed for the purpose of interpretation in the literature is to make "baseline" category against other alternatives which are accessed via log odds ratio. By keeping the choice zero as the base,

$$\frac{P_{ij}}{P_{i0}} = \frac{e^{x_i\beta_j}}{e^0} = e^{x_i\beta_j}$$

Accordingly

$$ln\left(\frac{P_{ij}}{P_{i0}}\right) = x_i\beta_j$$

Where in the general form,

$$ln\left(\frac{P(y_i = j)}{P(y_i = 0)}\right) = \sum_{i=1}^{n} \beta_{ij}x_{ij} \qquad \forall \quad j = 1, 2 \quad j \neq 0$$

Taking the logarithm of the ratio of any two choice probabilities to get the log odds ratio, the full model for the wealth effect on entrepreneurial entry choice when controlling for personal and household characteristics, was specified as follows.

$$ln\frac{P_{ij}}{P_{ik}} = \beta_0 + \beta_1 wealth + \beta_2 education + \beta_3 tradition + \beta_4 risk + \beta_5 inher + \beta_6 d_{prvjo} + \beta_7 d_{gen} + \varepsilon$$

In this multinomial setting, the dependent variable is the log odds ratio of three entrepreneurial entry choices: Subsistence, Self-employed and Entrepreneur which take values 0, 1 and 2 respectively. Independent variables

included were personal and household characteristics: level of education, whether they choose the activity because of the tradition; risk taker; whether they had inherent; whether they have previously employed and the gender of the micro entrepreneur. Wealth that used in the model is the value of capital related assets prior to the entrepreneurial decision, therefore unlike the most of measures used in the literature, not to be endogenous. In other words, wealth used in the study is not the values from the survey year, but what they used as the starting capital at the beginning of the business. Therefore, it is unaffected by any gains in wealth due to the business. Despite the main wealth measure, a wealth proxy was created for sensitivity analysis. In constructing a suitable ex-ante total wealth proxy, this study used an asset index approach which is increasingly advocated by the scholars (Moser & Felton, 2007). The values of this aggregate index are created utilizing principal component analysis over 14 consumer durables from the household belongings and basic infrastructure facilities which were acquired prior to the beginning of the microenterprise. Therefore the problem of endogeneity was controlled from the wealth proxy.

5. Results

Table 1 presents the results from the multinomial logit model, where the dependent variable takes 0, 1, and 2 for subsistence, self-employed and entrepreneur respectively. The first three columns reports, odds of choosing self-employed rather than subsistence while the second three columns reports, the choice probability of being in entrepreneur against subsistence. As pointed out in Table 1, wealth is positively significant for all three choices of entrepreneurship at the 5 % level of significance, χ^2 (1) = 1.2, p<.05 and χ^2 (1) = 1.6, p<.05 for self-employed and entrepreneur choice respectively. Level of education is positively significant with at the 10% level for self-employed while it is significant at the 5% for entrepreneur choice compared to subsistence activity. Non-risk taker significantly negatively associated with choosing entrepreneur activity whilst it has no predictive power over self-employed. Being female is inversely significant with entrepreneur choice, χ^2 (1) = .267, p<.001. However, this variable is not significant for choosing self-employed. Being a person whose parents are self-employed or having a training has a significant positive effect, χ^2 (1) = 1.8, p<.05 on entering as entrepreneur while it cannot predict entrepreneurial choice probability of the self-employment group. Unemployed are more likely to start as self-employed whilst this factor is positively significant at conventional levels for all three choices. The results of the multivariate models estimated for non-linear specification of wealth and the wealth proxy are reported in Tables 2 and 3 respectively. Accordingly, all wealth and education design variables are significantly associated with entrepreneurial engagement choice at conventional levels. Compared to low educated group secondary educators are significantly, but negatively related to the odds of choosing to be self-employed, χ^2 (1) = 1.4, p<.05.

6. Discussion

Table 1. Choice probability of entrepreneurial engagement: Multinomial logit estimates

Variables	Self Employed			Entrepreneur		
	B	Wald	Odds R	B	Wald	Odds R
Intercept	-0.739	3.973		-2.114	20.046	
	(0.371)			(0.472)		
Gender(F)	-0.632	3.573	0.531	-1.319***	7.652	0.267
	(0.334)			(0.477)		
Education level	0.261*	1.983	1.298	0.671**	10.354	1.957
	(0.185)			(0.209)		
Non risk taker	-0.205	1.063	0.814	-0.386**	1.701	0.994
	(0.199)			(0.235)		
Inherent	0.015	0.002	1.015	0.274	0.522	1.315
	(0.314)			(0.378)		
Unemployed	0.639**	4.529	1.895	0.082*	1.488	1.326

	(0.300)			(0.065)		
Parents occu/Tradition	0.039	0.018	0.962	0.612**	3.300	1.845
	(0.295)			(0.337)		
Initial wealth	0.215**	1.879	1.239	0.462**	6.087	1.587
	(0.164)			(0.187)		
*** p < 0.001; ** p < 0.01; * p < 0.05, (SE)						

Multivariate analysis showed that the coefficient of wealth covariate is positive and significant, however the effect is not very large compared to some other variables in the model. A unit increase in wealth leads only a little less than one-half percentage point increase in the probability of starting a business at the self-employed level. A similar result is found in the entrepreneurship level with the marginal effect but stronger than self-employed. Though the common sited issue for the micro entrepreneurs is the credit constraint, wealth doesn't seem to be the most prominent factor behind entrepreneurial choice when all the variables considered. However, it is the most prominent when unchangeable or natural factors like gender and lifetime effected variables such as education are disregarded. And the theory does not imply that it should be the prominent factor but should have a positive relationship to imply the decision is under credit barriers regardless of the strength of the relationship. Therefore, it is clear that all the choice probabilities are positively significant with the wealth covariate.

In terms of the other covariates in the estimated model, the results are almost identical in the direction across the different groups except trained. Being a person whose parents self-employed or having training has a strong positive effect on entering as entrepreneur while it cannot predict entrepreneurial choice probability of the self-employment group. Education level has a strong positive effect on both. An increase in one unit of the education variable increases the odds of being an entrepreneurs group by about two times while it impacts by less than one half times for the self-employed choice. Further, education is the most confounded for the entrepreneurs, but it takes the last for the other compared to subsistence group when Wald value is considered. As many other studies have found, being a male has a significant positive relationship with the choice probability for both. It is a one of the prominent factors in predicting entrepreneurship, having odds ratio of 3.9. Males are almost four times more likely to be in the entrepreneur group than females. Labor force experience has a positive, but decreasing effect on starting a business, while working in the state or private sector as a salaried employee previously significantly predict the probability of starting as in the self-employed group. The positive and significant effect of the previous salaried employment indicates that some households are "pushed" into self-employed may be due to a need of supportive income even after getting retired to cover the cost of living. Not surprisingly, people who are unemployed more likely to being in the sector regardless of the group. However, this relation is negligible for the entrepreneurs. Unemployed persons are more likely to start self-employments showing significance at the 5 percent level of significance with odds of 2.1. Results for the variable measuring the person's attitude toward risk show a strong positive relationship between being willing to take higher risks and starting a business as an entrepreneur. Literature on inheritances on the decision into entrepreneurship is positive and significant for developing countries and also small and medium enterprise sector (Blanchflower & Oswald, 1998; Holtz-Eakin et al., 1994). This variable has no predictive power in informal sector micro entrepreneurship in the country. However, the data received is less reliable which are from the recall memory of informal sector micro entrepreneurs and defining their receipts is even difficult. Therefore, the reported results could be further investigated. Some of the demographic factors such as age, marital status, gender which are important in some studies (Blanchflower, 2000; Delmar & Davidsson, 2000; Minniti et al., 2005; Mueller, 2006) do not affect the probability of entrepreneurial choice in the current study.

Regression results of the logit models with linear specification of wealth predict a positive and significant relationship. Then it is worth investigating this relationship with the non-linear specification of the variable. In order to do this quartiles of the distribution of wealth is taken into account constructing three dummy variables to represent the first, second and third quarters. And additionally two dummies were created to represent secondary and above-secondary education levels taking primary or below as the reference group.

It is quite interesting and carefully understood the minus coefficient reported in Table 2 for the secondary educator which does not imply negative impact of education. This shows low educator's preference is higher for to be self-employed than the secondary educators. Table 2 further presents the results of two logit models for non-linear wealth specification, where the dependent variable is choice events as mentioned above. As it was

reported, all parts of the wealth distribution show a positive and significant effect across two models. This implies that the probability of the transition into a business increases gradually as one move from self-employment to entrepreneur group.

Table 2. Choice probability of entrepreneurial engagement: multinomial logit estimates for wealth levels

Variables	Self Employed			Entrepreneur		
	B	Wald	Odds R	B	Wald	Odds R
Age	-0.532	3.573	0.531	-1.319	7.652	0.267
	(0.434)			(0.477)		
Gender (F)	0.005	0.139	1.004	0.022*	0.759	1.012
	(0.031)			(0.013)		
Above Secondary	0.714*	3.344	2.042	1.512***	11.519	4.535
	(0.390)			(0.445)		
Secondary	-0.400*	1.408	0.741	0.594**	2.234	1.812
	(0.334)			(0.398)		
Unemployed	0.599**	0.808	1.820	0.358*	0.571	1.294
	(0.305)			(0.341)		
Non risk taker	0.610	4.339	1.240	0.351*	1.467	1.286
	(0.693)			(-0.334)		
Initial wealth T2	0.497*	2.226	1.644	0.938**	6.261	2.555
	(0.333)			(0.375)		
Initial wealth T3	0.434*	1.268	1.544	0.551**	1.774	1.734
	(0.386)			(0.454)		
Parents occu/Tradition	0.112	0.135	1.118	0.678	3.949	1.970
	(0.304)			(0.341)		
Inherent	0.114	0.123	1.121	-0.245	0.403	0.783
	(0.326)			(0.386)		

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$, (SE)

Although similar relationship result is found for all wealth dummies, the magnitude of the effect is somewhat different across the groups compared to the lowest quartile. Persons who are in the first quartile are more likely to start as a self-employer while wealthy assets owners more likely to begin at the entrepreneur level (De Mel et al., 2008; Evans Jevonic, 1989). The relationship between wealth and entrepreneurship appears to be driven by these high-wealth households as well.

The results reported for the other variables do not seem to deviate due to the quartile representation of the wealth measure in the model. Findings of the estimated model lend much support for the implication of the positive relationship between wealth and starting a business which provide evidence of the existence of liquidity constraints. Further, it shows that liquidity constraints certainly exist and more strong for low wealth persons than wealthy persons.

In constructing a suitable ex-ante total wealth proxy for the sensitivity analysis, this study used the asset index approach which is increasingly advocated by the scholars (Moser & Felton, 2007). The values of this aggregate index are created by using principal component analysis of 14 consumer durables from the household belongings and two dummy variables (have = 1, have not = 0) which were acquired prior to the beginning of the microenterprise, reported in the questionnaires. Therefore the problem of endogeneity is controlled from the wealth proxy.

Table 3. Choice probability of entrepreneurial engagement: Multinomial logit estimates for wealth proxy

Variables	Self Employed			Entrepreneur		
	B	Wald	Odds R	B	Wald	Odds R
Education level	0.190**	0.349	1.094	0.349**	3.693	1.417
	(0.152)			(0.181)		
Non risk taker	-0.208	1.001	0.812	-0.372*	1.487	0.931
	(0.208)			(0.244)		
Inherent	0.069	0.049	1.071	0.404	1.154	1.498
	(0.311)			(0.376)		
Unemployed	0.634**	4.473	1.886	0.281*	0.286	1.324
	(0.300)			(0.339)		
Parents occu/Tradition	-0.088	0.089	0.916	0.466	1.947	1.594
	(0.293)			(0.334)		
Initial wealth	0.296*	2.538	1.344	0.684***	10.708	1.982
	(0.186)			(0.209)		

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$, (SE)

The characteristics that cause persons to build up higher values asset index could be the characteristics that lead households into entrepreneurship. More advantageously the representative asset measure could be capturing the effects of unobservable wealth variables that are correlated with wealth and the desire the starting point of a business (Moser & Felton, 2007).

According to the Multinomial logistic results reported in Table 3, asset index and the choice of entrepreneurship related positively and significantly by proving the results reported earlier. Wealth proxy represents a strong relation for the self-employed compared to subsistence while showing the unit increase cause odds to be increased by almost 1.1. For the entrepreneur group this variable influence more strongly (1.4). Wealthy persons in terms of index values are more likely to be in the entrepreneur group rather than in the subsistence or self-employed. As noted in Table 3, other covariates show similar direction in relation to choice probability regardless with the wealth measure used. However, the effects show some deviations in terms of the size. Two models confirmed the positive relationship of wealth and entrepreneurial choice for urban informal sector micro entrepreneurs in the country showing the existence of liquidity constraints.

7. Conclusion

In sum, the implication of the theoretical model tested in the study is that if there is no correlation between skills and wealth, then the choice probability of starting point of the business is positive with wealth when financial constraints are exists. This positive correlation between wealth and the probability of starting a business would imply that initial wealth determines the amount of capital required for business startups thus providing evidence of financial constraints.

The estimate of the coefficient on wealth shows that household initial wealth has a positive effect on the probability of starting choice of a business and is statistically significant at conventional levels for the whole sample. It was found that the entrepreneurs are credit constrained at their entry and survival as well. More crucially, lack of credit access has found to be the most binding constraints to the potential entrepreneur groups so that they are unable to utilize the economic opportunities available in the local area in a sustainable and successful manner. This means that if households or micro enterprise holders are wealthy enough they can go beyond the subsistence level which ultimately contributes the growth purposes of the country as a whole. Estimated regression coefficients on wealth, wealth quartiles and wealth proxy show almost similar results confirming positive significant over the entrepreneurial choice probability. The results further suggest that wealth and education are the main factors that strongly influence on the probability of becoming a micro entrepreneur at any form. The results also show positive effects of tradition, trained or parent's occupation and previous employment on the probability of starting a business as a self-employed or entrepreneur compared to subsistence. It also appears that women are less likely to become entrepreneurs compared to men in all the groups of interest.

8. Implications

The findings of this study have some implications for theory, and practice for increasing and improving entrepreneurship, particularly in the urban informal sector in Sri Lanka. From the theoretical point of view, the current study will be a guide to investigate the micro entrepreneurship specifically in the developing world in a more sophisticated manner before commencing ad-hoc policies on miss-specified targets. Further, this study will open new avenues to future research endeavors on urban poverty and micro entrepreneurship in Sri Lanka.

Some of the policy implications drawn from the study are strengthening of the retail lending techniques to lower transaction costs in dealing with entrepreneurs in micro business, forming policies to develop skills and change attitudes complementary to enhance credit facilities, provision of promotion-based, and community friendly, entrepreneur-centered, follow-up training to upgrade their knowledge and management of enterprising skill. The findings of this study further imply the need of supportive services to reduce household burdens on the women entrepreneurs in order to make them more productive rather than trying to assist them for a supportive income.

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What Is Wrong with Competency Research? Two Propositions

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Abstract

The theory and practice of competency approach has remained significant even decades after its conception. However despite its omnipresence, its validity has been repeatedly questioned. For it to be a truly useful tool, these criticisms and their roots must be critically analyzed to identify improvement measures. To find the solutions, a proper analysis of the competency subject must be first conducted. This paper aims to revisit the prevailing competency theories and backgrounds, with the intention to identify gaps and propose corrective measures. This paper starts by reviewing the theoretical foundations underpinning the competency approach, its origins, frameworks and key criticisms. Based on the reviews, it was found that the approach suffers two limitations. Firstly, its frameworks tend to be bias towards achieving utilitarian objective whereby definition of competent managers is limited to their contribution to organizational economic performance. Secondly, its research were mainly conducted from the positivistic lenses which over-simply the complex nature of managerial work. Based on these findings, the author then proposes epistemological and ideological turns that researchers should consider in researching the competency subject.

Keywords: competency, competence, criticisms, managers, epistemology, ideology, future research

1. Introduction

The theory and practice of competency approach has remained significant decades after its conception. A simple search using the term in the EBSCOhost database yields over 4,000 academic articles. The approach is being used across the globe for instance in Europe (Horton, 2000a; Hondeghem & Vandermeulen, 2000), Australia (Gonczi, 1994), China (Liu et al., 2007), South Africa (Parker & Walters, 2008), Middle East (Ismail et al., 2009) including Malaysia (Azmi, 2010; Azmanirah et al., 2014). Competency is an important tool in organizational human resource management efforts. It is not only being applied in private organizations, but also in public sector (Horton, 2000a; Hondeghem & Vandermeulen, 2000) and non-governmental organizations (Besler & Sezerel, 2011). This collection of evidence suggests that competency is progressive in both theoretical and practical terms.

However despite its omnipresence, validity of the approach has been repeatedly questioned. For it to be a truly useful tool, these criticisms and their roots must be critically analyzed to identify measures for improvement. Moving along this thesis, this paper aims to revisit the prevailing competency theories and backgrounds, with the intention to identify gaps and propose measures with regard to the approach taken in researching the subject. The article is organized as follows. It starts with a discussion on the theoretical underpinnings of the competency approach with a special focus on the American and British competency movements, two countries where the concept received most of its early developments. These two countries were also chosen given their standing as the classic cases in explaining the competency(e) terminology debates. The article then progresses to an analysis on several key competency definitions, its properties, samples of competency frameworks and its ideological foundations. To proceed further, its main criticisms together with an analysis of their root causes are discussed. The author then concludes the article by proposing some measures on how these criticisms could be addressed in future research in the subject.

2. Theoretical backgrounds

2.1 Origins

The origin of competency dates back to the medieval time during apprenticeship trainings (Horton, 2000b).

Industrial revolution, scientific management, and post World War II economic booming in the United States (US) gave rise to the concept whereby interests and initiatives were taken to organize occupations with their required skills and knowledge (ibid.). Afterwards, much development in the competency approach has been reported taking place in the US and the United Kingdom (UK), both who have had significant contributions in the conceptualization and practice of the competency approach.

In the US, the development of competency can be traced to individuals in the McBer consulting firm. The concept was first proposed by Harvard psychological professor, David McClelland, who established the firm in 1963. Backed by many empirical research data, McClelland famously debunked the validity of traditional aptitude and intelligence tests like exams in predicting individuals' success in career and life (McClelland, 1973). Instead he argued that individuals are successful because of their underlying characteristics that explain their superior performance. To determine these characteristics, McCelland developed two instruments: 1) Criterion Sampling - which studies the behavioural differences between high and average performers; and 2) Behavioral Event Interviews (BEI) - highly structured interviews on successful people to extract their hidden characteristics, thought process, and feelings which explain their successful behaviors. The competency approach was then popularized, by Richard Boyatzis in his book *'The Competent Manager'* (1982). In 1981 Boyatzis, then a McBer's consultant, was commissioned by the American Management Association to develop a generic model of managerial competency based on McBer's existing projects. The result was a generic managerial competency model based on an intensive, large-scale empirical research involving 2,000 managers holding 41 different jobs in 12 organizations. Due to this, Boyatzis was recognized as the person who first formally defined the word competency (Note 1). Many of subsequent studies on competency in the US generally emanated from the works of McBer, for instance Spencer and Spencer (1993) who were also researchers in the company.

Comparatively, the emergence of competency in the UK took a very different route. The 'competence movement' in the UK is a controversial government-initiated political agenda (Thorpe & Easterby-Smith, 1997). It was introduced to enhance the effectiveness of the British workforce with the formulation of the National Vocational Qualification (NVQ) who was responsible in developing the standards of various occupational groups. The competency influence made way into management education setting due to simultaneous publications by Handy et al. (1987) and Constable & McCormick (1987) whose reports associated British's poor international economic performance to the country's lack of attention and formality in managerial education and development. The reports set forth the professionalization of management in the UK with the formation of the Management Charter Initiative (MCI) in 1987 followed by the Management Standards Center (MSC) in 2000. The objective of the MCI is to develop standards for managerial jobs and to award accreditation to 'qualified' managers. Further discussions on the divergence and convergence of the competency movements in both countries can be referred in Horton (2000b). Unlike the US approach which looks at individuals' traits, the UK competence approach focused on functional analysis method which involves seeking opinions from industry experts to determine functions of a particular job and the minimum level its incumbent has to perform. Therefore, the competence approach does not really differentiate or seeks to determine what makes people exceptional in their job performance which is the focus of the American technique.

These conceptual backgrounds result double-barrel terminologies in the competency/e literatures. Competency in the US was referred as the 'behavioural approach' and defined as individual attributes that are related to effective performance. Whereas, in the UK the term 'competence' is more common that reflects an achievement of occupational standards. Competency was referred as an independent variable whilst competence as a dependent variable (Grzeda, 2005). The US approach was called 'input approach' in comparison to the UK's 'output approach' (Hoffmann, 1999). The competence approach is more acceptable for tangible jobs but less suited for complex jobs like management (ibid.). Some English writers used 'meta competence' to refer to the US approach (eg. Brown, 1993). The two terms do overlap in some areas. Competencies are necessary for competent performance and vice versa (Woodruffe, 1993; Young, 2002; Mumford & Gold, 2004), although this relationship is not necessarily causal. Having the right competencies is only one of the important ingredients for effective performance (Boyatzis, 1982; Woodruffe, 1993). There is also measurability connotation in most US-based competency definitions (for eg. Spencer & Spencer's, 1993) which implies a comparison to a standard, thus making the US approach similar to the UK approach. For the purpose of this writing, the term competency is used as it is believed covers the properties of both US and UK definitions.

2.2 Ideologies

Table 1 shows some samples of managerial competency frameworks based on literature reviews or empirical research. In general most frameworks, especially the traditional ones, have overlooked the need for ethical

competency (Jamil, 2011). This may be due to the definition of effectiveness was based on the success of managers in achieving organizational profit objectives. Competencies regarded as contributors / necessary for effective performance are those that have direct use to organization profit maximization agenda. As such, the frameworks suggest that organization is regarded as the main, if not the sole, stakeholder. The limited attention paid on ethical competency in managerial frameworks has also been noted by Burgoyne (1989) and Cheetham and Chivers (1996).

Table 1. Selected examples of competency frameworks

Authors	Competency frameworks
Boyatzis (1982)	Goal and Action Management, Leadership, HRM, Directing Subordinates, Focus On Others, Specialized Knowledge
Viitala (2005)	Interpersonal Competencies, Social Competencies, Leadership and Supervisory Competencies, Knowledge Management Competencies, Business Competencies, Technical Competencies.
Su-Chin et al (2012)	Communication Skills, Teamwork, Ability to Learn, Implementation, Problem Solving, Self-control, Initiative, Enthusiasm, Customer-service Orientation, Relationship Building, Time Management, Leadership.

The competency approach is conceptualized based on two main ideologies: social efficiency theory and developmental humanism (Garavan & McGuire, 2001; Hyland, 1994). Bias towards organizational effectiveness in many traditional competency frameworks is due to the dominance of social efficiency ideology in competency studies. The key and most common thrust is based on Taylor's social efficiency theory which supports utilitarian objectives. This principle is prevalent in competency frameworks developed in the disciplines of management, human resource, and to a certain extent, psychological (e.g. Prahalad & Hamel, 1990; Clardy, 2008; Boyatzis, 1982). Developmental humanism which pursues educational objectives is the less common perspective in competency studies. Frameworks founded by this perspective are more prevalent in education. Approaching competency from the social efficiency perspective seems in keeping in the context of workplace learning as profit maximization tends to be the dominant principle that governs business decisions.

Much of the literature claims that competency is not only concerned with economic objectives but can also be compatible with broader, educational missions. Its advocates (like Hager & Beckett, 1995; Albanese, 1989; Hyland, 1996) argue that the approach can develop whole individuals and can thus be appropriately applied in formal education. This perspective is especially applicable in the context of practical-oriented education like the Master of Business Administration (MBA) programs where development of holistic managers is crucial (Rees et al, 2015) Speaking from the context of workplace learning, Finch-Lees et al. (2005) also defended the approach stating that it could actually liberate and empower individuals, which is therefore in line with the concerns of critical theorists. Given the multi-faceted interpretations by its stakeholders, Hoffmann (1999) argues that the aim should not be in finding a single true definition that can satisfy everybody, but to select one which suits an intended purpose and context.

3. Criticisms

Despite its significance the competency approach is plagued with long-standing controversies. The main criticism is on its over-simplification of the complex nature of managerial roles. Its view and quest for *the* 'ideal' model of effective management behaviours suggest that managerial jobs are universal and standardized. Such thinking reflects the theory of scientific management which has become increasingly irrelevant in today's world. The manner in which the competency approach tries to capture all the mysteries of managerial work into sets of 'to do' and 'to have' lists has been considered an insult to managerial communities (Antonacopoulou & FitzGerald, 1996). It has been argued that competencies have failed to provide enough subtleties, complexities and contextualities necessary for effective leadership in organizations but have produced conformity and unfocused leadership model (Bolden & Gosling, 2006).

Secondly, the approach is also criticized for assuming that competencies and effective performance is necessarily direct, observable and testable relationships. This criticism is targeted more towards the British MCI competence framework which is concerned with the measurement of managerial performance outputs to some predetermined standards with the purpose of accrediting the performance according to several competence levels. Such practice

ignores the fact that effective managerial performance most of the time involves intangible and hard-to-measure elements. By focusing on the output, the MCI method failed to recognize that there are various ways to which managers learned and became competent (Burgoyne, 1989). In other words, adoption of the MCI framework across Britain suggests there is only *one* way for managers to become competent, and that is through the MCI accreditation. Antonacopoulou and FitzGerald (1996) also noted the same stating that the system disregards the significance of the managerial learning process.

Thirdly, the lack of consensus in the competency definition has been considered problematic. For instance, Jubb and Robotham (1997), notable critics of the approach, label the competency discourse as '*confusing and confused*' and declare the approach a '*myth*' (p. 175) whose validity has not been adequately proven. As mentioned earlier, the definition difference is a result of the multi-disciplinary nature of the discipline. Competency has originated from the disciplines of psychology, management / human resource, education and political disciplines (Burgoyne, 1993; Hoffmann, 1999). Each discipline with different interests that affects its orientation towards macro/micro, theoretical/practical and technical/practical dimensions (Burgoyne, 1993). Psychologists concern with individual traits for effective performance (e.g. Rhee, 2008; Boyatzis, 1982). Human resources pursue it as a tool for organizational strategic planning (e.g. Clardy, 2008; Rees & Doran, 2001). Whilst some educationists perceive it as a political move to vocationalize education (e.g. Macfarlane and Lomas, 1994). Given these diversions, competency definition provided by a particular author is therefore oriented towards the purpose of his / her discipline. This phenomenon can be seen in the competency definitions forwarded for instance, by Boyatzis (psychology), Woodruffe (human resource) and Hager and Beckett (education).

Competency models have been said incompatible with our fast-changing world. Caldwell (2003) argues that identification of relevant competencies is '*impossible*' and not '*useful*' in this volatile environment. The use of functional analysis technique, common in many competency studies, is retrospective rather than prospective. Antonacopoulou and FitzGerald's remarked that "*instead of growing dynamic, flexible and adaptable managers, capable of facing the challenges of tomorrow, the risk seems to be that the competency framework is, in an evolving society, cultivating dinosaurs struggling to develop the skills of the past*" (1996: 34). Macfarlane and Lomas (1994) declared the MCI competence approach as characterized by conformity, control, being present and inward-looking which they argued is in total disharmony with the concept of learning organization that requires managers to empower, reflect, debate and concentrate on future needs.

And the lastly, the idea of the generic competency framework has been said to ignore the importance of work context in influencing managerial behaviours (McKenna, 2004; Burgoyne, 1989). The generic models wrongly assume that managerial works are standardized and that the required competencies are similar across organizations and countries. A manager considered 'competent' in one organization, industry or in a particular country will not necessarily perform well in other contexts. The importance of context to managerial effectiveness has been repeatedly proven in the literature (e.g. Hofstede, 2001; Erondu, 2002). Even within the same organization, interpretation and application of certain competencies varies amongst managers (Antonacopoulou & FitzGerald, 1996; Hayes et al., 2000).

4. Propositions

The following present two suggestions which researchers may consider when researching competency. These suggestions aim to downplay the above-mentioned criticisms towards the subject.

4.1 Proposition 1 - Epistemological Consideration

Wrong epistemology has been pointed out as the root cause for the widespread criticisms (Burgoyne, 1989; Garavan & McGuire, 2001; Sandberg, 2000). Being originated from psychology, competency shares many of the discipline's positivistic tradition in its assumptions of human behaviours. Rather than capturing 'actual' competencies from employees' perspectives, positivism was argued results researchers' own preconceived ideas of an 'ideal' framework even before they commence fieldwork (Sandberg, 2000). Sandberg further argues that employing positivism in competency studies was wrong because it "*invoke(s) a dualistic ontology, assuming that person and world are distinct entities, and an objectivistic epistemology, assuming the existence of an objective reality independent of and beyond the human mind*" (p. 11). The positivistic approach is obvious with the use of functional analysis method and measurement of managerial performance. The functional analysis method breaks down management functions into a series of disintegrated tasks followed by their required standards. This practice violates the holism/reductionism principle (Hager & Beckett, 1995) and results a series of 'can do' lists involved in managerial work. The problem with this approach is even if managers were able to perform and achieve the standards listed, they would not be necessarily considered competent managers (ibid.).

With regard to measurement of managerial performance, rationalistic assumption that performance is observable and measurable tends to emphasize tangible outcomes as opposed to the learning process which is soft and self-perceptual. This perspective clearly undervalues concepts such as self-reflection which is significant to one's learning. The grave differences in the ontology, epistemology and methodologies between the existing competency studies and the reality of (i.e. leadership) practice was also noted by Carroll et al. (2008) as shown in Table 2.

Table 2. The competency / practice distinction (Carroll et al., 2008, p. 366)

Competency	Practice
• Rooted in objectivism	• Explicit constructionist
• Individual level of analysis	• Inherently relational and collective
• Quantifiable and measurable	• Discourse, narrative and rhetoric
• Unanchored in relationship and context	• Situated and socially defined
• Privileges reason	• Privileges lived or day-to-day experience
• Assumes intellect predominantly	• Incorporates embodiment and emotion

These arguments suggest that researching and developing managerial competency frameworks based on positivistic lenses are inappropriate as it oversimplifies the complex nature of managerial work, which in reality involves a lot of unobservable, immeasurable and subjective activities. The use of positivism in competency studies at best results in erroneous descriptions and prescriptions of managerial jobs. Therefore, an alternative epistemology, one which is in better harmony with the qualitative nature of managerial work may be required to produce more valid competency findings.

Interpretivism has been suggested as the more appropriate epistemology to study competencies (Garavan & McGuire, 2001). Interpretivism regards social reality as a product of its inhabitants hence the study of social phenomena requires an understanding of the social world that people have constructed and which they produce through their continuing activities (Blaikie, 2007, p. 124). Phenomenology, one of interpretivism variants, ensures that the competency framework is contextually-specific and appropriately values the learning journey that individuals experience. Phenomenology is able to solve many of the flaws in competency models because it treats a worker and his/her work as inextricably related (Sandberg, 2000). It also allows rooms for competency adjustment depending on contextual factors and gives each organization its competitive advantage by cultivating unique competencies on its managers. This view also concurs with the suggestion by Bolden and Gosling (2006) who argue that research on (leadership) competency frameworks should explore the symbolic and narrative nature of collective sense making in organizations, move from the individualistic notions of leadership to more inclusive and relational perspectives, and emphasize on the processes by which competency frameworks can contribute towards enhanced organizational performance to better understand its application and usefulness. Anthropology, narrative and storytelling (McKenna, 2004) and managerial portfolio (Burgoyne, 1989) are some of the recommended methods in competency research to capture the qualitative aspects of managerial work and competence. Interpretivism allows researchers to recognize that various interpretations exist with regard to managerial competencies, and the significance of contexts in determining the applicability of a specific competency.

4.2 Proposition 2 - Ideological Consideration

Competency frameworks can do better in serving beyond its traditional stakeholder. Given the increasingly complex roles and higher accountability of business where their contributions to societal and environmental health are as important as economic wealth, competency frameworks must be developed by considering both utilitarian and humanist ideologies. As discussed earlier, the definition of 'competent' and 'effective performance' have been mostly viewed from a narrow utilitarian lense dictated by organization profit maximization agenda. There is an apparent lack of attention on ethical and societal considerations to how 'effective job performance' is achieved. Changes in business environments have constantly evolved and redefined managerial roles from *'organization man'* (Whyte, 1956), *'individualized cooperation'* (Bartlett & Goshal, 1997) to *'social entrepreneurs'* (London & Marfopoulos, 2010). Global problems have increased demands for businesses and their managers to think about the consequences of their actions before making any decisions. Peter Drucker (1985) has emphasized before that managers are simultaneously responsible to organizational economic performance, their employees' well-being, and the interests of society. He argued that *"free enterprise cannot be*

justified as being good for business. It can be justified only as being good for society" (p. 41) and that managers are '*leadership group of the modern society'* (p. 325). The economic and social responsibilities of businesses and managers are louder especially in recent years have created an increased interests from the academe (Ghoshal, 2005; Khurana, 2007) and other bodies like the ***Association to Advance Collegiate Schools of Business (***AACSB), Global Reporting Initiative (GRI) and Principle for Responsible Management Education (PRME). Therefore, to ensure that managers these roles are performed well, holistic managerial competencies framework which consist of to cover the functional, personal and ethical sides of their responsibilities are necessary. Furthermore, multiple ideologies can work well with the multi-disciplined backgrounds of the competency approach as mentioned earlier.

5. Conclusion

This article has discussed the theoretical foundations underpinning the competency approach. It looks at the origins of the approach with specific focus on the US and UK competency/e movements and discusses how these backgrounds have contributed to the different understanding and usage of the competency approach. The article also highlights the multi-disciplinary nature of the competency approach and shows how this has attracted mixed reactions from scholars. The author then discussed the main criticisms towards the approach and suggested that these may have been caused by the prevalent positivist epistemology which guides many competency researches. With this understanding, the article then forwards two propositions which call for epistemological and ideological considerations in future studies on the subject.

This article contributes to the growing efforts in the field of competency which embrace research epistemological turns and recognize the need for holistic managerial frameworks. Being competent involves both competencies and competence. It is a journey to a *destination*. Managerial learning does not only occur formally but much is contributed through informal process. Corporations and their managers are accountable to multiple stakeholders. Hence, managerial competency frameworks should be designed to meet both economic and humanist interests. Capturing these tenets is crucial for the frameworks to be a truly useful and relevant tool to guide organizations' human resource initiatives in the increasingly-complex business world. While the contribution of this article may not be totally novel and the wind of change can already be seen elsewhere (eg. Quoquab et al., 2014), this article provides a thought-pondering issue for countries where positivism still remain the preferred epistemology and managerial accountability rarely goes beyond their economic responsibilities.

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Note

Note 1. McClelland used the word 'competency' in his 1973's seminal paper but did not formally define it.

What Affects Malaysian Consumers' Intention to Purchase Hybrid Car?

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Abstract

The purpose of this study is to examine the factors influence consumers' intention to purchase hybrid car and explore the roles of consumption values in automotive context. The study has been examining the direct relationship between functional value, symbolic value, emotional value, novelty value and conditional value with consumers' intention to purchase hybrid car. Each variable was measured using 7-point Likert-scale. Questionnaire was used to collect data from individual consumers in Klang Valley. The data were then analyzed by using structural equation modeling (SEM) with SmartPLS 2.0. Five hypotheses were developed for this study and were tested using two stages analyses. The first stage involves measurement model while the second stage is structural model. The results of the study indicated that functional value is the most significant predictor of consumers' intention to purchase hybrid car. In contrast, symbolic value, emotional value and novelty value failed to show significant relationship with consumers' intention to purchase hybrid car. Finally, implications of the findings as well as limitations and future research are discussed.

Keywords: consumer intention, hybrid car, partial least squares, structural equation modeling, theory of consumption values

1. Introduction

As the environment continues to exasperate, developed countries found that environmental degradation is affecting their economy and policies whereas developing countries like Malaysia have just started the green movement as a step to preserve the environment (Ramayah, Lee, & Osman, 2010). Developing countries like Malaysia start aware of the importance of green products which can reduce the environmental threat as well as boost the economy by creating opportunities for businesses. Consumers should responsible to the environmental degradation due to their consumption pattern. Environmental degradation not only caused by industry, consumers purchasing behavior and consumption pattern are also the reasons the environment continues to exasperate. Therefore, consumers could change the environment by consuming green products.

Apart from that, automotive industry is one of the most important industry in Malaysia. This is because automotive industry could contribute to the country's economy in terms of direct and indirect taxes, technology advancement, and the opportunity to grow other business, as well as human resources development by providing training and job opportunities. Malaysia is one of the largest automotive manufacturer in the world with more than half a million sales every year (Lim, 2012). Malaysia ranked as number three in ASEAN market, however the existence of green product could create an opportunity for Malaysia to become the market leader of automotive industry in ASEAN market.

In monitoring the automotive market, hybrid car is one of the green products that represent automotive industry. Hybrid car is the most popular green car in Malaysia in recent year. Malaysian consumers have showed their willingness to pay more for green products (Lung, 2010), however the usage of hybrid car is considered low. The first hybrid car available in Malaysia was in year 2007. Up to date, the total hybrid car registered in Malaysia since 2007 was around fifty thousand units. According to Mahalingam (2013), hybrid car sales are expected to be flat or lower. Therefore, there is a need to carry a study to examine the consumers' intention to purchase hybrid car before extra costs and investments incurred in manufacturing hybrid car and this study would contribute to local automotive manufacturers as well as foreign automotive manufacturers to emerge in Malaysia green market.

Apart from low usage of hybrid car, the diversity of factors in influence consumers' green purchase intention was

arise. Previous studies have studied about the environmental factors (e.g. environmental knowledge, environmental attitudes, and environmental concern) and marketing factors (e.g. cost, quality, attitudes, and demographic), however there is a lack of value factors being examine especially consumption values. Value was found to be an important predictor in predicting consumers' purchase intention (Bui, 2005). Although intention is a good predictor of actual behavior, however without examine the values, it is still unable to provide a full picture of customer mind on consumer's purchase decision (Schiffman & Kanuk, 1997). Therefore, consumption values was used to predict consumers' intention to purchase hybrid car in this study.

This study applied theory of consumption values developed by Sheth, Newman and Gross (1991) to examine the key determinants of consumers' intention especially in purchasing hybrid car. Most of the earlier studies regarding consumers' intention were employed theory of planned behavior or theory of reasoned action as the theoretical foundation. However, both theory of planned behavior and theory of reasoned action have it drawback. There are at least four limitations that have been identified by employing theory of planned behavior or theory of reasoned action. The first limitation is the determinant of intention should not limit to only attitudes, subjective norms and perceived behavioral control. The second limitation is the assumption of individuals are free to act without any limitation is often unfounded because limited ability, time, environment or unconscious habits would limit the freedom to act. The third limitation is values and environmental factors that may influence consumer's intention to perform a behavior does not take into account. The last limitation is theory of planned behavior or theory of reasoned action is a predictive model that predict individual's action based on certain criteria as individuals are not always behave as predicted and it might change over time especially when consumers take a longer time to carry out an intention, the behavior is less likely to occur. Therefore, two research questions are investigated in this study. First, we examine whether the consumption values (i.e. functional value, symbolic value, emotional value, novelty value and conditional value) drive or influence consumers' intention to purchase hybrid car. Second, we explore the roles of consumption value in automotive context. The next section of this paper will discusses the theoretical background and hypotheses development based on the theory of consumption values.

2. Theoretical Background and Hypotheses Development

One of the most successful strategies in 1990s was the ability of a company provides superior value to its customers (Wang, Liao, & Yang, 2013). Value is consider as an important make up of relationship market. Value is the fundamental basis for all marketing activities. Value is the major sources of competitive advantage (Woodruff, 1997). Therefore, in order for a company to stay competitive in the market, company should create value to consumers as value become the concerned of consumers in performing purchase behavior.

Perceived value refers to an overall evaluation of benefit a consumer received from a product or service based on consumer's review (Bolton & Drew, 1991; Patterson & Spreng, 1997). Ramayah et al. (2010) mentioned that consumers generate behavior along with their beliefs and worldwide assumption. Previous research has widely explained the positive effect of perceived value on marketing performance (Sweeney, Soutar, & Johnson, 1999). Perceived value was seen as an important predictor because companies are able to enhance consumer's intention to purchase through product value (Steenkamp & Geyskens, 2006). Companies are able to deliver values by offering benefits and differentiating product from its competitors (Zeithaml, 1988; Aaker, 1996). According to Chen and Chang (2012), green perceived value would positively affect green purchase intention.

According to Sheth et al. (1991), perceived value is not limited to functional aspects of quality and price. Perceived value is a multi-dimensional approach. Perceived value had been empirically proved in marketing disciplines as multi-dimensional approach (Wang et al., 2013; Sheth et al., 1991). Among perceive value approaches, Sheth et al. (1991) is one of the most important contributor to perceived value studies (Sanchez-Fernandez & Iniesta-Bonillo, 2007). Sheth et al. (1991) mentioned that consumer purchase choice entails a form of consumption values which can be categorized as functional, social, emotional, epistemic and conditional value, and each value plays a different roles in consumer's decision (Deng, Lu, Wei, & Zhang, 2010). Therefore, theory of consumption values is more appropriate in explaining consumers' purchase intention. In this study, a proposed framework made up from various consumption values to predict consumer's intention to purchase hybrid car by using theory of consumption values. The research model is shown in Figure 1.
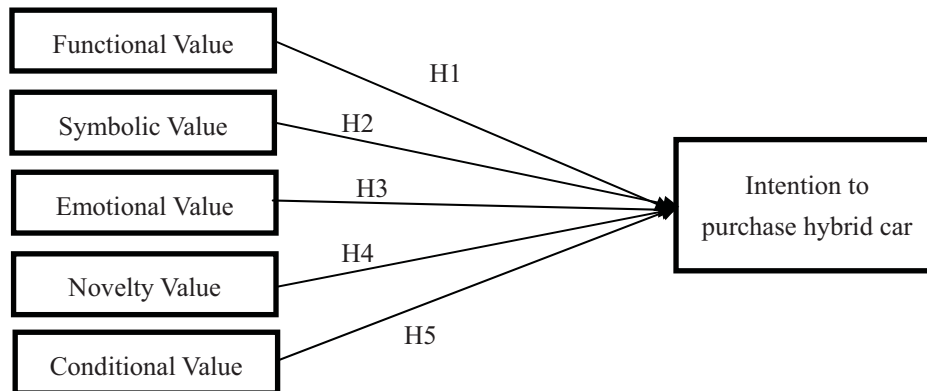
Figure 1. Research model

2.1 Hypotheses Development

The above literature has discussed the important concepts and useful studies in developing the framework for the present study. The next to be discussed is the relationship between the construct of the study.

2.1.1 Functional Value

Functional value was assumed as the primary driver of consumer choice (Sheth et al., 1991). Functional value has been conceptualized as the value received in terms of price and quality (Zeithaml, 1988; Dodds, Monroe, & Grewal, 1991; Bolton & Drew, 1991; Holbrook, 1994; Woodruff, 1997). Consumer's decision to purchase or use a product was influenced by the product attributes or product characteristics (Williams & Soutar, 2009) and the fulfilment of consumer's utilitarian needs (Bødker, Gimpel, & Hedman, 2009). Price has been found as the most salient functional value (Wang et al., 2013), however previous studies (e.g. Lin & Huang, 2012; Lin, Huang & Wang, 2010; Williams & Soutar, 2009) found that functional value does not significant influence consumers' choice and purchase intention. On the other hand, Wang et al. (2013) found that functional value is positively affects the behavioral intention. Consequently, the proposed hypothesis is as follows.

H1. Functional value positively affects intention to purchase hybrid car.

2.1.2 Symbolic Value

Symbolic value has been described as "the meaning associated with the product and the image of the product" (Sheth et al., 1991). Symbolic value arises when individuals or groups share the meaning of a product, hence, the process in understanding and evaluating symbolic value is much more difficult than functional value (Burcu & Seda, 2013). Oliver and Lee (2010) found that the relationship between social values with purchase intention on hybrid car was different according to cultures. The researcher found that social value would have positive effect on collectivism cultures. Malaysia is considered a highly collectivism society (Arfa Adlina, 2012). Previous studies (e.g. Lin & Huang, 2012; Lin et al., 2010) found that social value does not significantly influence consumers' choice. However, two extra dimensions (i.e. self-identity and social influence) are added in the present study to test the symbolic value Therefore, the following hypothesis is makes:

H2. Symbolic value positively affects intention to purchase hybrid car.

2.1.3 Emotional Value

Emotional value refers to the ability of a product arouse feeling or affective states (Sheth et al., 1991). The feelings can be either positive (e.g. loyalty, nostalgia and excitement) or negative (e.g. anger, fear and guilt). Additionally, feelings also can be described as distinctive categories of emotional experience and expression by structural dimensions underlying emotional category. Human are associated with emotional responses in their daily life. Emotional value is one of the consumption values that influence consumers' decision where a product can stimulate emotions (Bødker et al., 2009). Previous studies (e.g. Lin & Huang, 2012; Lin et al., 2010; Wang et al., 2013) found that emotional value is positively affects consumer choice behavior as well as behavioral intention. Hence, the following hypothesis is develops:

H3. Emotional value positively affects intention to purchase hybrid car.

2.1.4 Novelty Value

A novelty value is created when the product or service arouses curiosity, provide originality or novelty and/or knowledge gaining (Sheth et al., 1991). Curiosity and innovative are explained by motivation theories as incentives existing in human nature (Burcu & Seda, 2013). Hence, marketing experts accept that the incentives of "innovation and variety searching" are affected to consumers' purchase preferences (Burcu & Seda, 2013). Previous studies (e.g. Lin & Huang, 2012; Lin et al., 2010; Wang et al., 2013; Williams & Soutar, 2009) found that epistemic value or novelty value is significantly affect consumer choice behavior and behavioral intention. Thus, the hypothesis is developed as below:

H4. Novelty value positively affects intention to purchase hybrid car.

2.1.5 Conditional Value

Conditional value means the benefits perceived or obtained in a certain condition the person making a preference come across (Sheth et al., 1991). Generally, consumers' conceptions of conditional value cannot be known until the condition that will change the behavior emerges (Burcu & Seda, 2013). Conditional value was found to be the most influence predictor of consumers' choice behavior (e.g. Lin & Huang, 2012; Lin et al., 2010). Hence, the following hypothesis is developed:

H5. Conditional value positively affects intention to purchase hybrid car.

3. Research Method

A quantitative method was employed for this study. A questionnaire was used to collect data on intention to purchase hybrid car with consumers from Klang Valley, Malaysia. The items used to measure the constructs in this study are adapted from previous study to ensure the content validity. Six items were used measure intention to purchase hybrid car is adapted from Sinnappan and Rahman (2011) and Kanchanapibul et al. (2014). Ten items were used to measure functional value is adapted from Hong et al. (2012) and Lin and Huang (2012). Twelve items were used to measure symbolic value is adapted from Oliver and Lee (2010); Sinnappan and Rahman (2011); Tan (2013) and Lee (2009). Emotional value is measured by eight items adapted from Williams and Soutar (2009); Sinnappan and Rahman (2011) and Lin and Huang (2012). Six items were adapted from Lin and Huang (2012) and Oliver and Lee (2010) to measure novelty values, whereas five items were adapted from Lin and Huang (2012) to measure conditional value. All the items are measured on a seven-point Likert scales. A pilot study was conducted using convenience sample with 30 drivers from three residential areas in South Klang, Selangor. The reliability for pilot test was ranged from 0.755 to 0.905 which are sufficient for research purpose (Nunnally, 1978).

3.1 Data Collection Procedure

The sampling procedure applied in this study was proportionate stratified sampling where the population is divided into groups according to the major city in Klang Valley such as Kuala Lumpur, Ampang Jaya, Petaling Jaya, Subang Jaya, Shah Alam and Klang. According to the Cohen's Rules of Thumb, the minimum sample size suggested for seven arrows pointing at one construct for PLS-SEM analysis is 228 (Hair, Hult, Ringle, & Sarstedt, 2014). This study applied intercept method for data collection. As refer to previous research (e.g. Nor Azila, Hayatul, Noratisah, & Azli, 2014) that applied intercept method, the response rate is 56.5 percent. Therefore, 404 sets of questionnaire were distributed. The respondents were required to fill up and return the questionnaire on the spot.

The self-administered questionnaire was distributed at the selected top three brands hybrid car seller (Honda, Toyota and Nissan) showrooms. Questionnaire was distributed outside the showrooms and approach individual consumer who walk out from the showroom after consulting the sales representative or sales admin. The reason of choosing individual consumer who visit showroom is because the probability of an individual intent to purchase a hybrid car is higher for those who went to showroom. Consumers who visited the showroom are not curious buyers (Capgemini, 2011).

From 404 sets of questionnaire sent, 352 questionnaires were returned. However, only 306 were usable. Forty six questionnaires were removed because of the respondents are hybrid car owner. Therefore, the usable response rate of 75.7 percent has achieved.

The demographic profile of respondents for this study are shown in Table 1. Among 306 valid respondents, 147 (48 percent) are male while 159 (52 percent) are female. Based on the survey, the highest respondent's age group falls between 21-38 years old (73.5 percent), followed by between 39-49 years old (19.9 percent) and 50 years old and above (6.5 percent).

Table 1. Demographic profile of respondents (n=306)

Variable	Category	Frequency	Percentage
Gender	Male	147	48.0
	Female	159	52.0
Age	21-38	225	73.5
	39-49	61	19.9
	50 and above	20	6.5
Monthly Income	Less than RM 2000	25	8.2
	RM 2001 – RM 4000	131	42.8
	RM 4001 – RM 6000	108	35.3
	RM 6001 and above	42	13.7
Employment Sector	Government sector	11	3.6
	Private sector	227	74.2
	Self-employment	62	20.3
	Student	4	1.3
	Retirement	2	0.7
Qualification	Primary school	2	0.7
	Secondary school	54	17.6
	Diploma	88	28.8
	Bachelor's Degree	121	39.5
	Master's Degree	40	13.1
	Doctorate Degree / PhD	1	0.3
Brand Preference	Toyota	89	29.1
	Honda	73	23.9
	Nissan	32	10.5
	Lexus	40	13.1
	AUDI	37	12.1
	BMW	21	6.9
	Porsche	12	3.9
	Mercedes-Benz	2	0.7

4. Analysis and Results

Data analysis in structural equation modeling is divided into two steps (Ramayah, 2014; Anderson & Gerbing, 1988). The first step involves analysis of measurement model where assessment of validity and reliability of the items was carried out. The second step involves analysis of structural model where assessment of relationship between the latent constructs and hypotheses are tested. Partial least squares (PLS) was used to carry out the analysis of measurement model and structural model is because PLS do not require a large sample size, does not require normal-distributed input data, can be applied for complex model, and is useful for prediction (Urbach & Ahleman, 2010).

4.1 Measurement Model

Two types of validity were assessed in the measurement model which are convergent validity and discriminant validity as suggested by Hair et al. (2014). Convergent validity and reliability were assessed first in the measurement model. Composite reliability was used to test the construct reliability while average variance extracted (AVE) was used to assess the construct convergent validity. According to Hair et al. (2014), the threshold value for composite reliability is above 0.70 while the threshold value for AVE is 0.5. Table 2 indicated

that the AVE values and composite reliability were above the threshold value which shows that higher level of reliability and the constructs explain more than half of the variance of its indicators.

After convergent validity and reliability of each construct are confirmed, the next to be carried out is discriminant validity where to examine the degree to which the construct is truly different from the other construct in the study. Cross loadings and Fornell-Larcker criterion (correlation matrix) are carried out as suggested by Hair et al. (2014). Based on Table 3, the loading of each item is larger on its assigned latent variable that its loadings on other construct (Chin, 1998), this indicates a good discriminant validity. Thereafter, the square root of the average variance extracted (AVE) is compared with the latent variable correlations (Hair et al., 2014). As shown in Table 4, the values in the diagonal are much larger than the correlations shared between the construct. Therefore, discriminant validity was achieved.

Table 2. Convergent validity and reliability for the constructs

	AVE	Composite Reliability
Conditional Value (CV)	0.659	0.905
Emotional Value (EV)	0.725	0.955
Functional Value (FV)	0.604	0.938
Intention to Purchase Hybrid Car (Int)	0.651	0.918
Novelty Value (NV)	0.792	0.958
Symbolic Value (SV)	0.598	0.930

Table 3. Cross loadings

	Conditional Value	**Emotional Value**	**Functional Value**	**Intention**	**Novelty Value**	**Symbolic Value**
CV_1	**0.6566**	0.5079	0.3885	0.4095	0.3929	0.4502
CV_2	**0.8673**	0.4774	0.4495	0.4574	0.5943	0.4457
CV_3	**0.8425**	0.4613	0.4322	0.4273	0.5636	0.4286
CV_4	**0.8740**	0.4999	0.4425	0.4790	0.5855	0.4488
CV_5	**0.7985**	0.6351	0.5466	0.6060	0.5490	0.6059
EV_1	0.5645	**0.8582**	0.6438	0.5713	0.5414	0.6833
EV_2	0.6193	**0.8875**	0.6672	0.6006	0.6174	0.7047
EV_3	0.4735	**0.8207**	0.5799	0.5338	0.4557	0.6214
EV_4	0.5138	**0.8638**	0.6531	0.5713	0.5061	0.6204
EV_5	0.5306	**0.8489**	0.6263	0.5691	0.5531	0.6133
EV_6	0.5465	**0.8621**	0.6539	0.5966	0.5960	0.6425
EV_7	0.6003	**0.8954**	0.5991	0.5571	0.5453	0.6332
EV_8	0.5615	**0.7693**	0.4566	0.4749	0.4526	0.5612
FV_1	0.4313	0.5863	**0.7917**	0.5280	0.5230	0.6122
FV_2	0.2697	0.4731	**0.6784**	0.5004	0.3285	0.5046
FV_3	0.4200	0.5961	**0.8480**	0.6053	0.4528	0.6225
FV_4	0.4659	0.6506	**0.8753**	0.6531	0.5144	0.6721
FV_5	0.5795	0.6720	**0.8928**	0.6733	0.6105	0.6834
FV_6	0.5339	0.6812	**0.8938**	0.6309	0.5457	0.6900
FV_7	0.4579	0.4170	**0.6297**	0.4061	0.6002	0.4913
FV_8	0.2923	0.4911	**0.7260**	0.5575	0.3347	0.4876
FV_9	0.4843	0.5172	**0.7481**	0.5272	0.5492	0.6070

	Conditional Value	Emotional Value	Functional Value	Intention	Novelty Value	Symbolic Value
FV_10	0.4664	0.4390	**0.6246**	0.4398	0.5607	0.4686
Int_1	0.4619	0.4731	0.4766	**0.7844**	0.4612	0.4013
Int_2	0.4087	0.5559	0.5847	**0.8319**	0.4403	0.5226
Int_3	0.4262	0.4893	0.5128	**0.7950**	0.4267	0.4525
Int_4	0.4404	0.4606	0.5249	**0.8066**	0.4633	0.4275
Int_5	0.5078	0.5755	0.6665	**0.7864**	0.4361	0.5878
Int_6	0.6191	0.6014	0.6692	**0.8346**	0.5275	0.5954
NV_1	0.5758	0.5660	0.5822	0.5166	**0.9127**	0.5433
NV_2	0.5526	0.5500	0.5566	0.5048	**0.9242**	0.5375
NV_3	0.5890	0.6169	0.6175	0.5680	**0.8975**	0.6277
NV_4	0.6285	0.5953	0.6047	0.5430	**0.9019**	0.5844
NV_5	0.6182	0.5164	0.5350	0.4695	**0.8612**	0.5229
NV_6	0.6079	0.4996	0.5021	0.4288	**0.8402**	0.5189
SV_2	0.4880	0.5754	0.7171	0.5321	0.6576	**0.7679**
SV_3	0.4764	0.6093	0.6776	0.5286	0.5540	**0.7996**
SV_5	0.3837	0.4705	0.4432	0.3584	0.3948	**0.7018**
SV_6	0.4589	0.5553	0.4911	0.4502	0.3889	**0.7924**
SV_7	0.3591	0.4662	0.4724	0.4557	0.3173	**0.7226**
SV_8	0.4062	0.5541	0.5216	0.4624	0.3524	**0.7650**
SV_10	0.5533	0.6757	0.6736	0.5573	0.5780	**0.8403**
SV_11	0.5540	0.6660	0.6663	0.5507	0.5694	**0.8456**
SV_12	0.4451	0.5909	0.5300	0.4181	0.4780	**0.7117**

Table 4. Correlation matrix

	CV	EV	FV	Int	NV	SV
Conditional Value (CV)	**0.8117**					
Emotional Value (EV)	0.6471	**0.8516**				
Functional Value (FV)	0.5667	0.7201	**0.7772**			
Intention to Purchase Hybrid Car (Int)	0.5997	0.6587	0.7195	**0.8067**		
Novelty Value (NV)	0.6673	0.6293	0.6392	0.5712	**0.8901**	
Symbolic Value (SV)	0.5983	0.7471	0.7573	0.6272	0.6269	**0.7735**

Note: Diagonals represent the square root of the average variance extracted while the other entries represent the correlations

4.2 Structural Model

The next step after measurement model is structural model. Hypotheses were tested in this step. R2 values and path coefficient were obtained by running the PLS algorithm and bootstrapping with 5000 samples and 306 cases. The results are presented in Table 5 and Figure 2. The R^2 values of 0.586 means the five values explained 58.6 percent of the variance of intention to purchase hybrid car. Table 5 shows that only hypotheses were supported.

Table 5. Path coefficients and hypotheses testing

Hypothesis	Relationship	Path Coefficient	t-value	Decision
H1	Functional value -> Intention to purchase hybrid car	0.446	6.781**	Supported
H2	Symbolic value -> Intention to purchase hybrid car	0.021	0.310	Not Supported
H3	Emotional value -> Intention to purchase hybrid car	0.172	2.713**	Supported
H4	Novelty value -> Intention to purchase hybrid car	0.029	0.428	Not Supported
H5	Conditional value -> Intention to purchase hybrid car	0.204	3.348**	Supported

Note: **p < 0.01
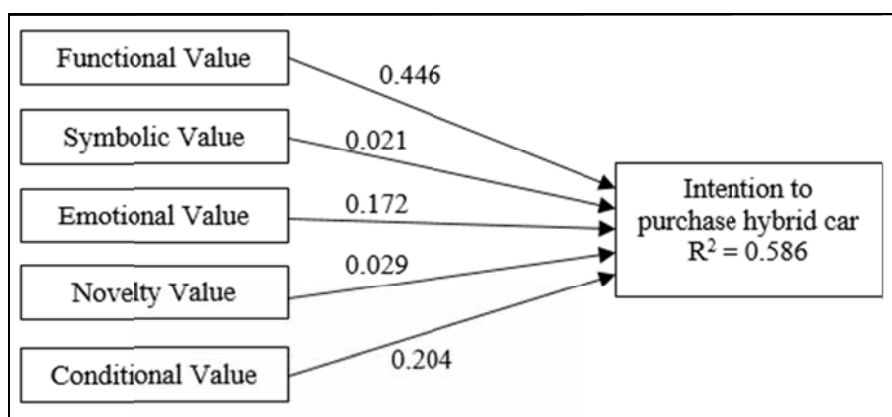
Figure 2. Results of the structural model analysis

5. Discussion and Implication

As hypothesized, the results of this study confirm that functional value, emotional value and conditional value have significant effects on intention to purchase hybrid car. Among the significant values, the influences of functional value is stronger than conditional value and emotional value. According to the respondents, Toyota is the most preferable brand that Malaysian consumers prefer to purchase for hybrid car. Consumers' intention to purchase hybrid car might result from the functional attributes of hybrid car in terms of maintenance cost, price and quality when manufacturer or government do offer discount, promotion or subsidy for hybrid car purchase and their emotional needs can be satisfied through purchasing hybrid car. Additionally, the respondents of this study shows that their willingness to purchase hybrid car with higher price is consistent with a market survey reported by Lung (2010). The increased of fuel price can be one of the reasons consumers purchasing hybrid car.

The results show that symbolic value and novelty value have not significant effects on intention to purchase hybrid car. The possible reason that symbolic value is not significant is because respondents did not feel that their social approval, status or impression can be increased through purchasing hybrid car. Malaysia is slightly move from collectivism country to become individualism country. As country become individualism, personal belief become consumers' main concern and the decision will be based on their personal belief rather than social groups' advice. Therefore, symbolic value become less important.

On the other hand, novelty value is also found to be insignificant with intention to purchase hybrid car. In the 21st century, most of the consumers are educated at least to secondary school level. Consumers are normally with little knowledge and they are able to get specific knowledge through internet. Therefore, promotion become important to increase consumers' awareness about the product rather than educate the knowledge of product to consumers.

Based on the findings of this study, 58.6 percent of consumer's behavior is explained by the five consumption values which is better than theory such as theory of planned behavior. The findings of this study is not in line with previous study such as Alesia Sigang, Sondah, & Geoffrey Harvey (2014). In Alesia Sigang et al. (2014) studied, there is a significant relationships between consumption values and purchase intention in green product context. On the other hand, Lin et al. (2010); Lin and Huang (2012) found that functional value and social value

are not significantly influence choice behavior while emotional value, epistemic value and conditional value are significantly influence choice behavior toward green products. This shows an inconsistent between the findings of this study and previous studies.

5.1 Managerial Implications

The research findings have provided some insight to marketer on the way to attract consumers with the appropriate values as product values has been identify as important factors in influencing consumers' purchase intention. Marketers should aware that functional value and conditional value does influence consumers' intention to purchase hybrid car.

Based on the findings, marketers should not concentrate too much on social influence as their strategy go attract Malaysian consumers to purchase hybrid car because symbolic value does not show significant relationship in influencing consumers' intention to purchase hybrid car.

Besides, government's subsidy and manufacturers' promotion or discount could create consumers' intention to purchase hybrid car. Therefore, Malaysia government should consider to implement another policy such as tax exemption which could boost the hybrid car sales and it can help in achieving one of the objectives of National Automotive Policy to become the regional hub of energy efficient vehicles.

6. Limitation and Suggestions for Future Research

As this study is based on cross-sectional data where data was collected once in a specific time which is unable to provide a better insight and understanding of consumers' intention. This is because consumers' intention might change over time and there is a time interval for consumers to carry an action. In order to better understand consumers' purchase behavior and the significant variables that influence consumers' intention might be different in long run. Hence, longitudinal research is recommended in future research.

Besides, the data of this study was collected from Klang Valley consumers' which is unable to represent the whole population of Malaysia especially the different between Peninsula Malaysia or East Coast and West Coast of Malaysia. Therefore, future research suggest that a cross-culture study where a comparison between West Coast and Each Coast of Malaysia should be carrying out. This is because consumers in East Coast and West Coast having different living lifestyle, culture, economy and development level. Therefore, cross-culture study enable marketers to apply appropriate marketing strategies to each coast.

Lastly, this study is based on theory of consumption values instead of the popular theory such as theory of planned behavior or theory of reasoned action. However, the theory of consumption values is able to explain 58.6 percent of behavioral intention in this study while as mentioned earlier only 40 percent of the behavioral intention is explained by theory of planned behavior or theory of reasoned action. Therefore, future research should consider theory of consumption values.

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Appendix A

Questionnaire items

Intention to purchase hybrid car

1. I intend to purchase a hybrid car because it is environmentally-friendly.
2. I intend to purchase a hybrid car even though it is more expensive than a conventional car.
3. I intend to purchase a hybrid car over a conventional car when their product qualities are similar.
4. I feel that I will play a great part in helping the environment if I drive a hybrid car.
5. I feel more comfortable if I drive a hybrid car rather than a conventional car.
6. I intend to buy a hybrid car in the near future.

Functional value

1. The hybrid car offers value for money.
2. The hybrid car is reasonably priced.
3. The hybrid car performs better.
4. The hybrid car is well made.
5. The hybrid car has an acceptable standard of quality.
6. The hybrid car performs consistently.
7. The hybrid car is better in fuel efficiency.
8. The hybrid car lowers my maintenance cost.

9.   The hybrid car is economical driving.
10. The hybrid car consumes less petrol.

Symbolic value

1.   If I buy a hybrid car, most people who are important to me will disapprove it.
2.   If I buy a hybrid car, most people who are important to me will appreciate it.
3.   If I buy a hybrid car, most people who are important to me will find it desirable.
4.   If I buy a hybrid car, most people who are important to me will not support it.
5.   I learned so much about the hybrid car from my friends and family.
6.   Most members of my family and friends will expect me to buy a hybrid car.
7.   I will follow the advice of my family that I should buy a hybrid car.
8.   My friends recommend e that I should buy a hybrid car.
9.   Buying a hybrid car would have a negative effect on my self-image.
10. Buying a hybrid car would say something positive about who I am.
11. Buying a hybrid car would say something positive about what I stand for.
12. I feel proud of being a green person.

Emotional value

1.   Buying a hybrid car will give me feelings of well-being.
2.   Buying a hybrid car is exciting.
3.   Buying a hybrid car will make me elated.
4.   Buying a hybrid car will make me feel happy.
5.   Buying a hybrid car will give me feelings of making a good personal contribution to something better.
6.   Buying a hybrid car will give me feelings of doing the morally right thing.
7.   Buying a hybrid car will give me feelings of being a better person.
8.   I emotionally support the hybrid car.

Novelty value

1.   Before buying a hybrid car, I will obtain substantial information about the different makes and models of products.
2.   I will acquire a great deal of information about the different makes and models before buying a hybrid car.
3.   I am willing to seek out novel information about the hybrid cars.
4.   I like to search for new and different knowledge about the hybrid cars.
5.   I know that hybrid cars can reduce the pollution level.
6.   I know that hybrid cars can reduce environmental harm.

Conditional value

1.   I will buy a hybrid car under worsening environmental conditions.
2.   I will buy a hybrid car when there is a subsidy by the government for the hybrid car.
3.   I will buy a hybrid car when there is a discount rate for the hybrid car.
4.   I will buy a hybrid car when there is a promotional activity for the hybrid car.
5.   I will buy a hybrid car when hybrid cars are available.

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Experiences of Discrimination and Its Effect on Life Satisfaction: Understanding Differences within Subgroups of Foreign Spouses from Multicultural Families in Korea

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Abstract

This study aims to examine the effect of perceived discrimination on life satisfaction of the foreign wives from multicultural families in Korea. In particular, this study aims to understand whether these experiences and the impact of such experiences on their life satisfaction differ by spouses' ethnic background. Using the data from 'National Survey of Multicultural Families 2009', analyses were conducted on 16,064 foreign wives living in Korea. The findings show that perceived discrimination is significantly associated with low life satisfaction that those reporting of having experienced more discriminatory events were less satisfied with their life in general. The findings also show that ethnic group differences indeed exist in migrants' exposure to discriminatory events and in the level of life satisfaction. These findings imply that social work practitioners and scholars need to recognize such differences in understanding the marriage migrants and that one-size fits all approach does not work when working with the population.

Keywords: discrimination, life satisfaction, ethnic difference, multicultural family in Korea

1. Introduction

A recent study conducted by Ministry of Gender Equality and Families [MOGEF] reported that approximately 41.3% of the foreign spouses have experienced some type of discrimination in their daily lives. According to the report, male spouses reported of being exposed to discriminatory events more frequently than the female spouses (42.2% vs. 41.1%), and that while over 50% of the spouses from Southern Asian countries, Southeast Asian countries, and Pakistan reported of having experienced the events, the portion was much smaller among those spouses from U.S. and Japan (MOGEF, 2013). Such report paints a rather bleak picture of reality for foreigners both currently residing and planning to reside in Korea, and puts Korean society to shame as it prides in being a globalized nation welcoming foreigners from all across the world. Though one may argue discrimination is an inevitable part of human life that has existed all throughout human history, it nevertheless remains as one of the central social problems facing societies in all forms across the globe.

For Korean society, it is particularly important to address the issue of discrimination as a social issue as it is in the process of establishing its identity as a multicultural, ethnically diverse society celebrating and embracing differences and diversity. The issue of discrimination, in fact, has long been a social agenda and has been discussed in many areas especially in relation to gender, age, and disability. In contrast, discrimination based on race or ethnicity has garnered relatively less public attention as Korean society has remained relatively an ethnically homogeneous society, or at least it claimed its identity as such for a long period of time. However, with changing population make up of Korea and an ever increasing number of foreigners residing in the country, it has surfaced as a central, critical social issue that warrants attention from public. With racial discrimination being identified as one of the causal factors of broader social problems such as disparity in income, education, and health as well as poverty and illiteracy (Zastrow, 1999), understanding how racial discrimination takes form and affects the ethnic minorities is now an urgent task for Korean society.

Despite its importance, effort to understand how discriminatory experiences affect individuals from ethnic minority groups has been minimal in Korea. Among hundreds of studies being published annually addressing

various issues of foreign spouses of multicultural families, the number of studies that investigate discrimination beyond simple statistics and rates is handful. This study was thus set out to fill this gap in literature on foreign spouses of multicultural families by examining the relationship between discriminatory experiences and life satisfaction; in addition, this study also investigates whether the relationship is consistent across spouses from different ethnic groups. As foreigners are often treated to be a homogeneous group, often resulting in uniform approach in policy and practice, this study aims to provide an empirical evidence of within-group differences, asserting the importance of approaching foreigners as a diverse group with different needs.

2. Literature Review

2.1 Perceived Racial/Ethnic Discrimination

Race-ethnic discrimination refers to "practices and actions of dominant race-ethnic groups that have a differential and negative impact on subordinate race-ethnic groups" (Feagin & Eckberg, 1980, p. 9). Commonly identified as a core concept in understanding diversity or a lack of it (Pincus, 1996), it exists at multiple levels in society from personal to structural level. Structural and institutional discrimination are similar in that they refer to policies of dominant race/ethnic group and behaviors of those involved that are either intended or unintended, but consequently have differential and/or harmful effect on the minority group. Discrimination at the personal level mainly refers to specific behavior of individuals with an intention to have harmful effect on those targeted (Pincus, 1996). The consequence of discriminatory actions is also known to differ by its type. Discrimination at the structural level is invoked as the primary cause of racial/ethnic gaps in income, employment, housing, and such (Jones, 2000), while discrimination at the personal level has been associated with various adverse psychological, behavioral, and health outcome for individuals of all ages (Sanders-Phillips, 2009; Finch & Vega, 2003; Brody et al., 2006). As ethnic minorities are perpetually exposed to discriminatory experiences in their daily life, discriminations based on one's race or ethnicity undoubtedly function as a significant risk factor (Prelow, Mosher, & Bowman, 2006) and a chronic stressor (Harrell, 2000), which over time can lead to deteriorated health and mental health, affecting all aspects of their life (Selye, 1956, as quoted in Prelow et al., 2006).

Ethnic minorities in Korea are particularly vulnerable to discrimination as Choi (2007) explained, Koreans exhibit a strong tendency to categorize people into 'us' and 'them' based on lineage by blood. Rooted in familism, Koreans emphasize lineage and easily consider who do not share the lineage as outsiders (Choi, 2007), and this has resulted in outright discrimination against those who are perceived as the outsiders. As described above, almost half of the foreign spouses responded that they have experienced discriminatory events during their stay in Korea because of their race or ethnicity (MOGEF, 2013), and this number has increased quite significantly from 36% in the national study conducted in 2009. Children born between foreign spouse and Korean parent are no exception to this as about 13.8% of the children being surveyed in 2012 also recalled unpleasant experiences of being discriminated by their peers, neighbors, teachers, and even their extended family members (MOGEF, 2013).

Empirical studies demonstrating the association between discriminatory experiences and individuals' developmental, psychological, behavioral, mental, and physical health are rather copious (Phinney, Madden, & Santos, 2006; Pavalko, Mossakowski, & Hamilton, 2003; Brody et al., 2006; Prelow et al., 2006; Yoo & Lee, 2008; Hwang & Goto, 2009; Brown & Chu, 2012) in other countries, however, studies examining such relation among foreigners residing in Korea are quite scarce. There are very few studies that examined the role of discriminatory experiences in explaining foreigners' well-being (Kim, 2007; Cho, 2011; Kim, Won, & Choi, 2011; Jin, Bae, & Hyun, 2011; Choi, 2012). For example, Kim et al. (2011) examined the association between perceived discrimination and psychological distress among children of multicultural families and found supportive evidence that such experiences elevated the level of depression and anxiety among children. Kim (2007) in her study of children of foreign migrant workers in Korea also yielded a similar finding that perceived discrimination was also negatively associated with their mental health. Choi (2012)'s study on Korean-Japanese adolescents in Korea also reported that the experiences of discrimination were positively related to problematic behaviors and aggression while it was negatively associated with their self-esteem. Though these studies provide an enlightening and supportive finding, emphasizing the harmful effect of discrimination on its ethnic minority individuals' well-being, their findings cannot be generalized to older population as these studies mainly investigated the experiences of children. Jin et al.'s (2011) study also limited their participants to Chinese students studying in Korea, a different population from other foreigners such as foreign spouses of Korean families. With no empirical studies on foreign spouses presently available, it is difficult to understand how these foreign residents are faring in Korean society, and it is thus imperative to explore the discriminatory experiences of foreign spouses and understand how they affect their life in general.

2.2 Life Satisfaction

Life satisfaction is in fact, the most extensively investigated topic in understanding psychological well being of different populations, and can be defined as a "global assessment of a person's quality of life according to his and/or her chosen criteria" (Shin & Johnson, 1978, as quoted in Vohra & Adair, 2000, p. 111). Satisfaction of life depends not only on what people have, but on criteria that people choose themselves and how they judge their own achievement (Kalaver, 1998). Studies on life satisfaction of general population as well as more specific subpopulations have been conducted since 1950's, beginning with Wessman's (1956, as quoted in Clemente & Sauer, 1976) doctoral dissertation on satisfaction and happiness in the U.S. Since then, a profuse amount of studies have been conducted to examine life satisfaction of more specific sub-populations such as the elderly, children, women, and the employed and their relationships with various constructs of mental health and/or physical health (Alston & Dudley, 1973; Alston, Lowe, & Wrigley, 1974; Palmore & Luikart, 1972; Horley, 1984; Inglehart, 1990; Kalaver, 1998; Bruno & Stutzer, 2002; Verkuyten, 2008).

With increasing migration among countries, the adaptation of immigrants has become a critical concern for both practitioners and researchers. Life satisfaction, in this sense, is an important proxy of their adaptation as Vohra and Adair (2000) explained that it is extremely important to study their satisfaction since it indicates the extent to which they are faring in hosting countries. Immigrants' reported happiness and life satisfaction are vital to understand their overall well-being in hosting countries, and the causes of their dissatisfaction and/or unhappiness with their lives must be identified and analyzed (Vohra & Adair, 2000). Furthermore, Tran and Nguyen (1994) explained that if immigrants have found a place of residence and are generally satisfied with their lives, then it can be stated that they have successfully adjusted to their new lives and thus, life satisfaction can be used as an indicator of immigrants' mental health status.

While an abundance of literature exists on the topic of life satisfaction, studies examining that among immigrants and/or ethnic minorities are relatively less (Verkuyten, 2008), and furthermore, studies examining life satisfaction in relation to immigrants' encounter of discriminatory events are even fewer. The existing literature on immigrants' life satisfaction commonly report lower life satisfaction (Marsiglia et al., 2013; Verkuyten, 2008; Ullman & Tatar, 2001) and empirical evidence also points to a negative direction in association between perceived discrimination and life satisfaction among immigrants and ethnic minorities (Verkuyten, 2008; Giamo, Schmitt, & Outten, 2012). A similar finding was yielded in Giamo et al. (2012)'s study of multiracial individuals in Canada that their perception of discrimination had negative effect on their life satisfaction.

2.3 Present Study

With a void in current immigrant literature on association between discriminatory experiences and life satisfaction both in Korea and abroad, this study was conducted with an aim to fill this gap by first exploring the experiences of discrimination and associated factors and second, examining the hypothesized relationship between perceived discrimination and life satisfaction among female marriage migrants. Marriage migrants refer to foreign spouses of Korean citizens, and the number of these individuals has grown drastically over the last decade. As a result of heightened social attention to this particular immigrant population, studies examining their life satisfaction and well-being in various aspects have accumulated over time. However, these studies share a common limitation as a majority of these studies, first overlooked the role of discriminatory experiences in determining their life satisfaction, and second, failed to take into consideration that the migrants are indeed an ethnically heterogeneous group with different needs and characteristics. This study therefore also aims to investigate the group differences in perceived discrimination and association between discrimination and life satisfaction with a hypothesis that the group differences exist in paths leading to both perceived discrimination and to life satisfaction. This study addresses three research questions: what are the factors associated with discrimination experiences of foreign spouses? Are their experiences of discrimination associated with their life satisfaction? And lastly, do group differences exist in discrimination experiences and its relationship to life satisfaction?

3. Method

3.1 Data

To address research questions, the National Survey on Multicultural Families 2009 was used for analyses. The Survey 2009 is the first and only complete enumeration study on a national population of multicultural families in Korea, and it contains a wide range of information from basic demographic and socioeconomic information to their service utilization behaviour and service needs. The data contains responses of 73,669 female and male migrants. For this study, however, only responses of female migrants were used as male migrants' ethnic background was not as diverse as the female migrants to conduct multiple group-analyses. Furthermore, only

those in 'working age population (18~65 years) were included as one of the questions on discrimination experiences addresses their work experiences.

3.2 Measures

3.2.1 Life Satisfaction

The definition of life satisfaction is adopted from Inglehart (1990), 'a cognitive assessment of one's subjective well-being covering all domains of life from income, occupation, and social life' (p. 214). It was measured through one question, "how satisfied are you with your life considering all aspects of your life?" Responses were coded on a five point scale ranging from one (very satisfied) to five (very dissatisfied), and the scale was inversely re-coded, so that the higher score is indicative of satisfaction.

3.2.2 Discrimination

While various concepts and measurements exist in capturing discriminatory experiences, this study employed the definition of perceived discrimination; experiences of being treated differently because of their race and/or ethnicity. It was measured through five questions such as 'have you ever experienced discrimination at workplace?' and 'have you ever experienced discrimination at the store?'. The responses were coded on a five point scale from one 'was severely discriminated' to five 'never experienced discrimination'. For analyses, each response was re-coded to have a range of zero to four, so that the higher score indicates more severe or blatant discrimination.

3.2.3 Socio-demographic Factors

Age, length of residence, language ability, current employment status, education, income, place of residence, naturalization status, having children, and ethnic background were included as socio-demographic variables in this study. Age and length of residence were measured as continuous variables. Language ability was measured in three domains: speaking, writing, and reading abilities. It is self-rated ability and respondents were asked how fluent they are in each domain on a five point scale ranging from one (very poor) to five (very good). For the analysis, the mean of the total score of all three domains was used. Current employment status was measured through a dichotomous variable (0: currently not working, 1: currently working). A dummy code was created to measure their education to distinguish the migrants with high school or less education from those with college and above education. Income was measured by asking the migrants their monthly household income on an six-point scale ranging from zero (below one million KRW) to five (above five million KRW). Another dummy code was created for the migrant's place of residence with zero indicative of residence in rural areas and one indicating urban areas. Naturalization status and having children were measured into dichotomous variables (0: no, 1: yes). Lastly, country of origin was used as a proxy of ethnic background among women, and it was measured by asking the migrants to choose the country of origin from the information booklet. To assess group differences by ethnic background, China, Japan, Taiwan, and Mongolia were grouped into East Asian countries, while Vietnam, Philippine, Cambodia, and Thailand were group into Southeast Asian countries, and the rest such as Russia and Uzbekistan were group into other countries.

3.3 Analyses

Analyses are mainly in three parts. First, descriptive analyses are conducted to provide overview information on foreign wives' socio-demographic factors, experiences of discrimination, and life satisfaction. Group differences on these variables by ethnic background are also explored in this stage. Secondly, the association between perceived discrimination and life satisfaction are examined using structural equation modeling. Third, the multiple group analyses are conducted to investigate whether paths leading to life satisfaction vary depending on migrants' ethnic background.

4. Results

4.1 Descriptive Analyses

As illustrated in Table 1, the mean age of the wives was 34.99 (SD=8.91), indicating that the women as whole group are relatively young. The mean years of residence in Korea is 5.93 years (SD=3.98). The mean score of women's language ability in all three areas (speaking, reading, and writing) was 3.39 (SD=1.05), indicating that their self-rated Korean language ability is slightly above the average. Approximately half of the women were unemployed at the time of survey with 53% and a majority of the women had less than high school education (75.8%). A majority of the women (68.7%) reported that their monthly household income was below one millions KRW. A large number of the women resided in urban areas with 68.2 percent. About 40.5% of the women reported that they obtained citizenship in Korea, and 64.6% of the women had one or more children

currently living with them. As for ethnic background of the women, the largest group is women from East Asian countries such as China (both Korean-Chinese and Han Chinese), Japan, Taiwan, and Mongolia with 69.4%, followed by women from Southeast Asian countries (Vietnam, Philippine, Cambodia, and Thailand) making up approximately 27% of the women. Women from Russia, Uzbekistan, and other countries made up the smallest ethnic group with 3.4%.

When severity of discrimination experience was examined, women reported of being most severely discriminated at work place (Mean=1.63, SD=0.93) while the lowest score was in the category of discrimination at real estate brokers/ by landlord (Mean=0.71, SD=0.90). As for life satisfaction, the mean score was 3.52 (SD=0.91), indicating that the women as a group were generally satisfied.

Table 1. Descriptive statistics

Variable	Mean	SD	n	%
Age	34.99	8.91		
Length of residence	5.93	3.98		
Language ability	3.39	1.05		
Speaking	3.46	1.07		
Reading	3.44	1.11		
Writing	3.25	1.28		
Current employment status				
Not working			8,433	53.0
Working			7,488	47.0
Education				
Less than high school			12,098	75.8
More than college			3,857	24.2
Income (KRW)				
<1 million			8,090	68.7
1~2 million			3,233	27.5
2~3 million			251	2.1
3~4 million			91	0.8
4~5 million			36	0.3
>5 million			73	0.6
Place of residence				
Urban			10,958	68.2
Rural			5,106	31.8
Naturalization status				
Yes			6,455	40.5
No			9,477	59.5
Having children				
Yes			10,255	64.6
No			5,611	35.4
Ethnic background				
Southeast Asian countries			4,359	27.1
East Asian countries			11,156	69.4
Russia and others			549	3.4
Discrimination experiences				
In neighborhood	1.28	0.97		
At restaurants/banks	1.16	0.98		
At public service centers	0.88	0.97		
At real estate brokers/landlord	0.71	0.90		
At work	1.63	0.93		
Life satisfaction	3.52	0.91		

As shown in Table 2, there were differences in socio-demographic factors as well as discrimination and life satisfaction levels by ethnic groups. For example, women from Southeast Asian countries were as a group significantly younger than women from other countries, and they were the newest arrivals in Korea as the mean years of residence was 4.42 years (SD=3.13) while women from other countries had stayed in Korea more than six years on average. They also scored the lowest in self-rated language ability while women from East Asian countries exhibited the highest score. As for income, women from Russia and other countries reported of earning more than women from the other regions, and the difference was statistically significant.

Women from Southeast Asian countries reportedly experienced more discrimination than those from East Asian countries and others, and the difference was statistically significant. As shown in Table 2, women from East Asian countries experienced the least discrimination, and interestingly, they also reported the lowest level of life satisfaction. Women from Southeast Asian countries and Russia and others tended to be more satisfied with their lives in general in comparison.

Table 2. Differences in key variables by ethnic groups

Variables	Ethnic background			Post-Hoc
	Southeast Asia(a)	East Asia(b)	Others(c)	
Age	28.53(6.85)	37.65(8.39)	32.37(6.41)	b>c>a***
Length of residence	4.42(3.13)	6.51(4.15)	6.13(3.47)	b>c>a***
Language ability	1.72(.82)	2.51(1.13)	2.02(.85)	b>c>a***
Current employ. status				Pearson χ2=20.789, p<.001
(yes)	1,931	5,331	226	
(no)	2,374	5,739	320	
Education				Pearson χ2=335.750 p<.001
(less than high school)	3,165	8,689	244	
(more than college)	1,137	2,418	302	
Income	.31(.88)	.40(.61)	.60(.95)	c>b>a***
Place of residence				Pearson χ2=497.287, p<.001
(urban)	2,392	8,191	375	
(rural)	1,967	2,965	174	
Naturalization status				Pearson χ2=409.130, p<.001
(yes)	1,278	5,056	121	
(no)	3,036	6,018	423	
Having children				Pearson χ2=192.950, p<.001
(yes)	3,116	6,719	390	
(no)	1,173	4,283	155	
Discrimination	1.05(.64)	.93(.60)	.98(.61)	a>bc***
Life satisfaction	2.63(.97)	2.47(.88)	2.57(.85)	a=c>b***

Note: *p<.05, **p<.01, ***p<.001,

Post-Hoc analysis using Games-Howell.

4.2 Relationship between Discrimination and Life Satisfaction

To examine the relationship between perceived discrimination and life satisfaction, structural path model was specified. The model yielded a chi-square value of 2094.454 (DF=53) at a probability of <.001, the IFI and CFI value of .935, and RMSEA value of .049, indicating that the current structural model fit the data adequately. As illustrated in Table 3, the factors significantly associated with perceived discrimination are age (β=-.031, p<.001), language ability (β=-.101, p<.001), current employment status (β=-.175, p<.001), women's education (β=.077,

p<.001), place of residence (β=-.050, p<.001), having children (β=.025, p<.05), and ethnic background. Women from East Asian countries (β=-.050, p<.001) and other countries (β=-.027, p<.001) experienced less discrimination than women from Southeast Asian countries. In other words, younger women with college and above education, those who are residing in rural areas, currently unemployed, have children, and are less fluent in Korea area more likely to experience more discrimination in their daily life.

Among the determinants of life satisfaction of female migrants, perceived discrimination was a strong predictor (β=-.111, p<.001). This significant and negative association between discrimination and life satisfaction is consistent with findings from previous studies as they commonly report of harmful effect of discrimination on immigrants' well-being. The finding also showed that women from Southeast Asian countries were generally more satisfied with their life than those from East Asian countries (β=-.101, p<.001) and from other countries such as Russia (β=-.014, p>.05). Among all the other socio-demographic factors, language ability was a strong predictor (β=.155, p<.001), indicating that those who are more fluent in Korean language tend to be more satisfied with their life.

Table 3. Standardized estimates of discrimination and life satisfaction

Variables	Discrimination	Life Satisfaction
	β	β
Age	-.031**	-.071***
Length of residence	.022	-.074***
Language ability	-.101***	.155***
Current employment status	-.175***	-.009
Education	.077***	-.042***
Income	.010	.058***
Place of residence	-.050***	.015
Naturalization status	.018	-.067***
Having children	.025*	-.048***
Southeast Asia	---	---
East Asia	-.050***	-.101***
Others	-.027***	-.014
Discrimination		-.111***

*p<.05, **p<.01,***p<.001

4.3 Multiple Group Analyses: By Ethnic Group

To examine whether paths leading to discrimination and life satisfaction differ by ethnic groups, multiple group analyses were conducted. The constrained model in which all the paths are constrained to be equal across all ethnic groups was compared to the unconstrained model in which all the paths were estimated individually, and the result yielded a statistically significant chi-square value difference (Δχ=142.10, df=36, p<.001), indicating that paths are not invariant across ethnic groups.

Illustrated in Table 4, paths leading to discrimination and life satisfaction varied across ethnic groups. For example, for paths leading to discrimination, employment status was the only factor that was consistently significant in predicting discrimination experiences among all three ethnic groups (β=-.228, -.139, -.213, p<.001), indicating that those who are unemployed tend to experience discrimination more than the employed women. For women from East Asian countries, being naturalized was significantly associated with their experiences of discrimination (β=.028, p<.05) though it did not have any association in two other groups. A difference was also detected with status of children as the association was significant only among women from Southeast Asian countries (β=.044, p<.05) and other countries (β=-.120, p<.05). For Southeast Asian women, those with children were more likely to report of discrimination experiences while for women from Russia and other countries, the association was negative, indicating that those without children are more likely to experience discrimination.

Language ability was negatively associated with the experiences for women from Southeast Asia and East Asia as those with poor language skills were more likely to be discriminated at different places though the relationship was not significant for women from Russia and other countries.

Table 4. Standardized estimates by ethnic groups

Variables	Discrimination			Life Satisfaction		
	Southeast Asia	East Asia	Others	Southeast Asia	East Asia	Others
Age	.094***	-.064***	-.031	-.032	-.071***	-.070
Length of residence	-.050	.027	.086	-.067**	-.068***	-.013
Language ability	-.083***	-.105***	.078	.092***	.166***	.113*
Current employ. status	-.228***	-.139***	-.213***	-.056**	.004	.009
Education	.102***	.068***	-.061	-.027	-.041***	-.106*
Income	.079**	-.031*	.057	.001	.082***	.194***
Place of residence	-.016	-.061***	-.140*	.050***	-.002	-.010
Naturalization Status	-.001	.028*	-.071	-.052**	-.071***	.009
Having children	.044*	.016	-.120*	-.055***	-.044***	-.020
Discrimination				-.113***	-.110***	-.124*

*p<.05, **p<.01,***p<.001

Discrimination was negatively associated with life satisfaction level across all three ethnic groups. For women from Southeast Asian countries, discrimination was the strongest determinant of their life satisfaction (β=-.113, p<.001) while for East Asian women, the strongest determinant was language ability (β=.166, p<.001). For women from Russia and other countries, income (β=.194, p<.001) was the strongest predictor. Another common factor appeared to be statistically significant in predicting life satisfaction across all ethnic groups was language ability that women with better language skills tend to be more satisfied with their lives than women who are less fluent.

5. Discussion

Immigrants as a group are vulnerable population at risk of developing serious health and mental health problems as a result of constant exposure to stressors in hosting country (Mossakowski, 2003). Foreign spouses of multicultural families in Korea are vulnerable to stress as they not only have to adjust to new language, culture, and environment, but also to value systems and practices of Korean family. Exposure to discrimination adds another layer of stress as they are constantly exposed to discriminatory behaviours and remarks across various social settings. However, literature pertaining to discrimination and foreign spouses' experiences in Korea are rather scarce and little is known about how much they are exposed to interpersonal discrimination and how such experiences affect their life in general. This study thus attempts to fill some of the gaps in immigrant literature, particularly on the topic of discrimination and life satisfaction.

The result of this study provides empirical evidence for the argument that discrimination functions as a chronic and pervasive stressor (Torres, 2009), leading to deteriorated health and mental health and quality of life. This is consistent with findings of previous studies (Kim et al., 2011; Choi, 2012; Giamo et al., 2012; Verkuyten, 2008). The finding also provides evidence that foreign spouses in Korea are indeed exposed to discrimination across various social settings, and that group differences also exist in degree to exposure to discrimination and the level of life satisfaction as well as in paths leading to life satisfaction. For example, women from Southeast Asian countries reported of being more discriminated than the women from other two regions. This finding is consistent with previous studies that individuals with different physical characteristics, such as skin tone, color of hair and eyes, and facial structure tend to experience more discrimination than those who look similar to dominant racial/ethnic group (Rumbaut, 1994; Yang, 2005). As women from China, Japan, Taiwan, or Mongolia tend to look more similar to Korean than the women from Southeast Asian countries, it is likely that they are easily identified as foreigners in various social settings, potentially making them an easy target of discrimination.

An interesting finding was also yielded in respect to life satisfaction. First as suspected, those who are more recent arrivals in Korea were found to be more satisfied with their life than those who have stayed in Korea for a longer period of time. This finding is consistent with literature investigating healthy immigrant effect which explains that the more acculturated immigrants tend to exhibit lower level of life satisfaction, more depressive symptoms, and other health problems (Kulis, Marsiglia, & Nieri, 2009). This is also consistent with Oberg's U-Curve theory which argues that recent immigrants first go through the honeymoon phase in which they are generally satisfied with their new life (Oberg, 1960). As immigrants adjust and become familiar with their new life, it is argued that they become aware of the extent of discrimination, their disadvantaged status as minority, and become dissatisfied with their life (Kulis et al., 2009).

Second, when ethnic differences were examined in life satisfaction, women from Southeast Asian countries exhibited the highest level of satisfaction among all groups. This may be explained by the fact that Southeast Asian women as a group are relatively recent immigrants compared to women from other countries. For example, while the influx of women from East Asian countries such as Japan and China has been rather consistent from 1980~1990's, the women from Southeast Asian countries such as Vietnam and Cambodia started to noticeably rise from mid 2000's (National Statistical Office, 2011). As a group of new immigrants, they may be less inclined to perceive themselves as victims of severe discrimination. However, the finding also points out that the experiences of discrimination were indeed the strongest determinant of life satisfaction among these Southeast Asian women. This finding indicates that they are more vulnerable to the harmful effect of discrimination than other women.

These findings provide several critical implications for social work practice with multicultural families and foreign spouses. First, discrimination is a critical factor that is significantly associated with their subjective well-being, measured by life satisfaction. This indicates that practitioners working with the women must be attentive to their perceived discrimination and its potential effect on their psychological, physical, and social adjustment and need to engage women in developing healthy coping strategies. As discriminatory experiences often lead to development of poor self-image and thus, lower self-esteem, it is essential for practitioners to address the issue with the wives as well as their family members.

In addition, policies and programs to increase awareness of Korean nationals also need to be in place. Discrimination could not be diminished or weakened by the effort of the foreign-born members of society, it must be a two-way process. However, while the programs and policies for foreign wives and multicultural families focus on foreign individuals' adjustment to Korean society, asserting the importance of one-way adjustment of foreign-born wives, programs or policies targeted to increase awareness or understanding for the diversity and different cultures are close to non-existent. With an exception of some effort made by regional education offices that offer training programs for teachers on culture diversity, programs for general public as well as service providers in medical, educational, legal fields do not exist as of present. As the findings of this study show that the foreign wives are widely exposed to discrimination at workplace and in neighborhoods, community-based education programs for Korean nationals need to be developed and implemented.

Furthermore, foreign spouses are not indeed a homogeneous group as ethnic differences were identified in their exposure to discrimination, life satisfaction, and other socio-demographic factors. The finding draws attention to critical ethnic differences. They suggest that marriage migrants and/or immigrants are not a group with similar characteristics and needs as they are often delineated and treated to be, and that there should be differentiated plans of intervention for each ethnic group. This finding also shows that the uniform approach to multicultural families and foreign spouses may not be appropriate and such one-size-fits-all approach by the government and service providers may exacerbate discrimination and associated problems for them. Thus, current pre-marriage education programs offered in Vietnam, Mongolia, and Philippines should be linked to after-marriage support programs to meet the needs of each ethnic group.

As this study was conducted using cross-sectional data, it is recommended for future research to continue to examine the relation between discrimination and life satisfaction using longitudinal data to establish causality. In addition, future research needs to examine discrimination within family and how interpersonal and structural forms of discrimination affect life satisfaction of the foreign spouses. Future investigations should also consider using various constructs of subjective well-being such as quality of life and psychological distress in examining its relation to discrimination experiences. In addition, continued research efforts should explore differences by each ethnic group, probing for example, how Korean-Chinese may differ from other Chinese and East Asian women to perceive discrimination.

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A Review on Higher Education for Hearing-Impaired Individuals

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Abstract

The higher education for the hearing-impaired individuals plays a key role in each nation's education development. Higher education of the deaf learners offers them opportunities to achieve valuable skills and knowledge for employment and social survival equal to the learners with normal hearing. This study aims to investigate on online information and communication technology (ICT) educational courses for the hearing-impaired individuals. ICT education is indispensable for hearing-impaired individuals because the visual display plays a critical role in helping them understand a task. Moreover, supported visual media are frequently used in computer education, because they are more vision-dependent, due to their imperfection of hearing. ICT improves productivity in increasing activity for the hearing-impaired individuals as it empowers them to express themselves through their works.

Keywords: Hearing-impaired individuals, Hearing-impaired education, Higher education, Electronic-Learning (E-Learning), ICT (Information Communication and Technology)

1. Introduction

The hearing-impaired individuals are those who are not able to perceive sound due to their loss in the sense of hearing. Both receiving and producing spoken language are under the influence of such hearing loss. It is rather common for the hearing-impaired individuals to struggle with spoken and written language. When hearing-impairment occurs in an individual's life, understanding speech acquisitions are poor. Hence, in conversations, miscommunication often arises between the hearing-impaired individuals (Vanderheiden, 1982).

The higher education for the hearing-impaired individuals plays an important role in each nation's education development. Higher education will assist the hearing-impaired individuals to attain the required knowledge and skills for social survival and employment, just like normal-hearing individuals. The hearing-impaired individuals can be defined as the disability for individuals to detect frequencies, or low-amplitude sounds (Vanderheiden, 1982). In 1982, Vanderheiden used another word for this; deaf, where individuals are not able to perceive sound because of their loss in the sense of hearing (Vanderheiden, 1982). For the hearing-impaired individuals, ability of both receiving and producing spoken language is under the influence of the hearing loss. It is rather common for a hearing-impaired individual to struggle with spoken and written language. When a tragedy of hearing-impairment occurs in an individual's life, the understandings of speech acquisitions are poor (Mahshie et al., 1988). Accordingly, the linguistic way of their communication with each other becomes the Sign Language. The learning curve of a new language is definitely not easy. For a normal individual, the language learning is naturally co-operated with the hearing-feedback. However, it is not easy for the hearing-impaired individuals, as they do not have the speech ability. Therefore, the most essential social behavior of a hearing-impaired human being is Sign Language, and it is the most convenient and effectual communication tool.

Communication between the hearing-impaired individuals and the normal-hearing individuals can be very difficult. It is often true that in universities or classes scenarios, the hearing-impaired individuals are often involved in project-oriented groups; thus, miscommunication is normal between them and the normal-hearing individuals (Schull, 2006). Although a number of faculties support students and staff including interpreters who are fluent in both signing and speech, miscommunication still exists; let alone, when the interpreters are rarely

available outside a class. Since video is well-suited for a web-based instruction to collaborate, communicate and information disseminate, subtitles and a translation video picture of the spoken text into sign language could be valuable.

2. Hearing-Impaired Children's Communication

Communication between the hearing-impaired individuals and the normal individuals can be difficult. Higher education of the deaf learners offers them opportunities to achieve valuable skills and knowledge for employment and social survival equal to the learners with normal hearing (Vanderheiden, 1982). English is often a second language of people who are born deaf, with their first language being the Sign Language. If for a normal-hearing child to begin develop expressive speech and language between 1-2 years old, and by the time the child starts school, he has mastered a major portion of the syntactical structures of his native language, and has several thousand vocabulary words. However, for a severe hearing-impairment sustained at an early age, the impact starts upon the education achievement of these hearing-impaired individuals. The only exposure to signing is at school, and language the normal-hearing children use the same way, usually does not them. Without this attraction, hearing-impaired children may miss the critical period for language acquisition. As Huang *et al*. argues , moreover, to achieve an effective stage for developing language-related skills throughout childhood and later in life, then these hearing-impaired individuals must be directly and repeatedly presented with signs, words and language concepts to avoid language development delays (Huang et al., 2008). Parents who get involved early in the process of learning Sign Language can communicate more effectively with their hearing-impaired children and have more impact on the children's progress throughout early life and development (Henderson-Summet et al., 2008). This can facilitate bonding within the family members, in the learning process. However, this is not true for deaf children born to deaf parents, because their language acquisition follows a normal development cycle, which is from the child's birth.

3. Existing Education for the Hearing-impaired Individuals

Education is fairly and equally imperative, for the normal-hearing individuals, or for the hearing-impaired individuals; right from a child's syllabus right through the higher Education. The higher education for the hearing-impaired individuals plays a key role in the development of a nation's higher education. Higher education will assist the hearing-impaired individuals to attain the required knowledge and skills for social survival and employment, just like Normal-Hearing Individuals. Relating to a research on the educational opportunities for the hearing-impaired individuals, Bell and Panko (1977) dealt with the goals around the facets of the hearing-impaired individuals career expansion, research in this procedure and professionals training to work with the hearing-impaired individuals; and meaningful improvement towards these goals were attained (Bell & Panko, 1977). As more of the hearing-impaired individuals enter the typical universities, capable sign-language interpreters with particular knowledge in advanced courses are demanded. Since spoken-language is an obstacle, finding skilled sign-language interpreters and captioners with advanced domain knowledge is rather problematic. Educators who are Hearing-Impaired themselves can better relate to the hearing-impaired individuals, as they do experience the challenges better. Nevertheless, there are also normal-hearing educators who have been familiar to teach these individuals, and serve as mentors to them. Students can benefit better from understanding their needs on the part of educators and, at the same time, from educators' ability to modify their techniques slightly to better adapt with these individuals.

According to Drigas and Kouremenos (2005), although the normal individuals and the hearing-impaired individuals mental abilities are at the same level, however majority of these hearing-impaired individuals today still show worse reading/writing and mathematical abilities (Drigas & Kouremenos, 2005). While some Educational institutions may have accidentally cultivated their education system separately for the hearing-Impaired and the normal students, this does not mean that there are any differences in the content of their studies concepts and syllabus. This is of course depends on the educators, teaching-assistant and academic staff involved in educating them. In education of the hearing-impaired individuals, educators play an important role. Educators are responsible in determining these individuals' needs and satisfaction, since these educators are the ones who know how to educate these individuals. Educators or academic staff have a total control over these individual, because the lessons and studies content for the hearing-impaired are prepared by the educators. Moreover, academic staff will implement some sort of instructional delivery options, in case there is a need for detailed guidelines to support their teaching in student's learning environment.

4. Higher Education Courses for the Hearing-impaired Individuals

Information and communication technology (ICT) education courses are crucial for the hearing-impaired individuals. Sign language is utilized to teach the hearing-Impaired, while voice is used in a normal-teaching

physical class lecture. Supported visual media devices such as graphs, charts and tables are commonly used for computer education, as these individuals are more dependent on vision, because of their shortcoming of hearing. Even in running software, the visual displays play a central role for the hearing-impaired individuals because only the visual displays can support them realize a task.

Sign language is used to teach the hearing-impaired, while voice is used in a normal-teaching physical class lecture. In some cases, interpreters are at the classroom too. Cavender (2007) researched on developing technologies that help managed the academic tasks required by the Hearing-impaired individuals; by testing a classroom platform for these individuals to access inaccessible interpreters and captioners, avoid visual spreading, and simplify interaction in the classroom; and support sharing and capture of instructional materials (Cavender, 2007). All these were possible with wireless networks, data projectors, and portable computing devices; and eventually, a more digital academic environment is created to better go with the needs of students.

Following this research, Cavender et al. (2009) also conducted a research on advancing the deaf and hard of hearing in computing Cavender et al. (2009). To make this possible, Cavender et al. (2009) alleged that a transition programs from high school to college is a critical time for the deaf and hard of hearing students because advance level may require diverse accommodations compared to the previous level. Students must now self-advocate for accommodations, and courses may be faster-paced and less accommodating. Yet, this transition programs are positively correlated with better academic and employment outcomes.

ICT does improve productivity, since it enhances activity for the hearing-impaired individuals. Educational technology has the capacity to comprise the hearing-impaired individuals in the academic mainstream. Not only academically, but job opportunities areas like data entry, graphics animation, computer operations, computer programming, computer technician, software testing and development, web design development and information technology (IT) entrepreneur. ICT has revealed several prospects for these individuals, as the ICT industry proposed a number of jobs.

4.1 ICT Courses for the Hearing-impaired Individuals

The constant computer technology improvement has made ICT and educational technology become increasingly more imperative in education. Educational research studies reveal that different ways of incorporating computer technology and the context in which computers are used have different impacts on student learning. ICT is divided into the education parts holding up the needs of students at different educational stages.

In appraising students' performance, it is rather possible to present ICT in many ways, such as involve different senses, record and assess learner's choices and performance, and suggest remedial reaction based on the learner's function. The ICT utilization in education provides people having special needs with new opportunities. This support is specifically imperative for students with special needs, in particular, the hearing-impaired individuals. Bell et al. (1977) mentioned the facets of the hearing-impaired students' job improvement, research in this procedure and professionals training to work with hearing-Impaired students, in their research on the Educational opportunities for the deaf (Bell et al., 1977).

4.2 Online-Learning Courses for Hearing-impaired Individuals

Engaging into the online-education environment, the same concept applies for online courses designed for the Hearing-impaired individuals. Using the same online-learning environment, studies reporting investigations of students perspective on online-learning, are more compared to the studies investigating the perspectives of academic staff (Jones & Jones, 2005). This study was also investigated by Palmer and Holt (2009) showing that many educators value the online-learning environment as a method for effectual delivery of learning material to students. Their research shows that students gave higher importance and contentment grades to elements of online-learning, compared to the academic staff; as this environment enhanced their learning (Palmer & Holt, 2009).

More to this research was also supported by various other related works by many researchers (Dutton et al., 2004; Wingard, 2004; Woods et al., 2004; Sharpe et al., 2006; Mahdizadeh et al., 2008) whom indicated that online-learning environment systems efficiently acts as mechanism for accessible delivery of teaching and learning materials to students. With the growth of the World Wide Web as a platform for electronic-learning (E-learning), this makes the web a crucial technology as the accessibility issues in web applications is imperative.

Moreover, most online courses proposed by the educational institutions of higher learning are available to both the normal individuals and the Hearing-impaired individuals. According to Belch (2000), the population for the disabled individuals in college campuses were rising steadily, which simultaneously increased the number of

faculties facing challenging logical accommodations to provide identical access to course materials and instruction to both disabled and enabled students (Belch, 2000); as required by the law in PowerDeFur and Orelove (1997). However, now since computers are accessible broadly as adaptive function developing devices for physically disabled persons (Bowe, 1984; Vanderheiden, 1982), universities environments are being called upon to provide more adaptive computer interfacing facilities for students who need and can benefit from such equipment.

Findings indicate that learning virtually has many benefits over other teaching technologies since it can execute the majority of the learning requirements related to students with disabilities education (Bricken & Byrne, 1993). Therefore, Shayo (2008) argued that the engaging E-learning materials that managed the basic load, and control extrinsic and relevant cognitive load for both disabled and enabled ones should be designed (Shayo, 2008). Moreover, E-learning systems symbolizes a primary means to offer educational services to individuals with disabilities, in particular the hearing-impaired individuals, whom typically have difficulties to attend the physical on-site learning programs, or to gain access to the physical printed learning materials. Furthermore, with E-learning and ICT combination into the web, the skill to intensify interactivity among users allows instructors of large courses to integrate activities into the curriculum; otherwise, it is tremendously problematic due to large enrollments and restrictions imposed by the large lecture hall. Computer-supported collaborative learning is vital, because a group of students can use computers to browse through information on the Internet and to debate, discuss, gather and present information found collaboratively.

This was also critically discussed by Noriah Mohd Ishak et al. (2002) on the use of collaborative computer technology in expanding the traditional college classroom. The research discussed on the new teaching techniques needed for students of higher institution, and the implications of using the collaborative computer technology in college classroom, and how Internet has impacted the individuals. While ICT tools such as chat rooms, e-mail, and forum are useful in helping students interact actively, simultaneously it gives them the opportunity to develop and master their interpersonal and social skills (Mohd Ishak et al., 2002).

4.3 Existing Education Program integrating ICT for Hearing-impaired Individuals

Although the hearing-impaired individuals operate computers the same way as the normal-hearing individuals, however human interface are important for them. A computer based on the Graphical-User-Interface (GUI) gives no problems for these hearing-impaired individuals, except the failure to hear the sound of the speech synthesizer.

Zawolkow (1980) introduced the Apples program in the schools educating the hearing-impaired youngsters, where programs are served as templates but have no content, since teachers can create and prepare their own lessons for the students (Zawolkow, 1980). With this program installed, the lessons development, and the local program distribution for the Hearing-impaired individuals have eventually became national. Other researchers name Debevc et al. (2007) also conducted a research on the hearing-impaired individuals, and how they were using an available and adjusted E-learning environment for developing their computer mastery (Debevc et al., 2007).

Quite the opposite, if an individual is visually impaired or blind, this gives a drawback for them because the human interface is made by the visual display terminal, the keyboard and the mouse; and most interfaces rely on graphics to display. The content set in graphical images must be provided in an accessible text format, so that by using text-to-speech systems, accessibility is possible. Improving computer systems for visually impaired and hearing-impaired are different because both have different restrictions. Ladner et al. (1987) were concern in how computers are useful to the deaf and blind individuals, and how these individuals can access them; therefore they believed that computer-assisted communication was the answer (Ladner et al., 1987). Hence, they designed DBnet, an incorporated collection of communication applications, which provides an appropriate user-interface for the deaf-blind individuals.

In a scenario taking an example of an individual who is blind and deaf; when two sensory channels (visual and auditory) are used for introducing two information sources, learning is improved, however when one sensory channel is used for introducing two sources of information, learning is harmed. This is studied by Mayer (2001) in the modality effect which is the result of the amount of load put on a sensory channel. In (2001) Mayer stated that if two channels are utilized, each is only burdened with one source of information. But if only one channel is utilized, that channel is burdened with both sources of information (Mayer, 2001).

Baloian et al. (2002) also conducted a research on the modeling educational software for people with disabilities, describing the similarities and differences of modeling the real world for applications tasks with people whom are visually-impaired or hearing-impaired. In their research, they examine two systems; AudioDoom, which let

blind children explore and interact with virtual worlds created using spatial sound, and whisper, which implements a workplace for the hearing-impaired individuals to recognize speech errors, which are showed in a proper way to the learner (Baloian et al., 2002).

Relating to the study of deaf and blind individuals, Jurich and Thomas (2002) stated that ICTs are opening new windows to disable people, as it can supply chances for these individuals to improved access to quality education. They claimed, ICT can be relevant as assistive technology (like the voice recognition for a device, designed for the Blinds); or adaptive technology (like keyboards with colorful keys to attract the Deaf), and as a tool for knowledge and support (Jurich & Thomas, 2002). Even Hayes (1998) suggested that several other websites exist that present information for the disables accessing the Internet; since E-learning has the capacity to move the disable people from the outer edges of educational opportunity to the leading edge of educational innovation (Hayes, 1998).

5. Summary

Since E-learning and ICT are rich and complex platforms, they have become the provision of education and training for individuals using virtual learning environments. E-learning produces novel challenges for teaching staff, curriculum support services, disability support services and institutional administrators

A research by Mohd Yasin (2005), on the comparisons of deaf student's achievement in the school examination, stated that the Sign Language used was not fluently signed by the hearing-impaired, thus it is difficult to explain certain abstract words to them (Mohd Hanafi Mohd Yasin, 2005). ICT education contains hearing-impaired individuals to have chances in the industry and research internships, bridge programs between academic levels; mentor and peer support; and career improvement of educators and staff (Burgstahler & Ladner, 2006).

ICT education is crucial for hearing-impaired individuals, because the visual display plays a key role in helping them understand a task. Moreover, supported visual media are commonly utilized in computer education, as they have to depend more on vision, because of their flaw of hearing (Murakami et al., 2002). In conclusion, ICT improves productivity in increasing activity for the hearing-Impaired, as it empowers them to express themselves through their works like systems designers, information professionals, software developers, systems analysts, etc.

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A research on the Evaluation of China's Listed Commercial Banks' Innovation in Service

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Abstract

Innovation in service has become a new hotspot of innovation research and service management research at the end of the twentieth century and the early twenty-first century, of which evaluation on innovation in service is an important topic in these fields. This study, through the investigation and research, taking Chinese listed commercial banks as an example, has established an evaluation index system of China's commercial banks' service innovation which has mainly evaluated on three aspects, i.e. innovation input, innovation output and innovation environment. The Analytic Hierarchy Process is introduced in this study. The related indicator data is acquired from 2012 annual reports of China's listed commercial banks. Through the analyses on the evaluation results, it is concluded that innovation input and innovation environment are positively correlated to innovation output. The purpose of setting up the evaluation index system is to measure the overall service innovation level in China's commercial banks, to figure out the status of their development and to find out the ways to improve their service innovation.

Keywords: innovation input, innovation output, innovation environment, evaluation index system, evaluation results

1. Introduction

The research on evaluation of service innovation was made originally in the 1990s, but in China it wasn't until the early twenty-first century. The main contents of research on evaluation of service innovation include the theory foundations or model of evaluation, the objectives and principles of establishing evaluation index system, the selection of evaluation indexes, the determination of weights, the data collection, the selection of evaluation methods, the analysis on evaluation results, etc. The construction of evaluation index system and survey data collection are the most important aspects in evaluation on service innovation.

In regards to the construction of evaluation index system, the international and national research achievements include European Innovation Scoreboard [EIS] (2001-2010), and those made by Hollanders & Arundel (2006), Kanerva, Hollanders & Arundel (2006), etc. There is no international research in China at present. Chen Jin (2004) made an exploratory study at the national level, while more scholars concentrated on the studies of regional level, such as Li Yanhua, Liu Xielin & Liu Jianbing (2009) who evaluated information technology in financial, real estate, culture, education and other modern service industries in Beijing from four dimensions of innovation input, innovation output, innovation economic performance, and innovation environment. Zhao Yan, Zhou Wen, Michael Dowling & Stefan Huesig (2009) evaluated totally six clusters of Knowledge-intensive Business Service [KIBS] in Regensburg area of Germany from six aspects of the innovation, i.e. the hard environment, the soft environment, the innovation network mechanism, the supply factors, the demand factors and the influence of clusters on enterprises. They found that the soft environment construction and the influence of clusters on enterprises have a strong effect on the innovation ability of the clusters' enterprises. Sun Youxia, Xiong Li, Han Changling (2010) evaluated the innovation capability of knowledge-intensive business service comprehensively in 23 regions of China by factor analysis method from five dimensions, i.e., knowledge creation ability, technology innovation ability, innovation undertaking ability, innovation basis ability and service innovation performance.

The research on the industry level are more concerned with both at home and abroad. The main research results include Arundel, Kanerva, Cruysen & Hollanders (2007), Cruysen and Hollanders (2008), Kusiak (2009), Shen Jing & Zhang Liang (2008-2011), Huang Shuwen (2010), Zhang Dehai & Liu Dewen (2010). Researches on the industry level conducted by domestic scholars are mainly concentrated in KIBS. As Chen Jin (2008) argued that, the KIBS innovation evaluation index system should include investment index, resource index and innovation effect index. His evaluation system emphasized more on innovation results and increased customers' satisfaction, patents, software copyrights and other indexes. Some scholars also made evaluation researches on the innovation in specific KIBS activities. Shen Jing et al. (2008, 2009, 2010, 2011) constructed a series of innovation evaluation index system, which integrates technological innovation and service innovation indicators from the viewpoint of utility of innovation, to evaluate China's high technology services, telecommunications, securities, banking, e-commerce and other typical KIBS. Shen Jing et al. (2009) evaluated the service innovation of China's listed state-owned commercial banks in 2007 from three dimensions of innovation input, innovation output and innovation environment. Several years passed, it is necessary to make further research on the innovation in service of China's commercial banks to make out the status quo of its development.

2. The Service Innovation Development Status of China's Commercial Banks

The service innovation of commercial banks refers to the banks' service behavior and service activities, such as the investment to the banks, personnel and technology input on research and development, improvement of the financial service quality, expansion of the scope of services, obtaining financial products patents, increasing revenue, and creating new value for customers. China's commercial banks have mainly carried out innovation behavior and activities in products, technology, organization, management and other aspects. There are some characteristics of development status.

2.1 The Ability of Product Innovation Is Weak

From the 2012 annual reports, the main business of China's commercial banks concentrates on the traditional deposit and loan business. 80%-90% operating income of the 16 listed commercial banks is from the interest income, while the non-interest income is less than 10% which includes the fee, the commission, and the non-interest income. The non-interest income, i.e. intermediate business, develops slowly. The current intermediate business income is still dominated by traditional clearing, settlement, cash management, custody, foreign exchange, bank cards, payment agency and commission business and other business, but investment banking, finance, consulting and other emerging business account for a relatively small proportion in the total business income. In 2012, except ICBC whose corporate wealth management business accounts for 9.45% of its total revenue, this emerging business in other commercials is in a relatively low level. This unbalanced pattern of intermediate business income is conducive neither to diversifying risk, nor to increase the profit. It shows that, the product innovation of commercial banks in China is relatively weak. Though non-interest income is growing, but it's not fast enough to have a substantive change to the profit structure of the existing financial institutions.

2.2 The Technological Innovation Is Very Active

China's commercial banks actively have developed technological innovation, such as ATM, phone banking, online banking, and mobile banking information system. Take ICBC, which is "China's Best Personal Online Banking" and "China's Best Enterprises Online banking" nominated by USA "Global Finance", for example. Its corporate online banking transaction volume in 2012 exceeded RMB300 trillion, an increase of 17.2% higher comparing to the last year; Mobile phone bank customers over 74 million, an increase of nearly 17 times in total volume of transactions; International settlement volume close to USD2 trillion, ranking as the world's leading bank for international settlement. ICBC adheres to the principle that innovation is the driving force to promote business development. It has strengthened the construction of independent research and development of product lines. ICBC launched more than 500 new products, such as multi-currency credit cards, foreign exchange trade in private accounts with totally 4 163 financial products and the growth rate is 28%. The volume of cards that the bank issued is 470 million with RMB4.13 trillion of annual consumption.

Although the technical innovation of our commercial banks is very active, most of the existing domestic technology innovation means imitate those of other countries. They lack of independent innovation.

2.3 The Organization Innovation Is to Be Strengthened

The organizational structure of China's commercial banks is the Head-Branch system, a typical "Pyramid" type structure, with levels of head office, branch, sub-branch and business outlets, reporting up layer by layer, and down accountability. A pyramid structure is conducive to the organization running stability and controlling centralized, but such structure leads to large agencies and staff redundant which blocks the transmission of

internal information, finally results in the low allocation of resources. Thereby it reduces the bank's operational efficiency. The China's commercial banks should learn from the advanced experience of commercial banks in the developed countries, relying on mature technology platform with flat and matrix style management which will help the resources allocating process to be more effective and also accelerate the internal information transmission aiming to improve the organizational operation efficiency.

2.4 The Innovation of Management Is Relatively Backward

Generally, management innovation of commercial banks in China is relatively backward, especially credit risk management which is needed to be strengthened urgently. To create conditions for the joint-stock system transformation, the commercial banks had to consume a lot of business income to accelerate the disposal of non-performing assets which had increased the extraction amount to write-off bad debts and reserve for bad debts, resulting in huge bad loans, which probably slowing down or even reducing the net profit growth, and greatly weakened the bank's innovation ability.

At present, the service innovation level of China's commercial banks is low, and it needs to be improved so as to face the increased fierce and volatile financial environment. To improve the level of service innovation, it is very necessary to measure scientifically on the service innovation actions and activities, to evaluate the utility of service innovation, and to put forward the forward-looking developing measures.

3. The Construction of Evaluation Index System of China's Commercial Banks' Service Innovation

With reference to the ideas of Driving Force Model of service innovation (Sundbo & Gallouj, 1998), the construction of index system should be based on the following principles:

(1) Systematics. As a whole, the evaluation index system should be able to reflect the main aspects of the service innovation of commercial banks in China or the main characteristics, not only to emphasize the scale of service innovation level, but also to improve the speed, efficiency and structure etc.

(2) Orientation. The selections of evaluation indexes are centered on the development of commercial banks in china. The selected indicators should have direct impacts on service innovation of commercial banks in China, and should be from a scientific point of view to understand and to grasp the essence of innovation of commercial bank service systematically and accurately. They finally should make the index system a stronger force to promote the service innovation of China's commercial banks.

(3) Simplicity. The choice of indicators should be concise, summary, representative and independent. The number of indicators should be reduced as much as possible. The comprehensive indicators should be used and the duplication of information between indicators should be avoided.

(4) Stability. The contents of indicators should be kept relatively stable in certain period, so as to compare and analyze the service innovation and development of commercial banks in China and to forecast its future trend.

(5) Availability. Generally speaking, the establishment of the index system should be based on the theory of sustainable development, but the availability and comparability should also be considered.

The key influencing factors of service innovation of commercial banks can be divided into three factors, i.e. innovation input, innovation output and innovation environment. According to the internal driving forces of service innovation, i.e. strategy and management, employees, innovation department and R & D department, the selected input index mainly includes three indicators, i.e. information input, R & D investment and personnel input. According to the tracks and actors of external driving force, the innovation environment index includes two indicators, i.e. cooperation of production-academy-research (technology track) and external investment (the service profession track and the public sectors). The innovation output index includes three factors, i.e. the dissemination of information and knowledge achievement, the status of non-interest income and innovation spillover benefits. There are corresponding second layer indicators underlying these first layer ones.

With reference to Shen Jing et al. (2009)'s evaluation index system, depth interview was made with the senior industry experts and group discussions about the evaluation indicators and their weights, then the evaluation index system of service innovation was constructed. See Table 1.

Table 1. Service innovation evaluation index system, index weight and the data source of China's commercial banks

Objective	The criterion layer	The 1st layer	The 2nd layer	Weight (%)	Data available
Service innovation evaluation index system of China's commercial banks	Innovation input A1 (0.25)	Information input B1(0.20)	Investment on banking information construction C1(1.00)	5	Not available
		R&D input B2(0.36)	Index weight of investment on external research institutes to income C2(0.25)	2.25	Not available.
			Index weight of investment on bank's internal research departments to income C3(0.75)	6.75	Not available.
		Investment on employees B3(0.44)	Educational background of employees C4(0.25)	2.75	4 levels, 1 for below vocational diploma, 2 for vocational diploma, 3 for bachelor degree, 4 for master and/or doctor degree.
			Index weight of education and training to income C5(0.75)	8.25	Not available.
	Innovation output A2 (0.6)	Information dissemination and knowledge achievement B4(0.20)	Yearly applications on patent C6(0.20)	2.4	http://www.cnpatent.com/zljs.asp.
			Growth rate of application on patent C7(0.20)	2.4	Not adopted.
			The quantity of published report and papers C8(0.60)	7.2	Not available.
		Income of non-interest B5(0.49)	Non-interest income C9(0.18)	5.29	Bank's annual reports
			Growth rate of non-interest income C10(0.32)	9.41	Bank's annual reports. Non-interest income =income-interest income.
			Value creation per capita C11 (0.22)	6.47	Value creation per capita =annual imcome/total employees * 100%.
			Growth rate of Value creation per capita C12(0.28)	8.23	To be compared with that in last year.
		Innovation spillover benefits B6(0.31)	Value created for other industries/enterprises C13(0.40)	7.44	Data of banks' load to companies.
			Growth rate of Value created for other industries/enterprises C14(0.60)	11.16	To be compared with that in last year.

	Cooperation of production -academy -research B7(0.14)	Index weight of investment on cooperation with universities and research institutes to total investment on science and technology C15(1.00)	2.1	Not available.
Innovation environment A3 (0.15)		Foreign direct investment C16(0.22)	2.84	(Corporate-owned stocks abroad + natural-person-owned stocks abroad + foreign captial stocks listed abroad + foreign capital stocks listed on domestic market) × stock price on the last dealing date of the year.
	External investment B8(0.86)	Domestic venture investment C17(0.28)	3.61	(Non-state corporate-owned domestic stocks + natural-person-owned domestic stocks + common stocks in RMB) × stock price on the last dealing date of the year.
		State investment C18(0.50)	6.45	State investment =(state-owned stocks+ state-owned corporate stocks)×stock price on the last dealing date of the year.

The AHP (Analytical Hierarchy Process) method is adopted to make a combination of qualitative and quantitative analysis for multiple attribute decision-making to evaluate the innovation service level of China's commercial banks.

Terming the item i for index i; X_i for the score of index i; Y_i for the utility value of index i; X_{imax} for the maximum value of index i; X_{imin} for the minimum value of index i; using formula (1) to standardize the score of each bank in each index.

$$Y_i = \frac{X_i - X_{i\min}}{X_{i\max} - X_{i\min}} \times 100 \tag{1}$$

Finally, by multiplying the index weight to the corresponding index score of every indicator and then aggregating each score, the final score of each bank's service innovation is obtained. Since some data are not available, total score is 66.05 points with eleven available indexes. See Table 3.

4. The Process of Evaluation on China's Commercial Banks' Service Innovation

4.1 Specimen of Banks

This paper attempts to compare and evaluate objectively the service innovation of total 16 listed commercial banks, however, after reading their annual reports, only ten indicators can be obtained from them, the remaining indicator, i. e. educational background of employees can not be obtained completely among 16 banks. As this indicator is the only one in the second layer of "innovation input", in order to make the research valuable, only 9 banks are chosen, based on the identical information of employees' educational background, see Table 2. Among the specimen banks, five banks, Agricultural Bank of China (ABC), Industrial and Commercial Bank of China (ICBC), China Construction Bank (CCB), Bank of China (BOC) and Bank of Communications (BOCOM), are the state-owned commercial banks; and the other four banks, Bank of Beijing (BOB), China Merchants Bank (CMB), Industrial Bank (CIB) and China International Trust and Investment Corporation (CITIC), are the joint-stock commercial banks.

Table 2 lists each bank's total capital stock scale and its structure. The total number of capital stocks of Industrial and commercial bank amount to 349 619 million shares, which is the largest one in the total capital shares. Bank of Beijing's equity is up to total 8 800 million shares, which is the smallest one in total capital shares. All the five

state-owned listed commercial banks possess more total share capital than those of four stock commercial banks.

Firstly, in 2012, the state ownership and state-owned corporate shares of ICBC, ABC, CCB and BOC account for the proportions nearly 60% or more of the total capital shares. Secondly, all the state-owned listed commercial banks have foreign equity or foreign capital stocks listed abroad with proportions close to 10% but less than 40%, while the proportion of their common share in RMB is below 10%. This indicates that the four state-owned listed banks mainly rely on state investments to carry out business activities and service innovations. On the contrary, the non state-owned banks like CITIC, China Merchants Bank, Industrial Bank and Bank of Beijing, have common stocks in RMB with the proporions more than 65%. China Merchants Bank does not have state investments. Bank of Beijing, Industrial Bank and CITIC Bank have state investments but below 15% of their own total shares. Bank of Beijing and the Industrial Bank don't have foreign investments, whereas CITIC and China Merchants Bank have foreign investments but below 32%. This signifies that the non state-owned banks rely mainly on domestic venture capital to operate and conduct service innovation. The only exception of state-owned banks is Bank of communications, whose foreign shares account for 47.15%, and common shares in RMB 44.05%, while its state ownership or state-owned corporate shares is only 8.81%.

Table 2. The capital stock composition of the specimen banks

| Specimen banks	State-owned and/or state corporate owned shares		Foreign stocks and/or foreign capital stocks listed abroad		Common stocks in RMB		Total	
	No. of shares	Percentage (%)	No. of shares	Percentage (%)	No. of shares	Percentage (%)	shares	Percentage (%)
ICBC	247 281 662 146	70.73	86 794 044 550	24.83	15 543 050 830	4.44	349 618 757 626	100%
ABC	268 484 705 904	82.66	30 738 823 096	9.46	25 570 588 000	7.88	324 794 117 000	100%
BOC	189 052 193 085	67.72	83 622 276 395	29.96	6 472 873 785	2.32	279 147 343 365	100%
CCB	148 501 891 381	59.40	91 915 429 499	36.76	9 593 657 606	3.84	250 010 978 586	100%
BOCOM	6 541 810 669	8.81	35 011 862 630	47.15	32 709 053 346	44.04	74 262 726 645	100%
CITIC	213 835 341	0.46	14 882 162 977	31.81	31 691 328 716	67.73	46 787 327 134	100%
CMB	0	0.00	3 910 478 000	18.12	17 666 130 885	81.88	21 576 608 985	100%
CIB	1 789 459 400	14.09	0	0	10 912 098 434	85.91	12 701 557 934	100%
BOB	314 901 592	3.58	0	0	8 485 257 947	96.42	8 800 159 639	100%
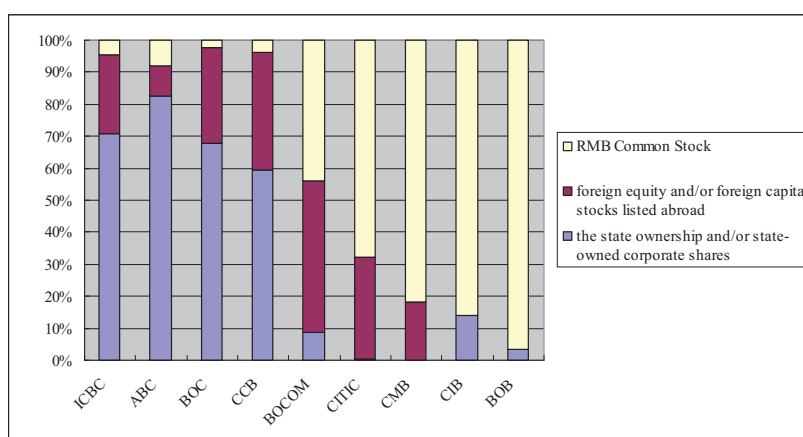
Figure 1. The structure of capital shares of specimen banks

4.2 Result of Evaluation on Specimen Banks' Service Innovation

As to the results of evaluation on specimen banks' service innovation in 2012, please see Table 3.

Table 3. Result of evaluation on specimen banks' service innovation in 2012

Objective	The criterion layer	The 2nd layer	ICBC	ABC	BOC	CCB	BOCOM	CITIC	CMB	CIB	BOB
Service innovation evaluation index system of Chinese commercial banks	Innovation input	Education background of employees	0.7	0	1.75	1.09	1.99	2.71	*2.75	2.64	2.22
	Innovation output	Yearly applications on patent	*2.40	0.36	0.18	1.09	0.14	0.04	0.22	0.01	0
		Non-interest income	*5.29	3.55	4.85	4.77	1.2	0.61	1.1	0.67	0
		Growth rate of non-interest income	0	1.14	0.46	1.54	1.5	1.77	2.99	*9.41	8.98
		Value creation per capita	3.26	2.05	3.1	3.49	4.23	*6.47	5.58	6.1	0
		Growth rate of Value creation per capita	5.08	5.17	4.8	5.49	5.25	4.07	0	8.16	*8.23
		Value created for other industries/enterprises	*7.44	5.19	3.82	5.82	2.73	1.36	1.32	1.03	0
		Growth rate of Value created for other industries/enterprises	1.66	1.26	0	2.21	3.02	1.96	3.91	*11.16	1.16
	Innovation environment	Foreign direct investment	2.42	0.58	1.64	*2.84	1.16	0.43	0.36	0	0
		Domestic risk investment	0.73	0.85	0	0.41	2.3	1.89	*3.61	2.63	0.97
		State investment	*6.45	4.72	3.47	4.29	0.2	0.01	0	0.19	0.02
	Total score	66.05	35.43	24.87	24.07	33.04	23.72	21.32	21.84	42	21.58
	Rank		2	4	5	3	6	9	7	1	8

The Comparison of results of evaluation on service innovation of some listed China's commercial Banks between 2007 and 2012, please see Table 4.

Table 4. The comparison of results of evaluation on service innovation of some listed China's commercial banks in 2012 and 2007

Year	Scores/Rank	CIB	ICBC	CCB	ABC	BOC	BOCOM	CMB	BOB	CITIC	CMBC	HXB
2012	Scores 66.35	42	35.43	33.04	24.87	24.07	23.72	21.84	21.58	21.32		
	Rank	1	2	3	4	5	6	7	8	9		
2007	Scores 66.77		34.88	40.19		26.91	25.18	33.35	23.34	32.14	22.44	20.43
	Rank		2	1		5	6	3	7	4	8	9

Table 3 shows that in 2012, CIB has the strongest ability of service innovation, and after CIB, the state-owned commercial banks as ICBC,CCB,ABC,BOC and BOCOM rank No.2 to No.6,while the other joint-stock

commercial banks, i.e. CMB, BOB and CITIC, rank No.7 to No.9.

By comparison with Shen Jing's results(2009), the state-owned commercial banks still have more advantages than the joint-stock commercial banks in overall aspects of service innovation after five years development, however, the attention should be paid to CIB, one of the joint-stock commercial banks in 2012, who becomes the strongest one by means of comprehensive innovation ability. Its innovation input (employees' educational background), innovation output (growth rate of non interest income, value creation per capita, growth rate of value creation per capita, growth rate of value created for other industries/enterprises) and innovation environment (domestic risk investment) are in better condition than those of most other banks, which is worthy of in-depth analysis.

5. The Correlation Analyses on the Innovation of China's Listed Commercial Banks

5.1 Evaluation on Innovation Input of China's Listed Commercial Bank

As to the Structure of employees' educational background of specimen banks, please see Table 5.

Table 5. The structure of employees' educational background of specimen banks

The 2nd layer index	Educational background	Index weight	ICBC	ABC	CCB	BOC	BOCOM	BOB	CMB	CIB	CITIC
Educational background of employees	below vocational diploma	1	0.159	0.255	0.125	0.080	0.056	0.080	0.019	0.017	0.024
	vocational diploma	2	0.365	0.359	0.343	0.274	0.259	0.230	0.200	0.169	0.198
	bachelor degree	3	0.438	0.350	0.482	0.577	0.615	0.540	0.669	0.737	0.641
	master and/or doctor degree	4	0.038	0.036	0.051	0.069	0.069	0.150	0.119	0.077	0.137
	Scores		2.355	2.167	2.458	2.635	2.698	2.760	2.902	2.874	2.890

From Table 5, it shows that the five state-owned commercial banks have been ranked backward in "Educational background of employees" comparing with the four joint-stock commercial banks. The score of ICBC is the lowest in 2012 with the employees of bachelor degree and up accounting for 47.6%, and master and/or doctor degree only 3.8% thereof; while CIB, whose score is the highest, has employees of bachelor degree and up accounting for 81.4%, master and/or doctor degree 7.71% thereof. There is no doubt that, higher education level means better professional quality which is the source of human resources in service innovation. By comparing this index, the specimen joint-stock commercial banks have higher proportion of high quality employees than the state-owned ones, which means the former has more advantages in human resources. This may cause by the historical reasons that the state-owned commercial banks have more elder staffs with lower educational background and more branches.

The correlation analysis is made on the score of Value Creation per Capita and the score of Educational Background. The results in 2012 show that, except ICBC and BOB, the other banks' are all positively related between these two indicators, see Figure 2. It is concluded that in general, Value Creation per Capita is positively related to Educational background. The higher level of educational background the staffs possess, the higher value creation per capita will be. For example, non state-owned joint-stock commercial banks as CMB, CIB and CITIC, their employees have higher educational background comparing to the five state-owned commercial banks, and the higher the value creation per capita they have.

Obviously, it can effectively create more profits for banks if they pay more attention to employees' educational background. In view of this, the state-owned commercial banks should continue to recruit talented staff with high education degree. Unnecessary human resources should be cut off by means of information construction and business process optimization such as increasing ATMs and self-service banks, improving and upgrading Internet banking, etc.. These help relieve the employees' pressure at the counters, cutting branches properly which can improve the value creation per capita.

There is a positive correlation between value creation per capita and employees' educational background. But in 2012, not all banks have such results. On the Y axis is ICBC, whose employees' educational background is the lowest score, but its value creation per capita is 3.26; while on the X axis is the BOB with the lowest value creation per capita, but its employees' educational background score is 2.22. This may be due to the largest scale of ICBC's total capital share and its largest operating income amounts of RMB 536.945 billion, while ICBC's staff is 427 356, slightly less than that of the biggest ABC's. The smallest in total capital share is BOB, who also has the least business income of RMB2.781 69 billion, and the least staffs of 8 259 person.
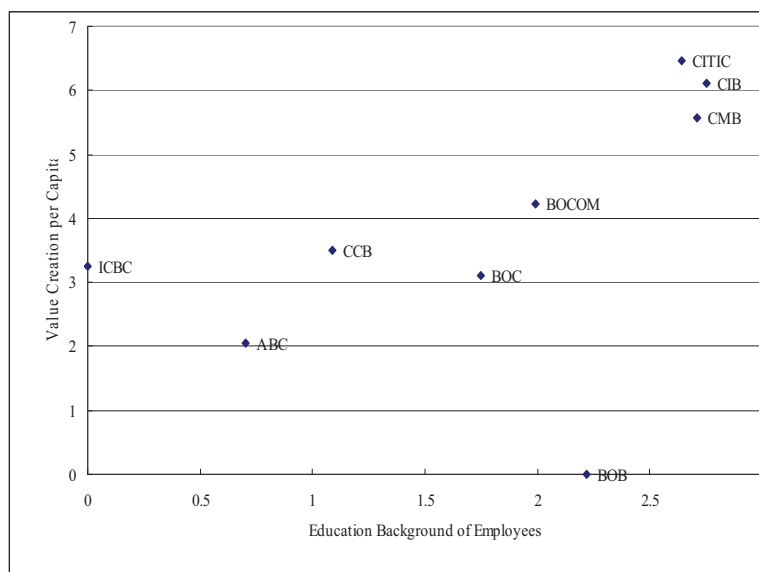

Figure 2. The correlations of value creation per capita and employees' education background

5.2 Evaluation on Innovation Output of China's Listed Commercial Banks

In the evaluation index system of China's listed commercial banks, weight of innovation output is 0.60 which indicates that the service innovation level mainly depends on innovation output. Non-interest income, innovation spillover benefits, information dissemination and knowledge achievements have been used to evaluate China's listed commercial banks' service innovation in this study.

5.2.1 Relations between Non-Interest Income and Service Innovation Evaluation

Table 3 shows five listed state-owned commercial banks rank at the top five on the non-interest income score which means that the state-owned commercial banks earn significantly more non-interest income than that of the listed joint-stock commercial banks, while the four joint-stock commercial banks have higher growth rate of non-interest income than that of the listed state-owned ones. This shows that, the non-interest income in the listed state-owned commercial banks mainly depends on the advantages of the scales of their own, but the growth rate is lower than the listed joint-stock banks whose innovation ability is relatively stronger.

By analyzing the relationship between banks' non-interest income and service innovation evaluation score, there is, to a certain extent, a positive correlation between non-interest income and the overall level of service innovation, i.e. the higher non-interest income, the higher level of service innovation. Their relationship is shown in Figure 3.

One more special bank is CIB, its non-interest income scale is not large, but the growth rate of non-interest income is the highest, see Figure 4, therefore, its score of service innovation is the highest. It shows that this bank has excellent speed of development in intermediate business.

Therefore, the listed state-owned commercial banks still need to develop their intermediate businesses and the financial derivatives so as to improve the proportion of non-interest income.
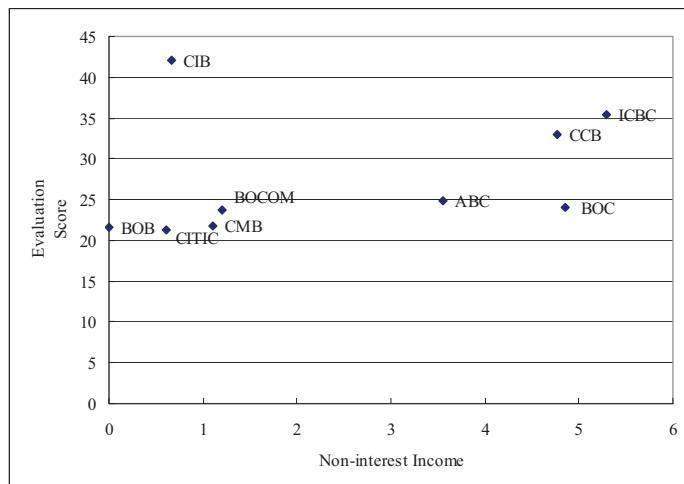
Figure 3. Relationship between evaluation score of service innovation and non-interest income
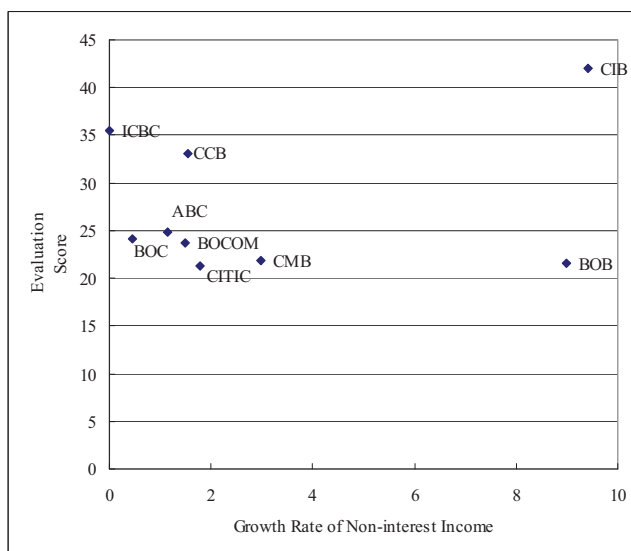
Figure 4. Relationship between evaluation score of service innovation and growth rate of non-interest income

5.2.2 The Relationship between Evaluation Score of Service Innovation and Value Created for Other Industries/Enterprises and Its Growth Rate in Specimen Banks

The index of Value Created for Other Industries/Enterprises and its growth rate in the listed commercial banks reflect the innovation spillover effect to a certain extent. In Figure 5, the five state-owned listed commercial banks occupy obvious advantages in the total amount of loans to companies, but their growth rate is relatively low. For example, ICBC has the biggest corporate amount of loan, but its growth rate is relatively low; while CIB has a relatively low corporate amount of loan, but its growth rate is the highest. This is due to, on one hand, the listed joint-stock commercial banks have low loan bases to customers and can maintain a relatively high growth rate, but more importantly, on the other hand, they have obvious advantages in credit system, product innovation, risk management and technology innovation which are better than those of state-owned listed commercial banks. Therefore, the state-owned listed banks should learn advanced management ideas and methods from the listed non state-owned commercial banks to promote further development of credit business, and reduce the bad debt risks, so as to improve the ability of value created for other industries/enterprises.
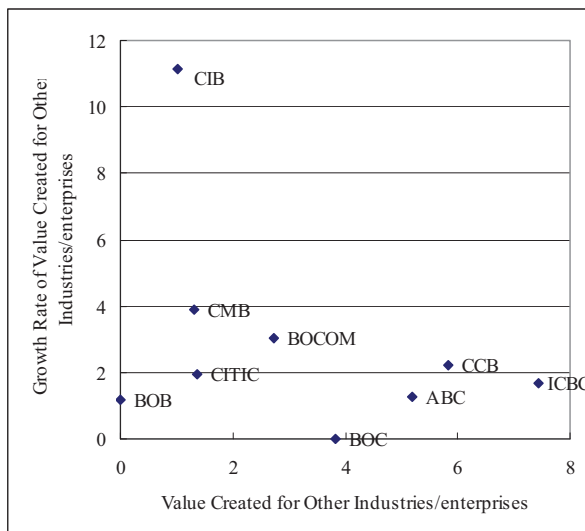
Figure 5. The relationship between value created for other industries/enterprises and its growth rate by specimen banks

5.2.3 Information Dissemination and Knowledge Achievement

The patents of commercial banks reflect the banks' information dissemination capability, knowledge achievement transformation ability and the ability of technical innovation in a certain extent. With the scores of patent application, except ICBC who gets 2.4, the other banks all obtain low scores. As shown in Figure 6, ICBC has 502 pieces of patent applications, while CMB, the listed non state-owned commercial bank has the number of 49 pieces, ranking No.4, followed by ICBC, CCB and ABC. The state-owned commercial banks have more granted patents than those of the non state-owned ones because of their longer operating history, but the non state-owned commercial banks have stronger surpassing strenthes.
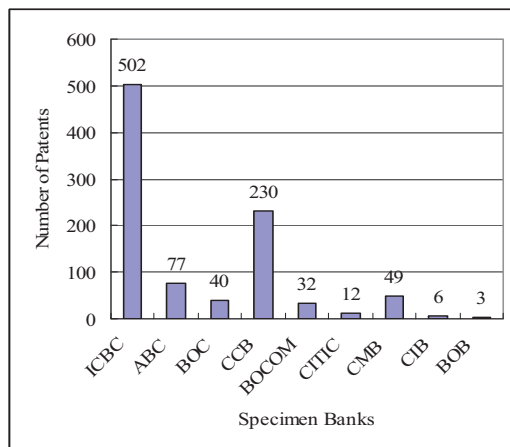
Figure 6. Patents granted in China of specimen banks untill 2012

On the whole, China's banks have not paid enough attention to application of patents. Intellectual property rights are the vital assets in modern economic society, but they have been in a state of loss in China's banking industry. In the increasingly fierce market competition, especially in the face of the competition from foreign banks, China's commercial banks should pay more attention to applications and registrations of financial patents to accumulate further service innovation.

5.3 Evelution on Innovation Environment of China's Listed Commercial Banks

Development of banks'service innovation depends on good external environment. From Table 2 and Figure 1, at

present, the state-owned commercial banks have more obvious advantages in access to foreign direct investment and state investment comparing with the listed joint-stock banks, but much lower proportion of shares in domestic venture capital investment.

5.3.1 The State Investments Focus Almost Entirely on the Listed State-Owned Commercial Banks

State investment is an important pillar of strength for the development of commercial banks, which is closely related to the sensitivity of the banking industry itself. It is seen from Table 2, the relevant state investment are mainly concentrated in the state-owned commercial banks, while joint-stock commercial banks have barely state investments. From Table 3, the highest score of state investment in the four non state-owned joint-stock commercial banks is only 0.19, lower than those of all state-owned commercial banks, which is determined by the ownership of the state-owned commercial banks.

5.3.2 More Foreign Direct Investments to the State-Owned Commercial Banks

In a whole, the state-owned commercial banks have won higher scores in foreign investment than non state-owned joint-stock commercial banks. This reflects that the joint-stock reform of state-owned commercial banks have promoted the diversification of investors. All state-owned banks should make full use of this advantage to establish corporate governance and to promote the improvement of innovative management system.

5.3.3 Less Domestic Investments to the State-Owned Commercial Banks

In the domestic investment index, the highest score is 3.61 points for CMB followed by 2.63 points for CIB. In general, the joint-stock commercial banks are more easily to obtain domestic investment. CMB, as a representative of non state-owned joint-stock commercial banks, has not gained state investment, and has little foreign direct investment. These banks have large management autonomy and relatively perfect corporate governance structure, so the external innovation environment is better.

In a word, the state-owned commercial banks have superior innovation environment than the joint-stock commercial banks.

6. Conclusion and Suggestion

It is concluded that innovation inputs-"Educational background of emlployees (C4)", innovation environment-"Foreign direct investment (C16) and State investment (C18)" have positive correlations to the innovation output- "Growth rate of non-interest income (C10), Value creation per capita (C11) and Growth rate of value creation per capita (C12)".

With the comparison of listed joint-stock commercial banks, the listed state-owned commercial banks have certain advantages in service innovation mainly in the fields of capital structure, scale and etc., which depend on the allocation of national resources and preferences of national policy, and have disadvantages in personnel quality. In addition, all China's commercial banks need to strengthen the innovation of intermediate products, improve human resource system, emphasize personnel training and make full use of foreign and domestic venture capital to enhance their core competitiveness.

Suggestions:

(1) It is suggested that the listed state-owned commercial banks should increase the input of innovation. That is, the banks should optimize the employees' educational background by increasing the proportion of masters' and doctors' staffs, to provide powerful source for service innovation.

(2) For the non state-owned joint-stock commercial banks, restricted by their equity structure, their innovation environment is relatively weak. They can only make full use of their domestic venture capital and improve their efficiency vigorously to make great achievement in service innovation.

(3) For the state-owned commercial banks, it is recommended that they should use sufficiently the absolute advantage of state ownership, state corporate shares and foreign investments to produce more innovation output.

(4) All China's commercial banks should make more innovations of new financial products and financial services to increase non-interest income and its proporion in operating income. Then try to optimize the structure of business income.

Since some evaluation indexes cannot be obtained from the annual report of China's listed commercial banks and other sources, the evaluation system and the evaluation results of this study have certain limitation. The universal applicability of the evaluation index system proposed in this study is to be verified and also adjusted. Revision and supplement are necessary when it is applied to other fields of enterprises.

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The Empirical Research on Independent Innovation Competencies of Enterprise R&D Departments

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Abstract

The strength of the independent innovation competencies of enterprise R&D departments (hereinafter referred to as ERDD) decides the market competitiveness of enterprises. It is of vital importance to evaluate the innovation competencies of ERDD. Given to the characteristics of ERDD in China, this paper builds the evaluation index system of the independent innovation competencies of ERDD which is based on factor analysis and aimed to understand the corresponding strength of industrial enterprises of the whole country and every province and city clearly. In this paper, 16417 ERDD in Jiangsu province are analyzed. Firstly, their overall situation and dynamic changes of quantities, innovation input and output, platform stimulating effect are analyzed. Secondly, the dynamic changes of constituent elements on their independent innovation competencies are researched. Thirdly, the comparison and evaluation of their independent innovation competencies are carried out by the results of 31 provinces' ERDD in mainland China.

Keywords: enterprise R&D departments, empirical research, independent innovation competencies evaluation

1. Introduction

ERDD are not only the main strength of enterprise' independent innovation, but also an important part of regional innovation system. The quantity and quality of ERDD not only determines the enterprises' competencies of independent innovation, but also regional innovation ability, in a great extent, even the country's innovation ability. Many countries and enterprises pay more attention to the construction of high-level R&D departments, regard them as the strategic move to master the core technologies, maintain the competitive advantages and achieve sustainable development. There are some typical high-level ERDD, such as Bell laboratory in communication industry, DuPont laboratory in chemical industry, Intel laboratory in IT industry, Microsoft Research Institute and other research institutions. The successful construction of the high-quality ERDD provides new products and new technologies for the global markets and builds an unique competitive advantage for the enterprises, even becomes the backbone of the national core competitiveness. Therefore, it is critical to evaluate the competencies of independent innovation of ERDD under the constraints of new economic and technical variables in China. However, the current studies on the independent innovation competencies of ERDD are concentrated more on the R&D input intensity, the R&D financing and policy supporting, but less on the evaluation. In view of these deficiencies, some beneficial explorations are carried out in this paper.

2. Present Actuality and Review of Domestic and Foreign Studies

So few achievements of the independent innovation competencies of ERDD have been gained and consensus has not been reached. At present, researches of domestic and overseas scholars about the evaluation of innovation competencies of ERDD are mainly concentrated on two aspects: how to establish the evaluation index system and how to choose evaluation method.

There are some typical studies. Foreign scholars analyzed the influence of foreign ERDD on Chinese native enterprises' organization management, policy and other aspects, then put forward to construct innovation competencies evaluation index from three aspects, including transformation of technology, organization management and policy support (Zedtwitz & Maximilian, 2004). Researchers also supported using 4 indicators: the R&D input, number of patent applications, patents being cited and new products released, evaluated the innovation competencies of R&D departments through the analysis of the 1200 international companies chose

from 4 high-tech industries (Hagedoom & Cloodt, 2003). The innovation competencies evaluation model of software industry can be structured from the enterprise capacity, output and performance (Edison, Ali, & Torkar, 2013). Thirteen indexes were selected from several aspects, including the research and development ability, mechanism and system and the work performance, then, fuzzy comprehensive evaluation method was used to evaluate the innovation competencies of ERDD (Sun, 2008). Chinese scholars selected 17 indexes from the innovation ability of input, investment carrier, output and environment to construct the measurement index system, calculated and compared the innovation competencies of R&D departments in 31 regions of China with the osculating value method (Liu, Sun, Tao, & Wu, 2008). Recently, large and medium-sized industrial ERDD in various provinces and cities nationwide had been taken as research objects and the index system of evaluating competitiveness was constructed from the innovation input, innovation implementation, innovation environment and innovation output, then measured by factor analysis method (Xia & Li, 2014).

Some conclusions can be summarized according to above presentation. The theory researches about the evaluation of innovation competencies of ERDD emphasize large and medium-sized enterprises rather than small and micro-sized enterprises, construct the static index rather than dynamic change of enterprise innovation competencies. Empirical researches mostly focus on the overall innovation competencies of regional R&D departments rather than the evolution of accumulation and improvement of sample ERDD independent innovation competencies. These deficiencies lead to the lack of reflecting their real competencies. Given to these, in this paper, factor-analysis evaluation method is used to construct the evaluation index system of innovation competencies of ERDD, and 16417 industrial ERDD in Jiangsu province are taken as the main research objects to analysis their dynamic changes of constituent factors of innovation competencies and ERDD innovation competencies of Jiangsu province is compare with other 30 regions in mainland China.

3. Construction of Evaluation System of the Independent Innovation Competencies of ERDD

Studies have shown that it is difficult to obtain satisfactory results if only single evaluation index system be used in evaluation. For this reason, this paper combines qualitative evaluation with quantitative evaluation, bases on the principles--objectivity, dynamic, feasibility, operability and measurement--to select evaluation indexes from the innovation input, innovation behavior, innovation support and innovation output. Then, eliminating the variable whose variation coefficient is less than 0.5 through variation coefficient analysis. Finally, getting the evaluation index system which consists of 30 indicators. The index system of the evaluation is given in Table 1.

Table 1. Evaluation system of the independent innovation competencies of ERDD

First Grade Index	Second Grade Index
Innovation Input X_1	R&D internal expenditure (X_{11})
	R&D external expenditure (X_{12})
	R&D investment intensity (X_{13})
	R&D personnel FTE (X_{14})
	Instrument and equipment value (X_{15})
	Expenditure for developing new products (X_{16})
	R&D projects expenditure (X_{17})
	Costs of staff service (X_{18})
Innovation behavior X_2	Number of R&D projects (X_{21})
	Number of ERDD (X_{22})
	Enterprise capital expenditure (X_{23})
	Other capital expenditure (X_{24})
	Government capital expenditure (X_{25})
	Number of new product development projects (X_{26})
	Number of enterprises with R&D departments (X_{27})
	Expenditure for buying domestic technologies (X_{28})
	Expenditure for technological transformation (X_{29})
Innovation	Number of foreign technology import contracts (X_{31})
	Number of high-tech industrial investment completed or put into production items (X_{32})

	Technology import expenditure (X_{33})	
Support	Number of college graduates (X_{34})	
	Number of college staff (X_{35})	
X_3	Expenditure for digestion and absorption (X_{36})	
	Number of main foreign retrieval tools included technical papers (X_{37})	
Innovation	Invention patent applications accounted for the total (X_{41})	
	Effective invention patents (X_{42})	
Output	Sales revenue of new products (X_{43})	
	Sales revenue of new products accounted for the main business income (X_{44})	
X_4	volume of high-tech products (X_{45})	

4. Empirical Analysis

4.1 Sample Selection

In order to promote the construction of ERDD, Jiangsu province has put forward the development strategy named "double promotion, double push" and took the construction of R&D departments as a strategic opportunity to improve the regional independent innovation competencies. It has continuously strengthened the status of enterprises technological innovation and achieved remarkable results (The People's Government of Jiangsu Province, 2012) . By 2012, the innovation competencies of Jiangsu province was the best of the whole country's during 4 years continuously. The quantity and quality of ERDD have improved greatly. Therefore, this paper studies enterprises in Jiangsu province empirically.

4.2 The Basic Situation of the Sample Enterprises

4.2.1 The Basic Construction Situation of Jiangsu Province Industrial ERDD

1) The number and growth of industrial ERDD in Jiangsu province

By the end of 2012, Jiangsu industrial enterprises had 16417 R&D departments, accounted for 35.50% of the country's gross; the number of the industrial enterprises which own R&D departments accounted for 37.70% of the country's gross; 2010 to 2012 year, the average annual growth rate of large and medium-sized industrial enterprises which have their own R&D departments had reached 85.24%. From the perspective of ERDD built rate, industrial R&D departments built rate reached 32.00%; large and medium-sized industrial ERDD built rate reached as high as 75.00%, nearly 40 percentage points more than the end of the 11th five-year plan, including large and medium-sized enterprises' reached 80.00% and 74.00%; R&D departments built rate of high-tech industrial enterprises reached 94.70%.

2) Innovation investment and growth of Jiangsu province industrial ERDD

By the end of 2012, industrial ERDD of Jiangsu province above designated size had spent 108.03 billion yuan in R&D, accounted for 15.00% of the country's, increased nearly 2.27 percentage points than the end of the 11th five-year plan. Average annual growth rate of large and medium-sized industrial enterprises' R&D expenditure reached 25.60% between 2010 to 2012. Industrial ERDD of Jiangsu province above designated size had 48.32 ten thousand researchers with the average annual growth of 28.30% that accounted for 21.30% of the country's, increased 113.85 thousand than the end of 2010 and 0.85 percentage points more than the end of the 11th five-year plan.

3) Innovation output and growth of Jiangsu province industrial ERDD

By the end of 2012, Jiangsu industrial enterprises carried out 44570 R&D projects with the average annual growth of 75.10% and increased nearly 3.26 percentage points than the end of the 11th five-year plan, including the number of industrial enterprises with R&D departments that accounted for more than 60.00% of all with the average annual growth rate of 39.00%. Industrial enterprises developed 53973 new products with the average annual growth of 79.64% that increased 3.65 percentage points than the end of the 11th five-year plan. Industrial enterprises had new products sales revenues 17 84.5 4 billion yuan that was 4.33% higher than the end of the 11th five-year plan, with the average annual growth rate of 53.65%. The industrial enterprises which own R&D departments achieved 17 76.2 4 billion yuan--income from new products of industrial enterprises--that accounted for 99.50% of all.

4) Stimulating effect of Jiangsu province industrial ERDD

By the end of 2012, Jiangsu province had 7216 "university-enterprise alliances" and implemented more than 13000 "industry-university-research projects", participated by more than 340 universities, 3000 disciplinary teams and 37.90 ten thousand scientific and technological personnel. There were more than 1000 new "university-enterprise alliances" with an average annual growth of 38.00%. From the perspective of attracting external resources, the sources of R&D funds include government funds, enterprise funds, offshore funds and other funds. Enterprise funds account for 95.77% of the total funds with the average annual growth rate of 23.13%; government funds reached 1.62 billion yuan with the average annual growth rate of 29.00%; offshore funds reached 0.72 billion yuan with the average annual growth rate of -8.75%; other funds reached 1.06 billion yuan with the average annual growth rate of 22.80%. From the perspective of driving engineering technological investment, big and medium-sized enterprises which have R&D departments put 58.36 billion yuan into technology transformation with the average annual growth rate of 10.30%, 5.35 billion yuan into technology introduction with the average annual growth rate of 24.20%, 2.34 billion yuan into technology digestion and absorption with the average annual growth rate of 39.40%, 2.46 billion yuan into purchasing domestic technologies with the average annual growth rate of 33.20%.

4.2.2 Comparative Analysis of the Construction of Jiangsu Province Industrial ERDD

1) The number and growth of industrial ERDD

By the end of 2012, R&D departments built rate and the average annual growth rate of Jiangsu province industrial enterprises above designated size both ranked the first that are much higher than Zhejiang, Shanghai and Beijing.

2) Innovation investment and growth of industrial ERDD

By the end of 2012, the total R&D funds of industrial enterprises in Jiangsu province ranked first, and average annual growth rate ranked the second about 10 percentage points lower than Zhejiang province. From the perspective of R&D personnel input, Jiangsu province was located in the first, while the R&D staff growth lagged behind Zhejiang province and Beijing city.

3) Innovation output and growth of industrial ERDD

By the end of 2012, the number of R&D projects implemented by Jiangsu province industrial enterprises above designated size ranked the top in our country, but the average annual growth rate was lower than Zhejiang province, ranked the second. From the perspective of development of new products and sales, the average annual growth rate of new products and their sales revenue ranked the second and first nationwide. From the perspective of original intellectual property rights, the total and average annual growth rate of patent applications of Jiangsu province industrial enterprises above designated size ranked third and fifth nationwide. Both of the invention patents' quantities and average annual growth rate of Jiangsu ranked first in the whole country, especially transferring and licensing patents accounted for 58.30% of total innovation patents (Note 1).
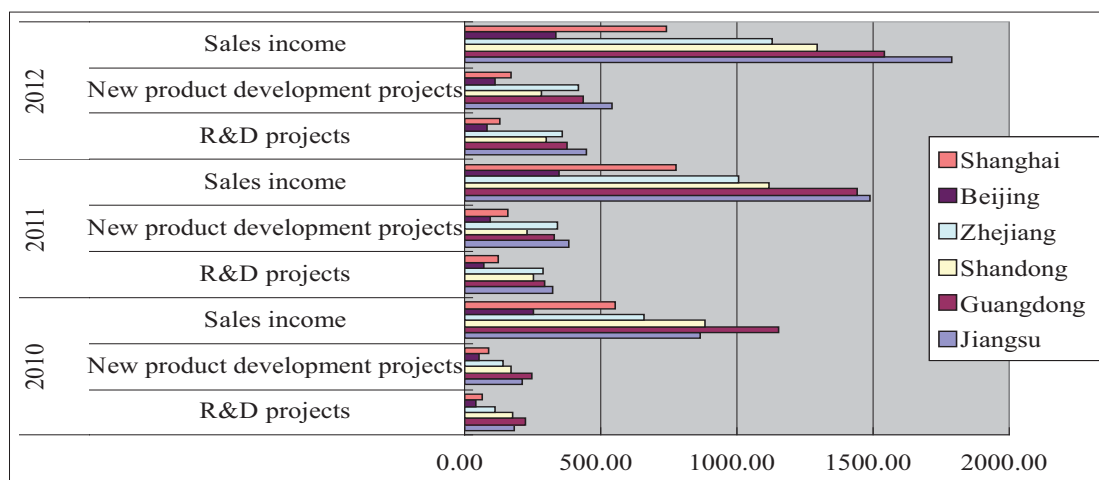

Figure 1. Bar chart of six provinces industrial R&D departments' R&D projects, new product development projects and sales income (Note 2)

4.2.3 Evaluation of the Independent Innovation Competencies of Jiangsu Province Industrial ERDD

The original data were normalized in this paper through the statistical program named SPSS20.0, then judged whether it is suitable for factor analysis by the examination of Kaiser-Meyer-Olkin (KMO) and Bartlett value. To extract the main factors with main component analysis method, do factor rotation by the maximum variance method, and use the method of regression analysis to get factor score function F_i,

$$F_i = \Sigma X_{ij} * W_i \tag{1}$$

get innovation competencies decomposition score, comprehensive score and ranking by using the function F (W_i is the factor loading weight).

$$F = \Sigma F_i * W_i \tag{2}$$

1) Innovation input

The result of data analysis shows that KMO is 0.77, the sphericity test value of Bartlett 625.16, the level of significance (Sig.) 0.000, so the data set X_{11}-X_{18} is suitable for factor analysis. Two main factors are selected, principal factor f_1 and f_2 are rotated and their variance contribution rates are 78.83% and 17.92%, the cumulative variance contribution rate is 94.75%, as shown in Table 2. Getting the corresponding scores and ranking according to the function.

$$F_1 = 0.7883f_1 + 0.1792f_2 \tag{3}$$

As shown in Table 3, the innovation input scores of Jiangsu, Guangdong, Shandong, Zhejiang and Shanghai are among the top 5 that highlights their strong investment on the construction of ERDD and their overall scale far beyond any others'. Anhui, Fujian, Henan, Liaoning and Hubei provinces increase significantly in input, however, Guizhou, Xinjiang, Ningxia, Hainan, Qinghai and Tibet the total of 12 provinces are still in the bottom.

Table 2. The rotary component matrix and component score coefficient matrix (Note 3)

	The rotary component matrix		Component score coefficient matrix	
	1	2	1	2
R&D internal expenditure (X_{11})	0.967	0.232	0.172	-0.051
R&D external expenditure (X_{12})	0.824	0.460	0.064	0.241
R&D investment intensity (X_{13})	0.197	0.975	-0.256	0.996
R&D personnel FTE (X_{14})	0.966	0.164	0.193	-0.125
Instrument and equipment value (X_{15})	0.900	0.187	0.169	-0.079
Expenditure for developing new products(X_{16})	0.961	0.237	0.169	-0.044
R&D projects expenditure (X_{17})	0.973	0.210	0.181	-0.077
Staff service expenditure (X_{18})	0.938	0.234	0.164	-0.039

2) Innovation behavior

The result of data analysis shows that KMO is 0.86, the sphericity test value of Bartlett 571.00, Sig.0.000. Therefore, the data set X_{21}-X_{29} is suitable for factor analysis. Two main factors are selected. Principal factor f_1 and f_2 are rotated and their variance contribution rates are 54.02% and 35.11%, the cumulative variance contribution rate is 89.43%. Getting the corresponding scores and ranking according to the function.

$$F_2 = 0.5402f_1 + 0.3511f_2 \tag{4}$$

Looking from the implementation situation over our country, Jiangsu, Zhejiang, Shandong, Guangdong and Shanghai's scores are much higher than others' that these 5 provinces attached more importance to the construction of ERDD and implementation ability, especially higher than other provinces in R&D projects, department built rate and technology introduction support.

3) Innovation support

The result of data analysis shows that KMO is 0.68, the sphericity test value of Bartlett is 319.97, Sig. 0.000, so the data set X_{31}-X_{38} is suitable for factor analysis. Two main factors are selected, principal factor f_1 and f_2 are rotated and their variance contribution rates are 45.88% and 37.97%. Getting the corresponding scores and

ranking according to the function.

$$F_3=0.4588f_1+0.3797f_2 \qquad (5)$$

In view of the innovation support all over our country, Jiangsu ranks the first, followed by Zhejiang, Shandong and Guangdong etc. Further analysis shows that Jiangsu province has basically realized full coverage of high-tech ERDD. Besides, it's technological plans tilted the enterprises with R&D departments, such as the provincial science and technological achievements transform funds, the provincial science and technology infrastructure plan and special funds plan of introduction, digestion and absorption, which has produced an obvious guide and direction effect. Jiangsu province has created the good environment for innovation by promoting the spirit of "innovation, entrepreneur and excellence; to be the first, to be in the lead, to take the lead" vigorously, improving the entrepreneurial innovation consciousness and ability, encouraging college students' entrepreneurial passion and innovation vigor of the whole society.

4) Innovation output

The result of data analysis shows that KMO, the sphericity test value of Bartlett and Sig. all meet the requirements, so the data set X_{41}-X_{45} is suitable for factor analysis. Two main factors are selected, principal factor f_1 and f_2 are rotated and their variance contribution rates are 57.20% and 27.82%. Getting the corresponding scores and ranking according to the function.

$$F_4=0.5720f_1+0.2782f_2 \qquad (6)$$

In view of the innovation output all over our country, there is a great gap between Guangdong, Jiangsu, Shanghai, Beijing, Shandong, Tianjin and Zhejiang 7 provinces and cities and others, especially reflected in applications of patent invention, sales revenue of new products and the total import and export trade volume of high-tech products. The ERDD of these 7 provinces and cities have made great progress in many areas, including mastering the key technologies, researching and developing key equipments and high-tech products, improving intellectual property management systems and enhancing the capability of creation and application of intellectual property rights etc. Compared with Guangdong province, Jiangsu province lags behind in the number of effective patents, sales revenue of new products accounted for main business income and the total volume of import and export trade of high-tech products.

5) Overall evaluation

The result shows that KMO is 0.71, the sphericity test value of Bartlett 129.31, Sig.0.000 through factor analysis on the innovation input, innovation behavior, innovation support and innovation output, so the whole data is suitable for factor analysis. Two main factors are selected, principal factor f_1 and f_2 are rotated and their variance contribution rates are 63.91% and 37.71%, and the cumulative variance contribution rate reaches 95.62%. Getting the corresponding scores and ranking according to the function.

$$F=0.6391f_1+0.3771f_2 \qquad (7)$$

In the view of the ranking of independent innovation competencies of ERDD, Jiangsu province remains the NO.1 followed by Guangdong, Shandong, Zhejiang, Shanghai and Beijing that highly integrates with the state that their competencies of innovation input, innovation behavior, innovation support and innovation output are all stronger than others'. And these 6 provinces and cites are positioned in the top echelon. Hubei, Anhui, Henan, Liaoning, Sichuan, Shanxi and others total of 12 provinces are located in the second echelon. These 12 provinces have tremendous scope for development because of the quite different competencies with the obvious advantages and disadvantages. Guangxi, Inner Mongolia, Guizhou, Gansu and Tibet and others total of 13 provinces with weak innovation competencies are located in the third echelon that results from the small and weak economic power and underdeveloped construction of ERDD.

Table 3. Industrial ERDD innovation competencies decomposition and comprehensive ranking list of 31 provinces and cities in mainland China

Region	II	R	IB	R	IS	R	IO	R	CS	R
Jiangsu	2.39	1	2.26	1	2.06	1	1.11	2	2.544	1
Guangdong	2.33	2	1.01	4	0.76	4	2.74	1	1.728	2
Shandong	1.56	3	1.02	3	0.88	3	0.09	5	1.22	3
Zhejiang	1.1	4	1.08	2	0.93	2	0.04	7	0.762	4
Shanghai	0.5	5	0.25	5	0.50	5	0.69	3	0.690	5

Beijing	-0.11	13	-0.03	10	0.15	10	0.46	4	0.222	6
Hubei	0.02	9	-0.05	12	0.11	12	-0.14	12	0.098	7
Anhui	0.03	6	0.14	6	0.35	6	-0.27	19	0.071	8
Hunan	-0.07	12	0.07	8	0.29	8	-0.07	8	0.047	9
Henan	0.03	8	-0.05	11	0.14	11	-0.36	25	0.046	10
Liaoning	-0.04	10	0	9	0.26	9	-0.13	10	0.011	11
Sichuan	-0.16	15	-0.06	14	0.02	14	-0.23	18	-0.004	12
Fujian	0.03	7	0.07	7	0.30	7	-0.30	22	-0.055	13
Tianjin	-0.06	11	-0.06	13	0.02	13	0.07	6	-0.083	14
Hebei	-0.13	14	-0.13	15	-0.09	15	-0.35	24	-0.131	15
Shanxi	-0.32	16	-0.24	16	-0.11	16	-0.19	17	-0.236	16
Jiangxi	-0.38	21	-0.32	21	-0.35	21	-0.29	20	-0.256	17
Chongqing	-0.33	17	-0.25	17	-0.15	17	-0.36	26	-0.295	18
Jilin	-0.37	20	-0.39	26	-0.53	26	-0.17	16	-0.331	19
Heilongjiang	-0.35	19	-0.31	20	-0.24	20	-0.32	23	-0.347	20
Shanxi	-0.35	18	-0.26	18	-0.15	18	-0.3	21	-0.368	21
Guangxi	-0.43	22	-0.3	19	-0.17	19	-0.14	13	-0.379	22
Inner Mongolia	-0.44	23	-0.36	23	-0.39	23	-0.14	11	-0.449	23
Yunnan	-0.5	24	-0.37	25	-0.47	25	-0.16	15	-0.462	24
Guizhou	-0.52	26	-0.32	22	-0.35	22	-0.08	9	-0.471	25
Gansu	-0.5	25	-0.36	24	-0.44	24	-0.43	28	-0.482	26
Ningxia	-0.58	28	-0.47	28	-0.66	28	-0.42	27	-0.580	27
Hainan	-0.59	29	-0.49	29	-0.68	29	-0.15	14	-0.609	28
Xinjiang	-0.53	27	-0.46	27	-0.59	27	-0.69	30	-0.641	29
Qinghai	-0.6	30	-0.5	30	-0.70	30	-0.46	29	-0.680	30
Tibet	-0.61	31	-0.51	31	-0.72	31	-0.86	31	-0.684	31

II: Innovation input, IB: Innovation behavior, IS: Innovation support, IO: Innovation output, CS: Comprehensive score, R: Ranking.

4.2.4 Analysis of the Existing Problems of Jiangsu Province Industrial ERDD Construction

1) Some departments have no relevant activities, the operation quality of ERDD needs to be improved

Survey data shows that 4615 Jiangsu province industrial enterprises above designated size which have their own R&D departments without R&D expenditure, accounted for 30.80% of all. Xuzhou, Zhenjiang, Wuxi, Suzhou and Taizhou cities have more than 30.00% enterprises which have built R&D departments but failing to carry out R&D activities, as shown in Table 4. It is a pressing matter to improve their operation quality when the quantity of ERDD has been increased. The date are given in Table 4.

Table 4. The R&D activities situation of Jiangsu province and its regional industrial enterprises which have R&D departments without R&D activities in 2012

	Jiangsu	Nanjing	Wuxi	Xuzhou	Changzhou	Suzhou	Nantong
Count	4615	109	910	949	298	1035	242
Ratio(%)	30.80	11.90	33.80	62.30	23.70	32.30	18.00
	Lianyungang	Huai'an	Yancheng	Yangzhou	Zhenjiang	Taizhou	Suqian
Count	68	97	115	205	205	197	619
Ratio(%)	20.90	25.90	18.60	21.60	34.00	33.40	29.90

2) ERDD are small and weak, without global influence

Survey data shows that the average expenditure of Jiangsu province ERDD is 7.23 million yuan which is 4.16

million yuan lower than the national average level and lagging behind Beijing, Shanghai, Guangdong and Shandong. From the perspective of own hardware, enterprises whose R&D departments equipment's value are not higher than 0.1 million yuan and 0.05 million yuan accounted for 16.4% and 10.2% of all. There are vanishingly rare ERDD with global influence in Jiangsu province.

3) The lack of talents, especially leading talents of high levels

The talents shortage has become one of the restricted factors for construction of high-level R&D departments. In view of the education composition of employees of ERDD, doctoral students and postgraduates only accounted for 1.80% and 8.40%. About 25.00% enterprise departments lack R&D technical backbone personnel, and 60.00% enterprise departments lack innovation leading talents. In view of personnel number of per ERDD, the average number of Jiangsu province is 29 that lower than national level (49), Guangdong (99) , Shanghai (85) and Beijing (73). Even approximately 20.00% departments have researchers less than 5.

5. Conclusion

ERDD, as one of sources of independent innovation, have been taken as an "engine" for enterprise's development. In recent years, Jiangsu province actively guides and vigorously promotes the construction of ERDD, and has achieved remarkable results. Jiangsu province ERDD have achieved breakthrough in department built rate and growth. Importantly, Jiangsu province gets great improvement in the competencies of innovation input, innovation behavior, innovation support and innovation output and ranks top in the 31 provinces. Its overall independent innovation competencies of R&D departments occupies the first place. However, the construction of ERDD still exists quite a few problems, such as poor operation quality, small scale, weak strength, sorely lacking of high levels of leading talents, result in the difficulties to adapt to Jiangsu province strategic requirement which is aimed to take the lead in building innovative province and accelerating the transformation and upgrading of enterprises. Therefore, further strengthening the construction quality of ERDD is an undoubtedly strategic choice in solving this dilemma.

Acknowledgments

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Notes

Note 1. The sources of data in this section: *Chinese Science and Technology Statistics Yearbook 2013, Science and Technology Industrial Enterprises Statistical Yearbook 2013 and China High Technology Industry Statistical Yearbook etc*, analyzed by the authors.

Note 2. The unit of "R&D projects" and "new product development projects": hundred items, the unit of "sales income": billion yuan (RMB).

Note 3. The extraction method: principal component. Rotation method: orthogonal rotation method with Kaiser standard. Rotation convergences after 3 times iteration.

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Changes in Adaption to Organizational Culture Levels in Vietnamese Commercial Banks Before and After WTO Participation

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Abstract

Becoming a membership in WTO has become an important event in Vietnam in the international integration process since the implementation of reform policies. This integration can cause both challenges and opportunities for the state commercial banks. One of the solutions to take advantage of the opportunities and overcome difficulties is to build stronger organizational culture. However, the number of studies on organizational cuture in the commercial banks in Vietnam is still limited. Therefore, this research was designed to evaluate the changes in levels of organizational culture in Vietnamese commercial banks. The research methods include mean value, standard deviation and Paired samples t-test to compare the differences between the two periods (Before and after Vietnam joined WTO). The survey results from 265 banking employees have shown that there are actually the differences on two cultural levels including (1) Artifacts, and (2) Espoused values between the two periods: before and after Vietnam's WTO-participation.

Keywords: organizational culture, levels of organizational culture, commercial banks, WTO

1. Introduction

Becoming a member of the World Trade Organization (WTO) in 2007 has been an important event for Vietnam in the international integration process since Vietnam adopted some reform policies ("Doi moi") in 1986. Commitment on reducing the trade barriers to the country bring not only opportunities but also challenges for domestic enterprises including the commercial banking sector. As the financial market is more open, an increasing number of international banks such as City Bank, HSBC, ANZ, etc., has entered and further got involved in Vietnamese financial market, which may lead to considerable challenges in competition for commercial banks in Vietnam. Joining WTO brings domestic commercial banks many business opportunities as the economic growth and development of private enterprises have enabled banks to promote their services.

In order to take advantage of chances from the market, as well as tackle the competitive challenges after Vietnam joined WTO, Vietnamese commercial banks must create their own competitive advantages. According to Barney et al. (2001), enterprises should be themselves responding to changes in the environment and build their competitive advantages to be successful. This is true for many different types of businesses including commercial banks.

Establishing appropriate organizational culture is considered as an effective solution to create competitive advantages for enterprises. Strong organizational culture positively affect the performance of the company (Ojo, 2009; Shahzad et al., 2012; Amad, 2012; Uddin et al., 2013); financial performance (Yesil & Kaya, 2013); and corporate behavior (Eccles et al., 2012). Moreover, creating organizational culture increases consensus in the organization, working productivity and self-awareness of employees (Nguyen Manh Quan, 2007). In other words, it generates sustainable competitive advantages for businesses.

There are many ways to determine whether an enterprise has strong or weak organizational culture, one of which is using Schein's model (1992) called organizational culture level. According to Schein (1992), organizational culture has three levels: (1) Artifacts, (2) Espoused Values, (3) Basic Underlying Assumptions. By evaluating the adaptation of organizational culture levels, we can identify whether the components of organizational culture in

one enterprise is strong or weak.

The competitive pressure for state-owned commercial banks has been growing more intense when Vietnam became a member of the WTO. Furthermore, building up organizational culture is becoming significantly important for enterprises including commercial banks. However, studies of organizational culture in Vietnam have not focused on the changes in the adaptation of organizational culture levels in banks. Therefore, this study is designed to assess the adaptation level of state-owned commercial banks to all three levels of the organizational culture, and the changes in the organizational culture level before and after Vietnam's WTO-participation.

2. Literature Review and Hypothesis Development

There are various definitions about organizational culture by different scholars. Organizational culture can be seen as a pattern of shared basic assumptions that organizational members learn by a group as they solved their problems of external adaptation and internal integration (Schein, 1992).

According to Ravasi and Schultz (2006), organizational culture is a set of shared spiritual assumptions that guide what happens in organizations by defining appropriate behavior for various situations. In some other cases, it is reflected as a group of the values and the interdependent behaviors which is popular in businesses and has the tendency of self-dispersed for a long time (Kotter & Heskett, 1992).

To measure the strength of the organizational culture, Schein (1992) gave out the model with three levels including: (1) Artifacts, (2) Espoused Values, (3) Basic Underlying Assumptions. Details of the three levels are explained as the following:

The tangible component of organizational culture (Artifacts) consists of phenomena and things that a person can see, hear and feel when exposed to the enterprise, which are the system of architectural decoration, symbols, logo, rituals, events, organizational structure and anecdotes. Vietnamese state-owned commercial banks are facing with more and more competitive pressures coming from both international banks and private banks since the WTO participation. Hence, the state-owned commercial banks have paid more attention to building up their organizational culture. Thus, the research points out the hypothesis as following:

H1: The adaptation of Artifacts of Vietnamese state-owned commercial banks after WTO accession is higher than that before WTO accession.

The second cultural level, Espoused Values, consists of values, strategies, general philosophies which are endorsed by a large number of employees and managers in the company, such as mission, vision, business philosophy, rules and regulations, values considered as the standards of behavior. Vietnam's WTO accession also impacts on resetting business strategies of commercial banks. Strategies for banking restructuring are also carried out to compete with competitors. This can lead to a change in the perception of shared values in the bank. Thus, the research points out the hypothesis as following:

H2: The adaptation of the Espoused Values of Vietnamese state-owned commercial banks after WTO accession is higher than that before WTO accession.

The third cultural level called Basic Underlying Assumptions includes awareness, belief, thoughts, feelings which are shared and become extremely popular in the subconsciousness and the psychology of organizational members. Later, they become common sense including the methods of evaluating and recognizing members and colleagues or working and living philosophy. Yet, these implicit defaults may change when enterprises implement restructuring programs or set up new organizational culture. When Vietnam is a member of WTO, big state-owned commercial banks all build up their own new organizational culture. Therefore, this study raises the following hypothesis:

H3: The adaptation of the Basic Underlying Assumptions of Vietnamese state-owned commercial banks after WTO accession is higher than that before WTO accession.

3. Methodology

3.1 Research Design

The questionnaire adopted from the study of Schein (1992) is designed for all three levels of organizational culture and adjusted by focus group discussions. A pilot test was conducted on 15 employees from four different banks to assess the appropriateness of the questions. Then, the questionnaire was modified and the final scale for each level of the organizational culture is developed as follows:

(1) Artifacts:

(Q1): Systematic brand identity in the whole network.

(i) Logos, insignia, symbols and colors.

(ii) Costume, business cards, etc.

(iii) The architectural decoration in offices (headquarters, branches, transaction offices and ATMs).

(iv) Stationery.

(Q2): Ceremonies and events.

(Q3): Stories and anecdotes about the development process and key members of the bank.

(Q4): Clear rules and regulations.

(i) Code of conduct for staff.

(ii) Internal regulations for working.

(iii) Task handling process.

(iv) Regulations for staff reward and punishment.

(Q5): Coherently and clearly organized hierarchy.

(2) Espoused Values

(Q6): Employees easily adapt to changes in business environment or internal structure.

(Q7): New ideas are welcomed at workplace.

(Q8): The system of business philosophy, mission, vision and core values are built and disseminated throughout the bank.

(3) Basic underlying assumptions

(Q9): Employees are aware of their working style in their bank compared to that of other banks.

(Q10): The staff believe in the bank's development.

(Q11): Employees are aware of the important role of building up organizational culture to differentiate itself from other banks.

The scale used to measure the aspects of the organizational culture levels is Likert scale with 5 levels (1 is totally disagree and 5 is totally agree). The survey was conducted in January and February of 2015 in the four largest banks in Vietnam including Agribank, BIDV, Vietcombank and Vietinbank. To ensure ethics in research, the respondent information is confidential. The sample size was chosen as the rule of Comrey & Lee (1992) that 250 respodents are good. To get such a number of respondents, we sent questionnaires to 1,000 employees working in four different banks. As the questionnaire requires employees to experience both two periods (before and after WTO accession), the response rate was not very high. 265 valid questionnaires were collected and categorized as follows:

Table 1. Sample characteristics

Criteria		No. of person (%)
Gender	Male	112 (42.3%)
	Female	153(57.7%)
	< 25	13 (4.9%)
Age	25 – 35	220 (83%)
	35 – 45	27 (10.2%)
	45 – 55	5 (1.9%)
	College	6 (2.3%)
Education level	University (Bachelor)	209 (78.9%)
	University (Master)	50 (18.8%)
	Agribank	33 (12.5%)
	Vietcombank	117 (44.2%)
Organization	BIDV	99 (37.4%)
	Viettinbank	16 (6%)

(Source: The author's survey)

3.2 Data Collection Methods

The questionnaire was designed and delivered to a random list of employees working in four biggest state-owned commercial banks in Vietnam as: Agribank, BIDV Bank, Vietcombank, and VietinBank. Questionnaires were printed and given sent to the employees working in Hanoi. Email questionnaires were also sent to employees working in other areas.

3.3 Data Analysis Methods

To evaluate the adaptation of employees to different cultural levels, the author uses mean value, standard deviation to measure the two periods. Furthermore, to compare the adaptation level of the two periods before and after WTO accession, paired t-test is run at the regular significance level of 5 pecent (Hair et al., 2006).

4. Research Results

4.1 Adaptation to Cultural Levels of State-Owned Commercial Banks Before and After WTO Accession

4.1.1 Adaptation to the Artifacts

All variables that measure the adaptation to artifacts are higher in the post-WTO accession period (2007-2014) than the pre-WTO accession period (2001-2006). Among the items, the highest mean value is "ceremonies and events" variable (Mean = 4.43, SD = 0.64), and the lowest value is "stories and anecdotes about the development process and the key members" (Mean = 4.01, SD =0.69). In the period before WTO accession, the highest score is "Coherently and clearly organized hierarchy" (Mean = 4.00, SD = 0.63), while the lowest one is still "stories and anecdotes about the development process and the key members" (Mean = 3.55, SD = 0.86) (see Table 2).

Table 2. Adaptation to artifacts in Vietnamese state-owned commercial banks before and after WTO accession

Criteria	Before WTO accession		After WTO accession	
	Mean	SD	Mean	SD
Q1. Systematic brand identity in all branches	3.64	0.73	4.36	0.48
1. Logos, insignia, symbols and colors	3.87	0.80	4.46	0.59
2. Costume, business cards, etc.	3.38	0.96	4.17	0.78
3.The architectural decoration in offices (headquarters, branches, transaction offices and ATMs)	3.57	0.90	4.45	0.59
4. Stationery	3.75	0.85	4.35	0.67
Q2. Ceremonies and events	3.94	0.89	4.43	0.64
Q3. Stories and anecdotes about the development process and the key members of the bank	3.55	0.86	4.01	0.69
Q4. Clear rules and regulations	3.89	0.64	4.37	0.79
1. Code of conduct for staff	3.88	0.78	4.41	0.82
2. Internal regulations for working	3.97	0.69	4.42	0.80
3. Task handling process	3.87	0.64	4.35	0.82
4. Regulations for staff reward and punishment	3.85	0.80	4.29	0.89
Q5. Coherently and clearly organized hierarchy	4.00	0.63	4.25	0.79

(Source: Author's survey results analysis)

4.1.2 Adaptation to Espoused Values

Research results show that the adaptation to all items of espoused values of the period after WTO accession is higher than that of the period before WTO accession. In the post-WTO accession period, the highest adaptation level is "the system of business philosophy, mission, vision and core values are built and disseminated throughout the bank" (Mean = 4.14, SD =0.77) and the lowest score is the variable "employees should easily adapt to the changes in business markets or internal structure" (Mean = 4.03, SD =0.80). However, in the pre-WTO accession period, the item "New ideas are welcomed at the bank" (Mean = 3.94, SD = 0.79) is reported to have the highest score, while the lowest score item is "the system of business philosophy, mission,

vision and core values are built and disseminated throughout the bank" (Mean = 3.83, SD = 0.89)   (see Table 3).

Table 3. Adaptation to espoused values in Vietnamese state-owned commercial banks before and after WTO accession

Criteria	Before WTO accession		After WTO accession	
	Mean	SD	Mean	SD
Q6. Employees easily adapt to the changes in business environment or internal structure.	3.92	0.76	4.03	0.80
Q7. New ideas are welcomed at the bank.	3.94	0.79	4.06	0.78
Q8. The system of business philosophy, mission, vision and core values are built and disseminated throughout the bank.	3.83	0.89	4.14	0.77

(Source: Author's survey results analysis)

4.1.3 Adaptation to Basic Underlying Assumptions

Research results reveal the rise and fall of the adaptation level to basic underlying assumptions in banking employees before and after WTO accession. The aspect "employees are aware of the important role of building up organizational culture to differentiate itself from other banks" reports the increase of mean value from 4.09 to 4.36 (see Table 4). While the item "employeesbelieve in the bank's development" shows the decrease of mean value from 4.34 to 4.26. It is surprising that the mean value of "employees are aware of their working style in their bank compared to that of other banks" variable relatively remains the same (see Table 4).

Table 4. Adaptation to Basic underlying assumptionsVietnamese state-owned commercial banks before and after WTO accession

Criteria	Before WTO accession		After WTO accession	
	Mean	SD	Mean	SD
Q9. Employees are aware of their working style in their bank compared to that of other banks	3.95	0.71	3.95	0.72
Q10. Employeesbelieve in the bank's development	4.34	0.74	4.26	0.85
Q11. Employees are aware of the important role of building up organizational culture to differentiate itself from other banks.	4.09	0.95	4.36	0.86

(Source: Author's survey results analysis)

4.2 Test of Changes in Adaptation to Cultural Levels

To compare the differences between the two periods of the adaptation to organizational cultural levels in Vietnamese state-owned commercial banks, this research uses paired samples t-test. The test results of all the three cultural levels are presented below.

4.2.1 Changes in Artifacts

Regarding the artifacts, test results show that there is asignificant difference in all variables of this cultural level between the two periods before and after Vietnam's WTO accession (p-value < 0.05) (see Table 5). The adaptation level to artifacts tends to be higher in the post-WTO accession period than that in the pre-WTO accession period. The most significant change happened in the aspect of "systematic brand identity in all branches" (Mean = 0.71, SD = 0.78) and least significant change was seen in the aspect of "coherently and clearly organized hierarchy" (Mean = 0.25, SD = 0.85) (see Table 5). In general, the adaptation level to artifacts in Vietnamese state-owned banks is higher in the period after WTO accession than that in the one before WTO accession. In other words, the first hypothesis H1 is accepted.

Table 5. Test results of differnces in adaptation to Artifacts

Criteria	Mean Differences		t	p-value
	Mean	SD		
Q1. Systematic brand identity in all branches	.71	.78	14.84	.00
1. Logos, insignia, symbols and colors	.60	.83	11.76	.00
2. Costume, business cards, etc.	.78	.89	14.35	.00
3.The architectural decoration in offices (headquarters, branches, transaction offices and ATMs)	.88	1.04	13.77	.00
4. Stationery	.60	.85	11.54	.00
Q2. Ceremonies and events	.49	.95	8.31	.00
Q3. Stories and anecdotes about the development process and the key members of the bank	.45	.84	8.74	.00
Q4. Clear rules and regulations	.47	.73	10.54	.00
1. Code of behaviour for staff	.52	.90	9.53	.00
2. Internal regulations for working	.46	.77	9.68	.00
3. Task handling process	.48	.83	9.44	.00
4. Regulations for staff reward and punishment	.44	.80	8.90	.00
Q5. Coherently and clearly organized hierarchy	.25	.85	4.76	.00

(Source: Author's survey results analysis)

4.2.2 Changes in Adaptation to Espoused Values

The test results of three aspects of espoused values show that there are significant change between the two periods of WTO accession (p-value < 0.05) (see Table 6). It can be seen that there is an increase in adaptation level from the pre-WTO accession period to the post-WTO accession one. The aspect of "the system of business philosophy, mission, vision and core values are built and disseminated throughout the bank" is reported to show the largest difference (Mean = 0.31, SD = 0.69). Otherwise, less changes have been observed in the aspect of "Employees easily adapt to the changes in business environemnt or internal structure" (Mean = 0.11, SD = 0.82) (see Table 6). In conclusion, the adaptation level to espoused values in Vietnamese banking system is higher after the WTO accession than that before WTO accession. The hypothesis H2 then is accepted.

Table 6. Test results of differences in adaptation to Espoused values

Criteria	Mean Differences		t	p-value
	Mean	SD		
Q6. Employees easily adapt to the changes in business environment or internal structure	.11	.82	2.09	.04
Q7. New ideas are welcomed at the bank	.12	.85	2.38	.02
Q8. The system of business philosophy, mission, vision and core values are built and disseminated throughout the bank	.31	.69	7.25	.00

(Source: Author's survey results analysis)

4.2.3 Changes in Adaptation to Basics Underlying Assumptions

According to the test results of mean differences with three variables of basic underlying assumptions, two of those variables are not proved to have significant changes between the two periods. T-test with the item "employees are aware of their working style in their bank compared to that of other banks" reports the p-value = 0.94 which is higher than 0.05. Similarly, the item "employeesbelieve in the bank's development" also has the p-value =0.09 (higher than 0.05) (see Table 7). The results show that there is no difference in the adaptation level of these two items between the two periods. The only aspect experienced the difference between the two periods is "Employees are aware of the important role of building up organizational culture to differentiate itself from other banks" (p-value < 0.05) (see Table 7). Thus, there is not clear evidence to conclude that the adaptation level to basic underlying assumptions in surveyed banks is higher after the joint in WTO. In other words, hypothesis H3 is not accepted.

Table 7. Test results of differences in adaptation to basic underlying assumptions

Criteria	Mean Differences		t	p-value
	Mean	SD		
Q9. Employees are aware of their working style in their bank compared to that of other banks	.00	.76	.08	**.94**
Q10. Employeesbelieve in the bank's development	-.08	.76	-1.69	**.09**
Q11. Employees are aware of the important role of building up organizational culture to differentiate itself from other banks.	.27	.60	7.23	.00

(Source: Author's survey results analysis)

5. Discussion

The research results showed a gender gap in the labor structure in the surveyed banks as the number of female workers is 1.4 times higher than that of male workers, which reflects the job characteristics in the banking sector.

Surveyed employees are at fairly young age with more than 80 percent of those is under the age of 35. This is consistent with the evolution of the banking sector in Vietnam during the period 2005-2010 which experienced the rapid development in scale of the banks.

In general, education level of surveyed employees is quite high with 90 percent of them hold a bachelor or master degree. It proves that the attractiveness of Vietnam banking industry is still very high. It also shows the high competitiveness of job positions in banking and finance industry.

Research findings also noted the trend in the level of adaptation of organizational cultural levels in most criteria of the state-owned commercial banks in Vietnam from the perspective of employees is higher in the period after WTO accession than that before joining the WTO.The most drastic changes belong to the aspects of artifacts and espoused values, respectively. Wherease, there seems to be no change in basic underlying assumptions. This fact is the reflection of the boom of building organizational culture in the banking system of Vietnam after the country joined WTO. For example, BIDV approved its brand identity system in 2009, amended it in 2012; Vietcombank conducted changes in the new brand identity in 2013 and most recently Agribank announced its changes of brand identity in late 2014. These activities have increased the evaluation of employees toward artifacts in the banks. Simultaneously, the artifacts, which are tangible cultural properties, are more perceptible due to their direct influence and therefore outperform other cultural levels. Basic underlying assumptions are of more spiritual factors so they are harder to change. It is undeniable that basic underlying assumptions do not show any significant change between the two periods except for the item "role of building organizational culture". The aspect of building organizational culture is evaluated to be increasingly adapted, so it is clear that the awareness of the role of organizational culture among employees in Vietnamese state-owned commercial banks has become better.

With the increasing level of adaptation at all three levels of organizational culture, it is definitely clear that recent programs to build organizational culture at Vietnamese commercialbanks after WTO accession are effective. It also shows the changing awareness of the banks' leaders about organizational culture in the context of increasing competition. The third cultural level includingbasic underlying assumptions does not change between the two periods. Thus, it is concluded that the surveyed banks need to make more effort on building organizational culture in depth raise awareness after managing creating an united tangible cultural layer.

This study has successfully addressed the questions about the state and changes in adaptation to organizational cultural levels in Vietnamese stated-owned commercial banks. However, there are still some limitations such as small sample size and focused respondents in only four big commerical banks. Consequently, the representative of the study is limited. Furthermore, this is one of the first studies about adaptation to organizational cultural levels so the survey scale should be continuously supplem ented and further improved for the next study. The next studies shouldal so consider expandingthe sample sizeandthe respondents groupfor abetteroverviewof the adaptation to organizational culturallevels in Vietnamese commercial banks.

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The Effectiveness of Group Acceptance and Commitment Therapy on Pain Intensity, Pain Catastrophizing and Pain-Associated Anxiety in Patients with Chronic Pain

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Abstract

This study aimed to evaluate the effectiveness of group–Acceptance and Commitment Therapy (ACT) on the intensity of pain, catastrophizing it and pain-associated anxiety in patients with chronic pain. The research design was quasi-experimental with pretest-posttest and one-month follow-up with control group. The statistical population was all individuals referring to psychological clinics, physical medicine and health centers in Isfahan city who were diagnosed to have chronic pain disorder in 2014. Out of 67 registered patients, 30 patients who had the research criteria were selected by the convenience sampling method and were randomly assigned into two groups each with 15 members. The subjects of the two groups all responded to Chronic Pain Acceptance Questionnaire (CPAQ), Pain Intensity Scale (PIS), Pain Catastrophizing Scale (PCS), and Pain-Anxiety Symptoms Scale (PASS-20). The experimental group received 8 90-minute sessions of Group- Acceptance and Commitment Therapy once a week. The data was assessed in 3 stages of pretest, posttest, and follow-up and was analyzed by multivariable covariance analysis. The results showed that the experimental group had a significant improvement in pain intensity, pain catastrophizing, and pain-associated anxiety (P<0/01) and this improvement was consistent after one-month follow-up. It can be said that Acceptance and Commitment Therapy can be effective on experience of pain of patients with chronic pain.

Keywords: Group-Acceptance and Commitment Therapy, Pain intensity, Pain Catastrophizing, Pain-Associated Anxiety, Chronic Pain Disorder

1. Introduction

Pain plays a critical protective role in saving humans' life by making us avoid dangerous and unpleasant stimulants. However, uncontrollable and long pain loses its warning and adaptive role and creates various psychological problems for humans (Wicksell, Olsson, & Hayes, 2011). Pain is a sensational and psychological experience of discomfort which is usually related to the real harm or the factor threatening tissues (International American Chronic Pain Association, 2014). Pain is basically divided into severe and chronic pain. The distinction between the two is in a 3-month interval in clinic works and 6-month interval in researches (Breivik, Collett, Ventafridda, Cohen, Gallacher, 2006). Chronic pain is an overwhelming situation so that it causes not only pain-associated tension and stress but also increasing emotional pressure, demoralization, disappointment, helplessness, and anxiety (Breivik et al., 2006). In a lot of researches, pain intensity, and emotional disorders such as anxiety, cognitive deviations, and physical harm or injury are considered as main predictors of disability in this disorder (Weiner, Rudy, Kime, & Golla, 2004; Gauntlett – Gilbert & Eccleston, 2007). Chronic pain has two main dimensions of sensational and affective dimensions. The sensational dimension refers to intensity of pain and affective dimension refers to emotional disorders associated with pain disorder so that Vadivelu, Urman & Hines (2011) consider anxiety as the most common pain-associated psychiatric disorder. Anxiety can increase one's experience of pain by decreasing his feeling of self-efficiency or self-confidence when facing potential threats (Holland, Breitbart, Jacobsen, Lederberg, Loscalzo, & McCorkle, 2010). These factors all make a person overestimate his illness and pain and regard it as a catastrophe and the person thinks he is unable to cope with it (Bartley & Rhudy, 2008). Turner, Jensen & Romano (2000) studied on 169 patients with chronic pain and found

out those catastrophic beliefs and coping strategies with pain significantly predict physical disability and depression in patients.

2. Research Background

Researchers have shown that biological factors cannot explain vulnerability to the experience of pain disorder, the time of its occurrence or incidence, its process, the acceleration and intensification of its incidences and strokes, or the disability related to the disorder by themselves (Rains, Penzien, McCrory, & Gray, 2005) since all psychosomatic disorders play a critical role in the emergence and creation of physical symptoms. In treating chronic pain, medical and non-medical treatments are used. Researches indicate that using medical medicines such as opium, anti-depressant, and anti-convulsion drugs only reduces patients' pain only up to 30 to 40% (McMahon & Koltzenberg, 2006). Hoffman, Papas, Chatkoff & Kerns (2007) found out that multiple-therapy approaches have more short-term and long-term effects on pain, emotional reactions, pain experience and pain intensity, and improvement of individuals' daily and occupational performance. One of the components of these treatments or therapies is psychological intervention. In this regard, the concept of acceptance is one of the psychological concepts which have attracted a lot of attention in explaining chronic pain-associated disability.

Psychological acceptance has a prominent role in adapting individuals to a lot of unwanted emotional experiences, memories, and unpleasant thoughts or special physical situation. Some researchers believe that having a psychological acceptance background makes people experience more acceptances when confronting pain and have less avoidance reactions (Hayes & Strosahl, 2010). Evidences show that individuals who make more effort to stop and remove pain or use distracting strategies for avoiding pain experience more pain and psychological distress in comparison to individuals who face their feelings, emotions, and thoughts related to pain and accept them (Macedo, Latimer, Maher, Hodges, Nicholas, Tonkin, McAuley, & Stafford, 2008). In Acceptance and Commitment Therapy which is briefly called ACT, the main goal is creating psychological flexibility, that is making somebody able to practically choose the appropriate option among different options and not to do something to avoid thoughts, feelings, memories, or distressing tendencies imposed on the individual (Foreman & Herbert, 2008). ACT has 6 central main procedures which lead to psychological flexibility including psychological acceptance, psychological awareness, cognitive defusion, self as context, value clearing, and committed action (Hayes, Luoma, Bond, Masuda, & lillis, 2006; Foreman & Herbert, 2008). Psychological flexibility and pain acceptance brings about using active coping strategies and evading passive avoiding strategies (McCracken & Gootirez-Martin, 2011). The review of researches show that most therapeutic interventions of chronic pain focus on relaxation, techniques for reducing anxiety and stress management, problem solving, psychological education, cognitive therapy, behavioral interventions such as distraction, and hypnotism (Rost, Wilson, Buchanan, Hildebrandt, & Mutch. 2012; Nezo, MaguthNezu, Friedman, Faddis, & Houts, 1998 ; Nezo, MaguthNezu, Felgoise, McClure, & Houts, 2003; Coluzzi, Grant, Doroshow, Rhiner, Ferrell & Rivera, 1995; Jacobsen & Jim, 2008; Holland et al., 2010). So far, process-oriented approaches which focus only on thoughts and thought patterns and individuals' reaction and response to their thoughts have not been investigated. Therefore, the aim of this research was to study the effectiveness of Acceptance and Commitment Therapy on the psychological indices of patients with chronic pain.

3. Research Methodology

The present study is a clinic experimental type with treatment, pretest, posttest, one-month follow-up and control group. The statistical population of the study was all individuals referring to psychological clinics, physical medicine health centers in Isfahan city who were diagnosed to have disorder by psychiatrists and were proved to have chronic pain disorder and not to have other main psychological and personality disorders through clinic interviews by clinic psychologists in 2014. Convenience sampling method was used for sampling. To do so, the researcher referred to Azahra, Sadi Therapeutic and medical centers and specialty clinics in Isfahan city and introduced the research design in some sessions. Those who were interested in participating in the research were registered. Out of all who were registered (67 individuals), 30 individuals were randomly selected and assigned in the control and experimental (intervention) groups. However, the research was done based on the data gathered from 25 individuals because of the drop-out of 1 person in the intervention group and 4 individuals in the control group. The criteria for being included in or excluded from the research were: being diagnosed as having one of chronic pain disorders at least for 3 months by the related physician and based on the structural interview by the clinic experts, level of education (at least primary school), age range between 20 to 45, lack of recognizing the real cause of pain like other physical diseases. The patients received no other psychological treatments or therapies while receiving the research's therapy. In case of receiving other psychological therapies or interventions prior to the research, all of them finished one month before participating in the research. The criteria for excluding participants from the research was being diagnosed to have disorders in axes I and II

simultaneously based on the diagnosis guide of psychological disorders by the clinic psychologist. In addition, the presence of justifying organic symptoms was a sign of the disease. The treatment group received group Acceptance and Commitment Therapy in 8 sessions. The description of sessions is given below.

3.1 Therapeutic Sessions of Acceptance and Commitment Therapy

Session 1

Getting familiar with the members of the group and making a therapeutic relationship, making members familiar with the subject of the research, discussion about the boundaries of confidentiality and secrecy, looking into chronic pain in each member of the group including the duration and type of pain and the used treatments and therapies, the overall assessment and evaluation of distressing thoughts and feelings in members, evaluating methods of controlling these thoughts and feelings, an introduction to creative helplessness, giving an assignment, answering the questionnaires

Session 2

Getting feedback from the first session, studying the homework or assignment of the previous session and discussing it, continuing creative helplessness, studying the worlds inside and outside of ACT, making individuals eager to quit the inefficient program of change, making individuals understand that control is a problem not a solution, and an introduction to tendency or inclination that is an alternative to control.

Session 3

Getting feedback from the second session and reviewing the reactions and responses to the previous session, continuing the discussion about tendency using ACT metaphors and similarities and exemplifications, introducing values and identifying the individuals' values, making relationships and making individuals understand the concept of tendency alongside with the concept of values, giving an assignment

Session 4

Getting feedback from the third session and reviewing reactions to the previous session, determining and studying the values of each person, clarification of or clearing values, actions and internal and external barriers and deepening these concepts, an introduction to the concept of defusion, giving an assignment

Session 5

Getting feedback from the fourth session and reviewing reactions to the previous session, making individuals understand fusion and defusion using metaphors, similarities and exemplifications in ACT, doing experimental exercises for making individuals understand the concept of defusion, introducing mindfulness, and doing one of the exercises of mindfulness, giving an assignment

Session 6

Getting feedback from the fifth session and reviewing reactions to the previous session, introducing different kinds of fusion, the concept of conceptualized self and educating how to defuse from it, pointing to values and evaluating the adaptation score, doing one of the exercises of mindfulness

Session 7

Getting feedback from the sixth session and reviewing reactions to the previous session, introducing fusion with life story, mindfulness and emphasizing on being at the present moment or contact with the present moment, referring to values and the necessity of being committed to values

Session 8

Getting feedback from the seventh session and reviewing reactions to the previous session, introducing the concept of controlling self and summarizing previous sessions and emphasizing on the main processes of Acceptance and Commitment Therapy i.e. Acceptance, Defusion, Self as context, Contact with the present moment, values, and committed action.

The following instruments were used for collecting the data:

3.2 Acceptance and Action Questionnaire

There are several versions of AAQ. The first edition includes 16 two-dimensional questions which assess acceptance, mindfulness, and value-oriented action. These two dimensions are called psychological flexibility (Hayes, 2004; Bond et al., 2011). The second version includes 9 questions without any dimension. The 9-question and 16-question questionnaires showed a significant correlation with each other (r=0/89) (Hayes et al., 2006). AAQ-И is a 10-question instrument which showed a good internal consistency (α=0/87) and test-retest

reliability (r=0/80). AAQ-И includes both positive and negative questions. AAQ-И is correlated with variables that are theoretically related to it. For instance, higher levels of psychological flexibility as assessed by AAQ-И were related to lower levels of overall psychological depression, anxiety, and distress. In addition, higher scores of AAQ-И predicted psychological health (Bond et al., 2011). In Iran, Chranbach's alpha coefficient for this instrument was calculated and reported to be at an acceptable level by Abasi, Molodi and Zarabi (2013).

3.3 Pain Intensity Scale

Pain intensity was assessed using a scale of 0 to 10 degrees (0= lack of pain, 10= the worst possible pain). The patients were asked to rate or grade their daily average pain in the last week. This index is widely used in research related to pain (e.g. McCracken et al.'s research). In Iran, Afsharzadeh, Rezaee and Yousefzadeh, (2010) evaluated the reliability and validity of the scale in internal investigations.

3.4 Pain Catastrophizing Scale

Pain catastrophizing scale was made by Sullivan, Bishop, and Pivik in 1995 with the aim of evaluating the individual's degree of catastrophic thoughts and behaviors. The questionnaire is self-report and consists of 13 subscales or dimensions and needs at least 6 classes of academic education to be responded. PCS was made to evaluate various aspects of pain catastrophizing and for a better understanding of the mechanism of the impact of catastrophizing on pain experience. Factor analysis showed that it includes the subscales of rumination, exaggeration, and helplessness. These three components evaluate negative thoughts associated with pain. Participants are asked to choose a number from 0 (never) to 4 (always) for a description of the frequency of 13 different feelings and thoughts associated with experiencing pain. Lower scores indicate less catastrophizing. The reliability using Cronbach's alpha was obtained to be 0/88, 0/89, and 0/67 for the subscales of rumination, helplessness, and exaggeration respectively and 0/92 for the whole scale. In addition, test-retest reliability of PSC in a sample of 100 patients with musculoskeletal diseases with a time interval of 21 days was r=0/80 for the whole scale and was approved to be between 0/67 and 0/81 for the subscales (Mayer, Salovey & Caruso, 2008). In Iran, this questionnaire was first normalized and used in the study by Davoodi, Yadollah, et al. (2012) and PCS correlation coefficient and the short form of Beck's Depression Inventory were calculated and there was a positive and significant correlation between the score of the whole catastrophizing scale PCS and the short form of Beck's Depression inventory.

3.5 Pain Anxiety Symptoms Scale

The questionnaire was made by Lovibond and Lovibond (1995). This scale consists of two forms. The main form consists of 42 statements which evaluate the psychological structures of depression, anxiety, and stress by 14 different statements. Its short form includes 21 statements each measuring one psychological structure or factor by 7 statements. Participants must mark or sign the severity of the frequency of the mentioned issue in each subject matter experienced over the past week. Each question has a Likert scale from 0 to 3. Lovibond and Lovibond (1995) showed that test-retest reliabilities for the subscales of depression, stress, and anxiety were 0/71, 0/81, and 0/79 respectively. For the validity of the scale the correlation coefficients of Beck's Anxiety and Depression Inventories were 0/81 and 0/74 respectively. Therefore, this scale's validity is suitable for being applied in research and diagnostic activities. In the present study, α= 0/78, α= 0/78, and α= 0/79 for depression, anxiety, and stress respectively obtained by the researcher.

The results obtained by the research instruments were analyzed by descriptive and inferential (multi-variable covariance) statistics by SPSS-20 software.

4. Results

The demographic results of the research showed that the individuals participating in the research were 12% men and 88% women. Out of this number 12% had primary school degree, 48% had diploma, and 40% had bachelor's degree. In addition, 12/5% were self-employed, 33/3% were employees, and 54/2% were housekeepers. 95/8% of the participants were married and 4/2% was single. The mean of age in the experimental group was 38/57 with the standard deviation of 4/25 and the mean of 41/36 with the standard deviation of 4/58 in the control group. The mean of pain history of the participants in the experimental group was 5/45 with the standard deviation of 3/67 and the mean of 2 with the standard deviation of zero in the control group. In addition, the mean of disease history of the participants in the experimental group was 4/21 with the standard deviation of 2/99 and the mean of 9/71 with the standard deviation of 6/7 in the control group. It should be mentioned that the participants in the research suffered disorders such as rheumatoid arthritis (30%), anxiety (15%), back pain (15%), depression (5%), headache (30%) and mental obsession (5%). The results obtained by the necessary assumptions of doing parametric test showed that the assumption of normal distribution of scores with Shapiro

Wilk Test is approved for the variables of pain intensity (0/940), pain-associated anxiety (0/0630), pain catastrophizing (0/836) and only the assumption of the equality of variances with <u>Levene's Test</u> is not approved for the variable of pain catastrophizing (0/027). Nonetheless, due to the point that the scale of data was interval and the normal distribution of the data, the analysis of covariance test is permitted. The results obtained by investigating group intervention of Acceptance and Commitment Therapy and its effect on pain intensity, pain catastrophizing, and pain-associate anxiety of the patients with chronic pain in post-test and follow-up stages are presented in Table 2 and 3.

Table 2. The results of Mancova analysis on the mean of scores of all variables

	Value	F	df1	df2	Significance	Eta Square	Power Estimate
Wilk's Lambda	0/097	9/303	6/00	6/00	**0/008	0/903	0/950

As it can be seen in Table 2, the significance levels of the test indicate that in post-test and follow-up stages, the mean of the experimental group is reduced in comparison to the control group at least in one of the elements of the research (pain intensity, pain catastrophizing, and pain-associated anxiety) (P<0/01). The degree of this effect or difference is equal to 0/903% i.e. 90/3% of individual differences in the scores of all components of the study (pain intensity, pain catastrophizing, and pain- associated anxiety) is related to the effect of group membership. The statistical power close to 1 indicates sufficient volume of the sample. The results of variance analysis about the effectiveness of ACT pain in the post-test and follow-up is presented in Table 3.

Table 3. The results of Mancova analysis of the effect of group membership on the scores of pain intensity

Pain Intensity		Sum of Squares	df	Mean of Squares	F	Significance	Effect Size	Power Estimate
Pretest	Post-test	0/381	1	0/381	0/107	0/750	0/010	0/060
	Follow-up	0/409	1	0/409	0/170	0/688	0/015	0/066
Group	Post-test	11/923	1	11/923	3/341	*0/045	0/223	0/883
	Follow-up	21/215	1	21/215	8/817	*0/013	0/445	0/771
Error	Post-test	39/256	11	3/569	-	-	-	-
	Follow-up	539/738	11	49/067	-	-	-	-

The results of Table 3 show that this therapy has been effective on the reduction of pain intensity in the post-test and follow-up stages compared to the control group. The degree of this effect in the post-test was 22.3% and in the follow-up was 44/5% respectively. It is noteworthy that the statistical power in the post-test was 0/88 and in the follow-up was 0/77.

The results of variance analysis about the effectiveness of Acceptance and Commitment Therapy on pain catastrophizing the post-test and follow-up are represented in Table 4.

Table 4. The results of Mancova analysis of the effect of group membership on the scores of pain catastrophizing

Pain Catastrophizing		Sum of Squares	df	Mean of Squares	F	Significance	Effect Size	Power Estimate
Pretest	Post-test	11/198	1	11/198	0/377	0/552	0/033	0/087
	Follow-up	5/374	1	5/374	0/492	0/498	0/043	0/098
Group	Post-test	322/600	1	322/600	10/846	**0/007	0/496	0/850
	Follow-up	499/911	1	499/911	45/724	**0/001	0/806	0/999
Error	Post-test	327/166	11	29/742	-	-	-	-
	Follow-up	120/266	11	10/933	-	-	-	-

As it can be seen in Table 4, there is a significant difference between modified means of pain catastrophizing scores of the participants by group membership (experimental and control group) in the post-test and follow-up (P<0/01). Therefore, the assumption was confirmed and Acceptance and Commitment Therapy was effective on the reduction of pain catastrophizing scores in the post-test and follow-up in the experimental group. The degree of this effect was 49/6%, and 80/6% in the post-test and follow-up stages respectively. It is notable that the statistical power was 0/85 in the pre-test and 1 in the follow-up.

The results of variance analysis on the effectiveness of Acceptance and Commitment Therapy on pain-associated anxiety in the post-test and follow-up are shown in Table 5.

Table 5. The results of Mancova analysis on the effect of group membership on the scores of pain-associated anxiety

Pain-associated anxiety		Sum of Squares	df	Mean of Squares	F	Significance	Effect Size	Power Estimate
Pretest	Post-test	70/002	1	70/002	1/427	0/257	0/115	0/194
	Follow-up	29/854	1	29/854	0/607	0/452	0/052	0/110
Group	Post-test	1713/810	1	1713/810	34/928	**0/001	0/760	0/999
	Follow-up	1885/044	1	1885/044	38/321	**0/001	0/777	0/999
Error	Post-test	539/738	11	49/067	-	-	-	-
	Follow-up	541/102	11	49/191	-	-	-	-

The results of Table 5 show that Acceptance and Commitment Therapy has been effective on the reduction of the scores of pain-associated anxiety in the post-test and follow-up stages in the experimental group. The degree of this effect was 76% and 77/7% in the post-test and follow-up stages. It is noticeable that the statistical power was 0/76 and 0/78 in the post-test and follow-up stages respectively.

5. Discussion and Conclusion

This study aimed to evaluate the effectiveness of group Acceptance and Commitment Therapy (ACT) on the intensity of pain, catastrophizing it & pain-associated anxiety in patients with chronic pain. The results of the research revealed that Acceptance and Commitment Therapy has been effective on the reduction of the pain intensity, pain-associated catastrophic thoughts, and pain-associated anxiety in the post-test stage and these changes were consistent in the one-month follow-up. These results are in line with the results obtained by Baranoff, Hanrahan, Kapur, & Connor (2013), Vowles, McCracken, O'Brien (2011) and Nordin and Rosman(2012). On the intensity of experienced pain results are in line with the results obtained by Vowles and McCracken (2008) and Poppe et al. (2011). Vowles et al. (2008) by studying 344 patients with chronic pain showed that acceptance indirectly improves patients' psychological and physical functioning or performance by modifying catastrophic thoughts on depression, anxiety and avoidance. In addition, Poppe et al. (2011) showed that pain intensity, pain interference, and pain duration were not significantly related to acceptance, while catastrophizing is negatively and significantly related to acceptance and catastrophizing modifies the relationship between the personality feature of avoidance and acceptance. In the present research, the techniques of acceptance and commitment could target pain signs well. In this therapy, pain exposure within sessions was not used. The exercises of behavioral commitment necessarily involved facing and exposure with pain situations outside sessions. Using defusion and acceptance reduced the degree and intensity of these situations for patients. In this intervention, pain intensity was reduced in patients with chronic pain by reducing anxiety by focusing on techniques of acceptance, defusion, detailed discussions about values, and individuals' goals. In this therapy, increasing individuals' tendency to experience internal events as they are was emphasized instead of focusing on exposure. Here, the goal was to help a person to experience feeling pain just as a feeling and to do what is important in his/her life in line with his/her values rather than responding to the feeling i.e. feeling pain in itself was not the issue, but the main issue was the individual's effort to respond to feeling pain (i.e. coping with pain). In fact, the aim of this therapy was increasing the individual's behavioral treasury while facing dangerous events and disasters (such as pain), what is called psychological flexibility. The results of this research are in line with the findings obtained by McCracken, Vowles & Eccleston (2007). And McCracken, & Zhao-O'brrien (2010) showed that the participants in this kind of therapy scored better in pain intensity, reports of pain and intensity,

the frequency of pain-associated anxiety symptoms and gradually their predictions improved. In fact, the central processes of ACT teach the client how to leave and quit thought avoiding and feeling pain, to defuse from pain thoughts and feelings, to reinforce observing self rather than conceptualized self, to accept pain internal events rather than controlling them, to clear his values and address them. One of the most important techniques of this therapy is mindfulness which was particularly emphasized in this research and was practiced almost in all sessions of therapy. Schütze, Rees, Preece, & Schütze, (2010) emphasized that mindfulness significantly and negatively predicts pain intensity, negative emotions, pain catastrophizing, pain-associated fear, alertness to pain, and inability to function and explains 17% and 41% of their variances. Hierarchical regression analysis showed that mindfulness by itself predicts catastrophizing by controlling other variables and modifies the relationship between pain intensity and catastrophizing. In fact, mindfulness makes the person aware of his negative thoughts and emotions and reduces their effects by cognitive defusion and bringing the person to the present moment (two fundamental processes in ACT). Another process which is emphasized in ACT and had a prominent role in this therapy protocol is committed action. Besides bringing about the realization of goals and the happiness resulting from it and increasing patients' life satisfaction, encouraging patients to clarify values (value clearing), determine goals, predict obstacles and hindrances, and finally have commitment to do actions in line with achieving goals and moving towards values despite having pain (by accepting pain) relieves them of being trapped in a loop of negative thoughts and emotions (such as anxiety, catastrophizing, disappointment, despair), which in turn increase pain intensity (McWilliams, Goodwin, & Cox 2004). This peripheral benefit in ACT is one of the main processes in CBT i.e. distracting attention. Acceptance indirectly improves patients' psychological and physical health by modifying catastrophizing effects on depression, anxiety and avoidance (e.g. Vowles et al., 2008; Meyer, Teshopp, Sprott, & Mannion, 2009). In this regard, McCracken and Zhao-O'brrien (2010) showed that if people with chronic pain accept their negative experiences without trying to control them, they would have better performance and suffer less and overall acceptance has a unique role in reducing pain and anxiety in patients with chronic pain beyond similar processes such as pain acceptance or mindfulness. The results of the research showed that Acceptance and Commitment Therapy has a significant effect on decreasing the intensity of pain-associated anxiety in both the post-test and follow-up. Based on acceptance approach and time commitment, patients with chronic pain experience fear or anxiety and do an action to avoid pain which makes them suffer more emotional effects and weakens their performance (Heuts, Vlaeyen, Roelofs, de Bie, & Aretz, 2004). On the other hand, Kratz, Davis and Zavtra (2007) showed that pain acceptance is a predictor of positive therapeutic effects. Acceptance helps patients to separate themselves from their own personal experience (cognitive defusion) and makes patients use less emotional reasons such as anxiety to explain their behavior and address the experience of the consequences of their actions instead of focusing on thoughts and feelings. Keogh, Book, Thomas, Giddins, & Eccleston, (2010) also stressed that acceptance, mindfulness, and values reduce the effect of sensitivity to anxiety. Mindfulness techniques are useful for patients with pain-associated anxiety and disability. Therefore, for the explanation of these findings, it can be said that two main processes for reducing negative emotions such as anxiety in patients with chronic pain are acceptance and mindfulness. Convenience sampling method, lack of comparing the therapy with other approved therapies, lack of attention to disorders associated with chronic pain, heterogeneous participants in terms of demographic variables are the limitations of this research. It is suggested that this therapy would be studied and investigated in future with long-term 6-month follow-up and considering other psychological indexes affecting the effectiveness of the therapy in patients who are diagnosed to have chronic pain at early stage.

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Islamic Obligation in Kazakh Customary Law (For Example, the Institution of Family and Marriage)

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Abstract

This article reveals the impact of Sharia law in customary (consuetudinary) law of Kazakh people, which formed the basis for regulations of social and legal relations in Kazakh society in XV-XVIII centuries, including the place and role of Islamic obligations of the institution of marriage and family. After accepting Islam in the Middle Ages, Kazakh people were not fully adopted all the rules of Sharia, but retained its obligations in their consuetudinary law. This influence particularly affected the institution of family and marriage. Islamic obligations formed the basis of many traditions and regulations that were set by this institution.

The purpose of this article is to identify and analyze the mechanisms of the Islamic obligations in consuetudinary law of Kazakh people in XV-XVIII centuries, particularly in the institution of family and marriage. In this regard, authors tried to form an objective view, through a systematic analysis of the place and role of Islam in the institution of the family and marriage in consuetudinary law of Kazakh people.

Keywords: Islamic obligations, Sharia law, Kazakh customary law (consuetudinary or Adat law), the institution of Family and Marriage

1. Introduction

For centuries (XV-XVIII), the consuetudinary law dominated in the traditional Kazakh society, which was the law that contained a set of legal customs, sanctioned and guaranteed by the state authorities, in order to preserve existing social relations. It was called "*Adat law*". The word "*Adat*" in Arabic language means "*custom*". Often in scientific literature, the word Adat is used to refer to designate the aggregate of different customs. One of the most famous regulations in social and legal relations in Kazakh society was the compilation of legal norms, such as "The codes of Kasim Khan" (XVI century), "The codes of Yessim Khan" (XVII century), "Seven Charters of Tauke Khan" (XVII-XVIII centuries), which further became valuable in the nomadic civilization.

The consuetudinary law of Kazakh society it is an unwritten law, it was built on a number of key regulatory institutions and on a set of short, easy to remember and expressive statements, containing basic substantive and procedural norms (Zimanov, 1989, p. 16). In addition, the solutions of the Kazakh court in XV-XVIII centuries were based on the consuetudinary law (MKCL, 1948, p. 223). Moreover, the vaults and the laws of the people from other states, which were located on the modern Kazakhstan territory, such as the laws of Turkic states (Turkic kaganate, Western Turkic kaganate, Turgesh kaganate, Kipchak khanate, VI-XII centuries) and Mongolian states (Golden Horde, XIII-XIV centuries). Along with the Sharia law, these laws did not play a leading role, nevertheless still had an impact on the formation of consuetudinary law. Despite the fact that the laws of Sharia played a pivotal role in the establishment of the customs and traditions, it will be a mistake to believe that the laws of Sharia were used wherever Islam was spread. The process of their integration into customs, traditions and beliefs was very long and complicated, because it was based on the natural geographic features and socio-economic relations that existed at that time. Islamic legists had to take into account local customs and traditions, which particularly affected Kazakh society. The penetration of Islam was not a single act, but stretched over several centuries from VIII-IX up to XVIII century, where the question of periodization of the spread of Islam on the Kazakhstan territory in the historiography was still not resolved. The end of the

Islamization in Kazakhstan is associated with the epoch of the Golden Horde. Along with these statements, there is evidence that Islam was initially adopted in Kazakhstan based on the level of mass consciousness and with the significant influence of the ritual institutions only at the 18 century or even at 19 century (Nurtazina, 2009, p.45).

2. Method

The thesis about the role of Islamic law in Kazakh society, i.e. Sharia law, comes from an objective understanding of fiqh – Islamic law and jurisprudence, particularly, the knowledge of the specifics of the legal schools of Islam. In reality, there was not one particular Islamic law, but rather different sets of laws, which were developed in the local Islamic schools, existed and further had an influence on Kazakh society. "As Muslim community has given its way to many other Muslim communities, the same has happened to a common Islamic law that has given its way to a number of other Muslim rights" (Charles, 1959). The majority of western authors, such as Radloff, considered Kazakh people as ordinary Muslims and even strict Muslim Sunnis. The significant number of scientists believed that Sharia law did not play a considerable role in the legal system, despite the fact that Kazakh people considered themselves Muslims. This view comes from the fact that nomads mostly belonged to the Hafini sense of Sunni, where the independence of consuetudinary law was recognized and economic as well as social relations were not consistent with the laws of Sharia. However, we do not fully agree with this opinion, though accepting the fact that Kazakh society has not strictly followed the rules of Sharia as their religious law. However, Islamic commitment complemented the usual law of Kazakh people and further had an impact on the development of the Kazakh law. Islam sanctified many social setting of "Adat", so that the characteristic of the social and economic life of Kazakh people still can be seen from the combination of Adat and Sharia (Mustafina, 2005, p. 50). Furthermore, in resolving disputes, the Muslim court made their decisions based primarily on Koran, on the opinions of the legists and in the worst cases; customs and traditions were taken into account as well. Kazakh biy court made their decision based on the already established customs and laws of their ancestors, and Koran was used as a tool for making vows. In this regard, it should be emphasized that customs and traditions do not conflict with the requirements of Koran and Sunna, on the contrary they are very close to them. Moreover, the rules of Sharia had an influence on the Institution of Marriage and Family, on the system of taxes and on the property rights in the consuetudinary law of Kazakh people. Especially we cannot deny the influence of Islamic commitments on a social institution of marriage and family in the Kazakh society. Kazakh society accepted Islamic obligations, which exhibited justice and humanity, but did not take those aspects of Islamic religion that have tarnished Islam. Kazakh consuetudinary law is clear in terms of the content of Islamic rules, and at the same time corresponds to the nomadic way of life and freedom loving of the Kazakh people.

3. The Family and Marriage Institutional Problems

3.1 The Institution of Marriage

The legal framework of marriage in Kazakh consuetudinary law and "Sharia" laws were closely related, but not identical (Charles, 1959, p. 47). According to the consuetudinary law of Kazakh people "Marriage" was considered an obligations that were voluntarily accepted by the individuals of different genders based on Sharia law in order to get permission for a joint living. The main rules of these commitments: the voluntary agreement, the absence of a close relationship, the number of wives must comply with the Sharia law, the presence of witnesses at the marriage and the payment of dowry, i.e. a gift to the bride. Therefore, Kazakh people followed Sharia rules during marriage procedures. In accordance with the Sharia law, the institution of the "Right of personal status" governed family relations (Imanbaev, 2015, pp. 38-39). Along with the fact that family was considered a small part of the state, it was closely linked with religion, morality and spiritual culture. Hence, for this reason the institution of the family and marriage play very important role in the organization and functionality of the Kazakh society.

According to the consuetudinary law of Kazakh people that was based on the Sharia rules, marriage was considered not only as if a union between two people, but also like a union of two family-related groups that retain their unity even in the case of a divorce of a death of a spouse. In this regard, social and religious views of the families of bride and fiancé were usually taken into account during the marriage procedures. However, this does not mean that there were no exceptions, for example, rich families could take girls from poor families, but more often, these girls were taken as a "third bride" or in the case of widowhood and a divorce of a fiancé. The formation of a family began from the marriage ceremony. Marriage – is the actual transition to the relationship between two spouses, which is the final part of the celebrations. In reality, the marriage was valid only after going through the rite called "Neke", despite the earlier agreements. Sharia very strictly and responsibly controlled marriage regulations. In order to continue procreation, the permission to marry was given also to the

disabled ones.

Due to the Sharia law, the marriage between two relatives was prohibited and the blood kinship started considering from the second generation. The relatives from the mother's side should not be closer than a second generation (Imanbaev, 2015, p. 40). However, in Kazakh society there were some changes, regarding this rule. Relatives of two individuals who were getting married should not be closer to the seven generation. The vitality of relatives was considered from the seventh generation. In order to clarify the relationships, Kazakh people were divided into tribes and clans, called "Zhuz". In Kazakh society the attitude to these separations were very strict, the reason for this was the desire to preserve the purity of blood between two individuals who were getting married. Nowadays, Kazakh people still follow these rules and the marriage of close relatives is not allowed. Exogamic barrier was strict, but the variation in the choice of a marriage partner was present – it ranged from the fifth to the thirteenth generation, starting from a common ancestor. Based on the available data, the predominant barrier was exogamous within the seven generations. On the eighth generation of both male and female line, the real kinship loses its significance.

According to Sharia, there were three different types of marriages: permanent marriage, temporary marriage and involuntary marriage. In Kazakh society only permanent marriage was used. The evidences of temporary and involuntary marriages were not found (Imanbaev, 2015, pp. 38-39). The institution of permanent marriage in Kazakh consuetudinary law was based on the Islamic obligations, which further had a set of following requirement to be met before the wedding:

1. The choice of a spouse, i.e. the purity and honesty of woman, social origin, intelligence, behavior and character and the ability to run the household were considered as well.

a) Virginity, i.e. integrity, there should be no sexual relations. For women, who were getting married second time, this do not apply;

b) To be a follower of Islam;

c) Good health and the ability for further procreation;

d) The absence of a close relationship;

Of course, this information was analyzed with the help of close relatives

2. Consent to marriage, i.e. it should be voluntary, the girl must be an adult and free;

3. There are should be no circumstances hindering marriage:

a) Close kinship (as mentioned above);

b) The absence of milk kinship;

c) A close relationship;

d) Do not exceed the number of wives allowed to have (four wives allowed under Sharia);

e) The lack of curse on woman (a cursed woman is considered unholy in Arabic community);

f) Religious;

According to Sharia system, a woman became a wife only after the wedding ceremony, held in the bride's house, usually on the second day of the wedding procedures. However, based on the certain traditional practices that came before the Islamic influence, indicated that the transition of a girl to a wife began from secret visits of a fiancé to the girl. This statement can be supported by the fact that in case of death of a fiancé, who already made secret visits to his future bride, the village in which this bride lived had to mourn for him, and afterwards she had to marry to one of his relatives (Stasevich, 2009, pp. 98-99).

The marriage ban also related to the relatives of a fiancé and the bride as a potential partner. The widow did not have the right to marry the brothers-in-law, but she could get married according to the customs of levirate to the brothers of a deceased husband and to the sons of his elder brothers. According to the consuetudinary law, husband had no right to marry to the younger sister of his wife, but in case of a death of his wife, it was allowed. A widower could not marry to the older sister of his wife under any circumstances, as she was considered as a second mother to her younger sisters (Argynbaev, 1989, pp. 249-278). Moreover, based on the "Adat" law, it was forbidden for a woman to marry to her siblings and a marriage of a man to his sisters of their mothers. The norms of Sharia gradually penetrated among the nomads, but not all of the Islamic norms of marriage were strictly followed. For example, Kazakh people did not follow the rule that forbade the marriage of brother to their sisters from different families. Supporting this view, this kind of marriage was highly desirable as it was considered as

strengthening the relations between two families (Zagryazhsky, 1876, pp. 155-156). Despite the fact that Sharia law allowed marriages between closely family-related partners, for Kazakh people the exogamic norms, when choosing a partner still remained an insurmountable barrier. The violation of the ban led to a strong public reprimand. These examples further underscore not only the regional peculiarities of the Central Asian Islam, but also the domination of the collective organization relative to the individualism. In addition, the sexual relations between married people before the movement of a bride to her husband's house was considered unacceptable and even led to the invalidation of the marriage (Stasevich, 2009, p. 100). Based on the evidences, even in these cases, the father of the bride had to resolve the problem by paying fines to the husband's family. And the husband, who attended the bride in her parents' house, did not usually advertise the "dishonesty" of his young wife, as this could be a reason for a scandal and father of a bride could also sue a husband in case of a disagreement with the husband's claims. Therefore, with the adoption of Islam by nomads, the validity of marriage was considered after the ceremony of uniting the fiancé and the bride. However, the wedding procedures were not completed at this stage, and the continuation of the ceremony was further held at the husband's family house, to where a young bride was transported a few days after the wedding.

3.2 The Institution of Matchmaking

In case of compliance with the above conditions, further transition went to the institution of matchmaking. Matchmaking was fixed in the written form or orally between two sides. The institution of matchmaking played a very important role for Kazakh people as well as for Arab people. The size of redemption for a bride depended on the social status of a family and it usually began with the five camels. However, the size of the redemption in Kazakh society certainly was not regulated. After the matchmaking process and the payment for a bride, the real wedding ceremony began. This institution was considered very important based on Sharia law and gave it a special significance:

a) "Izhaba Kabul", which means a voluntary agreement to fulfill its obligations on both sides (male or female) and required the presence of witnesses (one male and two females), who should be of a legal age and religious.

b) The act of marriage. Mullah held it. He asked for a consent of the two parties, afterwards he specified the size of the mahr (the wedding gift for a bride), which depended on the social status of a partner. Mahr further went into full ownership of a bride and she could freely use it.

Mullah read "Qutb", while the act of marriage was filled, showing that the wedding ceremony took place in accordance with the law, further the stamp was put and the witnesses signed the act. The act of marriage was usually given to the women. Mullah had the right to take a gift from a man, but he did not have such rights regarding the bride. After the completion of the marriage, the wedding began. "There was a rule in Sharia, which protected the young bride from the thoughtless act". The adult virgin should take permission for a marriage from her father or grandfather. The permission from mother or brother was not required. In case of the absence of father or a grandfather, and the girl was not a virgin, then she could get married without any permission. The right was also given to a father and grandfather for a matchmaking of their children and grandchildren that were still not adult. However, the termination of the marriage could be done in case of a fraud or malice. In addition, their fathers or grandfathers usually covered all expenses related to the organization of the marriage of still young partners, but these expenses should be returned back when married couple became adults. If there was a certain means on the fiancé's account, then a part of it was spent on marriage and the other part on the payment for a bride (Kerimov, 1978, p. 93).

3.3 Responsibilities in Marriage

Male and female after marriage gained equal rights as well as they had to take certain obligations. The most important duty of a male was to provide woman with the housing, clothing and food; woman should respect her husband, carry out his orders, without the permission woman should not go out and does not enter into any contract. If a woman did not listen to her husband and did not run the household properly then the separate living period was allowed. Therefore, Sharia focuses on the strength of the marriage. The permission for a divorce was usually given in the following circumstances:

- The missing of a man;

- Infertility;

- Mental problems;

- An incurable disease;

- The death of a spouse;

The first marriage was considered very important for a man. In case of a girl's behavior was inappropriate, then man had the right for a divorce. In this case, the payment for a girl should be refunded. Sharia permitted daughters in law marriage on children from another marriage, and the marriage of stepbrother and sister. However, according to Kazakh traditions the adopted daughter was also considered to be a biological daughter, hence on this marriage was imposed a strict ban.

3.4 The Institution of Polygamy, Levirate and Sororate

Among Kazakh people polygamy was widely spread. However, polygamy initially indicated the social status of a man, the prestige and the richness of a male, as the size of the dowry was increasing proportionally with every new marriage. Hence, only wealthy man could afford to marry second or third time to a young virgin girl. One of the main reasons for a second and third marriage was the need for man with the big household, which needs to be looked after by several women. In terms of Kazakh wives in wealthy family, they were given a separate household and they had to manage the whole villages at time of husband absence, while he nomadized away from them but with forthcoming winter, the whole family came together for the winter (Stasevich, 2011, p. 61). In addition, under the influence of Islam Kazakh people were allowed to have four wives. In the pre-Islamic period, this condition is not kept up. It should be noted that for a marriage the permission of the previous wives is required, so that polygamy was not an easy thing to do. While the number of wives increased a role of the first wife who was called "baibishe" began to grow and she had more rights. Nevertheless, it was quite problematic to obtain permission from the other wives. In general, the rights of the first wife (baibishe) and younger wives did not have much difference (Alimbetov, 2009, p. 89). In accordance with Sharia it was prohibited to have more than four wives (Alimbetov, 2009, p. 90). The reason to marry for the second time could be infertility of the first wife and the birth of only daughters from her. Kazakh scholar I. Altynsarin uttered well known Kazakh proverb showing the attitude of Kazakh people to the many children family: "a lot of wives, a lot of children" (1870, p. 103). We cannot exclude that a second marriage for a man might be marrying for love, not for the insistence of parents. It was observed often that the youngest wives became the favorite ones of their husbands. Though the first wife remained in the family as baibishe (senior wife). Patrimonial law and public opinion, which played an important role in society, protected woman who had been married with a consent of the parents of the couple, rather than mutual love and from a divorce with her husband who had not been able to love her. Due to Sharia the nomads did not always follow to law, providing for the mandatory consent of the first wife to remarry her husband. Apparently, much depended on the marital status of his first wife, her personal qualities and the influence of her opinion on the decision of the husband. Some senior wives acquired such power that the husband did not dare to contradict them and visited their younger wives secretly. These women became full owner and disposed of the younger wives as mother-in-law. Conversely, sometimes the reverse situation was observed - the leading position in the family occupied the youngest beloved wife, in the tent where he lived, and her husband, and her children had priority in inheriting his property.

The marriages on the base of levirate and sororate laws (married to the sister of his deceased wife, but it was respected more rare) referring to traditional Kazakh customs had pre-Islamic origin. The custom of levirate - Kazakhs called "amengerlik". "Amenger" means "brother of the deceased, he inherits" (Katanov, 1904, p. 96). There was a special name for the widow in the Kazakh language who wanted to remarry after mourning. This woman was called "zhesir" (Argynbaev, 1978, p. 100). Grodekov had distorted "esir" (1889, pp. 85-86). In the Kazakh consuetudinary law is also used the expression "zhesir dauy" (Argynbaev, 1978, p. 101), which means battle, strife because of violations of levirate law. Levirate was traditionally legal nomadic institution and involved not only certain norms of marriage, but also a certain order of succession of property, consisting in the transition of succession not to his son but to the brother of the deceased (Bikbulatov, 1980, p. 570). Representatives of the local clergy, directed in their religious views on the norms of Islam, condemned the custom of levirate as the forced compulsion of widows to marry and referred this tradition to the "Islamic law in prohibition affairs" (Stasevich, 2011, p. 72).

Islam supported pre-Islamic institutions - levirate and sororate. Due to levirate law widow had to marry her deceased husband's brother or his next of kin and according to sororate widower had to do the same with the sister of his deceased wife (Mustafina, 2005, p. 50). The right of levirate was based primarily on economic interest of congeners, regarding the property of the deceased not to leave it to his family (it is based on a system of inheritance of property of the deceased). Then the custom of sororate associated rather with the desire to preserve the already established social ties between the two family-related groups. Therefore, if the father of the bride or wife of the deceased understood that connections of his family and his family-in-law strong and promising, they did not usually refuse to conclude sororate marriage, even in cases if he had full authority. Unlike the levirate marriage, marriage by custom of sororate had not always been mandatory. After the death of

his fiancée or wife a man had the right to declare the father-in-law that he wanted to marry her younger not married sister. Nevertheless, father-in-law without giving any reason could refuse the request. The only condition for compulsory sororate marriage provided with the death of a bride that was completely paid dowry, in the house of his father. Even in this case, the father-in-law might refer to breach custom, according to which the groom and his comrades had come to him immediately after the death of the bride and declare his right to sororate marriage. It should be remind that sororate right extends only to the younger sisters of the deceased. In case of agreement between the father-in-law and the son-in-law the latest paid for the girl "baldyz" dowry - half of the total dowry once paid for the first daughter. There were no lush weddings and the young married quickly, without waiting for the annual mourning for his dead wife or bride.

3.5 Institution of Divorce

The word "talaq" in Arabic language means "divorce" and is a sign of divorcement. The word "talaq" is recorded in the places with a large amount of people, in a balanced state - three times, the interval between each utterance should be a few days, and in that case the divorce is recognized by law. If this word is pronounced in a drunken state, in a state of anger or illness, it does not have the legal force. Many legists-researchers are not fully aware this tradition, deliberately distorting the facts, criticized it. For example, Sharia researcher G. M. Kerimov writes: What is striking is that Islam is so jealously fighting against celibacy and monasticism creates a very light condition for divorce and family breakdown. It is enough for men to say to his wife three times without any explanation: "You are not my wife" or "I swear by Allah, your back to me like the back of my mother", etc., and the divorce is considered to take place" (Kerimov, 1978, p. 99). It is very difficult to utter three times the word "talaq". The interval between each utterance should be large. If during this period the man and his wife reconciled, then the word loses its power. Who wants among devout the wrath of Allah? The right to divorce retained not only for men but also for women.

According to Sharia and Kazakh consuetudinary law, the process of divorce is very time consuming. Making a decision about divorce man should notify his wife to stay in a balanced state. Uttering the word can stretch for a few days or months; i.e., if the divorce is made after woman's critical, then a man should wait for the next critical days until they finish, during this time, he must ensure the woman, not to hurt her and to sleep separately. Only after these conditions, spouses could be considered as divorced. Forms of marriage and divorce are similar. Man must repeat three times before the judge "I divorce you ..." which will serve as a confirmation abovementioned his words. In most cases, the woman is charged with treason and a man to prove it must provide four witnesses (men), if one of the witnesses doesn't confirm the words of other witnesses and her husband, they will be punished according to Sharia.

Russian researcher N. I. Grodekov noted that "in imitation to Sharia the consuetudinary law of Kazakh people allows "akymar", property, determined in favor of the wife in case of divorce (1889, p. 91). Akymar may consist of livestock, property and money. "Based on the materials cited by Grodekov N. I., akymar of a bride was arranged before the marriage, however, did not represent any documents, and then this part of the property was not separated from the family ones. Thus, woman did not get the personal rights of ownership of the property, as it should be according to Sharia, and

divorce had no guaranteed rights to akymar. It depended entirely on the will of her husband and his relatives. Furthermore, let me remind you that the sources from N. I. Grodekov mainly refers to southern Kazakh legal system, which, in contrast to other Kazakhs had strong political, economic and cultural links with the city center and have been early enough exposed to Islamization. Islam has established itself among the settled population of Semirechye and Syr Darya by the X century. Therefore, the influence of Sharia on the consuetudinary law of Kazakh people in this area was felt most strongly. The practice of paying out of akymar was a local phenomenon and was not widespread among the nomadic tribes of the steppes - it has not been recorded in other groups of Kazakhs (Stasevich, 2011, pp. 85-86).

Divorce "razha" gives possibility to divorce without the permission of his wife and get off with her two times. In the third case, to marry a woman is only after she had been married to another man. In such cases, due to Sharia law a man must give the woman the property, which belongs to her. After a divorce the woman should wait for the critical days, this time was called "Iddah", for pregnant women it continues until birth. After the commitments of divorce, underage children remain with their mother. The third type of divorce is made at the request of the woman, so she pays her husband a certain amount. Terms of the divorce are as follows: a man in front of witnesses should say the following words: "In order to give you a divorce I give you halaa" and demonstrates the resulting fee. The fourth type of divorce involves a divorce by mutual consent of the two parties. A divorced woman, as well as the widowed cannot immediately get married. This prohibition does not

apply to women over 50 years of age and under-age girls, proposed to, but had not managed to marry. Other types of divorced women must wait for the expiry of 3 months. The widowed woman may marry only after four months and ten days.

Despite the fact that after the divorce, the children usually stayed in the family of her husband, a woman had the right to receive part of his family property. What did this part include? After marriage, the husband had the right to dispose of his wife's property, but after the divorce, was obliged to return, "All property belonged to her" these were, the few things that were in the personal property of women (Grodekov, 1889, p. 91). Personal property of a woman consisted of personal property bridal headdress, some jewelry, one of the suits, the dowry and the bed linen. These were all things that made up part of the dowry; in the case of the death of a woman - her relatives received them as a memory of the deceased. Other movable and immovable property which constitutes the dowry of women, immediately after marriage passed into the possession of the husband and his relatives and distributed among those who participated in the collection of funds for the payment of bride price (Stasevich, 2011, p. 86). If the divorce was accomplished through the fault of the husband, and his fortune allowed without compromising the economy to allocate his former wife a saddled horse and camel, he could do: provide woman with the necessary minimum for the first time, allowing her to get to her parents or relatives of her potential new husband. However, this provision was based solely on the desire of the man and did not represent a mandatory rule. Husband often allocated money to his wife on clothes and most necessary things from the dowry, which was returned to him by his wife's relatives. There are cases when the husband is not getting all the dowry and property constituting the difference between the consideration paid and the dowry the bride money (Stasevich, 2011, p. 86).

The analysis of the legal framework of divorce shows that divorce, like marriage, was not a personal matter of spouses. Issues related with the transfer or retention of property solved at the level of the two family-related groups - the husband's family and relatives of his wife. After the divorce and the settlement of property claims woman was legally free and could go to live with her parents or other relatives, as well as marry at will, without consulting with the relatives of her husband, as it happened in the case of death of a spouse. Following the law, a divorced woman, as a widow, had the right to marry an unlimited number of times. However, in this concern different cases were documented when the right of levirate had power even under divorce, in the presence of husband's disability then his relatives could demand that a woman would marry to someone of his relatives. In the Holy Quran, Allah obliges people to live in marriage, creating a good family, to respect each other. Allah does not encourage that polygamy, giving permission to marry two, three, four women he points to the causes and consequences of such an act. The necessity of this could be explained by infertility of a woman, the impossibility to keep the house or her illness.

4. Conclusion

In traditional Kazakh society, Islam was adopted in the middle Ages and the rules of Sharia have not been fully accepted as law. Islamic obligations just completed Kazakh traditions and customs; they left their trace on the Institution of family and marriage, in the system of taxes and duties, on the rights on property in the Kazakh consuetudinary law. The majority of the traditions and customs, requirements and prohibitions against marriage and family were based and strictly kept by the rules of Sharia. The Institution of family and marriage in consuetudinary law, which was based on Islamic obligations, was retained until becoming soviet power in Kazakhstan in 1917. In this regard, at the end of the 30th of the twentieth century Islamic obligations and consuetudinary law of Kazakh people were destroyed completely. Lifestyle changes contributed to the erosion of religious traditions and the formation of an atheistic view of the world. However, Islamic obligations and rites continued to live in the family household sector, but not on a legal base. However, in the 90th years of the twentieth century, due to the collapse of the Soviet Union, the Institution of marriage and family began to apply Islamic obligation. Nevertheless, law in the Code of Republic of Kazakhstan "On Marriage and Family" does not fix them.

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Scope of Business Process Reengineering in Public Sector Undertakings

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Abstract

Business Process Reengineering (BPR) is a managerial tool used for bringing in drastic performance improvements in organizations. Towards this advanced techniques like Business Process Management (BPM) and Knowledge Management are employed the world over. In India, many Public Sector Undertakings (PSUs) were recently closed down and still more are on the verge of closure due to various reasons. Despite the utility of BPR in improving performance, Indian PSUs are yet to effectively use this tool. Data pertaining to 41 State PSUs (SPSUs) and two Central PSUs (CPSUs) in the State of Kerala were considered for the present study. The performance for the last 12 years and the factors responsible for poor performance were analyzed. The performance of most of the PSUs analyzed was found to be below satisfactory levels. This suggests the need for employing scientific tools like BPR to bring in drastic performance improvement. The study identified 12 factors that could contribute towards drastic performance improvement. An average improvement of 57.5 per cent was found to be possible in each of the 12 factors identified. The findings of the study have significant bearing on poorly performing PSUs in a developing country like India. The study also contributes substantially towards theory building, since it has identified certain additional factors of performance improvement.

Keywords: business process reengineering, business process management, process improvement, factors of performance improvements, public sector

1. Introduction

There is a definite need for business organizations to improve performance by incorporating innovative ideas and the latest managerial techniques. In this competitive world businesses need to be efficient and effective to stay competitive. Organizations will find it difficult to survive unless they adapt to the fast changing business environment. This situation holds true for all forms of organization, with Public Sector Undertakings (PSUs) being no exception. In the case of adoption of modern managerial techniques, PSUs are found to lag behind, thus holding themselves at a disadvantage. In spite of poor performance of Indian PSUs, there has been no marked attempt towards implementation of BPR. Since there are possibilities for drastic improvement in performance of PSUs, it is of paramount importance to try implementation of BPR. Successful BPR implementation will definitely reestablish the premier role of PSUs in the development of the economy. The main question here is the suitability of BPR as a potent solution for the revival of PSUs.

According to Goksoy, Ozsoy and Vayvay (2012) if a firm wants to survive in today's hypercompetitive environment it needs to bring in moderate change every year and undergo a major change almost every fifth year. Cost and quality as the determinants of success have given way to flexibility and responsiveness. This necessitates a paradigm shift to process management. BPR is "the role that process management can play in creating sustainable competitive advantage" (Herzog, Polajnar, & Tonchia, 2007). This situation holds good for all forms of organization, including PSUs.

PSUs have a paramount role in the economic development of countries like India. However, performance wise, there is much to be done in the case of PSUs**.** In 2005-2006, 157 profit making enterprises earned a total net profit of Rs. 76 240 crores and 58 loss making units incurred a total loss of Rs. 5 952 crores. The Economic

Review 2010 showed that many PSUs run at a huge loss. Loss making units rose by 36 per cent and loss amount by 375 percent during 2012-13. Recognizing the role of PSUs, Government of India has evolved a number of strategies for reviving and strengthening them. These strategies include revival of PSUs through the process of Bureau of Industrial and Financial Reconstruction (BIFR); financial restructuring wherever appropriate and formation of joint ventures with partners capable of providing technical, financial and marketing inputs. Certain other measures like infusion of fresh funds; organizational and business restructuring; human resources development including manpower rationalization through approved Voluntary Retirement Scheme (VRS); improved marketing strategies; modernization and technological innovations; and cost control measures were also invoked.

The State of Kerala has a significant number of State PSUs (SPSUs), which employed 132 677 personnel during 2012-13. Government of Kerala (2005) however, laments that SPSUs "in the manufacturing sector have been plagued by poor standards of Governance". Reasons adduced are: diffused nature of ownership, lack of synchronization of critical state sponsored interventions for improving its performance, conflicting objectives advocated by trade unions, inadequate incentives for competent personnel, delayed decision making, redundancy of manpower and improper person-task fit, outdated technology and unviable processes. Many SPSUs were closed down due to their inability to survive even after revival trial under the supervision of BIFR of Govt. of India. However, some sick units have been revived after implementing revival package under the supervision of BIFR. There is urgent need for implementing changes and reforms as the number of PSUs that face the threat of closure due to accumulated losses has increased. Mathew (1997) evaluated the performance of state PSUs in the manufacturing Sector of Kerala and found that out of the 47 manufacturing undertakings, only 18 enterprises made profits during 1992-93; while 29 made losses. The manufacturing PSUs incurred a net loss of Rs. 1 183.06 lakhs during the same period. A comparison of the performance of State PSUs at five stages from 1994-95 to 2012-13 is given in Table 1.

Table 1. Performance of Government Companies in Kerala (Amount in Rs. Crores)

Indicators	1994-95	2001-02	2005-06	2010-11	2012-13
No. of Companies	94	98	95	83	85
Employment	71 553	61 087	60 724	76 179	76 364
Capital Invested	1 716	4 082	7 175	8 145	10 725
No. of Profit Making Units	41	35	29	53	48
Net Profit	56.96	-16.34	-23.4	675.41	348.65

Source: Government of Kerala (1995 to 2013)

The table portrays a poor record of performance and calls for a detailed study on the reasons of performance variation and scope of performance improvement in Kerala PSUs.

1.1 Problem Statement

BPR is a managerial tool that is used for drastic performance improvements in organizations for the last two and half decades, particularly in the industrialized western world. At present, the western world is ahead with use of newer techniques like BPM and Knowledge Management. Use of BPR or related techniques is limited in India. A poor and highly fluctuating trend in performance is evident on assessing data regarding Public Sector Enterprises (Government of Kerala, 2002 to 2013) for 2001-02 to 2012-13. Until now, Kerala has no recorded BPR initiatives. This motivated a detailed analysis on the scope of BPR as a solution for the revival of these poor performing organizations. The objectives identified for the study are:

1. Evaluating the performance of PSUs in Kerala

2. Identifying the factors of performance improvement in PSUs in Kerala

3. Measuring the possible improvements in performance with BPR

4. Comparison of possible performance improvements in SPSUs with that of CPSUs in Kerala with implementation of BPR.

1.2 Literature Review

Present state of management techniques and technologies for performance improvements is the result of the convergence of many managerial techniques developed and modified for many years. Some of the earlier

contributions are; principle of division of labor by Adam Smith (1776), Principles of Scientific Management by, Frederick W. Taylor (1911), Mass production techniques introduced by Henry Ford (1913), etc. Technologies used for improvement of organizational performance, though known by different names, are similar in certain aspects. The suitability of these techniques depends on the situation. Since BPR is a strategy for drastic improvement, the possibilities of drastic improvements in performance as PSUs in the Indian context were examined. BPR in its crude form was in existence even in the days of Fredrick Taylor, Henri Fayol, etc. (Kondareddy, 1998; Kuwaiti, 2000). It was developed into a new managerial technique called BPR during 1990 by Hammer & Champy. During the same time, Davenport and Short (1990) developed the concept of Business Process Redesign with the similar concept of BPR. In the initial stage, BPR was mainly adopted by US based firms for bringing radical change in the business process as a replacement of the Japanese approach of TQM (Hammer & Stanton, 1995). To Hammer & Champy (1993) BPR is "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed". BPM, according to Elzinga, Horak, Lee & Brunber (1995) "is a systematic structured approach to analyze, improve, control and manage processes with the aim of improving the quality of products and services". In the modern context the redesign of processes relies on the use of information technology (IT). Objectives of Business Process Redesign are Cost Reduction, Time Reduction; Output Quality, and Quality of work life/ learning/ empowerment (Davenport & Short, 1990), pressure of survival, close of competitive gaps, superior performance standards (Al-Mashari, Irani, & Zairi, 2001). BPR initiatives usually aim to integrate separate functional tasks into complete cross-functional processes. Reengineering utilizes components of several management tools and concepts such as Systems Engineering, TQM, Continuous Improvement, Bench marking, Activity Based Costing, Customer Satisfaction Management, Cross functional team building and widespread use of IT (Kondareddy, 1998). A few identical concepts almost used as synonyms of BPR are: Business Process Redesign (Davenport & Short, 1990), Business Process Improvement (Hammer & Champy, 2001; Siha & Saad, 2008), and Business Process Management (BPM) (Elzinga et al., 1995). Hammer (2002) defines Process Improvement as "A structured approach to performance improvement that centers on the disciplined design and careful execution of a company's end-to-end business process."

Kim & Kim (1997) developed a new methodology called Enterprise Process Reverse Engineering (EPRE) for supporting the redesign phase of BPR. Despite differences in terminologies their essence is process improvement. BPR employs many managerial tools and techniques. Goksoy et al. (2012), Radhakrishnan & Balasubramanian (2008) and others pursuing this line of thinking call them as BPR enablers.

Use of IT in BPR for improving the process efficiency has been witnessed by (Attaran, 2004; Bhatt & Troutt, 2005; etc.). Six-Sigma prescribes a rigorous structured approach to improve product quality (Goel & Chen, 2008); raise efficiency; reduce costs or expenses, process times; and the resultant maximization of profits and customer satisfaction (Chung, Hsu, & Yen, 2008). Involving employees in every step of the production process is employee empowerment. The performance benchmarking model can be based on any defined foundation including quality, flexibility, agility, profitability or market share. It can be used to determine the performance gaps between itself and a pre-defined level of performance or its strategic competitors (Yung & Chan, 2003). Mazany (1995) refer to Just-In-Time (JIT) broadly as the philosophy that encourages an organization to remove all types of waste principally that associated with time and materials. The Taguchi concept of Product and process optimization can be applied in 'system design' and 'parameter design' phases of a system for reducing cost (Garzon, 2000). Agile Manufacturing enables businesses to be flexible and lean. The main concept of lean thinking is the elimination of seven types of waste: (1) Overproduction; (2) Waiting; (3) Unnecessary transportation; (4) Inappropriate processing; (5) Unnecessary inventory; (6) Unnecessary movement and (7) Defective products (Womack & Jones, 1996).

Many a research reported benefits of BPR implementation. Bell Atlantic Telephone was able to cut cycle time from 15 to 3 days, labour cost from eighty eight millions to six millions (Ranganathan & Dhaliwal, 2001). Paper, Rodger & Pendharker (2001) demonstrated a BPR case of reducing defect rate by 70%, customer rejects by 57%, cycle time on parts by 72%, inventory investment by 46%, and customer lead time by 70%. Overall improvement in this case came to 63%. Housing Development Board in Singapore, achieved dramatic improvements in; Customer Service (87%), Lease & Tenancy Services (58.4%), Financial Services (66.1%), Maintenance/Renovation Services (66.7%), General Administration(34%). The average improvements in this case were 62.4% (Thong, Yap, & Seah, 2000). Altinkemer, Ozcelik, & Ozdemir (2011) reported that there are performance improvements in manufacturing and operations, accounting and finance, labor productivity, inventory turnover and IT by the implementation of BPR even though there is a slight reduction during the initial

stages of project implementation.

Promotional role of PSUs in the development scenario of India is well acknowledged. Until the early 1990s (Kanungo, Sadavarti & Srinivas, 2001), it helped industrialization, generation of employment, and dispersal of industries to different parts of the country (Antony, 1992). While the global recession of 2008 rattled the economies of most of the developed countries, Indian economy remained mostly unaffected on account of the special role that PSUs enact (Kareem, 2011). However, the maladies afflicting Indian PSUs leading to low capacity utilization has been subjected to criticism. Extending this argument to the component level (State level) Mathew, Sulphey & Rajasekar (2014) established that most of the SPSUs in Kerala are poor performers. Reforms are needed to strengthen PSUs that are poorly organized, with irrational decision-making processes, staff mismanaged, weak accountability, poorly designed public programs and poorly delivered public services (Schacter, 2000). Aside from the benefits of process reengineering, it provides considerable improvement in efficiency and effectiveness enabling the organization to earn for itself the envious status of a vibrant, dynamic and progressive concern (Zaheer, Rehman, & Saif, 2008). In their study: "Organizational Change Effectiveness in an Indian Public Sector", Nandan &Verma (2013), identified four change outcomes, namely enhancement in employee involvement, improvement in employee performance management, improvement in work environment, and improved organizational systems. Rahimi (1996) argues that it is high time that PSUs in India go for BPR as more than 70 per cent of large corporations, world over, have indulged in BPR, by 1996. Thong et al. (2000), Macintosh (2003), Rinaldi, Montanari and Bottani (2015) bring to light the similarities and differences in implementing BPR in Private sector and public sector. PSUs are marked with restrictions in providing resources of BPR, greater levels of consultations and consensus among employees. Still there are greater potentials for significant improvement through BPR (Rinaldi et al., 2015).

2. Methodology

Kerala has at present 93 SPSUs grouped under 13 sectors. However, the population of the present study is limited to 41 PSUs under the administrative control of Department of Industries, Government of Kerala. Initially, the financial performance of these 41 units was analyzed, for which data was collected from the Review of Public Enterprises published by Bureau of Public Enterprises, Govt. of Kerala (Government of Kerala, 1995 to 2013), for the years from 2001-02 to 2012-13. The tools of Net Profit, Net Profit Ratio (NPR), Return on Capital Employed (ROCE) and Altman's revised Z-Score Model (Altman, Haldeman, & Narayanan, 1977), were used in order to understand the financial performance. To compare the performance of SPSUs in Kerala with that of CPSUs, two organizations – one Heavy Machine Company and a Health Care Company were selected. The data of CPSUs was taken from the company's annual reports.

Next the possibility of performance improvement was examined. For this, six manufacturing organizations from the above 41 PSUs were identified by judgment sampling. The SPSUs selected are:

1. Keltron Component Complex Ltd.
2. Keltron Electro Ceramics Ltd.
3. Keltron Manvila
4. Kerala Automobiles
5. Kerala Ceramics
6. United Electricals

12 performance improvement factors were identified through various methods including literature survey, a preliminary study through discussions with employees at various levels and trade union leaders, and observation by the researcher, verifying company records and procedures. 24 years of experience of one of the researchers in one of the PSUs under study and a considerable duration in teaching in management subjects of all the researchers benefited in identifying major performance improvement factors applicable to these PSUs. A questionnaire having 83 domains pertaining to the 12 factors was developed. Questionnaire was administered among the executives at different levels, as it is they who know the business well. Five point interval scale is used to assess possible performance improvement (percentage terms) as given in Table 2.

For each domain the response could be one of the five options, with each option having a predetermined score. The scores stand in a linear fashion to represent a range of values. The values 5, 4, 3, 2, and 1 are used in ordinal sense (but can be treated as interval scale as it represents interval values), to represent "Very High", "High", "Moderate", " Mild" and "Less" possibilities. But these scores also serve as the mid value in the range of 20% of the possible performance improvement. Naturally, 1 stands for 10%, 2 for 30%, 3 for 50%, 4 for 70% of

improvements, and so on. The decimal values also can be interpreted similarly.

Table 2. Five point interval scale in the questionnaire

Options	Score	Possible Improvement
Very High Possibility	5	80% - 100%
High Possibility	4	60% - 80%
Moderate Possibility	3	40% - 60%
Mild Possibility	2	20% - 40%
Less Possibility	1	0% - 20%

Data was analyzed using descriptive statistics and t-test. Correlation was done to know the relation between various factors of performance improvements. Comparison of possible performance improvements between State and Central PSUs was also carried out.

3. Results

The study was done in two stages. The first involved analyzing the performance of PSUs in Kerala, and second the possible performance improvements in the PSUs were measured.

3.1 Performance of PSUs in Kerala

The performance of 41 PSUs were analyzed using different financial performance indicators, namely, Net profit, NPR, ROCE and Altman's Z-score, for a period of 12 years from 2001-02 to 2011-12. Summary of performance indicators are given in Table 3.

Table 3. Summary of Performance Indicators of 41 PSUs in Kerala

Sl. No.	Company	Mean Values of Performance Indicators			
		Profit Rs. lakhs	NPR	ROC	Altman's Z-Score
1	The Kerala Minerals and Metals Ltd.	6 356.17	14.31	12.85	1.32
2	Kerala State Drugs and Pharmaceuticals Ltd.	(354.82)	(964.20)	(5.59)	(0.17)
3	Malabar Cements Ltd.	2 285.68	8.54	11.60	1.89
4	The Travancore Cements Ltd.	(241.67)	(9.27)	(29.42)	1.28
5	Travancore Cochin Chemicals Ltd.	(157.58)	(1.70)	(1.60)	0.79
6	Travancore Titanium Products Ltd.	293.08	0.78	(0.02)	0.94
7	Kerala State Mineral Development Corporation Ltd.	(12.61)	(0.19)	(2.31)	0.63
8	Kerala Ceramics Ltd.	(134.94)	(33.86)	(4.67)	(0.00)
9	Kerala Clays and Ceramics Ltd.	117.97	24.39	21.60	1.92
10	Kerala State Industrial Development Corporation Ltd.	2 399.22	83.63	5.30	0.99
11	Kerala State Industrial Enterprises Ltd.	453.13	31.81	25.19	1.50
12	Kerala Small Industries Development Corporation Ltd.	14.71	(1.09)	(4.73)	0.85
13	Kerala Industrial Infrastructure Development Corporation	1 096.03	74.76	2.49	0.66
14	Kerala Electrical and Alied Engineering Company Ltd.	(187.78)	(5.81)	(0.20)	1.10
15	United Electrical Industries Ltd.	(203.60)	(37.09)	(15.95)	0.75
16	Traco Cables Company Ltd.	(408.22)	(0.88)	(0.90)	0.77
17	Transformers and Electricals Kerala Ltd.	1 761.25	7.04	15.78	1.78
18	Kerala State Electronics Development Corporation Ltd.	(1 371.60)	7.19	2.01	0.37
19	Keltron Electro Ceramics Ltd.	(6.87)	(5.28)	(1.84)	0.92

20	Keltron Component Complex Ltd.	(216.93)	(7.17)	(10.24)	0.62
21	Keltron Crystals Ltd	(151.94)	(222.86)	(11.57)	(0.41)
22	Keltron Mangetics Ltd	(1.81)	(5.94)	(2.61)	0.53
23	Keltron Resistors Ltd	(33.10)	4.12	3.14	0.58
24	The Metal Industries Ltd.	(2.96)	(4.62)	(2.54)	1.42
25	Steel Complex Ltd.	(270.82)	(38.21)	(25.51)	0.43
26	Steel Industries Kerala Ltd	(183.83)	(13.50)	(1.76)	0.24
27	Kerala Automobiles Ltd.	(160.10)	(16.77)	(25.16)	1.40
28	Steel and Industrial Forgings Ltd.	368.92	7.62	13.37	1.83
29	Autokast Ltd.	(360.30)	(32.50)	(0.56)	(0.10)
30	Forest Industries (Travancore) Ltd.	23.30	3.27	5.34	1.18
31	Kerala Garments Limited	(58.82)	(2326.59)	(34.58)	(0.74)
32	Kerala State Textile corporation Ltd.	(536.98)	(11.91)	(6.78)	0.38
33	Sitaram Textiles Ltd.	(151.94)	(23.66)	(4.58)	0.00
34	Foam Matting (India) Limited	(41.34)	(11.38)	(6.02)	0.79
35	Handicrafts Development Corporation (Kerala) Ltd.	(40.66)	(9.75)	(5.16)	0.41
36	Kerala State Bamboo Corporation Ltd.	(143.15)	(18.46)	(10.70)	0.50
37	Kerala State Handloom Development Corporation Ltd.	(444.97)	(26.88)	(11.46)	0.15
38	Kerala State Coir Corporation Ltd.	20.48	(11.44)	(0.87)	0.76
39	Kerala State Cashew Development Corporation Ltd.	(1 549.58)	(79.91)	(1.19)	(0.02)
40	Kerala Artisans Development Corporation Ltd.	(6.79)	(12.16)	0.92	0.77
41	Kerala State Palmyrah Products Dev. & Workers Welfare Corporation Ltd.	(5.89)	(246.03)	(11.39)	(0.07)

Source: Compiled from Government of Kerala (1995 to 2013)

On analyzing the values in Table 3, it was seen that most of the values in the first three columns were negative, indicating that the performance of most of the PSUs were very poor. Altman score (Altman et al., 1977) also showed poor performance and most of the PSUs are in financial distress as per the rule given in Table 4.

Table 4. Altman's Z-Score model

Zone	Value of Z	Interpretation
Zone-*I*	Less than 1.23	Distress Zone
Zone-II	1.23 to 2.9	Grey Zone
Zone-III	Greater than 2.9	Safe Zone
Bankruptcy Group Mean = 0.15		
Non-Bankruptcy Group Mean = 04.14		

Source: Zeta Analysis A New Model to Identify Bankruptcy Risk of Corporations (Altman et al., 1977)

The total net profit or loss (Rs. Lakhs) of the 41 PSUs for the period 2001-02 to 2012-13 is given in Chart 1.
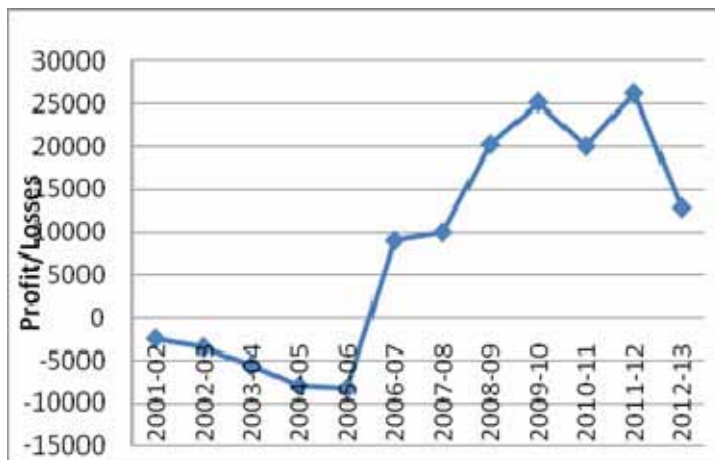
Chart 1. Net Profit / Losses of 41 SPSUs companies during 2001-02 to 2012-13

It is seen that the total net profit of 41 PSUs were negative from 2001-02 to 2005-06, resulting in a combined loss of Rs. 8 385 lakhs by 2005-06. But from 2006-07 the situation changed and the PSUs started making profit; by 2011-12 the total profit earned was of Rs. 26 280 Lakhs. But it slipped down again and reached a lower figure of Rs.12 871 Lakhs during 2012-13.

The performances of the selected CPSUs are presented in Charts 2 and 3.
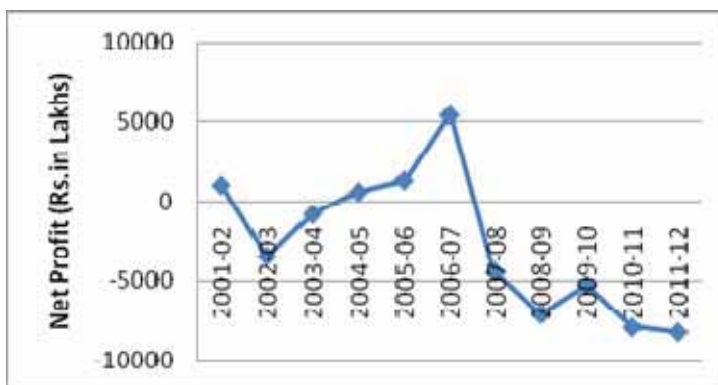

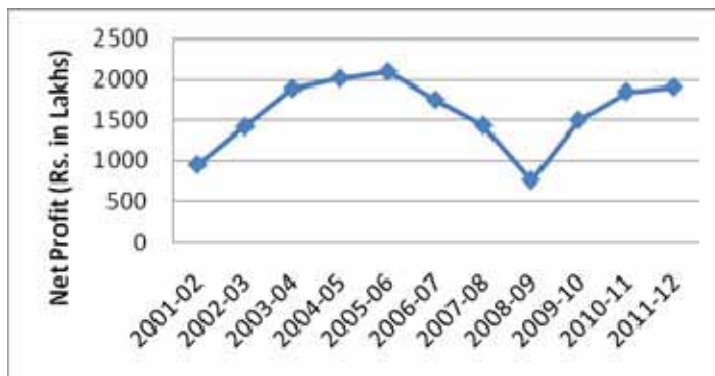Chart 2. Net Profit / Losses (Rs. Lakhs) of Machine Tools Company

Chart 3. Net Profit / Losses (Rs. Lakhs) of Health Care Company

It can be seen that the Machine Tools Company (MTC) has been making losses for seven years and the Health

Care Company (HCC) has been performing well and making profits for the entire period.

3.2 Possible Performance Improvements in PSUs of Kerala

Table 5 gives a summary of the opinion of the executives about the level of Possible Performance Improvements (PPI) in the selected SPSUs.

Table 5. Estimate of Possible Performance Improvements in SPSUs of Kerala

Factors	Mean	Std. Deviation	Improvement %
Cost	3.04	0.79	50.74
Quality	2.79	0.56	45.8
Time	3.22	0.79	54.49
Delivery	3.27	0.8	55.47
Flexibility	3.20	0.82	53.93
Growth	4.02	0.68	70.38
Service	4.04	0.68	70.86
HR	3.68	0.6	63.52
Trade Union	2.68	1.15	43.52
IT	3.64	0.94	62.8
Political	3.59	0.64	61.84
Obsolescence	3.36	0.79	57.24
Grand Mean	**3.38**		**57.55**

Per cent Improvement is estimated as below:

The possible performance improvement corresponding to mean 3.04 is calculated as: 50+ (3.04-3)* 20 = 50.74.

Similarly all other values are calculated.

The mean values of PPI and their corresponding percent improvement are given in columns 2 and 4 respectively. The mean values range from 2.68 to 4.04 and the corresponding percent values are 43.52 and 70.86; the grand mean is 3.38, which is 57.55%. It can be seen that the maximum possible performance improvements (above 70%) are in "Growth" and "Service" factors. Some other strong areas as per this study are "HR" (63.52%), "IT" (62.80%) and "Political (61.84%). The modern performance evaluation technique, viz. Balance Score Card (BSC) proposes "Growth and innovation" as one of the major factors for performance improvement. The result obtained in this study indicates that there is much scope for "innovation and modernization" of PSUs of Kerala as the score against "obsolescence" is 57.24%. This result also corresponds to the result of the preliminary study conducted in selected PSUs in Kerala which shows that some organizations make use of obsolete technology producing obsolete products. It implies that there is lot of scope for BPR in PSUs of Kerala, which leads to fundamental restructuring of the organization, and redesigning the product and technology. Further, the executives of such companies see the possibility of 43.52% improvement in the factor of "Trade Union". These results indicate that, taking all factors of performance together, an average 57.55percent improvement is possible.

Total PPI (arrived at by adding PPI in 12 individual factors) is found to be 748.13 per cent. This figure may not be accurate as these 12 factors are not independent. Accurate mathematical assessment of the total from these individual factors is beyond the scope of this article. Approximate figures can be assessed using triangulation, using knowledge from other sources. Approximate value is sufficient for the present study as it is intended to assess the scope of BPR implementation.

It is seen from the above analysis that there is high possibility of performance improvements in SPSUs in Kerala. The relationship among various factors of performance improvement can be explained to some extent, by analyzing the correlation between these variables.

3.3 Correlation between Factors of Possible Performance Improvement

The correlation between various factors of performance improvement as per the questionnaire survey among the executives of selected PSUs in Kerala is given in Table 6.

Table 6. Pearson Correlations between Factors of Improvements

	Cost	Quality	Time	Delivery	Flexibility	Growth	Service	HR	Trade Union	IT	Political	Obsolescence
Cost	1	.812**	.886**	.834**	.566**	.449**	.409**	.565**	.595**	.561**	.579**	.481**
Quality		1	.771**	.732**	.542**	.524**	.525**	.702**	.519**	.641**	.678**	.456**
Time			1	.861**	.510**	.413**	.312*	.452**	.535**	.406**	.458**	.360**
Delivery				1	.440**	.520**	.294*	.451**	.552**	.452**	.430**	.402**
Flexibility					1	.444**	.349**	.514**	.637**	.527**	.481**	.589**
Growth						1	.410**	.567**	.462**	.409**	.489**	.505**
Service							1	.686**	.208	.629**	.718**	.463**
HR								1	.500**	.674**	.735**	.549**
Trade Union									1	.382**	.395**	.478**
IT										1	.675**	.600**
Political											1	.584**
Obsolescence												1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The correlation coefficient between cost and quality is found to be 0.812. The table provides the correlation of all other factors. It is seen that all the factors have high or moderate correlation between each other. It means that the possibility of performance improvements goes together. For example the correlation between time and cost is 0.886. If we reduce time, cost will automatically come down. It can also be seen that improvement due to "political" and "trade union" has a correlation of only 0.395 which shows that the correlation between these factors is low compared to others. It is seen that no pairs have a correlation above 0.9, which shows that no factor can be excluded. All the correlation estimates, except that between trade union and service, are significant either at 0.05 or at 0.01.

The significant correlation is an indication that the performance improvement in one factor depends and also contributes to performance improvement in other factors. This is true in practical case also. The present study is aimed at finding the scope of implementation of the drastic performance improvement technique called BPR. Due to multicollinearity, it is difficult to estimate the exact figure of total possible performance improvement in the organization even though we have the possible performance improvement in each factor of performance. Allison (1999) pointed out that when the direction of causation cannot be inferred from data, the decision has to be based on the researcher's knowledge of the subject grounded in theory. The researcher's long experience in a typical PSU of Kerala and connection with many other PSUs can vouch for high PPI in most of the PSUs of Kerala. This is also confirmed by other data and information collected from PSUs under study and interview with employees at various levels in selected PSUs. It can also be seen that in some organizations, for example Automobile company, the present production turnover is one-fifth (150 units) of the installed capacity (750 units) which could be achieved previously without implementing any modern techniques. On implementation of modern techniques, it would certainly increase further. In another company under study, where the researcher was working for long years, the normal monthly production was only one third of normal achievable production. The manpower utilization was only below 50 percent. There was very little computer usage and much scope for

reduction in material and scrap, quality improvement, and implementation of modern managerial techniques. So there is a potential for high PPI.

This high PPI can also be established by simply analyzing the results of the study. It can be seen that the PPI in political factor is 62 per cent. Figure 1 in the previous section shows the performance of 41 SPSUs during 12 years between 2001-02 and 2012-13. During the period 2001-02 to 2005-06, one political alliance was in power, and during 2006-07 to 2010-11another political alliance was in power. Later, the political situation again reversed. A high difference in performance can be seen during these three periods. From 2001-02 to 2005-06, loss increased from Rs.2473 lakhs to 8385 lakhs. During the second period, PSUs started making profit. Rs.9012 lakhs profit during 2006-07 increased to Rs.25216 lakhs during 2009-10. During the third period, profit started decreasing. This is a clear evidence of the political factor in PPI. Analyzing other factors of PPI, it can be seen that manpower utilization is very low in most of the organizations; hence there is much possibility of HR factor. Use of IT is rare in PSUs in Kerala; hence there is much scope for PPI due to effective use of IT. Use of IT further improves manpower utilization. In a similar way, all the factors increase PPI in their respective factors and also by synergistic effect, leading the organization to a high per cent of PPI. The results of the study on PPI suggest that high performance improvement is possible in almost all SPSUs in Kerala. Hence there is significant scope for BPR in SPSUs in Kerala.

3.4 Possibilities of Performance Improvement of SPSUs and CPSUs in Kerala – a Comparison

Possibility of Performance Improvements in Selected Central PSUs in Kerala is given in table 7. It can be seen that the mean value of performance improvements in various factors for the central PSUs in Kerala varies from 2.67 in the case of quality and 3.61 in the factors of growth and service. The grand mean is 3.22 which correspond to about 54.4 % improvements in each factor of performance.

Table 7. Possibility of Performance Improvements in Central PSUs of Kerala

Factors	Central PSUs		
	Mean	Standard Deviation	% Improvement
Cost	3.04	0.73	50.78
Quality	2.67	0.55	43.38
Time	3.12	0.73	52.42
Delivery	3.23	0.70	54.64
Flexibility	3.12	0.75	52.42
Growth	3.61	0.75	62.12
Service	3.61	0.97	62.12
HR	3.56	0.79	61.21
Trade Union	3.06	0.85	51.21
IT	3.50	0.92	59.94
Political	3.29	0.81	55.71
Obsolescence	2.84	0.95	46.77
Grand Mean	**3.22**		**54.40**

Comparing the possible performance improvements in SPSUs and CPSUs in Kerala, it was seen that average possible improvements in state PSUs are 3.38 and that of Central PSUs is 3.22. The respective percentages are 57.55 per cent and 54.40 per cent. The significance of this difference is tested using paired T-Test. From the results of t-test, it can be seen that the difference in possibility of performance improvement of State and Central PSUs is significant at 0.05 significant level and not significant at 0.01 level. The correlation between the above is 0.842 which is an indication of high correlation between the two, which is significant. It can be interpreted that there are many factors common to State PSUs and Central PSUs, which affect the performance. There are also some differences in performance factors. The correlation value, $r = 0.842$ ($r^2 = 0.72$) implies that about 0.72% of the possibility of performance improvements are similar but about 28% differences also exist.

4. Discussion

The study aimed at identifying the scope for implementing BPR in PSUs of Kerala. Preliminary investigation by analyzing the financial performance of 41 PSUs under the study established that most of the State PSUs are poor performers, and require substantial changes to survive. Twelve factors based on 83 items were identified as major performance improvement factors in PSUs in Kerala. The factors identified and the expected per cent of possible performance improvement as per the opinion of the executives PSUs are:

1. Cost (50.74 %)   2. Quality (45.80%)   3. Time/Speed (54.49%)

4. Delivery (55.47%)   5. Future Growth (70.38%)   6. Human Resource (63.52%)

7. Political (61.84%)   8. Service (70.86%)   9. Flexibility (53.93%)

10. Trade Union (43.52%)   11. Information Technology (62.80%)   12. Obsolescence (57.24%).

It can be inferred that there is a high possibility of drastic performance improvements in all PSUs under study. Evaluating the possibility of performance improvement using other methods also confirms the results.

Comparing the possible performance improvements in SPSUs with that of CPSUs in Kerala, it is seen that average possible improvements in state PSUs is 57.55 and that of Central PSUs is 54.40, and the significance of this difference is 0.045. The correlation value of the possible performance improvements in State and Central PSUs is 0.842 showing significant correlation. These results show that the possibility of performance improvements in PSUs, whether under state or under central, are similar even though there are differences in some factors. Hence it is concluded that there is much potential for improvement in performance by adopting BPR in PSUs in Kerala, both central and state PSUs. The estimated average possible performance improvement of 57.55% in twelve factors of performance in this study is comparable to the performance improvements achieved in the studies of Irani & Zairi (2001) and Thong, Yap and Seah (2000). The average performances in those studies were 63% and 62.4 % respectively.

5. Conclusions

The scope for implementation of BPR in PSUs of India is established in the present study. It also estimates that more than 50 percent improvement is possible in the 12 performance factors. From the study, it was also seen that performance factors differ from organization to organization. The study is thus a pointer to the need for a further detailed study aimed at designing an appropriate firm specific project for implementing BPR. Apart from being an indicator for application of BPR on poorly performing PSUs in a developing country, the present study also contributes to BPR theory by identifying additional factors of performance improvement.

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Concentration in the Turkish Cement Industry

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Abstract

The market structure of the industry can be analyzed by reference to various indicators. These indicators are small or large firms operating in industry, market share, technological structure and competitive conditions. Todays is valid conditions of imperfect competition, concentration is one of the important indicators that determine whether they have a competitive structure operates. The main objective of this study is to analyze the market structure of the Turkish Cement Industry for the period of 2010-2014. To achieve this goal, domestic, foreign and net sales of firms data used in the study, N-Firm Concentration Ratio, Herfindahl-Hirschman and Entropy Index methods applied separately for each period, using the data set related to the domestic, foreign and net sales of firms in the industry. Consequently, the industry was determined as an oligopoly according to CR4 and CR8 while it was in a competitive market structure according to Herfindahl-Hirschman Index and Entropy Index.

Keywords: Turkish cement industry, concentration, n-firm concentration ratio, herfindahl-hirschman index, entropy index

1. Introduction

In consequence of value-added in Turkish economy, contributions of employment and exportation, cement industry is in the important sector position. Within industry sub-sector, cement industry is a significant sector which contributes to GDP (Gross Domestic Product).

Practical studies on industrial economics show that concentration becomes gradually an important indicator. Theoretically, a competitive firm equalizes the goods and service price to differential cost. For effective distribution of resources, the most important requirement is being equalize differential cost to the price. But, division is of output in oligopolistic market structures seen imperfect competition is not efficient because the prices exceed the differential cost (Hall, 1988, p. 921).

Economic theory shows that competition will increase with industrial firm, as well. While monopoly market consists of a single firm, perfect competition or monopolistic competition markets consist of many firms. Oligopoly market is made up of a few firms. Number of firms in industry is essential for to figure out the concentration ratio in perfect competition and monopolistic markets which have two, three organization types. Additionally, if a few firms are active, market shares represent the ratio of concentration. Hypothetically, there are two industries consisting of five firms. For example, five firms of first industry have equal market share (20%). Comes to second industry, one firm has 80% market share and the others have 5%. Pricing and the other firm's acts will be absolutely different from each other. Because of the market share differences, it is necessary to calculate heedfully concentration rate (Waldman & Jensen, 2001, p. 95).

As regards to studies of Mason (1939) and Bain (1949), concentration is one of the most important factors in industrial economy which determines the market structure. So, it is vital to evaluate concentration and reveal determinants of concentration for gain a clear understanding of practical studies on industrial economy. In this context, concentration can be defined as keeping under control the property or checking economic resources or activities by limited units among a small rate of the units having participated activities of economic or the units having participated (Bain, 1959). By means of this notion, it can be possible to research about numbers of firms which are active on economy or industry and their checking powers (Akay, 2007, p. 4).

Concentration shows us that production of goods or service is limited by some big company. Limited firms and their differences of capacious show us that it exists as a low competitive and more concentrated market.

Concentration can be evaluated as a function of all active firms in the market or market shares of some firms (Su, 2003, p. 17).

Concentration indicators have an importance in a lot of ways. By means of concentration which is fundamental factor to determine the market, it can be possible to have information about numbers of active firms in the industry and their checking power.

Primary purpose of this study is to analyze the market structure of Turkish cement industry in detail for 2010-2014 years period. In this regard, concentration ratio of active firms on Turkish cement industry has been revealed utilizing N-firm concentration ratio, Herfindahl-Hirschman Index and Entropy Index.

This study consists of six chapters. In chapter two, economic capacious of Turkish cement industry, in chapter three, index used for to evaluate concentration, in chapter four, summary of literature and data, in chapter five, empirical evidences, last chapter six, research results are mentioned.

2. Economic Status of Turkish Cement Industry

The First cement factory in the world was founded in 1848 in England. In Turkey, however, Darıca Production Plant owned by Arslan Ottoman Incorporated Company and Eskihisar Production Plant owned by Eskihisar Portland Cement and Water Lime Ottoman Incorporated Company were put into operation in 1912. In the same years, 60.000 tons of hydraulic lime was produced in Turkey and, until 1930-1931, hydraulic lime production was above cement production. Those production plants, which met the need for cement of the country, entered into a destructive and backbreaking domestic market competition with each other until 1920, when large quantities were imported. In that period, cement prices fell considerably on the grounds of lack of state intervention to the cement sector. As a result, those two production plants could not resist to the backbreaking competition any more and merged in 1920 under the name Arslan and Eskihisar Müttehit Cement Incorporated Company to act together against cement importation.

At the present time, approximately 71 million tons cement and 63 million tons clinker are produced by 66 production plants with 11335 employees, above 7 million tons cement and above 2 million tons clinker are totally exported.

In Table 1, it can be seen Turkish cement industry's domestic sales by regions.

Table 1. 2010-2014 Turkish Cement Industry's Domestic Sales by Regions (ton)

Regions/Years	2010	2011	2012	2013	2014
Mediterranean	6.731.415	8.122.096	8.523.916	11.232.760	11.408.933
Eastern Anatolia	3.362.483	3.335.885	4.760.517	5.211.903	4.991.903
Aegean	4.090.348	4.685.980	4.862.318	5.185.188	4.848.188
South East Anatolia	4.391.179	4.851.230	5.519.158	5.866.463	6.054.763
Central Anatolia	9.518.872	9.851.677	9.898.265	10.723.033	10.531.092
Black Sea	7.018.898	7.952.626	7.798.176	8.635.166	9.279.124
Marmara	12.606.805	13.451.386	12.567.842	14.085.891	16.061.927
Total	47.720.000	52.250.880	53.930.192	60.940.404	63.175.930

Source: www.tcma.org.tr

When Table 1 is analyzed, it is observed that Turkish cement industry's domestic sales increased consistently in 2010-2014. By the year 2014 the biggest domestic sale occurred in region Marmara and following regions are respectively Mediterranean, Central Anatolia, Black Sea, Southeastern Anatolia, Eastern Anatolia and Aegean.

In table 2, for 2014 it can be seen Turkish cement industry's cement and clinker export by countries. As seen from the table, when Libya is placed on the top of cement export, Egypt is placed on the top of clinker.

Table 2. 2014 Cement and Clinker Export (ton)

Country	Çement	Country	Clinker
Libya	1.902.640	Egypt	632.360
Syria	1.068.034	Ghana	372.214
Iraq	801.652	Brazil	281.905
Israel	677.972	Mauritania	214.925
Russia	592.008	Dominica	126.525
Equatorial Guinea	293.276	T.R.N.C.	112.305
Cameroon	251.933	Gabon	105.150
Total	7.652.557	Total	2.857.840

www.tcma.org.tr

In Table 3, it can be seen that Turkish cement industry's employment by region. By the period of 2010-2014, region Marmara is placed on the top of the employment and Eastern Anatolia is the last one. Between the years being talked about, employment increased nearly 12.5%.

Table 3. 2010-2014 Turkish Cement Industry's Employment by Region

Regions/Years	2010	2011	2012	2013	2014
Mediterranean	1802	1818	1847	2277	2256
Eastern Anatolia	866	835	1072	1032	1004
Aegean	1176	1155	1138	1127	1124
South East Anatolia	1397	1193	1265	1253	1255
Central Anatolia	1522	1507	1471	1455	1472
Black Sea	1304	1340	1414	1523	1698
Marmara	2007	2070	2118	2058	2526
Total	10074	9918	10325	10725	11335

Source: www.tcma.org.tr

In Table 4, it can be seen Turkish cement industry production capacity in 2014 and rate of capacity utilization by regions. As seen from the table region Marmara is placed on the top of capacity of clinker and cement. Rate of capacity utilization in clinker and cement are maximum in Black Sea.

Table 4. 2014 Turkish Cement Industry's Production Capacity and Rate of Capacity Utilization

Region	Clinker Capacity	Cement Capacity	Clinker Rate of Capacity Utilization	Cement Rate of Capacity Utilization
Mediterranean	16.688.100	26.499.668	92,64	61,02
Eastern Anatolia	4.960.560	10.221.921	82,90	48,97
Aegean	5.816.250	9.599.953	92,90	60,16
South East Anatolia	6.228.950	10.538.313	87,69	64,57
Central Anatolia	10.062.690	15.657.027	86,69	67,38
Black Sea	7.513.440	13.509.149	101,35	71,97
Marmara	18.333.950	27.454.141	95,27	67,62
Total	69.603.940	113.480.171	92,22	63,90

Source: www.tcma.org.tr

3. Concentration Index

In this chapter, it is examined concentration Index using for determiner market structures of Turkish cement industry.

Concentration rate of an industry are used for an indicator relative strengths of the firms. It is benefited from different indicator for evaluate concentration rate. Fundamental indicators are; Concentration ratio, Herfindahl-Hirschman Index, Entropy Index, Linda Index, Hannah and Kay Index, Hall-Tideman Index, Lorenz Curve and Gini Coefficient, Net Profit Index, Lerner Index, Logarithmic Variance of firm quantities, relative average deviation, Nos Cut Point, Pietra ratio, Condensation ratio etc. It will be dwelled on first three methods of calculation above mentioned.

3.1 N-Firm Concentration Ratio

N-Firm concentration ratio is the oldest and commonly used index known among the concentration criterions. In prospect of ith firm's market share is P_i concentration ratio is as follows (Curry & George, 1983, p. 207).

$$CR_N = \sum_{i=1}^{N} P_i$$

N value is traditionally taken as four, eight or twenty. Concentration ratio is not taking into consideration all firms which are active in industry; furthermore, it is not giving information about the relationship between relative strength's division among the group of big firms and the other industry firms. Also, concentration ratio does not indicate if the largest companies are always the same large companies or not. Thus this index cannot explain the growth variances of the industry. Additionally since a certain subjectivity is an issue at some stages of the index calculation; concentration ratio is characterized as a permissive measure. In the studies carried out to eliminate this subjectivity, 50% concentration of the four-firm concentration ratio corresponds to the 70% of the eight-firm concentration ratio. Therefore for four-firm analysis 50-55% and for eight-firm analysis 70% concentration levels are accepted as the base points (Tekeli et al., 1980, p. 22).

A low concentration ratio indicates a greater degree of competition whereas high concentration ratio indicates a lesser degree of competition. In a monopolistic market, concentration ratio is 100% (Parkin, 2005, p. 206). Concentration ratios that are accounted by using market coverage rates indicated by Turkish Statistical Institute (TurkStat) according to the sales revenues, encapsulate the totality of the state sector in manufacturing industry and companies with 10 or more employees in private sector.

Concentration ratios in Turkish manufacturing industry are reviewed in four sections according to the concentration ratio CR_4 as if the value is in between 0-30 then low degree (there is competition), in between 31-50 middle degree (competition decreases and oligopolistic structure starts to emerge), in between 51-70 high degree (competition decreases immensely and oligopolistic structure emerges) and in between 71-100 very high degree concentration (monopolistic structure emerges) (www.tuik.gov.tr).

Concentration ratio is used basically for two purposes. First of all it is used to measure the market coverage ratios of several largest companies which manufacture a special product in a private sector (i.e. oligopolistic market). The second purpose is to measure the degree of oligopoly of the largest companies (Adelman, 1951, p. 271).

3.2 Herfindahl-Hirschman Index

Another measure to account the concentration is the Herfindahl-Hirschman index. Developed by Hirschman in 1945 and rearranged by Herfindahl, Herfindahl-Hirschman index is defined as the square sums of the shares of the companies in the industry. Herfindahl-Hirschman index is assessed as an indicator of the sizes of both companies and the competitions between them in the industry. Herfindahl-Hirschman index can be formulized as follows (Pepall et al., 2005, p. 49).

$$HH = \sum_{i=1}^{N} P_i^2$$

Where N is the number of the companies in the industry and P_i^2 is the square of the market share of the i_{th} company, then the largest value of the Herfindahl-Hirschman index is 1 whereas the lowest value is 1/N. Index takes its values in between 0 and 1. As index value approaches to 1 concentration increases. Index value decreases by the increases in N and increases by the decreases in N. High value of the index indicates a lesser competition in the concerning industry (Martin, 1988, p. 102). Differently from the concentration ratio, this index takes all company distributions into account.

Market structures can be defined as perfectly competitive with Herfindahl-Hirschman index smaller than 1000, monopolistic competitive with the index in between 1000-1800, and non-competitive with an index value bigger than 1800 (Parkin, 2005, p. 207).

One of the important inconveniences of the Herfindahl-Hirschman index usage is the need for the market share ratios of the all companies operating in the market. Any data not included in the index may result inaccurate measurements (Weinstock, 1982, pp. 185-301).

3.3 Entropy Index

Assuming N is the number of the companies in the industry and P_i is the market share of the i_{th} company, then Entropy Index can be formulized as follows (Jacquemin & Berry, 1979, p. 360).

$$E = \sum_{i=1}^{N} P_i \ln \frac{1}{P_i}$$

Entropy index takes values between 0 and log N. Low value of the index is an indication of a high concentration value. If there is only one company in the industry (monopolistic) the value of the index shall be zero and the concentration degree shall be maximum. As E index approaches to 1 concentration degree shall be decreased (Barthwall, 2004, p. 197).

Economists could not agree on a common opinion about the best concentration index. Each of the concentration measures has its advantages and disadvantages comparing one to the other. If an industry takes its form by the leadership of a few companies then N-Firm concentration ratio might be used as an efficient measure. On the other hand, if small companies have big activities in the industry as well, then H-H index might be more efficient for measuring the concentration (Yıldırım et al., 2005, p. 46).

4. Summary of Data and Literature

It is possible to run across plenty of national and international studies about measurements of concentration in the literature. Below there are some of the studies carried out nationally or internationally:

Rosenbluth (1957) tried to determine concentration levels for 96 sectors in Canadian Manufacturing Industry by the help of Concentration Ratio and Herfindahl-Hirschman Index by using the data of the year of 1948; and then he compared concentration levels of Canadian Manufacturing Industry and American Manufacturing Industry. The research has revealed that despite of varying concentration levels of different sectors in Canadian Manufacturing Industry, the concentration levels determined to be high.

Shepherd (1961), by using the data of the year 1957 and help of CR_3 and CR_4 concentration ratio values predicted and compared the concentration levels of American and English Manufacturing Industries. As a result of the research concentration levels accounted for American Manufacturing Industry in general and on the sector basis were found to be higher than the concentration levels of English Manufacturing Industry.

Sands (1962) analyzed concentration levels in American Manufacturing Industry for 47 sectors by using CR index for the 1904-1947 years period. As a result of the research, concentration levels of 28 sectors were found to be increasing; and concentration levels of the other 19 sectors were found to be decreasing or unchanging for the concerning period.

Shepherd (1964) determined concentration levels in the American Manufacturing Industry by using CR_4, CR_8 and CR_{20} index values for the 1947–1958 years period. The research yielded an increase in the concentration levels in general for the concerning period.

Pashigian (1968) determined the concentration levels of English and American Manufacturing Industries with the data of the year 1951 and by using Concentration Ratios; then compared manufacturing industries of these two countries. The research concluded that the concentration level accounted for English Manufacturing Industry has been higher than the concentration level accounted for American Manufacturing Industry.

Bain (1970) analyzed the variations of CR_4 concentration ratio of the American Manufacturing Industry in 1954-1966 period. The research concluded that during 1954 and 1966 period the concentration levels in the American Manufacturing Industry showed an upward tendency which had a mid-level trend.

Sawyer (1971), by utilizing the data of the 1958–1963 years period and using CR_4, CR_8, CR_{12}, CR_{20}, Gini Ratio and Herfindahl-Hirschman Index tried to determine the concentration levels of the English Manufacturing Industry. As a result of the research the concentration levels of the English Manufacturing Industry was found to have an upward tendency in the concerning years.

Rotwein (1976) tried to determine the concentration levels of 11 industries in the Japanese Manufacturing

Industry in the 1956–1970 years period. The study revealed a gradual increase in the concentration levels in the concerning period.

Cortes (1998) by the data of 1983–1992 years period and using CR_4, CR_{10} and Herfindahl-Hirschman Index values analyzed the concentration levels for 436 sectors in the Japanese economy. The research concluded that during the corresponding time period Japanese Economy has been highly dominated by the companies having oligopolistic structures.

Pryor (2002) accounted concentration levels of the American Manufacturing Industry by utilizing CR_4 and CR_8 index values and then compared these ratios with each other in the years of 1992 and 1997. The study revealed a gradual increase of the concentration levels of the retail trade sector.

Matthes and et al. (2007) tried to determine the concentration levels of the Electrical Markets throughout 6 different regions in Europe for 1996-2005 years period by utilizing the Concentration Ratio and Herfindahl-Hirschman Index. The research revealed that in England and Scandinavian regions market structures have not been concentrated but in the other regions, due to the state dominated monopoly concentrations have found to be in the critical trends.

American Bureau of Statistics has calculated concentration ratios for the largest 4, 8, 20 and 50 companies in the American Manufacturing Industry in their report entitled "Concentration Ratios in Manufacturing" and prepared in 1997 and 2002. In the report the concentration level has been stated to have an upward tendency.

American Federal Trade Commission tried to determine the concentration levels in the ethanol market by utilizing the Herfindahl-Hirschman Index in the reports they prepared in the years of 2005, 2006, 2007, 2008 and 2009. Reports revealed that ethanol market has not been concentrated.

Fedderke and Szalontai (2009) accounted concentration levels of South African Manufacturing Industry by using Rosenbluth Index and Gini Index for the 1972–1996 years period. In the research concentration level appeared to be gradually increasing during the concerning time period.

Erlat (1976) analyzed concentration level in Turkish Manufacturing Industry with the data of the years 1963 and 1969 and by utilizing the Concentration Ratio, Herfindahl-Hirschman Index, Rosenbluth Index and Entropy Index values and compared these four indices. In the research CR_4 Index has calculated to have the greatest value among these four indices whereas the Entropy Index to have the lowest one.

Tekeli and et al. (1980) determined the concentration levels of 126 sectors in the Turkish Manufacturing Industry by using Concentration Ratio, Herfindahl-Hirschman Index, Entropy of the Distribution, Coefficient of Variation and Linda Index values by utilizing the data provided in the annual Manufacturing Industry Survey published by the State Institute of Statistics in 1976. In the research, considering the data of the year 1976 the oligopolistic territory in the Turkish Manufacturing Industry has been stated to be quite narrow.

Yıldırım (1988) tried to determine the concentration levels of 86 sectors in the Turkish Manufacturing Industry by using Gini Index and utilizing the data provided in the annual Manufacturing Industry Survey published by the State Institute of Statistics in 1984. In the research concentration ratios calculated as bigger than 51% for the 33 of the sectors, and in between 40%-50% for the 22 of the sectors among the concerning 86 sectors.

Özhan (1990) determined the concentration level in the Turkish Manufacturing Industry by using CR_2, CR_4 and CR_8 Index values and defined the factors designating the concentration levels. The research revealed that four-firm concentration ratio of the 1/3 of the sectors in the manufacturing industry has been higher than 80%.

Kaytaz and et al. (1993) determined the concentration level in the Turkish Manufacturing Industry by using concentration ratio and Herfindahl-Hirschman Index for 1989–1990 years period. In the research according to CR_4 and Herfindahl-Hirschman Index sectors having the highest concentrations found to be yarn, string, net, rope industry not elsewhere classified weaving products industry and fur processing industry.

Özmucur (1997) tried to correct the concentration ratios (CR_4, CR_8 and Herfindahl-Hirschman Index) published by the State Institute of Statistics (SIS) for the 1985-1989 years period. The research emphasized the need for applying the correction factor on the concentration indices which published by the SIS.

State Institute of Statistics tried to determine the concentration level in the Turkish Manufacturing Industry by using Concentration Ratio and Herfindahl-Hirschman Index for 1980–1994 years period. According to the study meanwhile CR_4 has been 55.6% in average and CR_8 has been 66.2% in average, the value of CR_4 has found to be 50.4% and CR_8 has found to be 58.8% when calculated according to the weighted sales revenues in between the years of 1980–1994. Also the most competitive sectors determined to be the ready-made clothing, fiber yarn, weaving, dying, knitting, flour and bakery products; whereas the highest monopolistic sectors determined to be

yarn, string and rope industry, packaging industry, bituminous based construction, insulation and binding materials productions, railway transportation vehicles manufacturing, all kinds of sports, athletics, gymnastics tools manufacturing, petroleum refineries, inner and outer rubber tire production, motorcycle, bicycle manufacturing and repairing, internal combustion engines and tribune industry, mineral oil preparation and blending processes.

Kazan and Atan (1999) determined the concentration levels of 26 manufacturing sectors by using CR_4, CR_8, Herfindahl-Hirschman, Entropy and Linda Index values and by utilizing the sales revenue data of the 500 big companies of Turkey in 1997. The research revealed that 65.4% of the total sectors have had the concentration ratios higher than the critical point value which has been 50%.

Erlat and Akyüz (2001) analyzed import and export concentration levels of Turkey by using CR_4, Herfindahl-Hirschman Index, Rosenbluth-Hall-Tideman, Comprehensive Concentration Index and Entropy Index values and compared these indices with each other. The study showed that CR_4 index has taken the highest value whereas Herfindahl-Hirschman Index has taken the lowest.

Akan (2002) worked to determine the concentration levels in the Turkish Manufacturing Industry for 1980–1996 years period. The research concluded that more than the half of the Turkish Manufacturing Industry has been dominated by the oligopolistic companies.

Baş (2004) interpreted concentration levels of Turkish Manufacturing Industry which have been calculated by CR_4 Index for 1980–2001 years period. The research resulted high concentration levels for the most of the big sectors which establish the foundations of the economy.

Kulaksızoğlu (2004) analyzed concentration level of Turkish Cement Sector by considering the production rates and by utilizing CR_4, CR_8, Herfindahl-Hirschman Index values for the 1978–2002 years period. According to the research, from the beginning to the end of the concerning time period concentration has determined to be increasing.

Eser and Köse (2005) analyzed industries in the cities by determining concentration levels of 12 sub-sectors for 44 cities in Turkey by using data of the year 2000 and by utilizing Herfindahl-Hirschman Index. The research revealed that according to the fundamental industrial indicators such as the number of the companies, employment, added value and export, concentration levels have been high in the traditional industry centers like İstanbul, Ankara, İzmir, Adana, Bursa, Kocaeli.

Polat (2007) tried to determine the market structure of the cement sector in Turkey by utilizing CR_4, CR_8 and Herfindahl-Hirschman Index values for the years of 2001-2005. In the research Turkish Cement Sector determined to be standing on the border of the monopolistic competitive and oligopolistic market according to the concentration ratio analysis whereas having more competitive market structure according to the Herfindahl-Hirschman analysis.

Yolaç (2007) researched the factors effecting concentration levels for 84 sub-sectors in Turkish Manufacturing Industry for the year 2000. The research concluded that the scale economies and advertisement costs had an important role on determining the concentration.

Durukan and Hamurcu (2009) tried to determine the market structures and concentration ratios by using Herfindahl-Hirschman Index in the mobile communication markets in Turkey and 5 other countries in Central Asia Turkic Republics for the 2002–2007 years period. The research revealed that Turkey, Kazakhstan, Kirghizstan and Turkmenistan had non-competitive over-concentrated oligopolistic market structures whereas Tajikistan and Uzbekistan had middle degree concentrated oligopolistic market structures.

Baysal and Çavuşoğlu (2009) tried to determine the concentration level of Turkish Manufacturing Industry by using data of the year 2001. According to the research concentration ratios of the manufacturing industry determined to be high and a clear majority of the companies in the manufacturing industry operated in oligopolistic structures.

Kaynak and Ari (2011) reviewed concentration levels of Turkish Automotive Industry by utilizing N-Firm Concentration Ratios (CR_4 and CR_8) and Herfindahl-Hirschman index values in the 2003-2010 years period. The research concluded that according to CR_4 domestic automobile and domestic light commercial vehicle sectors and according to CR_8 imported light commercial vehicle sector had high levels of concentrations. According to Herfindahl-Hirschman index domestic light commercial vehicle and automobile sectors had monopolistic competitive market structures whereas imported automobile and light commercial vehicle sectors had low concentration ratios and consequently had more competitive structures.

Güven and Yeni (2013) determined the relations among concentration, profitability and wages in Turkish Manufacturing Industry for the 1985-2001 years period. The research reported a positive relation among concentration, profitability and wages.

Pehlivanoğlu and Tiftikçigil (2013) examined concentration levels in Turkish Iron-Steel and Metal Industries by utilizing CR_4, CR_8, CR_{12} and Herfindahl-Hirschman index values for the 1995-2001 years period. The research reported a monopolistic competitive structure according to CR_4 and oligopolistic market structure according to CR_{12} for the concerning industries.

Akardeniz and Kıraç (2015) analyzed concentration levels of the companies operated in the field of non-woven in the technical textiles sector in Gaziantep by using N-Firm Concentration Ratio and Herfindahl-Hirschman Index values in the year of 2013. The study showed that the sector had an oligopolistic market structure.

Measures utilized for calculating the concentration which is assessed to measure the market structure, generally are employment, sales, fixed assets, added-value, etc. In this study as for the concentration measures domestic sales, non-domestic sales and net sales variables are used and concentration level of the Turkish Cement Industry is analyzed by using CR_4, CR_8, Herfindahl-Hirschman and Entropy Index values.

In this study the data used to calculate the concentration for 2010-2014 years period are gathered from the annual accounts and annual activity reports of the companies which are the members of the Turkish Cement Manufacturer's Association.

5. Empirical Evidence

In this section calculated values of CR_4, CR_8, Herfindahl-Hirschman Index and Entropy Index of the Turkish Cement Industry for the 2010-2014 years period and interpretations of the indices are evaluated.

5.1 Market Structure of Turkish Cement Industry According to N-Firm Concentration Ratio

CR_4 index which is calculated according to domestic, non-domestic and net sales variables for 2010-2014 years period is shown in Table 5.

Table 5. CR_4 Index (%)

Years	CR_4 (Domestic Sales)	CR_4 (Non-Domestic Sales)	CR_4 (Net Sales)
2010	50,6	60,7	50,7
2011	51,7	63,9	53,3
2012	51,4	71,4	51,9
2013	51,1	65,5	50,4
2014	50,2	64,9	50,1

Source: Authors own calculation

As can be seen in the Table 5, CR_4 index calculated according to domestic sales variables is taken values in between 50,2% and 52,7%. If we examine this situation by considering the Turkish Statistical Institute's criteria, then we can conclude that the industry concentrates highly and cement industry has an oligopolistic market structure according to the domestic sales variable; and also because the values are close to the upper level of 50% it is possible to state that the oligopolistic structure indicates a weak structure.

On the other hand, CR_4 index values calculated on non-domestic sales variable basis varies in between 60,7% and 71,4%. With regard to these values it can be concluded that the competition in the cement industry is decreased significantly and therefore the industry can be considered to have a strong oligopolistic market characteristics. Also, CR_4 index values calculated on net sales variable basis resides in between 50,1% and 53,3 %. In the light of these values it can be stated that competition in the cement industry is decreased and the industry sets an example of a weak oligopolistic market structure.

CR_8 index values determined according to domestic, non-domestic and net sales variables for the concerning time period are shown in Table 6.

Table 6. CR$_8$ Index (%)

Years	CR$_8$ (Domestic Sales)	CR$_8$ (Non-Domestic Sales)	CR$_8$ (Net Sales)
2010	74,9	87,9	73,8
2011	73,9	91,0	75,1
2012	72,7	93,3	73,2
2013	75,1	91,8	74,8
2014	73,8	92,4	73,7

Source: Authors own calculation

When Table 6 is examined then it can be seen that CR$_8$ index is calculated according to the domestic sales variable, takes values in between 72,7% and 75,1%. Since the level of 50% of the CR$_4$ ratio corresponds to the 70% of the CR$_8$ ratio, in the concerning time period and according to the domestic sales variable it can be concluded that the industry is highly concentrated and the cement industry carries the characteristics of an oligopolistic market structure; also because the values are close to the upper level of 70% it is possible to state that they define a weak oligopolistic structure.

CR$_8$ index values are calculated on non-domestic sales variable basis reside in between 87,9% and 93,3%. According to these values it can be stated that competition in the cement industry is decreased significantly and the industry exhibits a strong oligopolistic market structure

Also, CR$_8$ index values are calculated according to the net sales variable lies in between 73,2% and 75,1%. Therefore it can be stated that competition in the cement industry is decreased and the industry sets an example of a weak oligopolistic market structure.

5.2 Market Structure of the Turkish Cement Industry According to H-H Index

Herfindahl-Hirschman index values calculated according to domestic, non-domestic and net sales variables for the 2010-2014 years period are shown in Table 7.

Table 7. Herfindahl-Hirschman Index

Years	HH (Domestic Sales)	HH (Non-Domestic Sales)	HH (Net Sales)
2010	897,6	1211,3	860,1
2011	902,8	1357,4	928,8
2012	896,0	1609,6	893,6
2013	902,5	1460,1	863,4
2014	891,2	1526,7	844,2

Source: Authors own calculation

When Table 7 is examined it can be seen that Herfindahl-Hirschman index calculated according to the domestic sales variable takes values in between 891,2 and 902,8. This situation different than the CR$_4$ and CR$_8$ analysis indicates a more competitive structure of the cement industry due to the calculated values that are less than 1000.

Herfindahl-Hirschman index values calculated according to non-domestic sales variable reside in between 1211,3 and 1609,6. According to these values it can be stated that the cement industry has the characteristics of a monopolistic competitive market structure.

Also Herfindahl-Hirschman index values calculated according to net sales variable are in between 844,2 and 928,8. These values indicate that the cement industry sets an example of a competitive market structure.

5.3 Market Structure of the Turkish Cement Industry According to Entropy Index

Entropy index values which are calculated according to domestic, non-domestic and net sales variables for the 2010-2014 years period are shown in Table 8.

Table 8. Entropy Index

Years	E (Domestic Sales)	E (Non-Domestic Sales)	E (Net Sales)
2010	0,88	0,78	0,90
2011	0,88	0,76	0,88
2012	0,89	0,71	0,89
2013	0,88	0,74	0,89
2014	0,89	0,72	0,90

Source: Authors own calculation

When Table 8 is examined it can be seen that Entropy index calculated according to domestic sales variable takes values in between 0,88 and 0,89; Entropy index calculated according to according to non-domestic variable takes values in between 0,71 and 0,78; and Entropy index calculated according to net sales variable takes values in between 0,88 and 0,90. Since the index values are close to 1 this situation indicates that the concentration is low and therefore the cement industry has a competitive structure with regard to these three variables.

6. Discussion

Considering the provided manufacturing, employment and export rates, cement industry occupies a strategically important leading sector position in Turkey.

In this study the concentration level is analyzed for the 2010-2014 years period by utilizing CR_4, CR_8, Herfindahl-Hirschman and Entropy index values calculated according to the domestic, non-domestic and net sales variables gathered from the annual accounts and annual activity reports of the companies which are the members of Turkish Cement Manufacturer's Association and operating in the Turkish Cement Industry.

As a result of CR_4 and CR_8 analysis carried out in this study, the industry is determined to be a weak oligopolistic example according to the domestic and net sales variables whereas according to the non-domestic sales variable the industry is determined to have a strong oligopolistic market structure. Thus it is possible to state that the industry concentrates more with regard to export.

Also in the light of Herfindahl-Hirschman and Entropy Index values it can be stated that the industry has a competitive market structure. When the concerning index values are compared to each other it is concluded that the companies in the industry concentrate more on the export articles according to the domestic and net sales and so the competition is lesser.

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Assessment of Interregional Disparity and Identification of Prevalent Factors of Women Empowerment: Empirical Evidence Based on Bangladesh Demographic and Health Survey, 2011 Data

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Abstract

This paper aims to explore the present circumstances of Women Empowerment (WE) of Bangladesh and to identify the dominant factors behind it. For the aspiration of analysis, Bangladesh Demographic and Health Survey (BDHS), 2011 data have been used. ANOVA has been performed to detect the interregional disparity of WE. Bivariate analysis has been performed to examine the association between different factors and women empowerment status. To measure the impact of the prevalent factors on women empowerment status, a logistic regression model has been considered. The key findings are: firstly, all the divisions' women are not empowered. Secondly, respondent's age, respondent's education, place of residence, respondent's working status, wealth index, media exposure, region and husband's age are influential factors for WE. The findings of this paper indicate that a significant improvement of WE has been observed with the increase of age of respondents and their husbands as well as the educational level.

Keywords: interregional disparity, wealth index, women empowerment status, women empowerment score

1. Introduction

Women's empowerment is a crucial step in achieving gender equality, but still now sluggish empowerment of women is a global problem. In the global sector this problem may not be as acute as in the developing nations, particularly like in Bangladesh, but still the situation concerning the empowerment of women is critical (ILO, 2009; ADB, 2011). In the developed nations, culturally women may have some freedom, but still in the working place, this discrimination still prevails while in the leadership women are still behind than men at a great extent (Pande et al., 2011).

In the recent time, Bangladesh has continued to uphold both economic and social ladders concurrently. Despite the political unrest and intense population and poverty, Bangladesh has attained this parallel achievement and efficiency in the socioeconomic advancement. In spite of this progress, women empowerment in Bangladesh is very low in comparison to the developed countries. According to the United Nations Development Programmer's (UNDP) Human Development Report for 2011, Bangladesh ranks 112 out of 187 countries on the Gender Inequality Index, which is defined in the report as "a composite measure reflecting inequality in achievements between women and men in three dimensions: reproductive health, empowerment, and the labor market." The 2011 Global Gender Gap Index developed by the World Economic Forum, ranks Bangladesh 69 out of 135 countries in terms of gender inequality (Hausmann et al., 2011). Thus, based on both gender-related indices, Bangladesh ranks among the bottom half of countries included in each index. Not only Bangladesh, most of the developing nations, particularly the Asian countries face a big drop in the development of women (Almaz, 1991; Hirut, 2004; Mukuria et al., 2005; Rafiqul, 2011).

In Bangladesh where women constitute about half of the total population of which 80 percent live in rural areas (BBS, 2001), is lacking far behind though one third of the seats in local and national government is reserved for women only (Hossain, Naznin, & Sultan, 2011). In a WHO (2005) multi country study indicates that compared to a range of other societies, Bangladesh suffers from a particularly high prevalence of violence against women.

In another study, World Bank (WB) stated that women access to household decision making, financial and physical assets are very limited in Bangladesh. Women possess inadequate levels of skills and knowledge, thus being very vulnerable to male dominance in any social sphere (Sebstad & Cohen, 2000). Besides, Kamal and Zunaid (2006) had said that only 20 percent of women work for cash only and among these 20 percent only 48 percent take their spending decision by themselves whereas the rest takes either jointly with their husband or by others.

Recognizing this critical scenario, many policy makers, international organizations as well as scholars all around the world have raised their concern particularly on improving women status in the society. However, in establishing or commencing any new initiatives, it is necessary to know the present state of the empowerment in a country or regions. In this particular case, different organizations and scholars have developed many formulas and measurement criteria of women empowerment.

Njuki et al. (2013) under CARE's Pathways program have established their own Women Empowerment in Agricultural Index (WEAI) based on which they have modeled Women's Empowerment Index (WEI) where they have included five domains of empowerment contain some specific indicators. UNDP (2005) has established their own well recognized Human Development Index (HDI) which is widely used as the women empowerment index (WEI) that includes the actual, minimum and maximum value of different dimensions. Apart from that, Mason and Smith (2003) used actual score of each of the indexes where each contains several indicators of empowered women.

In each of this measurement index different dimensions have been identified which includes several indicators that help to determine the level as well as to measure the changes of women empowerment (Mason & Smith, 2003; Shahnaj Parveen, & Ingrid-Ute Leonhäuser, 2004; Schular et al., 2010; Nazneen & Sultan, 2011; Haque et al., 2011; Njuki et al., 2013).

To implement programs or executing new initiatives appropriately, it is important to identify which of the regions of an entire country is responsible for the degradation of empowerment. In Bangladesh, among the seven administrative divisions, some have the cultural background which may encourage women empowerment greater than another. As like, there may be some divisions where women are so much deprived that scoring of the entire country become low. As a result, it is important to ensure the proper information on the actual scenario of the women empowerment in each of the region of Bangladesh so that the initiatives that are being taken can be executed properly.

The studies which have already carried out to measure the women empowerment to examine only the indicators and factors that create effects from or have some affect on women empowerment (Haque et al., 2011, Njuki et al., 2013).

In the present study an attempt has been taken to evaluate the current scenario of women empowerment in Bangladesh as well as to examine the association between different factors (socioeconomic and demographic) and women empowerment status. Finally, the strength of the impact of the potential factors is assessed.

2. Methods

2.1 Data

In this study, the secondary data set 'Bangladesh Demographic and Health Survey, 2011 has been used. This data set was collected through a collaborative effort of the National Institute of Population Research and Training (NIPORT), ICF International (USA) and Mitra and Associates. The written informed consent was obtained from the participants prior to participation in the study and data collection was conducted confidentially. For this study, there is no need ethical approval since it is based on publicly available secondary data.

2.2 Variables

The 2011 BDH survey was designed to collect information for 4007 variables from 17,842 observations. Among these huge numbers of variables, only a few variables have been identified to be considered to achieve the objectives of this study. In this paper, Women Empowerment Score (WES) is calculated according to UNDP (2005) formulated Human Development Index (HDI), based on the number of house hold decisions (decision on respondents health care, child health care, large household purchases and visits to family or relatives) in which a respondent participants (BDHS, 2011 report). WES variable was converted, according to Njuki et al. (2013), into a binary one known as Women Empowerment Status (women empowered if WES $\geq$ 0.80, women not empowered if WES<0.80) which is the outcome variable. The following Table 1 shows the indicator for measuring women empowerment.

Table 1. Summary table of indicators for measuring women empowerment

Variables	Coding	Scaling of women empowerment
Person who usually decides on respondent's health care.	1=Respondent alone 2=Respondent and husband/partner 3=Respondent and other person 4=Husband/partner alone 5=Someone else 6=Other	1,2,3 =1 (positive response) 4,5,6=0 (negative response)
Person who usually decides on large household purchases	1=Respondent alone 2=Respondent and husband/partner 3=Respondent and other person 4=Husband/partner alone 5=Someone else 6=Other	1,2,3=1 (positive response) 4,5,6=0 (negative response)
Person who usually decides on visits to family or relatives	1=Respondent alone 2=Respondent and husband/partner 3=Respondent and other person 4=Husband/partner alone 5=Someone else 6=Other	1,2,3=1(positive response) 4,5,6=0 (negative response)
Final say on: Child health care	1=Respondent alone 2=Respondent and husband jointly 4=Husband, partner 5=Someone else 6=Other	1,2=1 (positive response) 4,5,6=0 (negative response)

Along with the outcome variable, we consider the socio economic and demographic factors: respondent's age (<20, 20-35, 35+), respondent's education (no education, primary, secondary, higher), working status (yes, no), wealth index (poorest, poorer, middle, richer, richest), media exposure (access, no access), type of place of residence (urban, rural), region (Dhaka, Barisal, Chittagong, Khulna, Rajshahi, Rangpur, Sylhet), husband's education (no education, primary, secondary, higher), husband's age (<20, 20-35, 35+), religion (Muslim, Non-Muslim) as determinants of the outcome.

2.3 Analysis Techniques

At first, we detect interregional disparity of women empowerment using Analysis of Variance (ANOVA). Next, to examine the relationship between different determinants and women empowerment status, we conduct a bivariate analysis along with a Chi-square test. Finally, to know the strength of the impact of the potential factors, we consider a logistic regression model along with all the socio economic and demographic determinants as covariates. For the purpose of analysis, the SPSS for Window (SPSS Inc., Chicago, IL, USA) is used.

3. Results

3.1 Univariate Analysis

Different demographic and socioeconomic variables for all ever married women age 12-49 as well as all ever

married men aged 15-54 who have been interviewed in this survey have been shown in the following Table 2. After that, Table 3 has been drawn to find out the frequency distribution of the four indicators on the basis of which WES has been calculated.

Table 2. Frequency distribution of the respondents and its demographic and socio economic characteristics

Variables	Categories	Frequency	Percentage
Respondent's age	<20	2004	11.2
	20-35	10121	56.7
	35+	5717	32
Respondents education	No education	4639	26
	Primary	5332	29.9
	Secondary	6406	35.9
	Higher	1465	8.2
Working status	Yes	15468	86.7
	No	2374	13.3
Media exposure	No access	11773	66
	Access	6059	34
Wealth index	Poorest	3096	17.4
	Poorer	3345	18.7
	Middle class	3428	19.2
	Richer	3777	21.2
	Richest	4196	23.5
Type of place of residence	Urban	6196	34.7
	Rural	11646	65.3
Husband's age	<20	67	0.4
	20-35	7050	42.2
	35+	9587	57.4
Husband's education	No education	5197	29.1
	Primary	4834	27.1
	Secondary	5175	29
	Higher	2627	14.7
Region	Barisal	2066	11.6
	Chittagong	2871	16.1
	Dhaka	3084	17.3
	Khulna	2656	14.9
	Rajshahi	2608	14.6
	Rangpur	2469	13.8
	Sylhet	2088	11.7
Religion	Muslim	15845	88.8
	Non-Muslim	1997	11.2

Table 2 shows that, maximum number of women (56.7%) fall in the age group 20-35 whereas only 11.2% and 32% fall in the <20 and 35+ age group respectively. In case of highest educational level, 26% women are illiterate whereas 74% fall in the literate group. In the literate group, only 8.2% have the higher education and a 29.9% & 35.9% woman has primary and secondary education. Table 2 also shows that, among all the respondents, 86.7% respondents are currently working, 34% respondents have the access to the media, 65.3 % respondents lived in rural areas and 88.8% respondents are the followers of Islam. Very few of the respondents (17.4 %) belong to the poorest category whereas 19.2% and 23.5% women belong to the middle class and richest family respectively.

Most of the husband's belong from the 35+ age group (57.4 %) whereas minimum number of husband's (0.4%) fall in the <20 age group. Also, 42.2% husband's fall in the 20-35 age group. In case of husband's education, 29.1% people are illiterate whereas 70.9% are literate. Among literate people, minimum number (14.7%) falls in the higher education category and primary and secondary education constitutes 27.1% and 29% respectively.

In comparison, we observe that, the literacy rate is higher for respondents than their husbands whereas the husbands have 6.5% more higher education than their female counterparts. On the other hand, a very negligible portion (0.4%) fall in the <20 age group in case of husbands whereas the 11.2% respondents lies in that age group. This comparative statement clearly indicates that, a moderate portion of the respondents is married under 20 years.

Table 2 also shows that, maximum number of respondents (17.3%) fall in the Dhaka division whereas the minimum numbers (11.6%) fall in the Barisal division. Also a large portion (16.1%) of the respondents falls in the Chittagong division.

Table 3. Frequency distribution of the indicators for measuring women empowerment

Variables	Categories	Frequency	Percentage
Person who usually decides on respondent's health care.	Respondent alone	2224	13.3
	Respondent and husband/partner	8456	50.7
	Respondent and other person	0	0
	Husband/partner alone	4951	29.7
	Someone else	1022	6.1
	Other	33	0.2
Person who usually decides on large household purchases	Respondent alone	1208	7.2
	Respondent and husband/partner	8832	52.9
	Respondent and other person	0	0
	Husband/partner alone	4856	29.1
	Someone else	1741	10.4
	Other	49	0.3
Person who usually decides on visits to family or relatives	Respondent alone	1633	9.8
	Respondent and husband/partner	8896	53.4
	Respondent and other person	0	0
	Husband/partner alone	4690	28.1
	Someone else	1409	8.5
	Other	43	0.3
Final say on: Child health care	Respondent alone	2423	14.5
	Respondent and husband/partner	8894	53.3
	Respondent and other person	0	0
	Husband/partner alone	3109	18.6
	Someone else	755	4.5
	Other	1497	9.0

Table 3 revels that, about 50.7 % of respondents take decisions on their own health care with their husband, whereas, 29.7 % of the respondent's husbands take the decision on the respondents health care alone. On the other hand only 13.3 % of the respondents take their own health care related decisions alone. Besides, in case of taking decisions on large household purchases, only 7.2% women take decisions solely whereas 52.9% women take decision jointly with their husband. 29.1% of the respondent's husbands take these decisions alone. Moreover, 53.4 % respondents take the decisions on visiting to family or relatives along with their husbands whereas 28.1 % of the respondent's husbands take this decision alone. Only 9.8% women take this decision alone, whereas 8.5 % case someone else other than husband and the respondents themselves take this decision. Lastly, having final say on child health care, 53.3 % of the respondents and their husbands take decisions together; where only 14.5 % of the women take it alone with 18.6% of the respondent's husbands take these
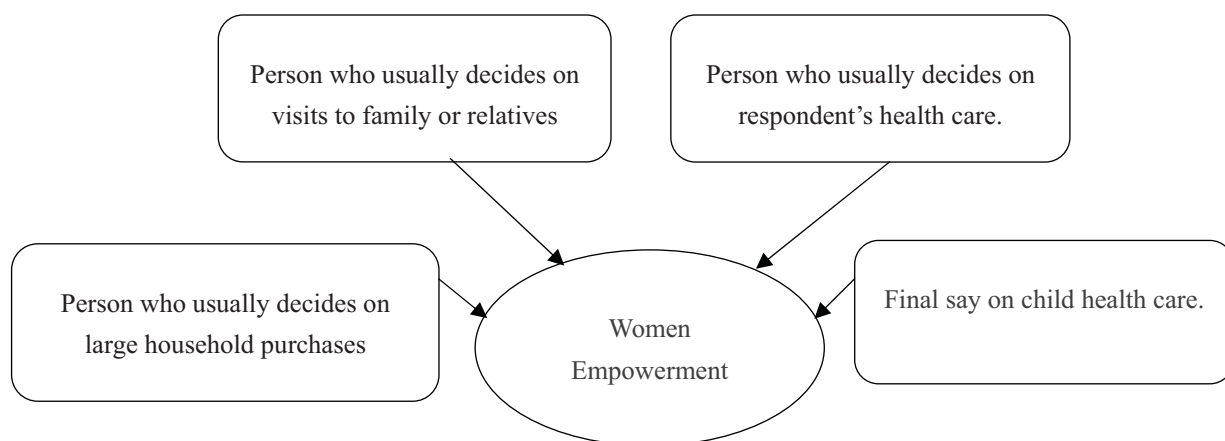
decisions alone.

Figure 1. Conceptual Framework for the construction of women empowerment

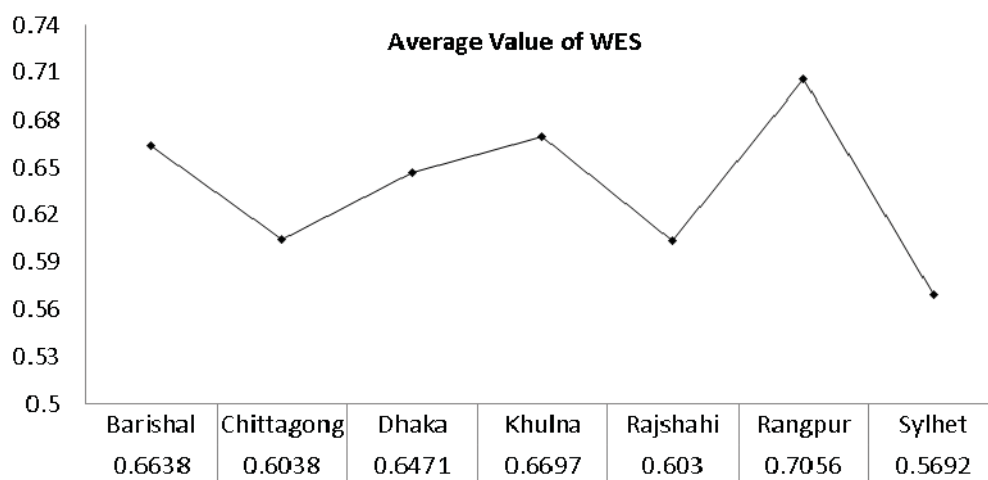*3.2 Detecting Inter-Regional (Inter-Divisional) Disparity of Women Empowerment*

Figure 2. Women empowerment scoring by seven administrative divisions of Bangladesh

Figure 2 shows that, among the seven divisions of Bangladesh, Sylhet division has the lowest mean WES with 0.5692. After that, Rajshahi has the mean WES of 0.6030. Chittagong places immediately after Rajshahi (0.6038). Apparently, Dhaka, Barisal and Khulna have the mean WES of 0.6471, 0.6638 and 0.6697 respectively. Rangpur division shows the highest value (0.7056).

Table 4. ANOVA table for detecting interregional disparity of women empowerment

Sources of Variation	Sum of Squares	Degrees of Freedom (DF)	Mean Square	F	P value
Between Groups	29.755	6	4.959		
Within Groups	2474.817	16653	0.149	33.370	0.000
Total	2504.572	16659	-------		

Table 4 reflects that test is highly significant (since, p value = 0.000) at 1% level of significance. That is, there is statistically significant difference in the means of women empowerment score among different divisions in Bangladesh.

Overall, since the test is significant, that's why we are more interested to know the pairwise differences. For this reason, we now perform the Least Significance Difference (LSD) test. To detect the pairwise mean differences among this region LSD test has been run at the 5% level of significance.

Table 5. Interregional Disparity among the Seven Administrative Divisions of Bangladesh

(I) Region	(J) Region (other than I)	Mean Difference (I-J)	Std. Error	P value
1 Barisal	1 Chittagong	0.06002	.01145	.000
	2 Dhaka	0.01664	.01131	.141
	3 Khulna	-.00593	.01166	.611
	4 Rajshahi	.06075	.01167	.000
	5 Rangpur	-.04179	.01184	.000
	6 Sylhet	.09460	.01241	.000
2 Chittagong	1 Barisal	-.06002	.01145	.000
	2 Dhaka	-.04337	.01036	.000
	3 Khulna	-.06594	.01074	.000
	4 Rajshahi	.00074	.01075	.945
	5 Rangpur	-.10180	.01093	.000
	6 Sylhet	.03458	.01155	.003
3 Dhaka	1 Barisal	-.01664	.01131	.141
	2 Chittagong	.04337	.01036	.000
	3 Khulna	-.02257	.01059	.033
	4 Rajshahi	.04411	.01059	.000
	5 Rangpur	-.05843	.01078	.000
	6 Sylhet	.07796	.01141	.000
4 Khulna	1 Barisal	.00593	.01166	.611
	2 Chittagong	.06594	.01074	.000
	3 Dhaka	.02257	.01059	.033
	4 Rajshahi	.06668	.01097	.000
	5 Rangpur	-.03586	.01115	.001
	6 Sylhet	.10052	.01176	.000
5 Rajshahi	1 Barisal	-.06075	.01167	.000
	2 Chittagong	-.00074	.01075	.945
	3 Dhaka	-.04411	.01059	.000
	4 Khulna	-.06668	.01097	.000
	5 Rangpur	-.10254	.01116	.000
	6 Sylhet	.03384	.01176	.004
6 Rangpur	1 Barisal	.04179	.01184	.000
	2 Chittagong	.10180	.01093	.000
	3 Dhaka	.05843	.01078	.000
	4 Khulna	.03586	.01115	.001
	5 Rajshahi	.10254	.01116	.000
	6 Sylhet	.13638	.01194	.000
7 Sylhet	1 Barisal	-.09460	.01241	.000
	2 Chittagong	-.03458	.01155	.003
	3 Dhaka	-.07796	.01141	.000
	4 Khulna	-.10052	.01176	.000
	5 Rajshahi	-.03384	.01176	.004
	6 Rangpur	-.13638	.01194	.000

Table 5 shows that, in most of the pairs the mean difference of women empowerment scores differed significantly (since, p value ≤ 0.05) that is the women empowerment score has significant effects in different divisional pairs. The mean difference of the WES of any two districts varies significantly except the pairs Barishal-Dhaka, Barishal-Khulna, Chittagong-Rajshahi.

3.3 Bivariate analysis

Table 6. Association between different covariates and women empowerment status

Variables	Category	Women Empowerment Status		P value
		Women Empowered n(%)	Women Not Empowered n(%)	
Respondent's Age	<20	395 (20.3%)	1551 (79.7%)	
	20-35	4245 (43.8%)	5451 (56.2%)	0.001
	35+	2518 (50.2%)	2500 (49.8%)	
Husband's Age	<20	3(4.5%)	64 (95.5%)	
	20-35	2448 (34.8%)	4587 (65.2%)	0.02
	35+	4707 (49.2%)	4851 (50.8%)	
Region	Brisal	921 (47.06%)	1036 (52.93%)	
	Chittagong	1092 (40.60%)	1597 (59.39%)	
	Dhaka	1210 (42.33%)	1648 (57.66%)	
	Khulna	1091 (44.08%)	1384 (55.91%)	0.000
	Rajshahi	927 (37.56%)	1541 (62.43%)	
	Rangpur	1230 (53.20%)	1082 (46.79%)	
	Sylhet	687 (36.13%)	1214 (63.86%)	
Highest Educational Level	No Education	1777(43.5%)	2309(56.6%)	
	Primary	2132(42.6%)	2875(57.4%)	0.001
	Secondary	2518(41.0%)	3622(59.0%)	
	Higher	731(51.2%)	696 (48.8%)	
Husband's Educational Level	No Education	2039 (43.6%)	2640 (56.4%)	
	Primary	1881 (41.1%)	2699 (58.9%)	
	Secondary	1982 (40.6%)	2903 (59.4%)	0.001
	Higher	1253 (50.0%)	1255 (50.0%)	
Respondent's Working Status	Yes	1089 (56.0%)	855 (44.0%)	0.000
	No	6069 (41.2%)	8647 (58.8%)	
Media Exposure	No Access	4877 (44.1%)	6194 (55.9%)	0.001
	Access	2276 (40.8%)	3303 (59.2%)	
Wealth Index	Poorest	1189(42.2%)	1631(57.8%)	
	Poorer	1272(40.7%)	1856(59.3%)	
	Middle Class	1289(39.9%)	1943(60.1%)	0.001
	Richer	1468(41.4%)	2075(58.6%)	
	Richest	1940(49.3%)	1997(50.7%)	
Types of Place of Residence	Urban	2822 (49.0%)	2935 (51.0%)	0.001
	Rural	4336 (39.8%)	6567 (60.2%)	
Religion	Muslim	6319 (42.7%)	8478 (57.3%)	0.045
	Non-Muslim	839 (45%)	1024 (55.0%)	

Table 6 reveals the Chi-square tests for relationship between selected covariates and women empowerment status. The Chi-square test reflects that all the selected demographic and socioeconomic variables have a highly significant relationship with women's empowerment status.

However, in case of respondents and their husbands age indicates a trend of women empowerment with the

increase of ages that is when the age of the respondents and their husbands are 35+ almost 50% women are empowered. The variable 'educational status' shows an interesting relationship with the women empowerment. More than 50% women are empowered when the educational status is higher of the respondents and their husbands followed by 'no-education' and the lowest rate shows the 'secondary education'. In our country, most of the cases, no-educated men marry the same educational status of women (16.3% among 8 possible categories) for which the women of these families can get priority in decision making. In regional case, the highest percentage of the women empowerment shows the Rangpur division (53.2%) followed by Barishal (47.06%) and then Khulna division (44.08%), 42.33% and 40.6% women are empowered those are living in Dhaka and Chittagonh division respectively, only 36.13% women are empowered for Sylhet division. 56% women are empowered when they are working and among the not-working women 41.2% are empowered. Among the media exposure women, 40.8% are empowered. In case of wealth index 42.2% women are empowered among the poorest family, 40.7% of the poorer family, only 39.9% among the middle class family, in richer family 41.4% are empowered and 49.3% are empowered among the richest family. 39.8% rural women are empowered whereas 49.0% are empowered in urban areas. Among the non-Muslim family 45.0% is empowered and 42.7% in a Muslim family.

3.4 Regression Analysis

One of the core intentions of this study is to scrutinize the impact of different determinants on the women empowerment. For this reason, we consider the logistic regression model. The results are given in Table 7.

Table 7. Regression coefficients (Reg. Coeff.) and odds ratios (OR) with 95% confidence interval (95% CI) from logistic regression model

Characteristics	Category	OR (95% CI)
Respondent's Age	< 20 (**Ref**)	1
	20-35	2.307 (2.032, 2.620)***
	35+	2.774 (2.391, 3.219)***
Husband's Age	< 20 (**Ref**)	1
	20-35	5.866 (1.829, 18.815)***
	35+	8.855 (2.754, 28.473)***
Highest Educational Level	No education (**Ref**)	1
	Primary	1.176 (1.073, 1.288)***
	Secondary	1.290 (1.159, 1.437)***
	Higher	1.426 (1.204, 1.689)***
Husband's Educational Level	No education (**Ref**)	1
	Primary	0.979 (0.895, 1.072)
	Secondary	0.922 (0.833, 1.019)
	Higher	1.039 (0.904, 1.194)
Respondent Working Status	No-Working (**Ref**)	1
	Working	1.603 (1.452, 1.769)***
Wealth Index	Poorest (**Ref**)	1
	Poorer	0.931 (0.836, 1.037)
	Middle	0.831 (0.743, 0.930)***
	Richer	0.782 (0.694, 0.880)***
	Richest	0.850 (0.743, 0.973)***
Types of Place of Residence	Urban (**Ref**)	1
	Rural	0.744 (0.689, 0.804)***
Religion	Non-Muslim(**Ref**)	1
	Muslim	0.989 (0.894, 1.093)
Media Exposure	No access (**Ref**)	1
	Access to media	0.908 (0.838, 0.984)***

Notes.***p value < 0.001, **p value < 0.05, *p value < 0.10. **Ref**= Reference Category

In the regression model, odds ratios for the respondent age group and husbands age group (20-34 and 35+) are significant at the 1 % level of significance. It implies that the age of the participants and their husbands plays an important role in the women empowerment as it is found statistically significant even after controlling the demographic and socioeconomic variables. From the Model it is found that the rate of women empowerment increases significantly with increasing the age of respondents and their husband's age. For the individual with age group 20-34 is 2.3 times and with age group 35+ is 2.77 times more empowered than the age group 1-19. In case of husband age, the women, those husbands are in the age group 20-34 is 5.86 times and the age group 35+ is 8.85 times more empowered than the husband's age group 1-19.

From the regression model it is indicated that the empowerment of the women is increasing with the level of education of respondents and working status. For the women with the highest education level, the empowerment is 42.6% higher than the women with no education. Those who are in working they are 60.3% more likely to have empowered than who are in not-working. Religion is not found to have statically significant effect, but place of residence has significant effects on women empowerment, i.e. women are those living in the rural areas are 25.6% less empowered compared to the urban areas. An interesting relationship has been found between wealth status and women empowerment. In poorer families, women are 6.9% less empowered than the poorest family, for the middle and richer family women are 16.9% and 21.8% less empowered than the poorest family and richest family's women are 15.0% less empowered compared to the poorest family. Those women have access to media are 9.2% less empowered than those have no access to the media this effect is statistically significant at the 1% level of significance.

4. Discussion and Conclusions

The aim of this study is to evaluate the overall status of women empowerment in Bangladesh based on BDHS 2011 data. For this purpose, ANOVA has been conducted for detecting interregional disparity, bivariate analysis for examining the association between different covariates and women empowerment status, and logistic regression analysis for measuring the strength of the impact of the influential factors.

One of the potencies of this study is the use of a nationwide large sample with in depth information on the indicators of women empowerment, socioeconomic and demographic variables. This data set is collected through a authentic and uniform procedure, which reduce the measurement error and bias. A high response rate is observed in this study. In addition, this paper not only measures the overall status of women empowerment of the country but also clearly indicates the interregional disparity level of women empowerment.

The regional average WES has been calculated where the highest value was observed in Rangpur (0.7056) and the lowest was in Sylhet (0.5692). None of the divisions' women are empowered since all the values are less than 0.80 (Njuki et al., 2013) and there is overall statistically significant difference in the average WES, assessed by ANOVA, among different divisions. LSD test has been carried out (at 5% level of significance), for the purpose of pair wise comparison, which reflects that the mean difference of WES varies significantly for all the pairs except Barisal-Dhaka (p value = 0.141), Barisal-Khulna (0.611), Chittagong-Rajshahi (0.945). The bivariate analysis clearly reveals that respondent's age (p value = 0.001), respondent's education (0.001), type of place of residence (0.001), respondent's working status (0.000), wealth index (0.001), media exposure (0.001), region (0.000), husband's education (0.001) and husband's age (0.02) are statistically associated with women empowerment status and are the most influential factors for women to be empowered. By fitting logistic regression model, a significant increase in women empowerment was observed with the increase of age of respondent and their husband as well as the educational level of both. This study also shows the significant impacts on women empowerment in case of respondents working status (OR: 1.603) and place of residence (OR: 0.744). Working women are more empowered and women living in urban areas. Religion implies insignificant result with women empowerment status.

An interesting result has been found in case of access to media (OR: 0.908) and the result is significant. Women who have access to media is less empowered than who has no access. In this case, one possible explanation is that, in Bangladesh a large portion of women (66%) does not have media access among which 29% are empowered whereas only 14% are empowered among the media exposed women (34%).

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The Success of Youth-Oriented Environmental NGO: A Case Study of *Koalisi Pemuda Hijau Indonesia*

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Abstract

This article presents a case study of a youth oriented-environmental NGO, *Koalisi Pemuda Hijau Indonesia* (KOPHI), which has experienced rapid growth in recent years in Indonesia. As a network organization, KOPHI has been able to accommodate youth in many cities throughout Indonesia, especially in prompting university students to get involved in numerous environmental actions. Its main activity is environmental conservation that is able to involve children, youth and communities in a number of cities. In contrast to established environmental NGOs, KOPHI has also been able to develop a mechanism for self-financing, so that it is not dependent on foreign aid agencies. The capacity of KOPHI in implementing the three dimensions of the strategic triangle (value creation, support & legitimacy, and operational capacity) is a key to the success in the sustainable growth of the organization and in its role in conserving the environment in Indonesia.

Keywords: youth, NGOs, environmental movement, strategic triangle, Indonesia

1. Introduction

1.1 The Development of Environmental NGOs in Indonesia

The environmental movement has grown into a global effort in overcoming various environmental crisis's and problems on a global scale. Although this movement initially stemmed from Western industrialized countries, it is now in motion in nearly all countries throughout the world. The environmental movement is supported by millions of global citizens and exceeds any social or spatial boundaries. It is no exaggeration to say that the environmental movement has been described as "the most comprehensive, influential movement of our time" (Castells, 2010, p. 72).

Some agencies that are actively involved in the environmental movement are environmental NGOs (ENGOs). ENGOs are involved and have a role in almost every country in the world. In the context of Indonesia, ENGOs as independent organizations with a focus on environmental issues began to grow and develop in the 1970s (Hendarti & Nomura, 2005). At that time, ENGO involvement was a response to environmental damage occurring due to citizens' limited awareness of environmental conservation. As an example, the WWF (World Wildlife Fund) found that deforestation was the cause of diminishing orangutan habitats in Sumatra in the early 1970s. YIH (*Yayasan Indonesia Hijau* - Green Indonesia Foundation) was established in 1978 in follow-up to a WWF project. YIH initiated activities in nature conservation education, in collaboration with schools in Bogor city, which then spread to Bandung, Surabaya, Makassar and Palembang cities. In that same year, *Kelompok Sepuluh Pengembangan Lingkungan Hidup* (Environmental Development Group of Ten) was established, consisting of 10 NGOs that assisted the government in resolving environment issues. In 1980, WALHI (*Wahana Lingkungan Hidup Indonesia* or the Indonesian Forum for the Environment) was established in Jakarta as a forum of environmental activists, groups and organizations with an orientation on environmental issues and actions. The establishment of these ENGOs marked the beginning of the ENGO movement in Indonesia (Hendarti & Nomura, 2005, p. 35; Sinanu, 2006; Suharko, 2005).

ENGO development intensified in the late 1980s up until early 1990s. ENGOs began to move into policy advocacy, in addition to continuing to develop various environmental actions, such as encouraging environmental awareness in communities, and implementing environmental education activities both in and out of schools. In the late 1980s, WALHI appeared to distance itself from the government through various policy

advocacy actions on environmental issues. WALHI took on policy advocacy due to a variety of environmental problems that actually derived from government policy.

The strengthened environmental advocacy orientation that was apparent in WALHI, was also evident in the establishment of an array of ENGOs in a number of regions that focused on encouraging policy reform pertaining to conservation of natural resources and the environment. *Lembaga Alam Tropika* (LATIN) or the Institute of Tropical Nature Indonesia in Bogor offered alternative forest resource management through 'community forestry'. *Warung Informasi Konservasi* (WARSI) or Conservation Information Forum was a network of 12 NGOs working in 4 provinces in Sumatra, focusing on conservation of biodiversity and 'community development' through training and education for local communities. *Yayasan Wisnu* or the Wisnu Foundation in Bali prioritised water and soil management and pollution issues and disseminating information to communities.

Environmental education activities continued to be developed by ENGOs at the same time. In the late 1980s, WALHI in collaboration with environmental groups started to develop a conservation education program through trainings, called *Pendidikan Konservasi Alam* (PKA) or Nature Conservation Education for nature loving groups in senior high schools and universities. In 1990, the Seloliman *Pusat Pendidikan Lingkungan Hidup* (PPLH) or Environmental Education Centre in Mojokerto, East Java was founded. PPLH was actually a development that came out of the environmental education programs implemented by YIH in the 1970s. PPLH was established to effectively manage the YIH programs that were disbursed throughout a number of cities. PPLH was a center for intensive environmental education activities, where students and teachers could visit to enjoy nature and learn (Nomura et al, 2003). In the early 1990s, environmental education activities were also developed by *Rimbawan Muda Indonesia* (RMI) or Indonesian Young Foresters in Bogor and *Yayasan Pengembangan Biosains dan Bioteknologi* (YPBB) or the Foundation for the Development of Bioscience and Biotechnology in Bandung (Hendarti & Nomura, 2005). The establishment of so many NGOs involved in environmental education prompted measures to develop cooperation among them. In 1996, a number of ENGOs formed *Jaringan Pendidikan Lingkungan* (JPL) or the Environmental Education Network as a collaborative forum for exchanging information, experience and resources to promote environmental education in Indonesia (Nomura & Abe, 2001).

In the late 1990s, JPL further expanded cooperation with the Ministry of Education, the Ministry of the Environment, and other government agencies to develop environmental education. Some JPL members also joined a team at the Ministry of the Environment to develop environmental education policies (Hendarti & Nomura, 2005, p. 40).

In addition, the environmental movement, which was more environmental advocacy oriented simultaneously strengthened. *Jaringan Aksi Tambang* (JATAM) or Mining Advocacy Network, Sawit Watch, and other advocacy NGOs, utilised the open political space to conduct advocacy actions against companies, government agencies, and other actors believed to be environmentally destructive. They mobilized various advocacy actions, ranging from protests in the media and online media, demonstrations through to lawsuits.

In the post-authoritarian New Order period, not only were the established ENGOs active in a variety of environmental actions, but also the newly emerging ENGOs. From the author's observations, from searching online media and social media, these ENGOs were actively implementing an array of environmental activities. The main target groups of these new ENGOs were generally young people. The ENGOs themselves were organized by young Indonesian middle class, who were mainly students from renowned universities in Indonesia such as Bandung Technology Institute, Bogor Institute of Agriculture, University of Indonesia in Jakarta, and Gadjah Mada University in Yogyakarta as well as other universities in various cities. Nilan (2015) refers to these ENGOs as youth-oriented ENGOs.

1.2 The Emergence of Youth-Oriented ENGOs

The youth-oriented ENGOs have been flourishing since early 2000. At the national level, this has included KOPHI (*Koalisi Pemuda Hijau Indonesia*), GYC (Garuda Youth Community), *Indonesia Berkebun* (Indonesia Farming), *Sahabat Alam* (Friends of Nature) etc. At the local (city) level, in Jakarta there is Trashi (*Transformasi Hijau*/Green Transformation), ICSF (Indonesia Climate Change Student Forum), and TGG (Teens-Go-Green). *Tunas Hijau* (Green Shoots) is active in environmental activities in Surabaya. Bicons (Bird Conservation Society), Culindra, *Sahabat Kota* (Friends of the City), *Taman Kota* (City Park), *Riset Indie* (Indie Research), and Greeneration are all active in Bandung. Even in small cities like Salatiga, *Tanam untuk Kehidupan* (Planting for Life) has been active in promoting environmental sustainability.

KOPHI appears to be the most successful of these youth-oriented ENGOs. First, in a short period of time since its inception in 2010 up until 2013, as a coalition-based organization, KOPHI owns a central office in Jakarta and

16 local chapters. The initial idea of its establishment was pioneered by three university students in Jakarta. Along with other local activists studying in Jakarta and other areas surrounding Jakarta, they founded KOPHI, which was followed by the establishment of the local chapters. In 3 years, KOPHI became a nationally recognised organization. Second, as this organization has rapidly grown through its networks, KOPHI has a robust managerial capacity to accommodate youth -especially university students to participate in and organize numerous environmental actions. It is estimated that on average there are 20-30 members in each chapter of KOPHI and this membership increases annually through open recruitment. At the end of 2013, there were around 1000 members in total. Third, KOPHI has been actively engaged in environmental activities that have involved children, adolescents and young adults in many cities in Indonesia. Fourth, KOPHI has significantly increased its self-financing capacity, thus not relying on donors or foreign aid agencies like conventional NGOs generally do. In short, KOPHI has provided the best practices for ENGO engagement in the environmental movement during the last decade in Indonesia.

The emergence and development of youth-oriented ENGO such as this still the lack attention of researchers on environmental movements, especially in developing countries. Studies on the environmental movement by ENGO are generally focused on established ENGOs and their role in promoting environmental conservation and environmental policy advocacy. Nomura and Abe (2001) examined the important role of ENGO networks in Asia in promoting and supporting transboundary environmental education. These networks serve as an "infrastructure", which facilitates and bolsters environmental education, as well as international cooperation in Asian countries. A study in Asia-Pacific regions (China, the Philippines, Vanuatu) shows that ENGOs have played a role and contributed to promoting environmental education and conservation activities leading towards sustainability. These ENGO achievements have initiated momentum in developing education for sustainable development in the region (Tilbury et al., 2003). In line with the implementation of the open door policy and the environmental problems that are escalating in China, ENGOs are developing and actively involved in environmental protection despite restrictions on their activities from the government (Maohong, 2009). In Indonesia, in a different political context, ENGOs became an important part of the environmental movement in Indonesia during the New Order authoritarian regime (Eldridge, 1995) and in the more democratic post-New Order (Nomura, 2007).

Moreover, these studies also failed to focus attention on the issue of the success or failure of ENGOs in environmental movement organizing. In the context of Indonesia, with reference to the "change agent" perspective, Nomura et al. (2003) provided a good example of an NGO environmental education center (PPLH-Seloliman) in promoting environmental education and self-sufficiency to support these activities. In the context of the rapid development of youth-oriented ENGOs after the fall of the authoritarian New Order regime, it is important to demonstrate the success of the newly emerging ENGOs in organizing environmental movements.

Based on KOPHI's success in growing to become one of the most prominent youth-oriented ENGOs in such a short period of time, this article depicts the processes and strategies that have helped this organization to achieve its goals. Through scrutinizing the trajectories of this organization, this article intends to shed light on factors that have contributed to KOPHI's success, therefore examining the meaning and practices of the environmental youth movement in a post authoritarian context. By referring to the concept of the strategic triangle that is often used to explore the values and practices of non profit organizations (Brown & Moore, 2001), this article argues that strategies deployed by an ENGO will determine its success in organizing youth to be involved in environmental actions.

2. Conceptual Framework

The concept of the strategic triangle is basically a conceptual framework to examine the accountability of NGOs that are part of NPO. Although the article does not embrace issues of accountability, nevertheless, following the argument espoused by Brown & Moore (2001), accountability is closely linked to strategic dimensions of voluntary and non-profit entities. Therefore, how these dimensions co-exist and work will determine the success of NPOs in delivering their promises.

Accountability is something that cannot be ignored by NPOs, because they have pledged to do their best and they have a moral and legal obligation to do so. The rapidly growing number of social movements and actions of various NPOs worldwide has raised critical questions and concerns in regard to their accountability.

In addition, accountability is imperative as NPO entities usually use other groups (mainly aid donors) to attain certain goals. NPOs, especially NGOs in relation to state agencies, corporations, and other development agencies, often claim to be working on behalf of the interest of others such as the poor, minority groups, and other

marginal groups. This indicates that in practice NPOs actually have complex relations with other stakeholders, where interests and claims from actors involved are varied and not always aligned to each other. A NPO is encouraged to not only extend its networks with many actors, but also keep its interests in line with other actors' interests to achieve its goals and missions.

According to Brown & Moore (2001, p. 574) issues concerning accountability are not abstract, moral, or legal issues. On the contrary, issues of accountability should be regarded as strategic choices that would uphold an NPO in defining and achieving its highest institutional values. NPO relations with other actors are not always equal and their interests are not always aligned to each other, which may affect missions, strategies, and operational aspects of an organization. In this case, NPOs need to draft missions and organizational strategies for accommodating other actors' interests while embodying the aims and values of the organization.

In the context of NPOs, the strategic triangle concept illuminates the relationship between accountability and strategy (Moore, 2000). The strategic triangle is detailed in Figure 1 below. The triangle consists of value, support and legitimacy, and operational capacity. These three elements are critical dimensions for an NPO to survive, generate invaluable outcomes, and successfully adapt to changing circumstances (Brown & Moore, 2001, p. 575).
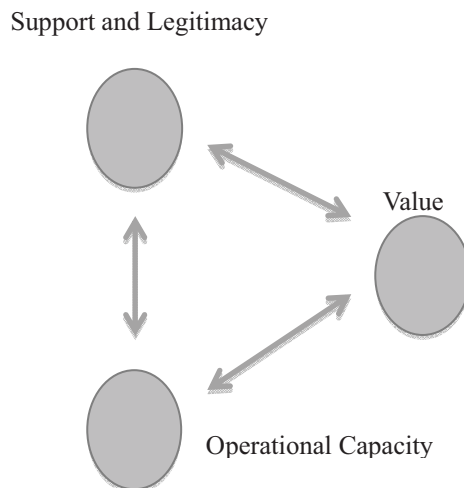

Figure 1. Strategic triangle (Brown & Moore, 2001, p. 576)

In regard to the first element, value, a NPO is established to achieve certain public goals - for instance, improving the lives of the poor, ensuring human rights are fulfilled and improving environmental conditions etc. In this context, a NPO must deliver and emphasize certain values that it wants to manifest and how these will be achieved. The formulation of these values will direct the organizational goals, helping to mobilize and foster support from other actors, and create a particular focus for developing and strengthening an organization's operational capacity.

The second element is support and legitimacy. A NPO would not be able to achieve its goals without the cooperation of other actors. In this context, a NPO should be able to gain the political, legal, and financial support needed for achieving its goals. With such cooperative relationships among diverse actors, a NPO will secure more legitimacy and additional support.

The issue of NPO support and legitimacy is much more complex than that of business and financial organizations which only focus on customers as supporting and legitimate resources. A NPO will only exist and remain sustainable if it can gain a variety of support from many actors. The capacity of a NPO in building relations with these 'contributors' directly affects the organizational management and operational capacity.

One of the most discussed critical concerns in the issue of support and legitimacy is organizational relations with 'contributors' or funding agencies. Financial support and material resources enabling the operational work are obtained from 'contributors' (individuals, funding agencies, government, and corporations). A high level of dependency on contributors may lead to a problematic situation in a NPO. If a NPO overly follows the preferences of donors, then the interests of the clients or target groups is potentially compromised. In this situation, donors may dictate the preferences of a NPO. In turn, this may raise more ethical, legal, and strategic

concerns and inquiries - for instance, to whom non-profit is supposed to be responsible.

The issue of support and legitimacy does not only pertain to the funding flow but is also related to resource flows. Many NPOs are too reliant on the contribution of time and efforts voluntarily generated by their members, staff, and volunteers. They are unpaid or possibly underpaid (compared to standard salaries in the private sector of the same level or skills). Many NPOs also gain resources in terms of in-kind donations in the form of aid, equipment, and so forth from contributors.

In the context of NPOs, legitimacy is also affected by political and social recognition from external parties and the public in general. Many kinds of support from various parties can leverage the level of legitimacy of a NPO and thus enable it to continuously operate to achieve its goals and justify their contributions. Simply put, support and recognition from an array of parties may pave the way of a NPO to ultimate organizational success.

The third element is operational capacity. This refers to the capacity to deliver program outcomes. Political, legal, material, and financial resources are utilized to attain expected outcomes. The term 'operational capacity' (rather than organizational capacity) is the organizational ability to deliver results. Operational capacity emphasizes "the capacity needed to deliver results that lies outside the organizational boundaries" (Brown & Moore 2001, p. 577). Corresponding to this, to achieve targeted goals, a NPO must focus on mobilizing and maintaining partnerships and coalitions with other actors rather than retaining an exclusive position to use its own resources.

As for targeted goals, the previously mentioned strategies should be interrelated, mutually supportive, and operate simultaneously. If a NPO only has support and values but does not have sufficient operational capacity, it is unable to manifest its pledges. If a NPO has sufficient operational capacity but lacks support, it will fail to gain legitimacy. Furthermore, if a NPO gains support and has sufficient capacity but has lacks a reference of values, it may survive but will merely expend resources without any meaningful achievements (Brown & Moore, 2001, p. 577).

3. Method

The article uses an intrinsic case study approach (Stake, 1995) to illustrate the success of KOPHI in organizing youth in Indonesia. The intrinsic case study aims to gain particularization, not generalization. In order to attain this aim;

> We take a particular case and come to know it, not primarily as to how it is different from others but what it is, what it does. There is emphasis on uniqueness and that implies knowledge of others that the case is different from, but the first emphasis is on understanding the case itself" (Stake, 1995, p. 8).

This work is usually done through: interpretation that is continuous; not only classifying and patterning data but also reflecting upon it; devoting time to the location; associating with the activities of a case; reflecting and revising the meaning of what has occurred. In order to comprehend a case, "Ultimately, the interpretations of the researcher are likely to be emphasized more than the interpretations of those people studied" (Stake, 1995, p. 12).

The conceptual framework above was applied as a tool of interpretation for data collected from fieldwork that investigated KOPHI Jakarta as the central chapter, and its branches in Yogyakarta and West Java. These two branches were selected, considering the intensity of activism and their progressive organizational programs. Additionally, there are many state and private universities in these provinces that have turned out to be fertile ground for nurturing and developing environmental activism.

Data was collected mainly through interviews with the founder, chairperson and former chairperson of central KOPHI in Jakarta, and also staff and members of the KOPHI chapters in Yogyakarta and Bandung. All informants were chosen through a snowballing method prior to being interviewed. Direct observation was also undertaken to look at various activities in KOPHI. Interviews and observations were conducted in May-June 2013. In addition, secondary data was collected from archives and all online media used by KOPHI, such as organizational websites, blogs, Facebook groups, Twitter, and tumbler up until the end of 2013. All of the collected data was interpreted using the conceptual framework above to gain particularity on the success story of KOPHI in organising youth.

4. Results and Discussion

4.1 Value Creation

Indonesia is home to abundant natural resources. However, due to improper management of these resources, there have been devastating impacts to the environment and an ecological crisis has emerged that is very serious (see Indonesia National Agency for Disaster Management, at www.bnpb.go.id). Reoccurring disasters such as

floods and landslides have become intense due to excessive exploitation of nature, which causes massive damage in Indonesia annually. In this respect, KOPHI was established to explicitly 'unify youth in being responsible and responsive to creating sustainability in Indonesia'.

The main values pursued by this organization and the platform of each activity are environmental conservation values, as exhibited on KOPHI's slogan "Sustainable Indonesia" (*Indonesia yang Lestari*). Conservation values are also mirrored in their routine greeting of "Greetings, sustainability fellows" (*Salam Lestari*).

The envisioned conservation values are manifested in KOPHI's organizational by-laws and statues that were set out in the organization's annually held national congress. Further, conservation values are encapsulated in the 2025 Strategic Planning document, which was established at the KOPHI national congress in 2013. An endeavour to integrate conservation values into workable programs was also discussed at the national congress forum involving KOPHI representatives from local and central chapters.

In order for conservation values to enter the public realm, KOPHI has become an agent of environmental education for children, youth, and the community. KOPHI introduces and practices knowledge and skills on environmental management through creative programs with children and youth. In regard to children, the learning principles demand creative processes by utilising games. Outdoor learning activities like studying in the garden is one of the educational tools chosen as an effective learning method to inculcate environmental values and to convey messages on the skills and knowledge of environmental management for conserving nature.

Most of KOPHI's local branches have developed environmental education for primary through to secondary school students. KOPHI Yogyakarta names this activity, 'Alternative Green Edutainment'. This program was developed for primary school students in grade four. In 2013, this program was implemented in *Percobaan Dua* Primary School and *Deresan* Primary School, both in Yogyakarta. The activity started with watching and discussing environmental animated movies, such as 'the Lorax'. This movie instils students with the values and practices encompassed in environmental consciousness, such as throwing rubbish into the bin and conserving water and electricity, and so on. Additionally, the children are taught how to separate waste and recycle (3R for 'reduce-reuse-recycle') through tutorials for all students to create artworks from used-goods, such as bottles and ribbons. The artworks are mainly for home decoration items such as flower buckets, piggy banks, and lanterns.

As for the secondary school students, the activities are labelled 'Green Agent' which aims to produce green agents who care about people and the environment in their surroundings so that they can become exemplary examples for friends at school. This activity was conducted at State Secondary School 1 in Yogyakarta, where 110 students participated. The main environmental education content was delivered through games and practical hands on activities on environmental sustainability. Another student conservation activity consisted of creating numerous bio pore holes in local residential areas as a measure to assist with absorption of rain water.

KOPHI is like a 'home' to members where they gather, learn together, and develop to foster pro-environmental behaviour. From the outset, KOPHI was designed as a membership based organization that enables intensive interaction and learning processes amongst its members. After new members join KOPHI, they participate in a 'family gathering', where all members and staff collectively reflect on what members as individuals can do for the organization. This event strengthens the emotional bond between members. A spirit of togetherness is fostered among volunteers, members, and board members, and later through various informal activities i.e. gatherings and having meals together. KOPHI members also enrich their knowledge and skills through organizational activities i.e. writing final reports on events, writing press releases, designing pamphlets and newsletters, and conveying online messages through blogs, websites, and social media. Members gain knowledge through discussions and regular meetings pertaining to environmental issues. Knowledge shaping processes occur through member's involvement in national and local events held by other NGOs.

The congenial interaction among KOPHI personnel is conducive for building environmentally friendly and pro-environmental attitudes. This was evident in the observations, where KOPHI personnel reminded each other on reducing tissue consumption, reused paper and were careful to conserve energy. In the course of everyday life, KOPHI personnel are expected to behave in an environmentally respectful manner, i.e. reducing motorbike use for commuting, saving electricity, and avoiding the use of plastic bags. Activities within the organization enable them to form pro-environmental attitudes.

Furthermore, in order to promote conservation values, KOPHI actively utilizes online media. Accessibility to online media, especially social media like Facebook, Twitter, and the like has allowed KOPHI to launch campaigns to the general public. Particular moments that are associated to environmental conservation, such as Earth Day Celebrations and Environmental Day, Earth Hour events, and Global Water Day are used to spread environmental messages that are uploaded onto websites, blogs, citizen journalism media, Facebook, and Twitter.

The choice of campaigning through online and social media is fitting for youth as they are the largest users of online social media.

KOPHI's activities are conservation oriented (Castells, 2010; Rootes, 2004). KOPHI has developed an identity as nature lovers and it strives to resist uncontrolled development. In this regard, KOPHI includes mainstream environmentalism similar to the orientation of large ENGOs in developed countries, in particular the Group of Ten, USA (Castells, 2010, p. 172). Due to this orientation, the values offered by KOPHI tend to be easily accepted by many different parties, in particular the government that has long been working in cooperation with conservation oriented ENGOs.

In creating conservation values, KOPHI actively uses online media to launch its activities. In reference to Castells (2010, p. 186), the success of the environmental movement is closely related to the capacity of its actors in leveraging the media. KOPHI's activities are uploaded to their website, Twitter and Facebook and also gain online media coverage. In this way, KOPHI is able to reach a much broader audience beyond their direct constituency.

4.2 Supports and Legitimacy

A more democratic political atmosphere in the post-New Order since the late 1990s has provided the assurance of civil and political rights, particularly in being actively involved in organizations and voicing aspirations. Consequently, civil society organizations (CSOs) had a massive resurgence and their activities have ranged from leisure-cultural based through to political related concerns. CSOs including KOPHI appear to have freedom, without feeling threatened by political repressive state apparatus.

Government bodies working on environmental-associated issues are usually supportive of the actions and programs implemented by KOPHI. The Regional Environmental Board and State Agricultural Division, and Fishery Division have funded KOPHI activities. In general, government bodies now position non-governmental organizations as partners rather than as 'opposition' (in contrast to the New Order). Their pro-environmental actions are seen to be more complementary than supplementary to the government's programs.

The choice of conservation oriented issues, like that of KOPHI, does not appear to drive CSOs to get involved in the political sphere. This is different to advocacy-based CSOs, such as WALHI, which often engage in advocacy actions and policy making processes as well as environmental protests. Such actions have led WALHI to directly confront the government and private corporations. Furthermore, this means that the environmental movement's chosen conservation orientation in the context of democratic Indonesia, does not place KOPHI into oppositional conflict in the political sphere or even in a legal context with government bodies and corporations.

In regard to funding issues, central and local chapters of KOPHI use the membership fees and sponsors' donations for daily management costs. The central office of KOPHI charges a membership fee of IDR 30.000/3 months to all members. Instead of raising the membership fee to fund programs and actions, the organization fundraises through 'garage sales' by engaging more people to donate used goods. These profits are used to run pro-environmental actions.

In terms of managing funds, KOPHI has a 'national savings' and both national and local chapters must contribute to it. All funds in the 'national savings', which are coordinated by the general treasurer in KOPHI's central office, can be used for actions and holding the national congress.

This fund-raising model and the mechanism for distributing funding means KOPHI is not so concerned with issues of dependency like other ENGOs that are reliant on foreign aid (Edwards, 1995; Hulme & Edwards, 1997). KOPHI is relatively autonomous in formulating its own agenda for actions and the likelihood of foreign donors dictating KOPHI's agenda is very low. The sponsors may be invited to KOPHI events but KOPHI is fully autonomous in determining its own way forward and the model of actions.

The financial model for programs that KOPHI manages, to some extent, has supported the work and continuity of programs but funding is not the only necessary aspect of financing actions. Rather than using membership fees to finance actions, KOPHI depends on its co-existence, in terms of the time and efforts of members, volunteers, and staff. All personnel are unpaid, and actually have to 'pay' a certain amount of money to the organization themselves. This has been possible because members of KOPHI are generally from the middle class that to some extent have adopted post-materialist values (Paloniemi & Valnio, 2011).

KOPHI develops legitimacy through two ways. Firstly, KOPHI works as an organization with a primary platform of voluntarism. Since its establishment, KOPHI set out to accommodate the spirit of voluntarism of youth. This spirit has shaped the basis of organizing programs and actions. In the recruitment process, all member candidates are informed that KOPHI is an environmental organization with a voluntary basis. It is

mandatory that all members and volunteers contribute by various means, i.e. money, time, and effort. All members are encouraged to work in a team and to assist one and other. Daily interaction in this organization is characterised with an informal and congenial atmosphere. This has allowed voluntarism to become a form of social capital in running the organization and action programs.

Secondly, significant decisions in the organization are made through a participatory consensual mechanism. A number of mechanisms in decision-making are determined and implemented at the local and central levels to enable the participation of members and provide more representativeness. At the national level, the national congress is held annually as a forum to approve KOPHI rules and regulations. The national congress also sets out by-laws, statues, and long-term planning in the form of strategic planning. In addition, the congress event discusses standard operating procedures, technical guidelines, and working plans.

The central KOPHI chairperson is voted and inaugurated at the national congress every two years. The chairperson and staff within the organizational structure who have completed their 2 year contract may be re-elected for the next period. As for the chairpersons located in the local chapters, elections are held in each chapter, and these chairpersons are inaugurated at the national congress.

A reward and penalty mechanism is also reinforced at this forum. Each KOPHI local chapter must present accountability reports. Those chapters that perform with excellence will receive an award. At the national congress in 2012, the KOPHI Yogyakarta chapter received an award for the best accountability report. Local chapters of KOPHI that do not submit an accountability report and send delegates to the national congress will be sanctioned. Prior to a sanction being implemented, it will first be discussed at the national congress and is usually in the form of a reprimand or termination of all organizational activities. The KOPHI West Java chapter is currently sanctioned, because it was inactive. It was decided at the national congress to temporarily terminate their activities, and allow them to reformulate the organizational structure.

Mechanisms for participatory consensual processes are also implemented by the local chapters of KOPHI in each city. Regular meetings are held for decision-making processes, exchanging ideas and action programs. The local chapters of KOPHI conduct an annual deliberative forum (*musyawarah besar*). In addition to discussing diverse organization-related matters and action programs, the chairperson elections are also held. After a chairperson is elected then the organizational divisions are structured for running pro-environmental actions.

4.3 Operational Capacity

The operational capacity of KOPHI is closely linked to its institutional design, organizational structures, and its ability to foster partnerships with stakeholders. As a coalition, the relationship between central and local chapters is not a hierarchical based relationship. As explained in the previous section, the national congress is the highest level forum in which decision making processes take place. The orientation of values and programs are collaboratively planned and set out in this forum. Given such a decision making model, the central and local chapters are given relative autonomy to arrange and run their action programs in accordance to environmental programs in their regions. In practice, coordination between central and local chapter occurs between the divisional levels of the organization. For instance, the head of the research and development division of central and local chapters of KOPHI work together in undertaking a collaborative research project to find solutions in response to certain environmental issues.

KOPHI has established organizational structures as a reference for the central and local chapters and this was determined at the first national congress in 2011. The core organizational structures of central and local chapters are alike, consisting of a chairperson as the main coordinator and individual who is responsible to the organization. The chairperson is assisted by a deputy chairperson, secretary, and treasurer. Three main divisions run the programs, namely the Human Resource Development Division, the Media and Communications Division, and the Research and Development Division.

The difference in organizational structure between central and local chapters is that chairpersons of local chapters are an integral part of KOPHI's central chapter. His/her position lies under the general chairperson and is equal to the secretary and treasurer. This enables 'room' for the 17 local chapters spread across 17 provinces to be involved and communicate directly, which facilitates coordination processes and partnerships between central and local chapters in KOPHI.

KOPHI fosters partnerships with stakeholders in running its programs and arranging actions. Without sufficient resourceful support of stakeholders, programs and actions would be ineffective. In this regard, the capacity of KOPHI in accessing and leveraging the resources of stakeholders determines the success of the environmental actions. KOPHI has initiated collaborative efforts and utilises the resources of six main stakeholders.

The first is connectivity to the targeted groups in environmental education, such as children, adolescents, communities, and the general public. Even though the primary target participants for environmental education are children, KOPHI also includes adolescents. In this context as 'educators', KOPHI staff position themselves as the 'big brothers/sisters' to the children, while the youth participants are the 'little brothers/sisters'. With a relationship such as this, KOPHI is able to strengthen emotional bonding and interaction amongst the participants, which facilitates the learning process. Creative games as an approach to learning, facilitates the delivery of messages and the learning content, which in turn can be internalized and practiced.

Unlike building a relationship and a close bond with children, KOPHI plays the role of a 'community' that has a stock of knowledge for youth. In this context, KOPHI socializes environmental management knowledge and practices like making bio-pore absorption holes and biogas as an entry point to foster a pro-environmental consciousness amongst community members. When this consciousness can be transferred, then it will be followed with collective actions on conserving the natural resources managed by the community.

While children and community members are directly approached through face-to-face interaction, the general public, in particular youth are approached using online media. Most youth can easily access online social media. Thus, the delivery of messages on environmental education using online media is more effective. The Media and Communication Division was established to strengthen the relationship with these groups. This division consists of creative members with advanced skills in selecting suitable media for use. They then develop plans, and convey messages on environmental education to the public. Although it is difficult to measure the effectiveness of online media, it is easy to gauge the number of people accessing and following the KOPHI online media.

The second is the relationship with schools in delivering environmental education covering primary schools, junior high schools, and senior high schools. Environmental education cannot be delivered successfully to youth and children without active participation of the schools. In view of this, KOPHI fosters more collaboration with chosen educative institutions as an arena for conducting environmental education. KOPHI Jakarta for instance has strong partnerships with some secondary schools for transferring skills on bio-pore absorption holes. The West Java and Yogyakarta chapter have collaborated with a number of primary schools, delivering programs through games, adventures, and creating recycled artworks from used goods.

In addition, schools that are involved in the actions are very welcome to the environmental education provided to their students. The experience of KOPHI Yogyakarta in working with Junior High School 8 Yogyakarta, for instance, demonstrated that the timing of the activity is an important consideration as they had to find free time slots within the school-hours. Moreover, all teachers were active in the environmental education as in the experience of KOPHI Jakarta in collaborating with *Regina Pacis* Senior High School.

The third is the relationship with local NGOs. Most actions and programs involve local NGOs in the same area or province of a KOPHI local chapter. For instance, KOPHI developed the "*Piknik Koin Lestari*" (Conservation Coin Picnic) program in Yogyakarta in partnership with "Coin a Chance" (CAC), a youth NGO that works in education and advocacy for children living in poverty. CAC is an action for collecting unused coins, where the collected coins are used to help needy childrenand those vulnerable to dropping out of school. KOPHI developed the program *Piknik Koin Lestari* for the CAC target group by providing environmental educational tours. Through this partnership, KOPHI has been able to utilize resources of local NGOs in promoting environmental education for children.

The cooperation with local NGOs is sustained through KOPHI's involvement in collaborative actions. KOPHI Yogyakarta, for instance, is engaged in pro-environmental campaigns and on-street demonstrations that are initiated by other NGOs such as Earth Hour Yogyakarta, IAAS Local Chapter UGM (University of Gadjah Mada), AIESEC, GYC and other youth organizations. Mutual and common understanding amongst NGOs is significant in boosting their actions due to their intensive and frequent meetings, which is also supported by the camaraderie among activists.

The fourth is in regard to relations with government bodies. Pro-environmental actions and programs in local settings have driven KOPHI to initiate cooperation with government bodies (i.e. the Regional Board of Environment, the Ministry of Agriculture, the Ministry of Fisheries, and other government bodies affiliated with environmental issues). Government bodies usually provide in-kind donations, i.e. plant seeds, fish seeds, and materials or equipment used for making bio-pore absorption holes and the like. KOPHI does not appear to be presumptuous in accessing funding schemes from the government.

The government provides support and assistance to KOPHI because its actions and programs actually compliment government operated programs. The Regional Board of Environmental Management in Bandung in West Java, for instance, offered KOPHI West Java the use of one of its rooms as a secretariat but the offer was

declined as the location did not support the mobility of KOPHI's staff.

The fifth is relations with university institutions. As mentioned previously, the majority of KOPHI members are students studying at university with diverse academic backgrounds. They are actually campus 'citizens', given that KOPHI often uses the available resources at university campuses where organizational activities often take place. In the annual recruitment process, interview sessions are also held at a university campus. KOPHI Jakarta frequently uses a room available at the University of Indonesia, while KOPHI Yogyakarta often makes use of room facilities available at UGM and the State University of Yogyakarta. These venues are usually used for socializing programs and conducting events, instead of using social media. KOPHI West Java for instance, was offered an opportunity by ITB (Bandung Institute of Technology) to open a booth at an exhibition in the university, even though none of KOPHI's staff study at that campus. This fact shows that universities are also platforms for KOPHI to organize their pro-environmental actions and programs. Their student status allows them to access university managed facilities.

The sixth is the relations with corporations or private companies. KOPHI forges partnerships with corporations when they require sponsors to support programs that will be run. However, some corporations also offer funding schemes to KOPHI. These sponsorships are used to fill the funding gaps, which membership fees cannot cover. However, KOPHI will only collaborate with companies that have a deep concern for the environment and conservation. However, there are not many of these corporations. KOPHI adamantly refuses cooperation with corporations whose operations are damaging the environment or violating the law. Before running a program, KOPHI approaches companies whose products are aligned with its conservation goals. One of KOPHI's national congresses, for instance, was sponsored by a food and beverage company and a company producing household equipment. At that time, KOPHI received sponsorship in the form of in-kind donations and money, while the companies benefitted from using the event for marketing purposes and building a pro-environmental conservation brand.

5. Conclusion

Youth oriented ENGOs are growing rapidly in post New Order Indonesia. Among these ENGOs, KOPHI has presented outcomes that are particularistic. KOPHI's network is developing in major cities in Indonesia and its membership continues to grow through a systematic and routine recruitment process. Its conservation activities are able to involve children, adolescence and communities in a number of cities. All programs and organization activities are self-financed and do not depend on foreign funding agencies. KOPHI has rapidly grown nationwide as a youth-oriented ENGO in a relatively short time.

The achievements and milestones of KOPHI are nevertheless inseparable from the three dimensions of the strategic triangle; value creation, support and legitimacy, and operational capacity. KOPHI has well-defined environmental conservation core values. The importance of conservation values is deeply embedded in KOPHI regulations (by-laws and statues), and in the interaction among members. Through daily interaction and informal regular meetings within the organization, all members are able to learn together, exchange experiences and endeavour to develop environmentally friendly attitudes and actions. Conservation values are also embodied in the environmental education for children, youth, communities, and the general public. The choice of values and conservation actions have driven the environmental movement of KOPHI, which is more 'moderate' compared to the radical advocacy oriented ENGOs.

This ENGO has legitimacy with its spirit of voluntarism, non-profit status and participatory decision-making processes. All members are selected and mobilized according to their individual interests in environmental issues and their willingness to work in a voluntary manner. The contributions in terms of the time and effort of members, who are students busy with studies, have enabled KOPHI to initiate many successful environmental actions. The organization is also supported by solid teamwork as a result of participatory consensual decision making process in the organization.

Environmental actions that are regularly initiated by this organization have strengthened the organizational identity as an ENGO driven by university-affiliated students. KOPHI has attained recognition as a sound environmental organization as seen in its competence in establishing relations and networking with various working partners. These relations are very important to KOPHI, as they enable KOPHI to implement programs and actions with the resources provided by other partners. Due to this recognition, KOPHI's partners have willingly assisted them and shared resources.

KOPHI is capable of developing the three strategic dimensions as presented in the approach above by performing its role in environmental conservation. The dynamic of the three strategic dimensions is mutually supportive and interrelated. This is clearly evident in KOPHI as an environmental organization that has rapidly

grown and matured in mobilizing continuous environmental actions. This in turn, has fostered recognition from the public, and ultimately has contributed to conservation efforts in Indonesia.

KOPHI's success confirms that youth-oriented ENGOs have the capacity to initiate and organize continuous environmental conservation movements. Using the conceptual framework of the strategic triangle, a similar analysis can be applied to a number of other youth-oriented ENGOs that have grown rapidly since Indonesia entered the era of democracy. Their success or failure in organizing environmental actions may be an indication of the sustainability of environmental movements among youth and also shows their contributions to the protection and preservation of the environment and natural resources both at the local and global level.

Acknowledgments

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Note

Note 1. However, after mid 2000 the author could not find any further JPL activities and its old website could no longer be found. He also could not find any account or address associated to JPL through searching online media such as Facebook and Twitter, which are commonly used by ENGOs.

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On the Source of Ci-Priority Ideology of Wang Guowei's Ci-Study and Ci-Creating

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Abstract

Wang Guowei was an important Ci researcher in the Ci-study field from the late Qing Dynasty to the early Minguo era who had developed the distinctive Ci-priority ideology. The Ci-priority ideology derived from 1) Wang Guowei's Ci-liking which had come from his individual character based on his melancholy and suffering experiences, 2) Wang Guowei's pure literature ideology which had surpassed fames and wealth, 3) Wang Guowei's sticking to and rejuvenating the traditional culture because of his thought and feelings that adherents of a former dynasty should behave with honor and dignity. Wang Guowei's Ci-priority ideology had introduce the West aesthetic theory of literature and art, and constructed the multi-angles and all-round system of Ci-study theory based on the core of prospect theory.

Keywords: Wang Guowei, Ci-priority ideology, pure literature ideology, thoughts and feelings of adherents of a former dynasty

1. Introduction

Ci is a kind of poetry written to certain tunes with strict tonal patterns and rhymes schemes, in fixed numbers of lines and words, originating in the Tang Dynasty and fully developed in the Dong Dynasty.

Up to the Qing Dynasty, the academic have continued to talk about the priority of various literature styles, but to time from the late Qing Dynasty to the times of Minguo, the ideology of superior poem and inferior Ci had not been thoroughly changed, so ci-priority could not enter the field of vision of literature history[1]. When one country is in reform and suffering, the poems and prose which can carry on the doctrine become the mainstream culture and are respected greatly, and ci becomes the end of literature and is neglected by the world. Wang Guowei develops ci-priority ideology under the circumstance of this ci-study development history and society changing and reforming. The academic have not interpreted where Wang Guowei's ci-priority come from. This is an important question which can not only find out Wang Guowei's academic thoughts and study-ci experience from micro-angle, but also can point out the changing and development of the ci-study, so it has very important significance to studying the ci field from the late Qing Dynasty to the early Minguo era.

2. Wang Guowei's Individual Character of Melancholy and Suffering

Wang Guowei's academic interests have changed with his physical condition and individual character. He has suffered from his experience. 'zhiyu yilai, shi you yunian, tis u leiruo, buneng ruijin yu xue, jin wu shiyou zhi zhu, tui you shengshi zhi lei, xing fu youyu, rensheng zhi wenti, ri wangfu yu wu qian, zi shi shi jue congshi yu zhexue' ("志学以来，十有余年，体素羸弱，不能锐进于学．进无师友之助，退有生事之累"，"性复忧郁，人生之问题，日往复于吾前．自是始决从事于哲学") 'He was sick for more than ten years from his beginning his study, so he could not improve his study greatly. He wanted to push forward his academic research, but he could not obtain the help from his teachers and friends. He had intent to give up the academic research, but he could not make living. So he has gradually become melancholy and depressed. He once said that making-living becomes a heavy burden which he must face every day, so he determined to undertake the philosophy study.' So, we find out that Wang Guowei took part in philosophy study because he wanted to get rid of the suffering and freed himself from worldly worries.

When Wang Guowei was absorbed in his philosophy study, he soon landed in terrible trouble which he considered that the philosophy theory is mostly lovely but not be trustful, and the trustful philosophy theory is

not lovely. So he wanted to free himself from a predicament, but not be successful, and he has transferred his study interest from philosophy to literature.

At last, he focused on ci study after long-time lingering and thinking, and making successful in making poem and ci[3]. So Wang Guowei's success in making and studying ci should source to thin and weak physical, depressed character and resonating with ci's distinction which is good at expressing feelings. So Ye Jiaying (1988, p. 32) commented on Wang Guowei's and said that 'gai jingan xiansheng zhi weiren, fanxing guoduo, changyu yilian er duanyu fayang, ci suoyi ta sui yiyou wenxue zhi tiancai, er qi suochang zhe nai dan wei yi jingjian guya qusheng de shici'（盖静安先生之为人，反省过多，长于抑敛而短于发扬，此所以他虽亦有文学之天才，而其所长者乃但为以精简古雅取胜的诗词）'Mr. Jingan conducted himself in society based on his introspecting himself so much, so he was good at holding in and not good at throwing up, so this is the reason that he was good at making concise, ancient and elegant ci which was praised highly although he was a literature genius.'

Wang Guowei stressed the comfort function of aesthetics. He was influenced by Kant and Arthur Schopenhauer's aesthetics thought[4], and he believed that art education has the function of 'wei kongxu zhi kutong, er fang beilie zhi shihao'慰空虚之苦痛，而妨卑劣之嗜好 [5], (to comfort the suffering-burden mind coming from the spiritual ballast, and free from the dishonorable and humble hobbies').

And Wang Guowei developed the art ideology that 'meiyu yu deyu buke li' (美育与德育之不可离 [6]) 'the art education and moral education cannot be divided.' So Wang Guowei was the first Chinese scholar who introduced the viewpoints that the art and literature are 'meishu zhe, shangliu shehui zhi zongjiao' (美术者，上流社会之宗教 [7]) 'the religion of the high society'. He considered that '' (美术之慰藉，现实的也. 而美术之慰藉中，尤以文学为尤大，……故此后中学校以上，宜大用力于古典一科 [8]) 'the function of art and literature is realistic, and literature is on the first place among the comfort function of the art and literature, so he advocated that people should endeavor to undertake the ancient and classic education from the middle school'.

Furthermore, Wang Guowei still believed that 'yiqie zhi mei, jie xingshi zhi mei' (一切之美，皆形式之美 [9]) 'all beauty came from the form beauty'. And the beauty of pictures and poems were all forms, so the tradition Ci-study which is famous for its form beauty is held in esteem because it is considered as inner feeling's reflecting from Wang Guowei himself. And Wang Guowei praised Li Yu (李煜)that his ci had the same meaning and significance as Skaya Mani and Christ shoulder the human being's sins, and had the function of refining people's mind like religion. So we can say that Ci was praised highly because it could resonate with Wang Guowei's individual character.

3. The Pure Literature Ideology of Transcending Fame and Wealth

Wang Guowei was a famous scholar in early 20 century who had modern academics thought when he explored the nature of literature and law of creating and commenting on the literature during the upsurge of the west culture coming into the east culture. He focused on the art value on its own, considered that 'du mei zhi weiwu, shi ren wang yi ji zhi lihai err u gaoshang chunjie zhi yu, ci zui chuncui zhi kele ye' (独美之为物，使人忘一己之利害而入高尚纯洁之域，此最纯粹之快乐 [10]) 'beauty could stand alone, it was a pure merry when it made people forget the fame and wealth and enter a high honorable and innocent scope'.

He established the pure literature ideology, and blamed that people used the art and literature as the political tools. And he believed that 'bi deng yan zhengzhi, ze yan zhengzhi eryier, er bi yu xie zhexue, wenxue zhi shensheng, ze ci da bukejie zheye' (彼等言政治，则言政治而已耳，而必欲渎哲学、文学之神圣，则此大不可解者也 [11]) 'it was not difficult to understand that people used politics to profane the sacred philosophy and literature'. He objected to imitating, and considered that 'mofang zhi wenxue, shi wenxiu de wenxue yu buzhui de wenxue zhi jihao ye' (模仿之文学，是文绣的文学与餔餟的文学之记号也 [12]) 'the imitating literature was the literature signs of embroidering based on the fixed picture and eating the food from other's mouth'.

Wang Guowei did not like to write in ornate style when commenting Ci, and he believed if '' (人能于诗词中不为美刺投赠之篇，不使隶事用典之句，则于此道已过半矣 [13]) 'when one wrote Ci not to use ornate words and allusions, he mastered the main quintessence of creating and commenting Ci'. He disobeyed the literature ideology that literature should convey the moral viewpoints, and pursued the literature's aesthetic value which was seemingly useless. He often attacked the existing maladies when writing Ci over-using ornate words and the same meaning sentences. He criticized the evil of the Yangzhou Ci-style which advocated that the meaning and thought of Ci should be written in outer form of elaborate language. So he determined to clear the evil existing in the Ci-field, and reestablish the new style of Ci. He regarded the prospect and feeling as the two original natures of the literature, and then transfer them into meaning and prospect that could express oneself inner feelings and moves somebody from the outer angle.

Wang Guowei's concepts of art and literature then converted into artistic ambience theory in his Renjian Cihua (人间词话), and loved, appreciated and advocated the natural, real and having- artistic-ambience Ci, so Wang Guowei brought the Ci-field with refresh wind. At last, we can see that Wang Guowei's Ci-priority ideology came from his pure literature concepts.

4. Sticking to and Rejuvenating the Tradition Culture

Wang Guowei came to Minguo as a adherents of a former Qing Dynasty, feeling sympathetic to the late Qing Dynasty. He called himself Donghai Yugong(东海愚公)after Xinhai Revolution(辛亥革命). He expressed his loyalty to the late Qing Dynasty by the means that he still sticks to the tradition culture. Traumas-devastation caused by Jiawu war had strengthened the uselessness concepts of the traditional culture. Yan Fu appealed 'bu du pohuai rencai zhi bagu yi chu, ju fan songxue hanxue, cizhang xiaodao, jie yi qie shu zhi gaoge ye' (不独破坏人才之八股宜除，举凡宋学汉学，词章小道，皆宜且束之高阁也 [14]) 'to root out the Bagu which had destroyed the system of selecting talented people, and he called on placing the Song Cultuer, Han Culture and not-carrying-the-moral ci on the top shelf'.

The Qing Dynasty cancelled the Keju Kaoshi(科举考试—imperial examination system) by formal decree in 1905, and advocated the new style education and new political system. But the people of insight worried about the studies of classical Chinese culture disappearing from the time, they established series of newspaper printed for the tradition culture in order to 'kanfa baozhang, yongcun guoxue'(刊发报章，用存国学) 'establishing newspaper to protect the tradition culture'.

Wang Guowei and Luo Zhenyu established Guoxue Congkan based on this kind of ideology. And Wang Guowei still said that 'guojia yu xueshu wei cunwang, tian er wei yan zhongguo ye, bi bu wang qi xueshu'(国家与学术为存亡，天而未厌中国也，必不亡其学术) 'country and academics could coexist, and the gods did not give up China, so they cannot destroy its academics.' So Wang Guowei believed that the academics had something with the country's existing, the men of insight should have courage to take on heavy responsibility to rejuvenate China traditional culture.

In fact, Wang Guowei majored in the west science in his early time, obviously, this was a thinking revolution because he considered that the most-valued literature of the east ancient country cannot be equal to the western literature, and we should wait for the future literati. Although Wang Guowei regarded advocating the traditional culture as his duty, he also bemoaned Ci's declining. He believed that 'zi nansong yihou, si dao zhi bu zhen jiu yi, yuan, ming ji guo chu zhulao, fei wu jingju ye, ran bumianhu jucu zhe, qi kun yu diaozhuo ye, jia dao yihou zhi ci, fei bu xie mei ye, ran wu jiu yu qianbo zhe, yi jie yu moni ye' (自南宋以后，斯道之不振久矣！元、明及国初诸老，非无警句也. 然不免乎局促者，气困于雕琢也. 嘉道以后之词，非不谐美也；然无救于浅薄者，意竭于模拟也 [15]) 'Ci was not on the high ebb from Nan-Song Dynasty. Ci had some wonderful sentences from the Yuan and Ming Dynasty to the early time of Minguo, but it was distressed and embarrassed, and confined in ornate style. Ci was not inharmonious after the time of Emperor Jiajing and Daoguang in the Qing Dynasty, but it was considerably meagre and clumsily modelled on the former works'. And he had introduced Ci-style into the literature category which should be respected by the following persons.

Guo Yuanlin (2013, p. 19) said that Wang Guowei, 'jicheng qianjiaxuepai yanjin zhi feng bing jiejian xixue jingyao er kaichuang xinlu' (继承乾嘉学派严谨之风并借镜西学精要而开创新路 [16]) 'an academic giant, carried on the meticulous scholarship from Qian-Jia academic school, drawing lessen from the quintessence of the west science, and exploiting the new road to the academic peek'. Wang Guowei emphasized the discipline system very much. He believed that 'fan xuewen zhi shi, qi ke cheng kexue yishang zhe, bi bu ke wu xitong, xitongzhe he, li yixi er fenlei eryi'(凡学问之事，其可称科学以上者，必不可无系统. 系统者何？立一系以分类而已 [17]) 'anything about learning which can be called science must has a system, and what is the system? To establish series and can be divided into different categories.'

Wang Guowei had divided the beauty into 'elegant' and 'grand' because 'zi Bake ji Hande zhi shu chu, xuezhe dai shi ci wei jingmi zhi fenlei yi' (自巴克及汗德之书出，学者殆视此为精密之分类矣 [18]) 'the academic regarded this as the elaborate categories after publishing Buck and Hande's books.' Wang Guowei used the view that 'one divides into two' into his artistic ambience theory, and strengthened the system of Ci theory. Directed by the west systematic thought, Wang Guowei integrated making Ci, studying ci and rectifying the ancient documents onto himself, creating the systematic Ci-priority ideology.

5. Conclusion

The development of Wang Guowei's Ci-priority ideology had something with politics-culture environment from the late Qing Dynasty to the early time of Minguo, Wang Guowei's aesthetic concepts of the literature and art

and Wang Guowei's individual character. Through exploring the source of Wang Guowei's Ci-priority concepts, we can find out that his Ci-priority concepts rooted in the traditional literature, based on the west aesthetics theory, and constructed the multi-angles and all-round theory system of Ci-study under the core of prospect ambience concepts.

Wang Guowei entered the traditional Ci field brought with new ideology, new thoughts and new methods, found the new road to new field for the Ci-priority's development. He liked a skylark in Ci field from the late Qing Dynasty to the early time of Minguo, who sang using his real and natural voice. He sang the first overture of the modern Ci-study loudly. When the falling flowers are flying in profusion in the sky, the whole trees turn into beautiful flowers. Wang Guowei advocated the evolution and reforming of Ci-study ideology during the Minguo times and modern times, Yang Haiming (1996, p. 110) said that Wang Guowei was worthy of the first person who had the cross-times significance during the new reforming of Ci-study and Ci-study criticism in the 20th century.

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Notes

Note 1. When Lin Chuanjia commented the literature of the Song Dynasty, he only talked about poems, not talking about Ci in his work Zhongguo Wenxueshi in 1910. And during the same periods, Huang Ren also ignored the existing of Ci.

Note 2. Wang Guowei. Author's Preface 1 of the 30th Chapter/ Yao Jinming. 2007. *The Literature Collection of Wang Guowei*. the last volume. p. 282. The Publishing House of Zhongguo Wenshi.

Note 3. Wang Guowei. Author's Preface 1 of the 30th Chapter/ Yao Jinming. 2007. *The Literature Collection of Wang Guowei*. the last volume. p. 284. The Publishing House of Zhongguo Wenshi.

Note 4. Wang Guowei. The Theory of Aesthetic Education Produced by Confucians/ Yao Jinming. 2007. *The Literature Collection of Wang Guowei*. the last volume. p. 93. The Publishing House of Zhongguo Wenshi.

Note 5. Wang Guowei. *On Getting Rid of Virus*/ Yao Jinming. 2007. *The Literature Collection of Wang Guowei*. the last volume. p. 14. The Publishing House of Zhongguo Wenshi

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Note 9. Wang Guowei. *On the Importance of Elegance to the Aesthetics*/ Yao Jinming. 2007. *The Literature Collection of Wang Guowei*. the last volume. p. 18. The Publishing House of Zhongguo Wenshi

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Note 14. Yan Fu. On the Saving the Nation from Extinction/Wang Shi. 1986. *The Collection of Yan Fu*. the first volume. The Publishing House of Zhonghua Shuju. p. 45.

Note 15. Wang Guowei. The Preface of Renjian Cihua/ Zhou Xishan. 2013. *The remarking, rechecking and collecting of Renjian Cihua*. The Publishing House of Shanghai Sanlian Shudian. p. 380.

Note 16.Guo Yuanlin. Do You Know the One-thousand-Year History of Grand When You Watching Daqin at the West Coast of Heihai—Wang Guowei Borrowing the Researching Method from the West Studies. *The Knowledge of Classical Literature*. Volume 4. p. 19.

Note 17. Wang Guowei. The Prelude to the General History of Europe/Xie Weiyang. 2010. *The Literature Collection of Wang Guowei*.volume14. p. 3. The Publishing House of Zhejiang jiaoyu. The Publishing House of Guangdong Jiaoyu.

Note 18. Wang Guowei. *On the Importance of Elegance to the Aesthetics* / Yao Jinming. 2007. *The Literature Collection of Wang Guowei*. the last volume. p. 17. The Publishing House of Zhongguo Wenshi.

The Examination of the Influence of Transformational Leadership over Commitment to Service Quality: A Case of Hospitals of Sindh, Pakistan

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Abstract

Majority of the main stream literature provides the evidence that commitment to service quality (CSQ) is vital in ensuring excellent service quality. Past studies on the commitment to service quality are also limited only to the management level of analysis in service industries so the main focus of this study is to examine the relationship between transformational leadership style and commitment to service quality among the medical staff of Sindh Pakistan. A total number of 317 questionnaires were received through survey questionnaire from medical staff in four cities of Sindh, Pakistan. The data was analyzed using SmartPLS 2.0. The findings of this study indicate a significantly positive relationship between transformational leadership style and commitment to service quality. The managerial implications for the top management of hospitals are discussed. Policy makers, leaders at hospital, they motivating the staff to towards commitment to service quality. Results focused on how transformational leadership style can be used to manage commitment to service quality.

Keywords: commitment to service quality, transformational leadership, Hospitals, Pakistan

1. Introduction

Front line employees are interacting directly with customer and accountable for service delivery to customer and satisfaction which help to increase the performance (Parasuraman, Zeithaml, & Berry, 1985; Hartline, Wooldridge, & Jones, 2003). According to most of practitioners, observers and researchers (Hartline & Ferrell, 1996; Hartline, 2000; Maxham & McKee, 2000; Bowen & Schneider, 1985) accept that front line committed employee with his/her job organization show the low level stress, share customer-oriented values and deliver maximum service quality. Previous research evidence that leadership style has a incredible impact on employees' behavior, containing acceptance of the organization's strategic and marketing initiatives-particularly those relating to customer service (Ahmed & Parasuraman, 1994).

Furthermore, literature provides the evidence that commitment to service quality (CSQ) is vital in ensuring excellent service quality (Babakus, Yavas, Karatepe, & Avci, 2003; Hartline, Maxham, & McKee, 2000; Elmadag, Ellinger, & Franke, 2008; Clark & Hartline, 2009). But Past studies on the commitment to service quality are also limited only to the management level of analysis in service industries (Reeves & Hoy, 1993; Hartline & Ferell, 1996;; Babakus et al., 2003; Hartline et al., 2000; Malhorta & Mukherjee, 2004; Subramony, Beehr, & Johnson, 2004; Ashill, Carruthers, & Krisjanous, 2006; Little & Dean, 2006; Kim, Tavitiyaman, & Kim, 2009). All these studies have reported that when the management is committed to service quality it in turn brings about positive organizational commitment among the employees. Peccei and Rosenthal (1997) and Worsfold (1999) discovered that there is not paid much attention paid to employees' CSQ particularly when the concern is on continuous improvement in the customer expectations.

Different studies on the hospitals in Pakistan (Irfan & Ijaz 2011; Nisa, Sadaf, & Zahid, 2012) reported that the medical staff is not willing to provide service to customer, found low on taking responsibility and are less committed to provide service to the customers. Furthermore, past studies conducted on the hospitals in Pakistan with regards to service quality report lack of commitment of medical staff for providing excellent services (Zaidi, Mayhew, Cleland, & Green, 2012; Akbari, Rankaduwa, & Kiani, 2009; Afzal & Yusuf, 2013; Saeed et al., 2013; Khan, Shaikh, Ahmed, Zafar, Tahir, & Shaikh, 2014; Ullah, 2012; Abdullah & Shaw, 2007; Razzak, Ahmed,

Saleem, & Nasrullah, 2009; Rabbani, Lalji, Abbas, Jafri, Razzak, Nabi, & Tomson, 2011; Rabbani, Jafri, Abbas, Jahan, & Syed, 2009; Khowaja, 2009; Saeed & Ibrahim, 2005; Riaz, Ayaz, Wain, & Sajid, 2012; Malik, Chaudhry, Karamat, Arif, Cheema, & Rauf, 2010; Khan, Ahmad, Aleem, & Hamed, 2011). Despite these studies conducted in the hospital settings in Pakistan, there has been no or lack of attention paid to CSQ which points towards an urgent need of further examination of commitment to service quality in the hospitals in Pakistan.

Achieving a good level of employees' CSQ is of great importance for each service organization (Asgari, 2014). In two separate studies (Irfan & Ijaz, 2011; Natasha & Sbroto, 2003) mentioned that customer contact employees do not initiate and give importance to their customers suggesting leaders to enhance the commitment of frontline employees to deliver service quality. Literature also suggests that leadership mechanism might help to overcome this situation (Waldman, 1993; Jabnoun, 2002; Natasha & Subroto, 2003; Hartline et al., 2000; Clark et al., 2009; Hashim & Mahmood, 2012) further suggesting that as the leaders help in envisioning the goal and they provide the resources and environment which can enhance CSQ. Particularly, Transformational leadership style has the potential to enhance CSQ (Clark et al., 2009). Hence the main objective of this study is to examine the influence of transformational leadership style over CQS in the hospitals in Sindh, Pakistan.

2. Literature

2.1 Transformational Leadership and Commitment to Service Quality (CSQ)

Several studies have demonstrated that transformational leaders are seen to lead their employees to convey high affective commitment (Clark et al., 2009; Erkutlu, 2006; Barnett et al., 2001; Liao & Chuang, 2007). Meyer and Allen (1991) described that Affective commitment "an employee's emotional attachment to, identification with and involvement in the organization".

As the transformational leaders are charismatic in nature and they are visionary therefore research reports that when employees work under them they are more committed with their service organizations (Narimawati, 2007; McGuire & Kennerly, 2006; Nguni et al., 2006; Emery & Barker, 2007; Chen, 2004). The transformational leadership has been under a mainstream research theme throughout the last two decades. The empirically findings of the previous research report that transformational leadership enhances attitude and performance of employees (Lowe et al., 1996; Bass, 1999). There is sufficient evidence available in the past research that transformational leader's can greater the employees' satisfaction and commitment to their organizations (Clark et al., 2009; Barling et al., 2000; Hater & Bass, 1988).

The employees who are following the transformational leaders that they have been developed the high sense of commitment to service to their organizations (Nguni et al.; 2006; Emery & Barker; 2007; McGuire & Kennerly, 2006). As findings, transformational leadership has ability to promote commitment when followers realize that commitment to service quality help their organization in competitive advantage over contenders and come across their client's satisfaction. Studies, like those published by Emery and Barker (2007); Erkutlu (2006); Barnett, et al. (2001); and Liao and Chuang (2007) support the viewpoint that transformational leadership affects the subordinates' commitment. For example, a study by Erkutlu (2006) based on a boutique hotel in Turkey, found a strong connection between transformational leadership styles and employees' commitment. Of particular importance is that the general notion of transformational leaders in enhancing employees' organizational commitment will in turn create loyalty and reduce turnover among employees (Rayton, 2006). Hence, the literature reports positive relationship between transformational leadership and commitment to service quality (Clark et al., 2009; Hashim & Mahmood, 2012) based on which following relationship is hypothesized.

H: Transformational leadership style is positively related to commitment to service quality.

Figure 1. Theoretical framework

3. Methodology

3.1 Instrumentation and Data Collection Procedure

The multifactor leadership questionnaire (MLQ 5x-short form) from the work of (Bass, 1985) consisting of 20-items was employed to measure transformational leadership, following (Boehnke et al., 2003; Antonakis et al.,

2003). For the purpose of measuring commitment to service quality the modified version of CSQ suggested by (Clark et al., 2009) with 9-itmes was used for this study, which was originally developed by Mowday, Steers, and Porter (1979). These above measures were rated on five point scale with 5 denominating strongly agree and 1 indicating strongly disagree.

The data was collected using survey questionnaire from the medical staff of 43 hospitals of Sindh province in Pakistan. For the total population of 70,594 medical staff in the 43 hospitals in Sindh province a minimum of 382 responses were required (Krejcie & Morgan, 1970) however to improve response rate 764 questionnaires were distributed out of which 317 useable questionnaires were received.

4. Results

4.1 Demographic Profile

In comparing the male and female respondents for this study the number of male respondent (55.8%) was found slightly higher than female (44.2). The majority of the respondents (55.2%) were having MBBS, whereas participating holding FPCS were (6.9%), 3.8% were (PhD or Specialization) holders and 24.3% were having educational degree. Mostly respondents were of middle age 20 to 30 years (61.5%) and second highest age group was 30 to 40 years with (26.8%). In between 40 to 50 years the respondents were (10.4%) and for 50 to 60 years there was only (1.35%). In terms of length of service 32.2% staff were having one to five years' work experience, 31.5% had less than one year work experience, 23% had five to ten years work experience, staff with 10-15 years' experience was 5.7% and 8% were having 15 years and more work experience.

5. Measurement Model

To empirically ascertain the construct validity of the model, researchers apply a 2-step Structural Equations Modeling (SEM) approach that has been recommended by Anderson and Gerbing (1988). Following Anderson and Gerbing (1988)'s approach first, researcher assessed the internal reliability convergent validity for constructs, followed by the discriminant validity of constructs results in table 1 and table 2 respectively. Following the rule of thumb.

Table 1. Result of measurement model

latent variable	Item	Loading	AVE	CR
Transformational leadership	TSL11	0.946755	0.61369	0.9253
	TSL13	0.81891		
	TSL15	0.906717		
	TSL16	0.892859		
	TSL17	0.770399		
	TSL2	0.903416		
	TSL20	0.915564		
	TSL5	0.842854		
	TSL6	0.722149		
	TSL8	0.935193		
	TSL9	0.630554		
Commitment to service quality	CSQ1	0.893736	0.72167	0.9657
	CSQ2	0.815849		
	CSQ4	0.710551		
	CSQ5	0.824417		
	CSQ6	0.851901		
	CSQ7	0.472963		
	CSQ8	0.831747		
	CSQ9	0.787		

TSL1, TSL3, TSL4, TSL7, TSL10, TSL12, TSL14, TSL18, TSL19 and CSQ3, CSQ9 were deleted because these loading are less than 0.4 following to Hulland (1999). Composite reliability (CR) = Square of summation+square of factor loading/square of summation of the factor loadings/ summation of the square of the factors+ summation of the error variances.

Table 2. Discriminatory validity of constructs

Latent variable	1	2
Commitment to service quality	0.849512	
Transformational leadership	0.693216	0.783383686

The square root of average variance extracted while others entries represent the correlations.

Recommended values for cross loadings and composite reliability is 0.7 and above while for the average variance extracted should be above 0.5 (Bagozzi et al., 1991). Additionally, to ascertain discriminate validity of construct, the average variance shared between each construct and its measures should exceed the variance between the construct and other constructs (Fornell & Larcker, 1981). As evidenced in Table 1, the values for average variance extracted exceeded the recommended value of 0.5 set in the previous studies (Bagozzi et al., 1991; Chi, 1998). Simararly, all factors loading have exceeded the recommended level 0.7 set in the previous studies (Bagozzi et al., 1991; Gefen et al., 2000), suggesting that the measurement model has achieved satisfactory internal reliability and convergent validity. According to (Hair et al., 2010) and Fornell and Larcker, (1981) Regarding the discriminant validity of the theatrical constructs (Table 2), the correlations for each construct is less than the square root of the average variance extracted suggesting that the measurement model has reached acceptable discriminate validity.

6. Structure Model

Structural model: after presenting the results of measurement model, next were the results of the structural model (Ringle et al., 2005) are presntted in Table 3 and Figure 2.

Table 3. Path coefficient and hypothesis testing

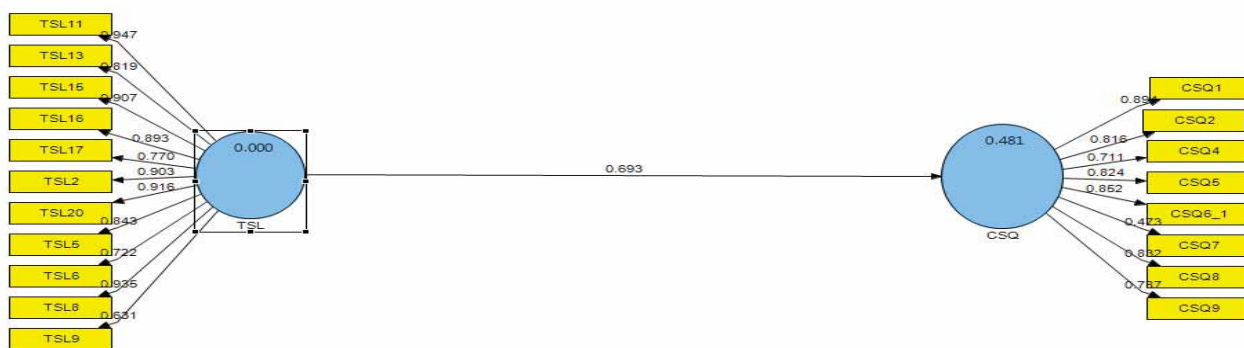| H	Relation	Beta	SE	P value	Decision
H1	Transformational leadership and commitment to service quality	0.693216	0.003512	0.00	Supported

Figure 2. Result of the structural model analysis (p <0.05; p<0.01)

Table 3 described that relationship between transformation leadership style and CSQ. The result of relationship that significant between the transformation leadership and CSQ (b=0.693; 0.00) similarly the result show significant positive relationship between leadership style and CSQ. Meanwhile result of figure 2, showing the hypothesis is supported. R-square reported 0.481for leadership style. This model variables can explained 40% variance of transformational leadership.

7. Discussion

The influence of transformational leadership style over commitment to service quality in the medical staff of

hospitals in Sindh, Pakistan was examined in this study. Cognitive dissonance theory Festinger's (1957) it was argued that transformational leadership influences the commitment to service quality in the medical staff of hospitals in Sindh, Pakistan. Those hospitals where leaderships tend to behave as transformational enjoy the maximum level of employees' commitment towards service quality (Clark et al., 2009; Hashim & Mahmood, 2011). The results of this study indicate that transformational leadership style has positive relationship with commitment to service quality in the hospitals in Sindh, Pakistan. These findings are in line with the previous studies (Hashim & Mahmood, 2011, 2012).

8. Conclusion and Recommendation

The findings of this study indicate that transformational leaders influence commitment to service quality of the medical staff in the hospitals in Sindh, Pakistan. The study would be helpful to managers, owners, and policy makers of the hospitals communicating them to how transformational leadership style can influence their medical staff, inspiring them, tapping their potential, promoting collaboration, encouraging and reinforcing affirmative attitude towards commitment to service quality.

Beside this, the study also has some potential limitations which require discussion, first, as the sample for this study only covers medical staff in Sindh province of Pakistan so the results cannot be generalized to all over the country or the world hence further research may be conducted at the country level to further investigate and confirm this phenomenon. Further, as the data was collected in point in time therefore a longitudinal study could further confirm these findings. Third, as the data was collected with self-reported measurement therefore there are fair chances of social desirability. Lastly, as the R^2 reported for this study indicates that the transformational leadership has 0.481 percentage of variance explained in the commitment to service quality meanwhile the presence of other variables such transactional leadership, laissez-fair and role clarity may improve commitment to service quality, hence, future research may be conducted in the presence of above variables to further confirm this.

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Issues and Challenges of Microcredit Programmes in Malaysia

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Abstract

Most of the Small Medium Enterprises (SME) in Malaysia are microenterprises. To date, the government has played an important role, by giving unwavering support in terms of financial assistance to spurs businesses amongst the microfinance industry. This study highlighted microcredit loan cannot be used as a yardstick to measure one's success in business. It is highly recommended that continuous business and technical knowledge be given to all borrowers. A Graduation Model can also be implemented in microcredit programme in order to attract more poor people to venture into small business.

Keywords: microcredit, microenterprise, graduation model

1. Introduction

Microfinance programme in Malaysia have been implemented since 1987 as one of the poverty eradication strategies in the country. There are three large microfinance institutions in Malaysia namely Amanah Ikhtiar Malaysia (AIM), Yayasan Usaha Maju (YUM) and The Economic Fund for National Entrepreneurs Group (TEKUN). AIM and YUM are poverty-oriented institutions that only give microcredit loans only to people who live at, or below, the country's poverty line. TEKUN provides microcredit loans to both poor and below average income people. AIM and TEKUN provide microcredit services throughout Malaysia (Peninsular, Sabah and Sarawak). Meanwhile, Yayasan Usaha Maju (YUM) focus on providing microcredit loans to the poor people of Sabah. Each of these microfinance institutions has its own lending systems and has been subsidised by the government since their existence.

Although poverty reductions in Malaysia have been reduced and many *Bumiputra's* entrepreneurs are recipients from microcredit programme, there are still unresolved issues that need to be addressed. Amongst them are the poverty-oriented microfinance institutions such as AIM and YUM do not reach many of the poor in the country (Mokhtar, 2011). According to Nawai and Bashir 2010, AIM only reached 4% of the total poor in Malaysia. A study by Hamdan, Fadzim and Wan Sabri (2012) also showed that the positive impact of microcredit loans will only occur on the better-off borrowers, who have better financial income prior joining the microcredit programme. This leaves the issue of whether the microfinance borrowers in Malaysia are really poor?

Another important issue is that the borrowers also lacks of business knowledge and technical skills related to their business. A study by Mokhtar, 2011 found that most microfinance borrowers in Malaysia lack knowledge on how to manage their business income. Most did not know how to separate their business income, between their business and personal consumption. Many borrowers allocated a large portion of their income for personal consumption and only a minimal amount for their businesses. Many used their businesses to financially support their daily living expenses and made little effort to expand their businesses. This is one of many reasons, why some of their businesses either unsuccessful or stagnant even after continuous microcredit loans. Thus, this study will focus on these two issues and will provide recommendations to the problems.

2. Issue 1: Do Not Reach Poor People

Studies on the impact of microcredit loans on household level in Bangladesh by Khandker (2005), Pitt and Khandker (1998) and Zaman (1999) showed that microcredit loans improved the poor borrower's consumption,

food spending and children's education. However, different countries documented different impact results. For example, the study of microcredit borrowers in Peru by Dunn and Arbuckle (2001) showed that microcredit loans increased the poor borrower's household income and food consumption but not expenditure on household appliances and children's education. However, a study by Mosley (2001) on microcredit borrowers in Bolivia showed that richer borrowers enjoyed a larger positive impact than the poor. A similar result was reported in Thailand by Coleman (2002) who also documented that microcredit loans had a larger impact on richer borrowers. A study on Malaysian microfinance borrowers also found similar results, whereby the most benefited from the programme are the non-poor borrowers (Nawai & Bashir, 2010; Mokhtar, 2011).

It is very challenging to the microcredit providers in Malaysia to reach and attract the poor by giving them microcredit loans in order to operate a business. According to this study, lacks of confidence amongst the poor negates them from borrowing. The other factor is their high credit risk that excluded them from the programme. The usual question arises, do the poor have the capability to conduct a business while at the same time struggling with the issues to survive. The poor is as a group of people who lack of necessities in their daily living such as food, clothing, shelter and also education. Without basic education and business exposures, these group of people certainly do not have the skills and knowledge needed to operate a business. Microfinance institutions need to equip the poor with basic nessesities and certain knowledge before granting the poor with microcredit loan. Hence, microcredit prgrammes need to be redesigned to make it more attractive and beneficial for the poor.

With this regard, this study suggest the Graduation Model proposed by the Bangladesh Rural Advancement Community (BRAC) to be implemented in Malaysia. The Graduation Model by BRAC is a framework of strategy in helping the poorest to be involved in microcredit programme. It is based on the realization that majority of the poorest in Bangladesh are excluded from the programme (El-Zoghbi, de Montesquiou, & Hashemi, 2009).

According to the framework as shown in Figure 1, firstly the microfinance institution needs to identify the poor or their potential borrowers to be involved in the programme. In this case, not all the poor will be selected. Only the physically and mentally capable that can learn and have the potential in managing a business will be chosen. Once the recepients are selected, they will be provided with the consumption support such as food, clothes, comfortable house and children education. In addition, the poor will be given with livelihood training, business skills, saving service, heathcare and productive assets transfer. In the productive assets transfer, the poor will be given in-kind good such as tools and equipment, seeds, fertilizer or livestocks to help the poor to start the business. They will be graduated once they have passed the poverty line and are eligible for the microcredit loans.

Even though, the Graduation Model originally is designed to the poor living in extreme poverty line, it is also can be applied to all the poor community. It is because the core of the model is to give a "breathing space" to the poor before they venture into a business (El-Zoghbi et al., 2009). The goverment can give subsidies along the "breathing space" periods and the subsidies should be stopped when the poor are graduated. With the monetary and non-monetary supports given during the "breathing space" it is hope that the poor will be confident and independent in managing their business. According to BRAC experience, 70% from 800,000 poor in the Graduation Model programme has been succesfully graduated, independent and lifted their life from poverty line (El-Zoghbi et al., 2009).

The Graduation Model framework has been replicated in other countries such as India, Pakistan, Haiti, Honduras, Peru, Ethiopia, Yemen and Ghana (El-Zoghbi et al., 2009). Most of these countries reported a positive impact on this model and they have scale-up the programme (El-Zoghbi et al., 2009). Thus, it is hope that the Graduation Model could provide a strategy to Malaysian microfinance institutions in reaching out to the poor and attract them to participate in microcredit programme. As stressed by Mosley, (2011) in the article "Rebalancing Microfinance", the microcredit programme should act as a tool-kit or credit-plus (Note 1) instruments rather than a single instrument (microcredit loan only) in order to become effective tool in combating the poverty. It is believe that the Graduation Model framework could provide a complete "tool-kit" for the Malaysian microfinance institutions.

3. Issue 2: Lack of Business Knowledge and Technical Skills

Research studies have shown that by giving financial literacy education to borrowers and prospective borrowers can help them make better financial decision (Bernheim et al., 2003; Lusardi et al., 2007). A study by Cole, Sampson and Zia (2009) show a strong association between financial literacy, better financial decisions and household well-being. However, in Malaysian microcredit industry, many borrowers are financial illiterate and lack of knowledge in business management (Mokhtar, 2011).

This study surveyed 100 borrowers of AIM and YUM institutions in order to investigate the reasons why most of the microfinance borrowers lack of business knowledge and skills. This study used a stratified sampling procedure where the population (borrowers) was divided into subgroups or strata (seasonal borrowers). This study randomly selected borrowers in various microcredit loan schemes (economic purposes only), such as small businesses, services, plantations, animal husbandry, fishery and manufacturing.

The results found that most of the borrowers never attended any business management course since many of them never been given the opportunity to attend the course (see Table 1). This study also found that most of the microcredit borrowers do not have any technical skills that's related to their businesses. With this limited knowledge and exposure, they lack of self-understanding about the importance of continous business improvement. The results support a study by Mokhtar, 2011.

In Malaysian context, entrepreneurship culture is not well-blend amongst the Malays and *Bumiputera* as compared to the Chinese. For Chinese, most of their businesses succeeds, as they inherit their skills through generations. Therefore, knowledge in business management and related technical skills have to be given to all microfinance borrowers, when majority of them are Malays and *Bumiputera.*

In recent development, microfinance institutions in Malaysia do provide business and financial management course to their borrowers. The courses either conducted by the microfinance institution itself or other agencies such as SME Corporation and MARA. However, according to the borrowers, only selected borrowers will be chosen to attend the course. The course is also conducted on a seasonal basis and there is no fix training schedule in the calendar. In addition, the location of training and workshop is held in town and not all borrowers especially those who live in rural areas can attend.

The microfinance institutions also do not have a standardized module of training specifically to handle different level of borrowers. For example, the level of understanding financial and business management topics may differ from each borrower. The microfinance institutions should have different sets of training module specifically to the new borrower and repeating borrower. The trainer or the speaker also needs to simplify the information and knowledge given because the audiences lack education.

Hence, it is suggested that microfinance institutions in Malaysia have their own education and training trainers. In the current practice, the trainers are from other agencies and they do not understand the needs of the microentrepreneurs. It is also suggested that coaching system or mentor-mentee programme should be introduced for the borrowers. This is due to the fact that the borrowers need continous guidance and support in order to succeed. Since each of the microfinance institutions in Malaysia has thousands of borrowers scattered all over country, having the trainers and coaches on their own, will make the knowledge transfer process more effective.

According to this study, Langkawi Development Authority (LADA) under Investment & Business Facilitation Division, has taken initiatives to educate the entrepreneurs with capacity building rather than giving loans. This agency recognized the needs for knowledge to be given for microentrepreneurs in Langkawi in order to be successful in managing their business.

4. Conclusion

Microfinance institutions such as AIM, YUM and TEKUN have played a significant role in providing financial assistance to microentrepreneurs in Malaysia. Many of them have been benefited from the programmes. However, the most benefited from the programmes are under the non-poor borrower category. The offer by these institutions is not attractive enough to lure the poor people because of limited microfinance product (microcredit only). Microcredit loan cannot be used as a measure of success in the business. Hence, this study recommends to all microfinance institutions provide the entrepreneurial skills and technical skills related to business to all microcredit's borrowers in Malaysia. In fact, the borrowers must be equipped with this knowledge before the microcredit loan is disbursed. Thus, it is highly recommended that the government modify the recent design of the Malaysian microcredit programme to make it more effective in alleviating poverty and more sustainable in the future.
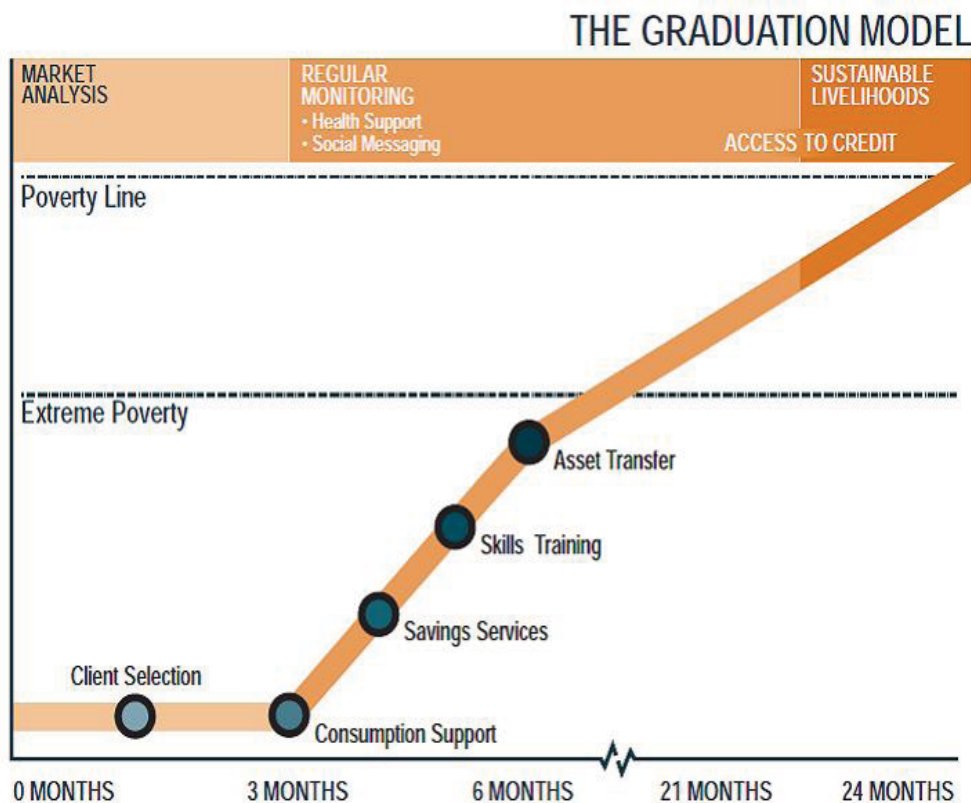
Figure 1. The Graduation Model

Source: Adapted from El-Zoghbi, de Montesquiou and Hashemi (2009, p. 2)

Table 1. Borrowers involvement in technical and business management course

	AIM	YUM
	%	%
Attended Any Technical Course Related to Business		
Yes	26.7	15.1
Never*	73.3	84.9
Total	100.0	100.0
Accuses if Never Attended Any		
Never been offered	57.0	78.2
Family and time constraints	33.0	21.8
Total	100.0	100.0
Attended Any Business Management Course		
Yes	15.6	9.4
Never*	84.4	90.6
Total	100.0	100.0
Accuses if Never Attended Any		
Never been offered	65.0	75.2
Family and time constraints	25.0	24.8
Total	100.0	100.0

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Note

Note 1. Credit-plus means apart of microcredit loan, microfinance institutions also need to provide other financial services such as microsaving, weather insurance, continuous business and livelihood training to the borrowers.

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Smartphone Dependency and Its Impact on Purchase Behavior

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Abstract

People nowadays seem to become dependent towards smartphone due to its convenience, great camera features, easy applications' installations, and more importantly, it can do most of the computer functions on the go. Significantly, smartphone usage in Malaysia is growing enormously and has become a significant and lucrative industry. This study aims to understand the antecedents and the outcome of the smartphone dependency among smartphone consumers. Two theories - the theory of uses and gratification and the media dependency theory- were used as the theoretical basis for this study, in order to determine the motivations to use a smartphone and to define dependency and its outcome. The antecedent variables were convenience, social need and social influence; and all of these dimensions are conceptualized as one-dimensional. The outcome of dependency on smartphones was expected to be the purchase behavior. Data analyses were based on 226 valid questionnaires that were collected among smartphone users. The result from the Confirmatory Factor Analysis of Partial Least Square (PLS) shows that only social needs and social influence significantly influenced the smartphone dependency among consumers, therefore indicating that these two factors are important to influence dependency on the smartphone. In addition, the analysis also verifies that the purchase behavior is the outcome of the dependency on the smartphone. Based on these results, marketers could focus on creating dependency among consumers on smartphone usage based on the consumers' social need, which eventually will promote future purchase behavior in the long run. More importantly, understanding social influences as antecedents

Keywords: dependency on smartphone, purchase behavior, theory of uses and gratification, theory of media dependency

1. Introduction

Consumers nowadays have slowly become dependent on mobile phones. Today's mobile phones are no longer only used for making and receiving calls, but rather includes various useful features and thus making them known more as smartphones. It is a common sight to see people in a queue or while waiting for a train, bus, and airplane to have a smartphone in their palm to pass the time. Some, even at a coffee table, gathering with friends would keep browsing social websites to update their status. Lim, Wong, Zolkepli and Rashvinjeet (2012) reported that there is even such a trend that youngsters today would sit around together for dinner, but none of them are talking and instead had their eyes glued to their mobile phones texting or surfing. On top of that, smartphones with the great camera features have even made consumers to prefer and be dependent on smartphone camera usage due to its convenience. A smartphone enables us to install applications which vary from social networking apps, gaming, work or information apps. As a result, it is important for academics and marketers to understand the underlying causes and outcomes behind this smartphone dependency phenomenon in order to understand consumer behavior; as well as for marketers to sustain sales of smartphone and its market share. Significantly, to identify and understand the important factors which influence dependency on the smartphone and the expected outcome of the dependency-purchasing behavior, two theories will be used – namely Theory of Uses and Gratification and Theory of Media Dependency. The latter was used to explain dependency and its outcome (purchasing behavior) whilst Theory of Uses and Gratification was used to justify and explain factors that motivate people to depend on smartphone.

2. Media Dependency Theory

The media dependency theory focuses on the consumer dependency to satisfy the goals (Patwardhan & Yang, 2003). This theory states that media dependency is where the satisfaction of needs or the attainment of goals by individuals upon the resources of the party or media is met (Patwardhan & Yang, 2003). The individual will then develop a dependency with the media to fulfill their goals and some of these goals would require access to resources controlled by the mass media (Ball-Rokeach, 1985). Loges (1994) suggested media system dependency is not an exclusive media effect and many outside influences may enhance or restrict the dependency relation. Together with the categories or goals which concern with the dependency of the media, other factors can intensify or reduce media dependency as well, such as demographics, exposure and affinity towards the media (Mafe & Blas, 2006; Mafe & Blas, 2008). On the other hand, Alcaniz, Mafe, Manzano and Blas (2008) reported that media dependency will change as the utility of media resources change, which refers to the more usefulness of the media being perceived, the more dependent on the media will be.

Lu and Wang (2008) suggested that internet addiction or internet dependence is viewed as a psychological dependence on or a behavior action to the Internet. The researchers show that dependency and addiction were about the same. In their research on internet online game addiction, several symptoms of internet addiction were identified; which included the increased length of time online, unpleasant feeling when offline or obsessive thinking about the internet, having occupational or relationship problem and deceit. Hooper and Zhou (2007) discussed dependency (in relation to mobile phone usage) as the regular use of mobile phone which becomes a necessity to their lives and the tendency to switch it on all the time. In a research by Balahkrishnan and Raj (2012) they found that most of their respondents cannot go anywhere without their mobile phone and felt distressed when they do not have their phones with them. They define this as mobile phone attachment. The author's findings further reported that most of the respondents will be angry and frustrated when they cannot use their phone and could not manage their lives without their phones. Balahkrishnan and Raj's findings (2012) are almost similar to what was suggested by Hooper and Zhou (2007). Furthermore, based on the media dependency theory, dependency on media will lead to future purchase behavior. In this context of research, consumer dependency on smartphone is being conceptualized as having the propensity of high usage, being engaged and unwilling to be apart from it (Ting et al., 2011).

2.1 Uses and Gratification Theory

The uses and gratification theory can be helpful in explaining why people choose a certain technology or service; how they use it and the outcomes that they feel they have gained from the experience (Auther, 2007). According to Wu *et al.* (2010), there were some important assumptions proposed for this theory; firstly, people are active in choosing media based on their needs, secondly, people choose media based on their wants and interest because they have alternate choice to fulfill their needs, and lastly the communication behavior was different from others because of social and psychological factors. Leung (2007) discussed that the basic needs will interact with personal characteristics and the social environment of the individual and this interaction would produce different motives and gratifications behaviors that can come from using the media or other activities.

The general conclusion of the theory of use and gratification studies is that the gratification sought motivates the use of a particular medium in an audience (Leung, 2007). Wei (2008) reveals that audiences are aware of their social and psychological needs and will actively seek the media to fulfill them. The theory of uses and gratification measures not only the internet, but also the unique user interface of the mobile device (Stafford and Gillenson, 1994). The audience is often attempting to satisfy certain psychological needs such as surveillance, information-seeking, entertainment, personal identity or companionship (Leung, 2007; Leung & Wei, 1998). Sociability, instrumentality, reassurance, entertainment, acquisition, and time management were some of the common motives for the use of the telephone (Leung & Wei, 1998; Leung 2007). Leung (2007) further found that gratification use of the short messaging system (SMS) in mobile phones were motivated by its convenience, low cost, utility for coordinating, mobility, immediacy, entertainment, relaxation, fashion or status, and intrinsic factor of sociability and affection. These findings are in line with the findings from Leung and Wei (2000) on mobile phone usage.

The uses and gratification theory had been successfully applied to various new media that are related to communication technologies (Wu et al., 2010). According to Mafe and Blass (2008) this theory has become one of the most influential theories in the study of mass media to better understand what the media content needs. As a result, this theory is applicable to explain the current research framework on mobile or smartphone usage since it is very closely related with media and mass communication. Based on the uses and gratification theory, consumers were motivated to use mobile phones or smartphones due to its convenience, sociability as well as

entertainment. This motivation to use can further lead to their dependency on smartphone and lead to future purchase behavior.

2.2 Antecedents of Smartphone Dependency

2.2.1 Convenience

Brown (1993) reported that convenience was anything that adds to one's comfort or saves work: useful, handy or helpful device, article or service. He further suggested that convenience is a multidimensional construct with a suggested six classes of convenience. The six classes suggested were time utilization, accessibility, portability, appropriateness, handiness and avoidance of unpleasantness. Berry, Seiders and Grewal (2002) suggested a conceptual model of service convenience which consists of five constructs. These constructs are known as the decision convenience (i.e. customers who desire a particular performance devote time and effort to deciding how to obtain the particular performance), access convenience (i.e. customers' perceived time and effort expenditures to initiate service delivery), transaction convenience (i.e. customers' perceived expenditures of time and effort to effect a transaction), benefit convenience (i.e. customers' perceived time and effort expenditures to experience the service's core benefits), and post-benefit convenience (i.e. customer's perceived time and effort expenditures when reinitiating contact with a firm after the benefit stage of the service).

According to Osman et al. (2011), a smartphone offered advanced computing power and connectivity which literately is a handheld computer that is powerful enough to deliver various functionalities comparable to a computer. Smartphones allow users to check e-mails, keep track of appointments and maintain a calendar; whereas the newer generation of smartphones enable users to handle numerous tasks more efficiently and effectively (Holub, Green, & Valenti, 2010). Holub et al. (2010) gave an example of tax practitioners who are able to receive e-mail from a client even if they are not in the office which enabled them to provide tax advice to clients thus making their job more convenient and effective. Karlson, Meyers, Jacobs, Johns and Kane (2009) suggest that information workers often manage several different computing devices (PC and smartphone) to balance convenience, mobility, input efficiency, and content readability throughout their day. According the author, these information workers transfer activities and tasks between devices (PC and smartphone) of vastly differing capabilities and some would use their smartphone to work as a primary device until using a PC is necessary. Harvel (2006) suggested that the idea behind convenient for designing an application has to be made easy and people will use it. It has to consistently respond towards "ease of use" and "time-saving" (Harvel, 2006), in which it will aid to the user's job performance (Park & Chen, 2007). Convenience is normally related to people's perception of time scarcity and value time related issue (Berry et al., 2002) which lead to the consumer need of high convenience (Ting et al., 2011). Hence, in this research context, convenience refers to time saving and usefulness of usage on smartphone, which is in line with Ting et al. (2011) as a single dimension construct. The usefulness is in performing various PC-related tasks and ability to complete tasks quickly allowing for greater time saving.

Hahn (2010) reported the twin function of a mobile phone as a laptop and as a phone has provided an increase usage rate of the smartphone users. This increase usage rate has shown a dependency impact on the users. Apart from that, Karlson et al. (2009) showed that engineers in the software industry would prefer to use their smartphone at work rather than their PC. On top of that, Holub et al. (2010) reported that tax practitioners had their smartphone as a moving office, which made them more effective to work and respond to emails. These examples strongly suggested the increase usage of smartphone had led to people's dependency on smartphone. Ting et al. (2011) research finding showed that the convenience factors of smartphone had positively affected consumer's dependency on smartphones. Therefore, it is hypothesized that:

H$_1$: Convenience has a positive relationship with consumers dependency on smartphone usage.

2.2.2 Social Needs

According to Maslow's hierarchy of needs, there are five sets of goals which are referred to as 'basic needs' (Maslow, 1943). The basic needs in Maslow's hierarchy of needs are physiological, safety, love or sense of belonging, esteem and self-actualization needs (Maslow, 1943; Tikkanen, 2009). Stephen (2000) suggested that if both the physiological and safety needs are being satisfied, a new set of needs emerge which are the needs for love, affection and belongingness. This is classified as the social needs (Stephen, 2000). Based on the uses and gratification theory, the use of mobile phone or telephones is categorized into two: intrinsic and instrumental where intrinsic are towards social oriented and social motives (Leung & Wei, 1998; Balahkrishnan & Raj, 2012; Leong & Wei, 2000). Leung and Wei (2000) found out that the use of mobile phone is for affection and sociability, such as chatting, gossip, keeping family contacts and having a sense of security. Women have intrinsic use of telephone as they are more concerned about family and use of telephone helped owners feel less

lonely and more secure (Leung & Wei, 1998). This is similar to what suggested by Balahkrishnan and Raj (2012) that intrinsic as communication for the purpose of companionship or reassurance. They also reported that mobile phones have become a necessary part of social communication through the maintenance of key social network. Mobile phones keep social interaction with friends and family as well as a precaution to the security aspect for emergency purposes (Balahkrishnan & Raj, 2012; Wei, 2008). Ting et al. (2011) also suggested that the uses of smartphone are to fulfill the social need of communicating with family and friends as well as affiliation groups. They can stay connected through integrated live chat in the smartphone or simple access to social sites such as *Facebook* or *Twitter* to stay connected. Social needs in this research context will be similar to what was suggested by Ting et al. (2011). It will refer to as users of smartphone to fulfill their social need to communicate and stay connected with others.

Ting et al. (2011) reported that interaction or social networking together with live chatting has been made available and can be enabled through smartphones. This will lead to one's increase usage of smartphones and the dependency to it. Leung and Wei (2000) found out that the use of mobile phone is for affection and sociability, such as chatting, gossip, keeping family contacts and having a sense of security. On the other hand, the uses of mobile phone or telephones are towards social oriented and social motives (Balahkrishnan and Raj, 2012). Ting et al. (2011) in their research further showed a positive relationship between social needs and dependency on smartphone. Hence, it is proposed that:

H$_2$: Social needs has a positive relationship with consumers dependency on smartphone usage.

2.2.3 Social Influence

In a research by Weber and Villebonne (2002), social influence was defined as a cultural environment that is an external variable that will influence one's behavior as well as influence the reasons why and how people live. They stress that this external cultural environment is important for strategic marketing plan because society exerts a constant and persuasive influence on its members. According to Lu and Wang (2008), social influence has a profound impact on the user's perception and behavior which can be divided into two distinct constructs: subjective and descriptive norms. The researchers described subjective norms as the social pressures to perform or not to perform a specific behavior and descriptive norms as the perception of the attitudes and behaviors of significant others. When we observe other people performing a certain behavior, we are more likely to believe that is a sensible thing to do (Lu & Wang, 2008). Previous studies that have focused on subjective norms perceive it as social pressures an individual faces when deciding whether to behave in a certain way (Lu & Wang, 2008; Pookulangara & Koesler, 2011). Pookulangara and Koesler (2011) suggest that people may choose to perform a behavior to comply with important referents even if they are not favorable. Bearden, Metemeyer and Teel (1989) suggest that a subjective norm is where people would act or actually act according to their importance referent like friends, family, or society in general. Manson, Conrey and Smith (2007) suggested that the social influences are divided into two fundamental components, namely the sources and target of influence as well as time. The author describes social influence involving many sources and targets as people converse with groups of friends. Hence it is seen to be multidirectional, which involves multiple sources and multiple targets of influence. On the other hand, the second component of time is an inherently dynamic process and is not limited to a single time point only. Social influence affects the ways other people affect one's beliefs, feelings and behavior (Manson et al., 2007). Social influence in this research is conceptualized to be the way other people or the environment will affect one's belief or behavior (Weber & Villebonne, 2002). This definition is in line with Ting et al. (2011).

Klobas and Clyde (2001) found that social influence from family and friends, teachers, colleagues, students and many more can influence the outcome of the usage of the internet. Auter (2007) also added that friends and family are among the important social influence to the usage of mobile phone. These usages are linked with dependency (high usage) in the context of this research. If smartphone made a good impression on others, consumer dependency on them will increase and consequently lead to a positive word of mouth communication to others (Ting et al., 2011). The research finding by Ting et al. (2011) also reported a positive relationship of the social influence and the dependency of smartphone. Based on the discussion, it is proposed that:

H$_3$: Social influence has a positive relationship with consumers dependency on smartphone usage.

2.3 Outcome of Smartphone Dependency

2.3.1 Purchase Behavior (Continuous Purchase)

Different from purchase intention, purchase behavior is in which the product is purchased with some degree of regularity (Hawkins, Mothersbaugh, & Mookerjee, 2010). According to Newberry, Klemz and Boshoff (2003),

purchase intentions were seen as swift purchase and were in the near term whereas purchase behaviors were more towards long term of purchasing. Consumer purchase behavior can be used to define customer loyalty where there is a repeat purchase behavior or a repeat patronage with a favorable attitude (Kong, 2006). According to Oliver (1999) these repurchase intentions or loyalty had been defined as a deeply commitment to rebuy and patronized towards a product consistently in the future causing repetitive purchase of the same brand despite influence and marketing effort of rival competitors. He further claims that consumer loyalty can transpire at four different levels: cognitive, affective, conative (behavior intention), and action (actual behavior). Haverila (2011) research on repurchase intention of mobile phone focuses on the conative (behavior intention) as he reported that conative or behavior intention can predict behavior of mobile phone usage.

In a research on internet addiction by Lu and Wang (2008), they conceptualized loyalty as comprising of two dimensions: attitudinal and behavioral characteristic. The behavioral aspect refers to the intention to make repeated purchase and the attitudinal aspect refers to the favorable attitude toward or preference for certain services or certain product or firm. Uncles, Dowling and Hammond (2003) proposed three conceptualized models for loyalty. First, loyalty as primarily an attitude that sometimes leads to a relationship with the brand – where people's beliefs and positive feelings with the brand lead to repeat patronage. Second, loyalty mainly expressed in terms of how it reveals behavior, defined mainly with reference to the pattern of past purchases of a consumer. Third, refers to buying moderated by individual's characteristics, circumstances and the purchase situation. Research findings by Ting et al. (2011) on dependency of smartphone and impact of purchase behavior, reported that the consumers' past experience will lead to their future purchase behavior. They perceived purchase behavior as a behavior intention that will lead to future purchase of smartphone; which, in turn, will lead them to use a smartphone based on their past experience. On the other hand, a consumer's past positive experience on certain media would lead to future purchase behavior as well (Kuhlmeier & Knight, 2003). Research by Pilstrom and Brush (2008) take the intention to repurchase, word of mouth communications and willingness to pay behavior as a separate construct in which traditionally had been used as the dimensional measure for behavioral intention. Their study is on word of mouth, willingness to pay and repurchase intention as an outcome of perceived value; and this allows the examination on differential individual effects of the perceived value dimensions on each behavioral intention (Lin, Sher, & Shih, 2005). Hence, in this research purchase behavior is conceptualized as a behavior intention for future repurchase or repeat purchase and use of smartphone (Kong, 2006; Ting et al., 2011).

Ting et al., (2011) suggested that consumers learn quickly from their prior experience on smartphone usage which will be a guide or evaluation for them to decide their next purchase. However, further research findings showed that there is a positive relationship of dependency on smartphone and purchase behavior on smartphone. Whereas Patwardhan and Yang (2003) also showed that the orientation dimension of dependency could predict actual online purchase. On the other hand, research done by Mafe and Blas (2006) on internet dependency and purchase intention, found that internet dependency has a positive influence on future behavior. In addition to that, Alcaniz et al. (2008) also reported that online information dependency significantly leads to future online purchase intention. Therefore, this study hypothesized that:

H_4: Dependency of consumer on smartphone has a positive relationship with their purchase behaviour.

3. Research Methodology

The targeted samples were 260 respondents who own and use a smartphone. Sample selections were based on those who were age 18 and above. This was because people from this age onwards were being perceived as an adult with higher purchasing power and the ability to make decisions on their own on the preference of choice and purchase. The data collected from this study was analyzed using Smart Partial Least Square 2.0. The following research model was used in this study, as shown in Figure 1.
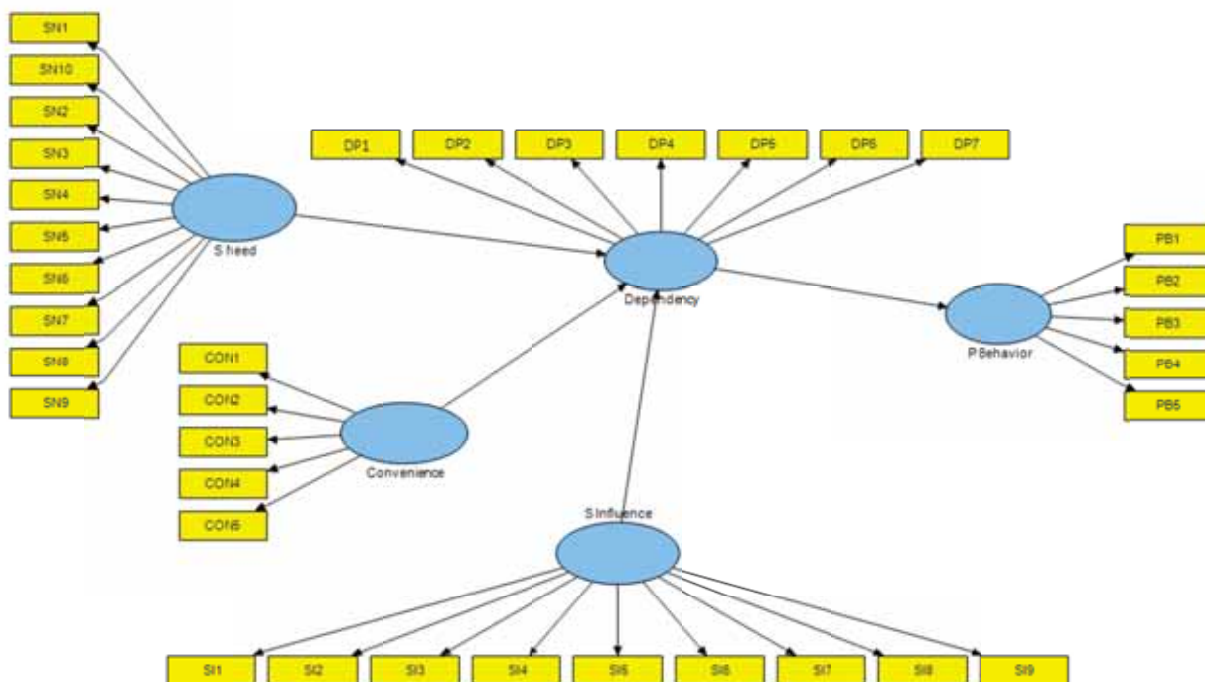
Figure 1. The research model

4. Measurement instrument

4.1 Common Method Variance

Prior to further analysis, common method variance (CMV) needs to be tested when data are collected through self-reported questionnaires and, particularly, when both the criterion and predictor variables are acquired from the same person (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). CMV refers to variance credited to the measurement method instead of variance explained by the study's construct. The existence of CMV can be detected if one principal factor counts for the majority of the variance explained (Podsakoff and Organ 1986). As such, CMV was first to be tested to obtain rigorous empirical evidence in this study. An exploratory factor analysis was performed by entering all measurement items, findings revealed that the largest variance explained by an individual factor was 25.057% (see Table 1). The findings confirmed that CMV was not considered a significant problem for this study.

Table 1. Measurement model Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.020	25.057	25.057	9.020	25.057	25.057
2	3.343	9.286	34.342			
3	2.781	7.726	42.068			
4	2.269	6.304	48.372			
5	1.981	5.502	53.874			
6	1.540	4.277	58.150			
7	1.255	3.487	61.638			
8	1.171	3.253	64.891			
9	1.111	3.086	67.977			
10	.988	2.743	70.720			
11	.938	2.606	73.326			

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
12	.843	2.340	75.667			
13	.784	2.177	77.843			
14	.731	2.031	79.874			
15	.670	1.861	81.735			
16	.592	1.643	83.378			
17	.549	1.524	84.902			
18	.533	1.482	86.384			
19	.499	1.386	87.770			
20	.445	1.236	89.006			
21	.439	1.220	90.226			
22	.416	1.156	91.382			
23	.362	1.005	92.387			
24	.351	.974	93.361			
25	.294	.816	94.178			
26	.289	.802	94.980			
27	.256	.712	95.692			
28	.239	.663	96.355			
29	.229	.637	96.992			
30	.196	.545	97.537			
31	.192	.534	98.070			
32	.176	.488	98.558			
33	.161	.448	99.006			
34	.141	.392	99.398			
35	.115	.320	99.718			
36	.102	.282	100.000			

Extraction Method: Principal Component Analysis

5. Analysis and Results

5.1 Assessment of the Measurement Model

In order to obtain valid and reliable results, this study followed the two-step approach as suggested by Chin (1998). The assessment of the measurement model was done using both convergent and discriminant validity analysis. Factor loadings, cross-loading, composite reliability and average variance extracted were used to assess convergence validity. Therefore, the process was to confirm the convergent validity before proceeding to test the structural model and hypothesis. First, the measurement model was tested for convergent validity. The convergent validity is defined as the degree to which multiple items converge in measuring the concept of construct (Bagozzi et al., 1991; Hair et al., 2010). This was assessed through cross loadings, factor loadings, composite reliability (CR) and average variance extracted (AVE) (Hair et al., 2010). This means that if all the items are significantly important in measuring their constructs, the loadings and cross-loading for all items should not be lower than 0.5 (Hair et al., 2010). While, the composite reliability values are at least 0.7 and the average variance extracted (AVE) are at least 0.5, then the convergent validity can be confidently confirmed (Bagozzi et al., 1991; Hair et al., 2010). As seen in Table 2 and Table 3, the loadings and cross loading for all items exceeded the recommended value of 0.5 (Hair et al., 2010). While, the composite reliability value of all the constructs exceeded the cut-off value of 0.7 and all the values of AVEs are more than the 0.5 threshold. Thus, one can confirm that the measurement model possesses an adequate level of convergent validity. Therefore, we can conclude that convergent validity has been established.

Table 2. Cross-Loading of the Items

	Convenience	Dependency	P Behavior	S Influence	S Need
CON1	0.761	0.243	0.320	0.132	0.317
CON2	0.767	0.222	0.326	0.170	0.276
CON3	0.678	0.169	0.322	0.118	0.203
CON4	0.690	0.188	0.312	0.164	0.282
CON5	0.707	0.183	0.276	0.193	0.273
DP1	0.164	0.643	0.213	0.276	0.195
DP2	0.319	0.725	0.501	0.269	0.420
DP4	0.237	0.705	0.558	0.203	0.391
DP5	0.139	0.804	0.379	0.278	0.319
DP6	0.123	0.770	0.351	0.342	0.273
DP7	0.195	0.722	0.194	0.247	0.189
PB1	0.186	0.280	0.686	0.241	0.326
PB2	0.316	0.391	0.820	0.193	0.310
PB3	0.251	0.346	0.603	0.136	0.269
PB4	0.401	0.503	0.817	0.265	0.351
PB5	0.397	0.483	0.809	0.184	0.373
SI2	0.101	0.239	0.152	0.751	0.250
SI3	0.067	0.274	0.120	0.754	0.220
SI4	0.216	0.312	0.391	0.682	0.365
SI7	0.126	0.224	0.090	0.713	0.141
SI9	0.248	0.224	0.154	0.663	0.246
SN1	0.236	0.240	0.289	0.140	0.746
SN10	0.308	0.390	0.428	0.327	0.789
SN2	0.263	0.278	0.279	0.262	0.695
SN3	0.273	0.192	0.217	0.117	0.663
SN4	0.217	0.219	0.236	0.152	0.756
SN5	0.309	0.418	0.390	0.300	0.852
SN6	0.202	0.285	0.234	0.174	0.691
SN7	0.208	0.331	0.344	0.250	0.707
SN8	0.375	0.387	0.333	0.407	0.591
SN9	0.285	0.279	0.270	0.250	0.738

Table 3. Measurement model

	Items	Loadings	AVE	CR
Convenience	CON1	0.761	0.520	0.844
	CON2	0.767		
	CON3	0.678		
	CON4	0.690		
	CON5	0.707		
Dependency	DP1	0.643	0.533	0.872
	DP2	0.725		
	DP4	0.705		
	DP5	0.804		
	DP6	0.770		
	DP7	0.722		

	Items	Loadings	AVE	CR
P Behavior	PB1	0.686	0.566	0.865
	PB2	0.820		
	PB3	0.603		
	PB4	0.817		
	PB5	0.809		
S Influence	SI2	0.751	0.509	0.838
	SI3	0.754		
	SI4	0.682		
	SI7	0.713		
	SI9	0.663		
S Need	SN1	0.746	0.527	0.917
	SN10	0.789		
	SN2	0.695		
	SN3	0.663		
	SN4	0.756		
	SN5	0.852		
	SN6	0.691		
	SN7	0.707		
	SN8	0.591		
	SN9	0.738		

Note. SI1, SI5, SI6, & DP3 were deleted due to low loading.

a: $CR = (\Sigma \text{ factor loading})^2 / \{(\Sigma \text{ factor loading})^2) + \Sigma \text{ (variance of error)}\}$

b: $AVE = \Sigma \text{ (factor loading)}^2 / (\Sigma \text{ (factor loading)}^2 + \Sigma \text{ (variance of error)}\}$

5.2 The Discriminant Validity

Next is to test the discriminant validity. The measurement model's discriminant validity is examined based on the criterion suggested by Fornell and Larcker (1981). The discriminant validity represents the extent to which a set of indicators discriminate a construct from other constructs in the model. This implies that good discriminant validity is achieved when the items share more variance with their constructs than the constructs share with other constructs more (Compeau et al., 1999). Table 4 showed the correlation matrix, the diagonal indicators are the square root of the AVE of the entire latent variables or constructs. Discriminant validity can be assumed if the diagonal indicators are greater than other off-diagonal indicators in their columns and rows. In this case, the discriminant validity is confirmed as exhibited in the in the correlation matrix.In total, the measurement model demonstrated adequate convergent validity and discriminant validity.

Table 4. Discriminant validity

	Convenience	Dependency	P Behavior	S Influence	S Need
Convenience	0.721				
Dependency	0.283	0.730			
P Behavior	0.431	0.550	0.752		
S Influence	0.214	0.364	0.271	0.714	
S Need	0.378	0.440	0.435	0.353	0.726

5.3 Assessment of the Structural Model

After the assessment of the measurement model, the structural model, then evaluated to test the hypotheses. The structural model comprises of the hypothesized relationship between the model's exogenous and endogenous variables. It shows how well the theoretical model predicts the hypothesized paths. The bootstrapping procedure

(500 resamples) was applied to generate the path coefficients and their corresponding t-values; which then enabled inferences to be made by determining the statistical significance of each path coefficient. Table 5 and Figure 2 show the results of testing the structural model.
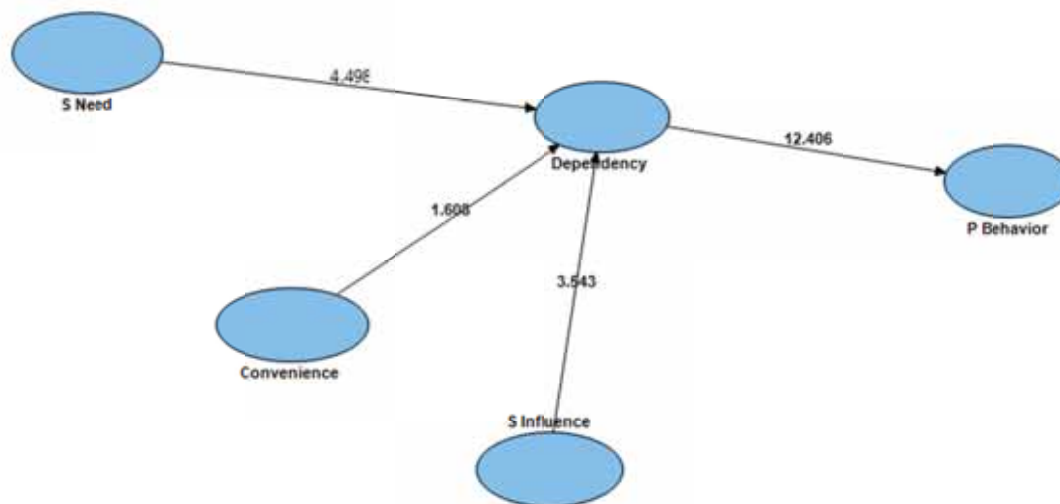

Figure 2. The structural model

5.4 Predictive Power of the Model

Following the assessment of the measurement model, the quality of the structural model can be assessed by R^2. R^2 indicates the amount of variance in the endogenous variable could be explained by the exogenous variables (Barclay et al., 1995). Based on the results reported in Table 5, the R^2 of the Consumer dependency was found to be 0.254 indicating that the three exogenous variables, namely Convenience, Social needs and Social influence together explained 25.4% of the variance in the consumer dependency. In turn, the variable Consumer dependency could account for 30.3% of the variance in Purchase Behaviour. Based on the assessment criterion suggested by Cohen (1988), 0.26 substantial, 0.13 moderate and 0.02 weak; one of the values is considered moderate and the other value of the R^2 is considered substantial.

Table 5. Predictive Power of the Model

Endogenous	R Square
Consumer dependency	0.254
Purchase Behaviour	0.303

5.5 Goodness of Fit (GoF) of the Model

A global fit measure (GoF) assessment was also conducted to investigate the global validation of PLS model (Chin, 1998). The Tenenhaus et al. (2005) global goodness of fit (GoF) index was applied to the model. This measure is the geometric mean of the average variance extracted and the average R^2 for the endogenous variables. The following formula is used to compute GoF.

$$Gof = \sqrt{(\overline{R^2} \times \overline{AVE})}$$

Based on the results obtained, the GoF value was 0.384 which was calculated as in the following:

$$Gof = \sqrt{(0.278 \times 0.148} = 0.384$$

On the basis of the results, the GoF value of 0.384 for the research model was obtained. Then, the result of the model is compared with Wetzels et al.,'s. (2009) baseline values of GoF (small =0.1, medium =0.25, large =0.36). It can be concluded that the model's GoF measure is large and adequate of global PLS model validity.

5.6 The Structural Model and Hypothesis Testing

After successfully confirming the measurement model's validity and reliability, the next stage is to run PLS algorithm and Bootstrapping algorithm in SmartPLS 2.0 in order to test the hypothesized relationship.

Table 6. Hypothesis Testing Result

Hypothesis	Path	Std Beta	Std Error	t-Value	Decision
H1	Convenience -> Dependency	0.114	0.071	1.608	Not Supported
H2	S Need -> Dependency	0.316	0.070	4.498**	Supported
H3	S Influence -> Dependency	0.228	0.064	3.543**	Supported
H4	Dependency -> P Behavior	0.550	0.044	12.406**	Supported

**p< 0.01, *p< 0.05

Table 6 shows the result of hypothesis testing. From the analysis, it was found that the relationships between all the exogenous variables Social Needs (β = 0.316, p< 0.01); Social Influence (β = 0.228, p< 0.01) except for Convenience, and Consumer Dependency were positively and statistically significant. In addition, results show that Consumer Dependency (β = 0.552, p< 0.01) was positively related to Purchase Behaviour. However, Convenience (β = 0.114, p> 0.05) are not significantly related to Consumer Dependency. Through this analysis, hypotheses H2, H3, and H4 were confirmed, while hypotheses H1 was not supported.

6. Discussion and Conclusions

6.1 Antecedents of Dependency

Hypotheses H_2 stated that social needs have a positive relationship with consumers' dependency on smartphone usage. The results of our study on hypotheses H2 showed a significant result which supports the hypotheses. This result is in line with the research findings of Ting et al. (2011) which reported that social needs lead to dependency on smartphone usage. Relatedly, Leung and Wei (2000) reported that the use of mobile phone is for affection and sociability purposes. Similarly, Balahkrishnan and Raj (2012) also suggested that the uses of mobile phones or telephones are social oriented and social motivated.

The concept of social need in this study refers to the need to communicate and stay connected with others. Almost all of today's smartphones are equipped with social networking applications such as Facebook, twitter and Myspace (Ting et al., 2011) which allows users to instantly get connected and stay connected to their favorite social networking sites instantly. Through this function consumers could get live updates from friends and family whenever and wherever they are. Balakrishnan and Raj (2012) reported that mobile phones are regarded as the extension of oneself, where communication among users was not tied to a physical location. Furthermore, certain smartphones, such as the iPhone, have live chatting application built-in to their smartphone; and live chatting and video calling among iPhone users are free via Wi-Fi or their data network. Based on the respondent profile, iPhone users stand as the second largest group of respondents, which is slightly below Samsung users. On top of that, local telecommunication service providers are selling smartphones at cheaper prices by taking up monthly subscription plans which include the data plan (Euromonitor, 2011). This makes it more affordable for more users to own a smartphone that comes with a data plan which allows access to the internet, thus enabling the user to stay connected with the important people in their lives. As what Dresler-Hawke and Mansvelt (2008) suggested, the mobile phone has become an important thing in the lives of youths today, as a necessary part of social communication which allows them to communicate through updating their social networks. Through social websites, live updates of status or information of friends or events or even emails is just within a click away, accessible whenever you want. Most importantly, all these functions are free via smartphone through Wi-Fi or their current data plan. Many users nowadays use social websites, especially Facebook or twitter, to inform their peers or affiliates about happenings, events or even meetings and discussions. This creates the need for consumers to keep up-to-date via these social websites, especially when they are on the go with their smartphone. As what Wei (2008) suggested, mobile phones have gone beyond voice.

The results of this study also showed that the hypothesis H_3– social influence has a positive relationship with dependency on smartphone usages – was significant. As stated earlier, social influence was defined by Weber and Villebonne (2002) as a cultural environment that can influence one's behavior as well as influence the reasons why and how people live. Lu and Wang (2008) further expanded the concept of social influence to include its impact on the user's perception and behavior through two distinct constructs, i.e. the subjective norms and descriptive norms. Past researchers described subjective norms as the social pressures to perform or not to perform a specific behavior when an individual is faced with decisions to behave in a certain way (Fishbein & Ajzen, 1975; Lu & Wang, 2008; Bearden, Metemeyer, & Teel, 1989; Pookulangara & Koesler, 2011). In relation to this, Fishbein and Ajzen (1975) further explained that the perceived pressure to perform a given behavior is related to the expectations of a person's family, friends, or the society at large. In our study, the subjective norm is one of the dimensions of social influence. Therefore, our finding is partially in line with Ting et al. (2011) on their finding on social influence as a single dimension construct that leads to dependency.

This result suggested that pressure from friends and family would influence the dependency on smartphone. Peer pressure is one of the most influential pressures, especially on youth towards their behavior (Perrine and Aloise-Young, 2004). The pressure of the society indeed had great impact on our respondents to own and be dependent on smartphones, even for those with a low monthly salary. Yang and Jolly (2009) discussed that people in Asian countries are more susceptible towards a collective type of culture whereas Europeans are more individualistic in nature. As such, it stands to reason that Asians are more influenced by their social surroundings. This conforms to this study's finding, where social pressures are viewed as factors that lead to the smartphone dependency, particularly when they are greatly pressured by friends and family to own a smartphone to stay connected. Since the majority of smartphones today have built-in social applications and messaging applications, for example iPhone and Blackberry both have free messaging service among the similar phone brand, pressure from friends and family were likely to influence one's decision to own a similar smartphone that would allow for cheaper connectivity among each other.

As for hypotheses H_1, the relationship between convenience and dependency, it was rejected. This implies that time utilization does not have a positive relationship with dependency on smartphone usage. This is in contradiction with research findings by Ting et al. (2011) where they found that convenience does lead to dependency on smartphone usage. They suggested that consumer demand for convenience is higher due to time scarcity. However, they conceptualized convenience as a single dimension construct. Time utilization in this study context is referred to as being practical and effective of use of the smartphone that help save time. Harvel (2006) and Berry et al. (2002) both suggested convenience was related to time issues. Indeed smartphones that do come with ample applications provide great convenience and can assist its users in undertaking their daily tasks quickly. This study's rejected hypothesis was explained by Karimuddin (2012) in that he revealed that a study done by Nielsen Telecom Industry Group showed that location based service of smartphone utilization do exist in mature markets such as in Korea, Japan and Singapore, while growing markets such as Indonesia and Malaysia, its usage are more focused on social media and search applications.

6.2 The Outcome of Dependency - Purchase Behavior (Continuous Purchase)

The results stated in Table 6 showed that hypotheses H4 was significant at p<0.01. Therefore, the hypotheses of dependency of consumer on smartphone have a positive relationship with their purchase behavior was accepted. This means dependency on smartphone would lead to consumer purchase behavior. This study's finding is in line with previous research findings by Ting et al. (2011). Purchase behavior in this study refers to as repeat purchase or future repurchase of smartphone. The result of our study is also in line with research findings by Alcaniz *et al.* (2008), which reported a significant relationship of online information dependency to future online purchase intention. This showed that since consumers were dependent on a product, it would be unlikely for them to switch and thus remain loyal and continue usage of the product that they have; particularly since they have already adapted and are familiar with it. Kuhlmeier and Knight (2003) showed that the past positive experience of consumers will lead to future purchase behavior. This supports the findings of our study that consumers will show dependency towards a product that they were satisfied with their usage and to which they had adapted a routine or habit towards the product that they were using; thus leading to future purchase behavior. For example a consumer that uses a social network account through their smartphone application will be unlikely to change to a "normal" mobile phone as they had been using and depending on smartphone as a means of connectivity with their existing mobile application account all this while. Patwardhan and Yang (2003) and Mafe and Blas (2006) also showed a significant relationship of internet dependency on future online purchase behavior. Ball-Rokeach (1985) reported that purchases of product were intensified when individual dependency is high. The user's dependency towards a media like internet, television or smartphone in the long run creates a confidence and

satisfaction within the consumer towards the product through dependency. It would then lead to future purchase behavior based on their past experience with the product that gives them the confidence and satisfaction.

6.3 Conclusion

Since there is a growing trend of smartphone usage in Malaysia, the smartphone industry is also growing in its importance and viewed as a profiting industry in the country. It is clear that the newer models of mobile phones available in the market today offers more than just call-and-text features, but also includes various useful features such as photo taking, voice recording, file organizing and the like, thus making them popular to own amongst the everyday consumers. As a result of its growing popularity, it is important for academicians and marketers to understand the underlying causes and outcomes behind this smartphone dependency phenomenon in order to understand consumer behavior. It is particularly important for marketers to understand customers' dependency to smartphone usage in order to sustain sales of smartphones and its share in the market. This study was undertaken to understand the important factors that can influence dependency on smartphone usage and on the expected outcome of the dependency to purchasing behavior. This was done through the Theory of Uses and Gratification, which was used to justify and explain factors that motivate people's dependency on smartphone, and the Theory of Media Dependency, which was used to explain dependency and purchasing behavior.

Based on the gratification theory, the motivation of use of smartphones was proposed to cause dependency on smartphone. With that, the antecedents of smartphone dependency were proposed to be entertainment, social needs, social influence and convenience. The outcome of the smartphone dependency was proposed to be a consumer purchase behavior. This is in line with Karimuddin's (2012) statement that the Malaysian market for smartphone was in its growing stage and thus, consumers' use of smartphones are still mainly for social connectivity and search purposes. Whereas, Loh (2011) suggested that people in Malaysia still prefer to use their laptop or personal computer. As suggested by Alcaniz et al. (2008), when the benefit of smartphone was greatly perceived and valued, dependency on smartphone would definitely increase. It is predicted that in the future, as the market matures, there will be more reason for consumers to be dependent on smartphone usage which in turn leads to future purchase behavior. Since the smartphone is still a growing trend and Malaysia is a growing market for the smartphone industry, it is beneficial to understand the different cultural needs on mobile phone usage as it could help local marketers of smartphones to promote, advertise and sell their product within the area.

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Free Flying and China Dream

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Abstract

This paper reviews the development of general aviation and aviation culture, discusses the connotation and spiritual features of aviation culture, and puts forward the idea that free flying aviation culture can promote the free and comprehensive development of human beings. Through the presentation the national aviation culture craze in the United States, and investigation of the overall progress of low-altitude airspace management reform and the enforcement of people's aviation consciousness in China, the paper proposed that "Flying Dream" is the very reflection of "China Dream" in essence, and. It is concluded that to develop general aviation in China is a realistic demand of social progress and comprehensive development of human beings.

Keyword: aviation culture, china dream, free flying

1. General Aviation and Aviation Culture

Since ancient times, human beings created different mythologies about flying, like Chang'e a fairy lady who can fly to the moon and lives there in ancient Chinese myth, or Prometheus in Greek myth who can fly to steal the fire for humans, which are the very reflection of human beings' longing and imagination of flying. And the effort to realize the flying dream has never quitted. Our ancestors tried various methods to get closer to the dream of flying like free birds, from kite to wooden bird, from hot-air balloon to airship, and from glider to aircraft.

In 1903, with the birth of the first powered aircraft made by the Wright Brothers in the United States, Man entered the era of aviation. Aviation began to play more and more important role in people's life. However, general aviation is the most widely applied aviation. American scholar John J. Sheehan classifies all air operations as three types - commercial aviation, air operation and general aviation. General aviation also known as GA is further defined as aviation operation except commercial aviation and air operation, including private flight, business flight, and training flight, etc (Sheehan, 2006).

In the United States and some other countries, with the advent of aviation activities, the general aviation is booming vigorously. People can fly a small aircraft for travel, which has become an effective means of transportation and a kind of leading life fashion for them. At the same time, aviation culture has gradually grown to be an important part of social culture in Western countries. In some aviation superpowers, the general aircraft operated by individuals takes up a large portion of aircraft operation activities.

In China, though individual flight is just emerging in recent years but which has shown a new cultural vitality in itself and is becoming a kind of social trend and development orientation.

2. Aviation Culture and the Free and Comprehensive Development of Human Beings

2.1 Free Spirit Is the Core of Aviation Culture

British anthropologist Taylor defines culture as a "…complex whole which includes belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society" (Taylor, 1992). Aviation culture is the sum of the spiritual cultures generated in the aviation practices, with focus on the free flying which is the core of value, behavior, social atmosphere and other culture elements, and the results of interactions between these elements.

The spirit feature of aviation culture as its most key core is the free spirit. The pursuit of free flying and the longing for free life is the eternal pursuit of human beings. Because the yearning for freedom lies in the deep root

of human nature, so people ride on horse, develop carriage and car for faster travel instead of totally relying on walking. Faster to get to other places helps people to explore many other places and leaves them more time to think and create. If we say the on-ground vehicles expanded people's activity scope in horizontal direction, then going up to the sky, flying did that in lateral direction. With flying, not only the traveling speed fastened, range widened, but also things they can see and experience are enriched. Behind these inventions lies the heart to free himself from physical and spiritual constraints around him.

Most inventions in human history are the products of human's searching for freedom. Therefore, we can say freedom is the source of innovation as well as the fundamental force of social progress. "Wherever there are any free personalities, there are any independent progress centers." (Mill, 1982) Freedom is the core value of the western culture, which obviously plays as the cultural root for rapid development of general aviation in western countries.

Meanwhile, freedom is also the core value of scientific socialism. In the Report of the Eighteenth National Congress of the Communist Party of China, it is stated that "we should promote prosperity, democracy, civility, and harmony, uphold freedom, equality, justice and the rule of law and advocate patriotism, dedication, integrity, and friendship, so as to cultivate and observe core socialist values." (Hu, 2012) Spirit of freedom has always been the significant value advocated by Chinese Society.

2.2 Aviation Culture Promoting Free and Comprehensive Development of Human Beings

Karl Marx advanced the theory of man free comprehensive development, took the "free development of each human" as the purpose of human development, "the free self-development of each would be the condition of the free self-development of all." (Marx & Engels, 1974)

The future society is "a social form based on the basic principle of everyone's complete and free development." (Marx & Engels, 1995)

Friedrich Engels emphasizes the cause of culture making human free, "each progress in culture is a step toward freedom." (Marx, 1975)

The author believes that free flying spirit of general aviation can promote the free and comprehensive development of human being. Flying generates great influence in people's life. Travel at high speed brings great convenience for humans as well as the liberation of spirit at the same time. On the one hand, free flight help to facilitate the development of human activities, needs and abilities; and on the other hand, free flight can break previous restriction on human social relations caused by geographical natural environment, enriching people's social relations, which in return helps people to reach an all-round and free development of their personalities and capabilities, and to use their talents to the maximum, and which in the end will essentially promotes mankind's free and comprehensive development.

Human modernization is the kernel of Chinese traditional culture's modernization transition. Social modernization ultimately points to the comprehensive development of human, and man modernization is the final purpose and destiny of social modernization. American sociologist Alex Inkeles once described that a nation, only when its citizens have transited to modern man both psychologically and behaviorally, then can be called a modern nation (Inkeles, 1985). Due to aviation activity's modern feature and its influence on people's behavior and attitude towards life, general aviation plays a positive role in the modernization transition of Chinese traditional culture and becomes a powerful driving force of human modernization at the same time. Therefore, generally speaking, to develop general aviation culture will become a very effective way to facilitate the modernization transition of Chinese traditional culture and human beings, which will eventually promotes the free and comprehensive development of human being.

3. Aviation Culture Craze in the United States

Marx Webb points out: "Behind any cause exists some spirit power deciding the development direction and fate of the cause." (Weber, 1987) American aviation culture value overwhelmingly highlights the social philosophy of democracy, freedom, and fairness.

In America, flying is a kind of life attitude and life style, and which also gradually evolved to be a kind of social culture. Based on statistics we have by now, there are nearly 230,000 general aviation aircrafts, 700,000 pilots in the United States, and approximately 20,000 general aviation airports as well. There is also a program organized by EAA (Experimental Aircraft Association) in America, the Yong Eagles program. In this program, the members of EAA are encouraged to volunteer in taking millions of children aged from 8 to 18 to fly in the sky, with the aim of taking them to experience the fun of flying and to inspire their passion for aviation (Xu, 2000).

As mentioning American modern transportation vehicle which usually refers to two types, one is car, the other is plane. The Americans advocate freedom, encourage innovation. They enjoy the loose social environment and the sound service system at the same time, own the world's leading Air and Space Museums and the ubiquitous aviation cultural atmosphere, and have developed a kind of craze about aviation across the whole country. For them, designing aircraft, assembling aircraft, collecting airplanes, flying an airplane is an America fashion that has lasted for a century.

According to statistics, there are about 600 fly-in communities and airparks spread across the United States so far. Each family owns an aircraft and everyone lives here loves flying (Yan, 2008). No matter what kind of career they have and no matter how old they are, they choose to live in fly-in communities just because their passion for flying. They can fly to work, to shop, to go sight-seeing, to meet friends, and etc. They enjoyed the free-to-go freedom without wasting time on booking tickets, waiting in the departure hall. Besides the freedom and highly effectiveness they have, sometimes they just enjoy the leisure time of fiddling with their aircrafts in the hanger, listening to the lyric-like thundering of aircraft engines. That's the deep-rooted passion and love for aviation which has penetrated to the blood and neurons of this nation. As is known to all, that American national aviation culture craze is the foundation for America growing to be the aviation power in the world.

4. The Demand of General Aviation Development in China

4.1 Low-Altitude Airspace Management Reform

Research shows that, when GDP of average per capita reaches more than $4,000, there will be a breakthrough in the development of general aviation, and private aircraft will be affordable for most families. After the American per capita GDP reached $4,000 in 1968, the general aviation industry witnessed an explosive growth in its development.

In 2010, China per capita GDP was about US$4,361, which had achieved the economic level of general aviation rapid development. But based on the simplified comparison of GA data in Table 1, it is obvious to notice the huge gap general aircraft status between China and America.

Table 1. GA data comparison between the U.S. and China

Data/Country	U.S.	China
GA airports	19,729	300
GA aircrafts	209,034	3,857
Pilots	552,656	5,881
FBO	3000+	5-6
Flight hours	25m	5.17m

* GAMA2013 General Aviation Statistical Databook & 2014 Industry Outlook.

The significant impetus of general aviation for the social and economic development is crystal clear, for this reason the Chinese government has taken the general aviation development into the Twelfth Five-year Plan.

In September 2010, the Chinese government launched "On Deepening Reform of Low Altitude Airspace Management" to make the arrangement for the opening of airspace; about ten cities in China will be the first pilot places enjoying the initial opening of low-altitude airspace. Since then, the authority gradually issued several policies to facilitate the development of general aviation in China. In Oct 2014, the newly issued "The Regulation about Using and Managing Low-altitude Airspace" demonstrates government's determination to develop general aviation industry in China, and opens up a new prospect for it.

Within the strategic planning of CAAC, it is proposed that by 2020, general aviation will reach scale development level; total flying hours will get to 2 million hours with a 19% annual growth rate. Meanwhile, most GA companies are taking continuous effort to build up their ability in GA aircraft design, manufacture, to establish the sales and after-sales service center, to nurture GA market in China. Inspired by these favorable policies and positive measures taken by government, and the effort from GA companies, insiders all believe the future of general aircraft industry will be promising, and the smooth development of GA industry will be in the interest of the progress of Chinese society and well-being of the people.

4.2 A Questionnaire

In August 2013, the author carried out a questionnaire survey on the longing for flying and private aircraft market demand in Guangdong China. Guangdong is an economically developed province in China, the frontier zone of the reform and opening up, and also the hometown of Feng Ru the first aircraft designer, manufacturer and aviator in China. The survey respondents were young entrepreneurs, high income people and aviation enthusiasts from Guangdong province. The total of 147 copies of questionnaires was issued, with 117 feedbacks and 81 valid ones. According to the survey results, 66 persons have clear intention of getting a private flying license, accounts for 45%; and 80 persons dreamed of having a private aircraft themselves, which is about 54%. There is also certain part of people take a wait-and-see attitude toward the popularity of private aircraft in China.

It is not difficult to notice from the survey that even though personal flying has a late entry in China, the dream of flying is inborn with the high-income population. The questionnaire results foretell that along with the all-round development of Chinese economic society, especially after the issue and implementation of the reform of the airspace control system, the emergence of a large number of private aircraft will be possible and Chinese flying dream will be realized.

5. China Dream and Flying Dream Deadline

In March 2013, Mr. Xi Jinping, the newly elected China's President, once interpreted Chinese dream by saying: "The Chinese people living in our great motherland and the great age shall all enjoy the opportunities of their brilliant life, enjoy a chance to have their dreams come true, enjoy the chance of growth and progress with China and the era." (Xi, 2013)

China aviation industry believes that "Flying Dream" is one of the embodiments of "China Dream". Therefore, only when general aviation is grounded and become popular in China and the free flying dreams come true, can the dreams of China becoming an aviation superpower and the great rejuvenation of the Chinese nation be truly realized.

In recent years, the Chinese Government has issued a series of plans and policies, a lot of capital is flowing into general aviation industry, small aircraft manufacturers are appearing constantly, flight training schools are springing up like mushrooms, and there are regional aviation exhibitions and air shows every month, from which we can tell that private flight is beginning to enter the Chinese people's life. It is predicted that in 2020, the number of general aircraft in China will be increased from two thousand now to more than 10,000 aircrafts and general aviation culture will quickly gain popularity in China.

6. Conclusion

Culture is a reflection of social existence as well as the condensation of lifestyle. The free flying spirit of aviation culture promotes the development and prosperity of our society. With the advance of economic development and reform, the spring of rapid China general aviation development is around the corner. The government is accelerating low-altitude airspace reform, establishing facilities and infrastructures, providing policy support and forming service awareness. In addition, Chinese people are increasingly to have better conscious of aviation and deeper yearning for flying. Along with the growing social atmosphere and value of aviation, these favorable factors just mentioned will definitely together lead the development of general aviation to prosperity in China. Aviation culture of free flying can satisfy the people's needs, change people's life, and promote the free and comprehensive development of human beings.

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The Impact of the Users' Seek Values on Consumer Intention to Use SST in Multiple Service Industries in Saudi Arabia

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Abstract

This study investigated the effect of users' seek values on consumer intention to use SST in multiple service industries in Saudi Arabia. The sample consists of 400 sample units where data is gathered with the help of a questionnaire. The study employed regression analysis to examine the independent variables-dependent variables relationship. Moreover, the outcome of the study revealed that a positive and significant association is present between user's seek values and consumer intention to use SST. The research provides limitations and suggestions for future research before the study is concluded.

Keywords: users' seek values, consumer intention to use SST and service industries in Saudi Arabia

1. Introduction

Over the past decade, self-service technologies have increasingly come to the fore and as a consequence, technology-based interactions are predicted to become an important element for the successful service delivery in the service industry of retailing and hospitality (Meuter et al., 2000) in the near future. It is not surprising that tourism and technology are two of the top fastest growing industries around the globe (Sheldon, 1997). Added to this, self-service technology is predicted to become a part of our day to day lives as service providers all around the world continue their efforts to search for ways to lower their costs but at the same time heighten their service quality for market competitiveness.

In the past decades, firms have significantly maximized their investment in information technology (Ndubisi, 2005) and thus, in the context of retail banks, in order to satisfy various customer needs and obtain competitive edge, they have invested quite a significant amount in IT. This is evidenced by the fact that Global Information Technology (IT) spending by financial entities was reported to reach US$351.2 billion in 2008 alone, with a predicted growth rate of 5.1%.

In the current dynamic era, technologically-based service concept, customers provide themselves with service through technology with the help of an employee of the service provider or without it (Meuter, Ostrom, Roundtree & Bitner, 2000; Reda, 2000; Henderson, 2001). The commonly used self-service technologies in the current times include; telephone-based technologies and interactive voice response systems, direct online connections and Internet-based interfaces, interactive freestanding kiosks, and video/CD technologies (Bitner, Ostrom, & Meuter, 2002). Specifically, these technologies throughout service industries include vending machines, ATMs, e-kiosks for baggage check-in or boarding pass at the airports, room check out at hotels, e-blood pressure checking devices, automated car rental technologies, touch-free e-care washers, automated telephone services, self-checkout systems in retail stores, e-self-ordering systems in restaurants (fast food) and service computers having Internet connections at the airports (Kotler, 2000; Meuter, Ostrom, Roundtree, & Bitner, 2000; Carlin, 2002; Harler, 2002; Wright, 2002).

Strategically, the deployment of sophisticated self-service technologies in service encounters is expected to increase consumer satisfaction through improved service quality (Bitner, Brown, & Meuter, 2000; Parasuraman & Grewal, 2000) while cutting costs at the same time (Weijters, Rangarajan, Falk, & Schillewaert, 2007). Self-service technologies enable retailers the standardization of their consumer interaction, which leads to a

steady service atmosphere that is devoid of employee personality and mood (Hsieh, Yen, & Chin, 2004). This type of technology also enables consumers to be productive and involved in the delivery of service, which allows retailers' handling of demand fluctuations without having to deal with costly employee levels adjustment (Curran, Meuter, & Surprenant, 2003).

Among the many self-service technologies, e-banking is considered to be one of the most successful consumer applications in e-commerce (Pousttchi & Schurig, 2004). Initially, research on self-service technologies focused on the consumers' attitudes regarding ATM (Rugimbana & Iversen, 1994; Rugimbana, 1995; Davies et al., 1996; Filotto et al., 1997; Moutinho & Smith, 2000). Current studies have embarked on an analysis of the telephone banking development (Lockett & Littler, 1997; Al-Ashban & Burney, 2001) and personal computer (PC) banking (Mols, 1998). However, recently, research on e-banking has concentrated on Internet banking (Polatoglu & Ekin, 2001; Black et al., 2002; Karjaluoto, 2002; Mattila et al., 2003; Gerrard & Cunningham, 2003) including the multiple service transaction option through the Internet.

As elaborated in the previous section, despite the advent of these innovative self-service technology that was designed to enhance lifestyles and facilitate the accomplishment of the consumer daily activities, consumer acceptance and their actual adoption of self-service technologies has been viewed to be lagging and less that it should and more importantly, the number of consumers using these services has not increased to the degree expected (Flavian et al., 2004). This is exemplified by the case of the United States of America where millions are not using the e-banking technologies, nor do they expected to do so in the near future (Kolodinsky & Hogarth, 2001; Wang, Lin, & Tang, 2003). In this context, Anguelov, Hilgert, & Hogarth (2004) stated that less than 25% of households were engaged in some form of e-banking activities, which is a form of self-service technologies. This suggests that nearly 75% of households were still using some form of in-person banking as many of these households expressed their lack of trust for using online banking transactions and preferring face-to-face dealings with bank employees in their working places.

The self-service technology literature lacks theory to guide empirical work (Wheeler, 2002). Hence, it is important that research is carried out in this subject as the findings would offer an insight on the factors that influence consumers' resistance to self-service technology adoption in various service industries. Therefore, to respond to these challenges, there is a need for an empirically relevant but also theoretically rigorous framework. Specifically speaking, majority of studies on consumer technology adoption have made use of the Technology Acceptance Model (TAM) for their theoretical framework (Davis & Venkatesh, 2000; Gefen, Karahanna, & Straub, 2003; Monsuwe, Dellaert, & Ruyter, 2004; Ramayah & Lo, 2007; Lee, 2010). However, TAM has no construct, which represents an overall estimation of the adoption object (Kim, Chan, & Gupta, 2007). The model only explains adoption behavior with two factors namely ease of use and usefulness. Thus, there have been calls by researchers to expand the theoretical framework of SST studies to include other theories that could provide deeper understanding of the factors that influence SST adoption among consumers (Kim et al., 2007). This study attempts to respond to such calls by grounding the study on a recent theoretical framework based on the values consumers associate when making decisions to adopt SST. This theoretical framework is grounded on consumer perceived value.

2. Literature Review and Hypotheses Development

2.1 Users' Seek Values and Consumer Intention to Use SST

It has been argued that users' seek values influence their intention to use SST (Auh et al., 2007) and at the same time consumers' intention to use SST influences their SST adoption (Karahanna, Straub, & Chervany, 1999; Korzaan, 2003). Taking into account these links that are supported by the literature, it could be argued that a possible mediating relationship could exist in the relationship concerning users seek values and their SST adoption. This influence is done due to the mediating impact of consumers intention to use SST on the relationship between users seek values and their SST adoption. Consumer motivation to use the SST constitutes as the final motive whether or not to opt for self-service. This is known as values or needs expected from the customer of the particular self-service options. Despite of the differences in individual preferences specifically in the customers' needs and wants, there are some common needs and wants among them (Van Hagen, 2006). The most important desired outcomes of bank customers when determining the differences in customer value perceptions between Internet and mobile banking are efficiency and convenience (Laukkanen, 2007). There are various 'values' sought by the consumers in adopting the SST such as 24/7 service availability, location free access and service access speed that reflect solid attributes of e-channels.

Time savings and easy-to-use concepts represent the advantages or consequences derived from the use situation. Finally, concepts like convenience, security and privacy represent more abstract desired end-states of consumers.

These concepts should be treated as different level constructs that are linked to each other hierarchically. In the view of consumer value perceptions, value can be developed on various levels of abstractions and can stem from different factors (Laukkanen, 2006). Consequently, it is pertinent that the customers' desired end-states in the consumption of self-service technology services that link the products/services consumption and individual's personal values are investigated (Huber et al., 2001).

There is a prevailing value that the self-service facilities must be accomplished before the user evaluates the next list of values or attributes offered by the service provider. Völlink et al. (2002) claimed that potential adopters are interested only in the perceived benefits of an innovation. Adopters prefer to focus on improving the perceived benefits to increase the possibility of adoption (Plouffe, Vandenbosch, & Hulland, 2001). Customers will evaluate the intervention on the basis of other attributes only when they perceived that the benefits gained are sufficiently high. When the benefits are perceived as unimportant, the evaluation process is stopped. As a result, we believe that there is a prevailing end value that determines the adoption of SST.

We argue that the decision making in the SST adoption is a stepwise process in which prevailing seek value is a cognitive indices or beliefs and is reflected in the attitude displayed towards the innovation as stated by Rosenberg and Hovland (1960) and Le Bon and Merunka (1998). Hence, the reason behind the establishment of SST is to comply with consumers' expectations and these could be time/cost savings, convenience or even autonomy (Bitner, Ostrom, & Meuter, 2002). SSTs success is also attributed to the benefits they provide such as time and monetary savings, easy to use, and availability, and these benefits also vary based on the type of consumer (Zeithaml et al., 2006; Meuter et al., 2000).

Consumers choose to use self-service technology for a variety of reasons that benefit them. Among the many advantages are time and cost savings, higher control over the delivery of service, minimized waiting time, greater perceived level of customization (Meuter & Bitner 1998), location convenience (Kauffman & Lally 1994), experienced fun/enjoyment from technology use (Dabholkar, 1994, 1996), along with efficiency, spontaneous delight and versatility (Bitner, Brown,, & Meuter, 2000). In addition, customers may find the technology-based options attractive for many reasons; they are easy to use, they are convenient compared to other options, they allow avoidance of contract with employee of service providers (Meuter et al. 2000).

Self-service technologies can provide consumers greater convenience, accessibility, and ease of use. Convenience include: business available 24 hours a day, seven days a week. SST often empowers the consumer to use the technology as they have control over the service interaction and are not confined by time or pressured. Co-production also benefit customer in several ways including: reasonable prices, greater opportunities for options, greater discretion concerning the final product configuration, minimal waiting times, and a higher potential for customization (Auh et al., 2007). Based on this argument, this study hypothesize that users seek values influence the consumer behavior intention to use SST. Therefore, the hypothesis proposed is:

Hypothesis: There is a positive relationship between Users seek values and consumers' intention to use SST.

3. Research Method and the Study Model

A research design refers to the research structure that presents the measures, samples, methods of data collection, and analysis of work and it explains the main research questions. The present study goes about achieving the research aims via descriptive correlational study method where the effect of users' seek values on consumer intention towards using SST are identified among several industries in Saudi Arabia. The researcher develops the methodological basis of the study by utilizing the factors that affect users' seek values and consumer intention to use SST in various industries in Saudi Arabia.

In research methods, the quantitative approach is described as a systematic empirical study of the quantitative properties and the phenomenon under study, as well as the linkage between them. It involves the use of numerical measures and is appropriate for empirical studies are developed to test hypotheses. Added to this, a quantitative study is conducted to create and use mathematical models, theories, and hypotheses concerning the phenomenon under study. The measurement process is the basic element in a quantitative study as it highlights the relationship between empirical observation and the mathematical equation of quantified relationships.

In addition, sampling is referred to as a process of unit selection – that is, the selection of individuals or organisations from the general population and the investigation of the sample allows the researcher to conduct a generalisation to the population at large. In this regard, a sample refers to a selected group of people that is deemed to be a part of the study. It is the use of a subset of population to represent the population at large. Literature highlights many sampling methods and the two major ones are non-probability and probability type of sampling. The sampling type chosen should be aligned to the study in order to ensure that the sample reflects the

perception of the whole population for generalisation purposes to different periods and circumstances.

In this regard, non-probability sampling refers to a method of sampling wherein a few individuals have the probability to be chosen whereas the probability sampling refers to one where all individuals have equal probability to be chosen and included in the sample. The present study makes use of the probability sampling as the non-probability one is not suitable and practical to be utilized in the study.
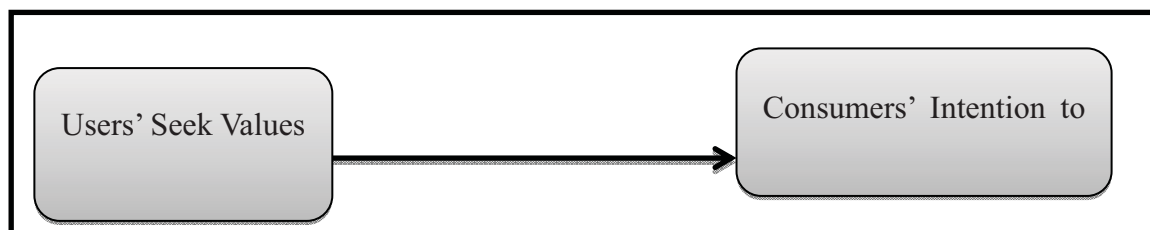

Figure 1. Research framework

3.1 Measurements of Instruments

User's seek values are gauged via convenience and accessibility as gauged by Wolfinbarger and Gilly (2001), time saving, effort saving, flexibility, cost saving, greater control, minimized waiting time, heightened customization, suitable location, enjoyment, efficiency, flexibility, ease of use, 24/7 service, devoid of pressure and with privacy protection. Additionally, behavioural intention to use SST refers to the intention to use the facilities of SST. The above items are obtained from prior studies (i.e. Dabholkar, 1996; Dabholkar & Bagozzi, 2002).

4. Data Analysis and Results

Data collected is analysed with the help of IBM SPSS to provide data description and to test the proposed hypotheses.

4.1 Descriptive Statistic

The descriptive statistics results of continuous variables obtained through SPSS, version 21, are presented in Table 1 – they include mean, standard deviation, minimum and maximum.

Table 1. Descriptive statistics of continuous variables

Variables	Mean	Std. Deviation	Min	Max
USV	3.819	0.5252	1.62	5.00
CIUS	3.941	0.6640	1.00	5.00

4.2 Testing the Normality of the Error Terms

Normality forms the symmetrical curve that has the highest frequency of scores lying in the small and medium frequencies' extremes (Pallant, 2011). Normal scores distribution according to Kline (1998) and Pallant (2011), can be examined for the independent and dependent variables by obtaining their values of skewness and kurtosis. In the field of social science, the constructs nature possesses various scales and measures that may have positive or negative skewed distribution (Pallant, 2011). Meanwhile, kurtosis refers to the measurement score of the distribution that shows the level to which observations are gathered around the central mean.

As for the values of skewness, acceptable values fall between +3 and -3 (Kline, 1998) and based on this criteria majority of the obtained skewness variables are acceptable. Similarly, kurtosis values ranging from +3 and -3 are also met as recommended by Coakes and Steed (2003). However, some values of skewness showed a deviation from normal distribution and the researcher addressed them for relationship testing through SPSS as suggested by Chin (1998).

Table 2. Results of skweness and kurtusis for normality test

Variable	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
USV	-0.981	0.122	1.653	.243
CIUS	-0.911	0.122	1.993	.243

4.3 Correlation Analysis

The correlation analysis results are displayed in Table 2, where it is evident that the entire correlations are less than 0.80. This result satisfies the suggestion proposed by Gujarati and Porter (2009). They stated that the correlation matrix should be less than 0.80 in order to make sure of the non-existence of multicollinearity.

Table 3. Results of Pearson Correlation Analysis

	1	**2**
1) USV		
2) CIUS	0.543[***]	

Notes:

∗∗∗ Correlation is significant at the 0.01 level (2- tailed).

∗∗ Correlation is significant at the 0.05 level (2- tailed).

∗ Correlation is significant at the 0.1 level (2- tailed).

4.4 Regression Results of Model (Based on Consumers' Intention to Use SST)

Table 4. Regression Results of Model (Dependent Consumers' Intention to Use SST)

Variables	Standardized Coefficients Beta	t-value	Sig.
USV	0.543	12.914	0.000
R^2			0.295
Adjusted R^2			0.294
F-value			166.781
F-Significant			0.000
Durbin-Watson			1.899

As for the regression analysis results obtained from user's seek values, they are contained in Table 4. It is evident from the table that the value of R^2 is 0.295, indicating that the model explains 29% of the variance in user's seek values - a respectable result. The value of the ... also shows that the independent variables are capable of explaining 29% of the dependent variable's variance. Aside from this, the F value was significant at (F=166.781, p<0.01), supporting the model validity. The researcher also made use of the Durbin-Watson (DW) test to determine autocorrelation. In this regard, the value of the test statistics varies from 0-4.0 as laid down by Reinard (2006) and Kazmier (1996). To this end, a statistical value that is less than 1.4 indicates the existence of a significant positive correlation series, and one that is greater than 2.6 indicates the existence of significant

negative correlation series (Kazmier, 1996). According to the rule of thumb of the DW test, values that fall in the range of 1.5 to 2.5 are deemed acceptable. Table 4 shows the DW value to be 1.899 – a value that falls within the above mentioned range, and as such, it confirms the independence of observations.

5. Discussion of Results

5.1 Users Seek Values and Consumers' Intention to Use SST

Based on empirical and theoretical evidence, this study proposed a positive relationship between users seek values and consumers' intention to use SST. In this regard, the study found a positive and significant association between users seek values and consumers' intention to use SST. Therefore, this finding supports the hypothesis.

This study is similar with previous studies that found a significant relationship between users seek values and consumers' intention to use SST such as, Meuter and Bitner (1998), Kauffman and Lally (1994), Dabholkar (1994, 1996) and Bitner, Brown, and Meuter (2000). Also, customers may be more inclined towards technology-based options based on the fact that they are easy to use, and are convenient in comparison to other alternatives, and they steer clear of contact with the employees of the service providers (Meuter et al., 2000).

6. Conclusion

The present study explored the crucial relationship between user's seek values and consumer intention to use SST in different Saudi service industries. It makes use of questionnaire to gather data from a sample comprising of 400 respondents. This study also employed SPSS tool to examine the relationship between user's seek values and consumer's intention towards using SST including descriptive statistics, normality of error terms, regression test, among others. The study result revealed that user's seek values positively and significantly affected consumer intention towards SST use. The study provided some limitations and recommendations for future works.

7. Limitations and Suggestions for Future Research

This study examined the relationship between user's seek values and consumer intention towards SST use in various Saudi service industries. Future works are recommended to examine this relation further in other sectors. The present study is also confined to Saudi Arabia and as such, future researchers can replicate this relationship in the context of other nations (e.g. Oman, Qatar, Bahrain etc.). This study examined the user's seek values-consumer intention towards SST use relationship and in regards to this, future works could explore this relation via a third variable (e.g. demographic characteristics, personality traits, etc.).

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The Impact of Perceived Risks and Perceived Benefits to Improve an Online Intention among Generation-Y in Malaysia

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Abstract

This study examines the role of perceived risk and perceived benefit in improving the online intention among Generation-Y in Malaysia. The purpose of this study is to identify the valid measure of perceived risk and perceived benefit as the result with, associated with online intention among Gen-Y in Malaysia. In addition, this research proposes a new research framework on online intention by referring to numerous antecedent literatures of online intention. The conceptualization of consumer perceived risk and perceived benefits of this study provides empirical evidence in the study of online intention. Four types of risk, such as delivery risk, privacy risk, quality risk and time risk and four types of benefit such as shopping convenience, product selection, ease of shopping and shopping enjoyment were used to examine their impact toward online intention. In this study, a total of 200 questionnaires is distributed by the researcher which focus specifically on Gen-Y in Malaysia. Pearson Correlation and Multiple Regression analysis are employed in order to test the hypothesis and examine the relationship between the variables. The finding confirmed that all the dimensions of perceived risk and perceived benefit have played an important role in improving the intention of consumers to shop online. All the dimension of perceived risks has a significant negative relationship toward online intention and all the dimension of perceived benefits has a significant positive relationship toward online intention. In fact, this study provides useful assistance for online marketers to develop an effective marketing strategy in targeting Generation-Y consumers at the same time, they can get a broad overview about the risks and benefits of online intention where it leads to increase the involvement of Gen-Y in online shopping.

Keywords: perceived risk, perceived benefit, shopping convenience, product selection, ease of shopping and shopping enjoyment

1. Introduction

The Internet has become more well-known nowadays as the fast-paced growth of technology (Jamali et al., 2015; Tee et al., 2014). As the Internet has developed, people can use the Internet for any purposes. It is not only going to be used as a tool to do a networking medium, but also a transaction medium at a global market (Jamali et al., 2014; Yulihasri, Islam, & Ku Daud, 2011). E-commerce gives advantages and chances for businesses to develop their businesses in the other part of the world and connect people in a borderless world. Consumers can do online shopping from anywhere at any time now since everything is at their fingertips. In fact, the development of the Internet has improved the popularity of online shopping. According to Ueno (2014), a report from JPMorgan in 2011, it was stated that in the year 2012 the total world revenue of e-commerce was approximately US$963 billion whereby in Malaysia itself the growth of online shopping market in 2011 was RM842 million. They also predict that in 2016 the number of growth will even higher and it is going to exceed RM 1.9 billion. This shows there is a fast growth of e-commerce in Malaysia which has grown and expected to reach to an unbelievable growth in the future.

Although there is a significant growth of online shopping in the future, negative aspects and impacts of online shopping have become more related. Consumers are more concerned about their purchase decision. They will automatically think about risk and to which extend it is insecure. As Internet shopping is done through a virtual store, there is no human contact and consumers can't check the quality of a product, sometimes it makes

consumers feel insecure and uncertainty about their purchase decision. They are worried about their pre-purchase experience as they afraid to face the unexpected loss from the purchase and product (Naiyi, 2004). In addition, based on the study done by Forsythe, et al. (2006), they found that the perceived benefit significantly affects the consumers' online intention. Perceived benefits are the results that related to the integration, which are valued by every individual. Wu (2003) said that perceived benefits were the total of online shopping advantages and satisfaction that meet their needs and wants. This is the perception of what customers gain after doing the online transaction.

In Malaysia, online shopping is a new technology breakthrough as it's still at the early stage of development and just started to attack the Malaysia retailing sector with online shopping services (Haque, Sadeghzadeh, & Khatibi, 2006; Tee et al., 2013). In Malaysia, the number of Internet users is high, there are total 20,140,125 Internet users with the total population is 30,073,353. However, although Malaysia has high Internet access rate, only a small percentage of users have purchased online (Haque, Sadeghzadeh, & Khatibi, 2006). According to Malaysian Communication and Multimedia Corporation (MCMC, 2005) as cited in Thaw & Mahmood (2009), only 9.3% of Internet users had made purchases through the Internet. The number of online shoppers has decreased as well in the year of 2002. As compared with the number of Malaysian shoppers shop online in the year of 2001 and 2002, online shopping rate in Malaysia has decreased from 4% in 2001 to only 3% in 2002 (Zulhuda, 2009). Moreover, in 2012, from the total 15 purposes of using the Internet, online shopping was in the 11th position (Malaysian Digital Association, 2012). This shows there is a low percentage of consumers want to shop online.

On top of that National statistic also specified that 81% of consumers that browse the website for goods and services, they actually don't make an online shopping transaction. Malaysia is one of the countries that have high e-commerce fraud rates. It was ranked 7th out of 25 most fraudulent countries (Wong, 2013). Online shoppers feel unsecured with the transaction done over the Internet since nowadays cybercrime cases kept on increasing. Cybercrime activity like fraud can affect online shopping activity where it makes consumers afraid of giving their personal information online.

In addition, buying over the Internet also relates to consumers experiences and satisfaction that they perceive while shopping. Online shoppers can gain benefits as well from doing online shopping. Therefore, it is important to understand consumer perceptions toward online shopping as to improve and increase the online shopping intention in Malaysia. The strong of purchase intention will directly give impact to the purchase decision of the consumers.

2. Literature Review

2.1 Perceived Risk

Even though nowadays the number of online transaction is increasing, many people still hesitate and resist in using online transaction because they find several barriers in using it. According to Bauer (1960), online shopping involved risk since the purchasing action can create poor consequences which they were unconsciously approached to uncertainty. Besides, Bauer believed that perceived risk will give impact to a consumer purchase decision. Dowling & Staelin (1994) stated that perceived risk was about the consumer perception toward the uncertainty of buying a product where it can make consumer become doubt in buying the product and lead for asking suggestion of the consequences of buying it. Stone & Gronhaug (1993) believed that perceived risk is one of the most significant factors that influence consumer purchase intention. Comparing with traditional way of shopping, online shopping perceived to have higher risk. It's able to reduce the willingness of consumers to purchase good or service online (Barnes, 2007). Online shoppers are afraid to suffer losses by the time what they expect is not the same with the reality (Pavlou, 2003). Researchers have identified various risks associated with online intention such as delivery risk, privacy risk, quality risk and time risk. Based on the dimension of perceived risk, researcher proposed the following hypothesis:

H_1: There is a relationship between delivery risk and online intention

Delivery risk is the potential loss of delivery, which related to good lost, damaged and sent the product to the wrong place after customers do online transaction (Zhang, Tan, Xu, & Tan, 2012). It also may include the risk of getting the product with a delay or not even receiving the product at all. The other delivery risk components that make people frightened to do online shopping is because first consumers worry that the firm will deliver the product late or not on time and it will take a long time because of several circumstances. Second is consumers fear that during transporting, the goods will be damaged cause of no proper packaging (Masoud, 2013). As an online retailer, it is important to ensure that the product isn't damaged or expired during the delivery. Then, guarantee an effective and accurate delivery service. If the merchant can provide accurate delivery service to its customer, it leads to increase the confidence level of placing the order and reduce the perceived risks of delivery

(Tsai & Yeh, 2010).

H_2: There is a relationship between privacy risk and online intention

The development of e-commerce has brought the issues and problems especially in privacy. According to George (2002), privacy risk can affect consumers' intention to make purchases over the Internet. Once consumers have faced unfavourable experience, then they might reluctant to purchase online again in the future. According to Featherman& Pavlou (2003), privacy risk is about the potential loss of control over the customer personal data information. Lots of unauthorized people used the information without agreement and lead to misuse the information data.

A study done by Lenhart (2000), he found out that 8% of Internet users left the online world because of privacy and 54% of people have never gone online because they believed that the Internet is dangerous. Online shoppers are worried about the online payment security, reliability and privacy policy because during the payment process, consumers have to provide their personal and credit card information. Thus, privacy risk refers to the degree in which consumer may lose their personal information when doing an e-commerce transaction (Bhatnagar, Misra, & Rao, 2000). In addition, another researcher defined privacy as the degree to which extend online shopping website is safe and protecting the privacy of consumer data (Kyauk & Chaipoopirutana, 2014). Consumer online intention can increase if customers think the online retailer can protect their personal information securely. Hence, online companies that clearly communicate to consumers on how their private and transaction data are secured are more likely to benefit from increased consumer satisfaction (Ab Hamid et al., 2006).

H_3: There is a relationship between quality risk and online intention

In doing online shopping, shoppers rely on the limited information and picture that shown and provided on the website as product can't be touched (Jarvenpaa, Noam , & Lauri, 1999). Quality risk is regarded on the option of the products which are out of order and the design isn't coming-up as what the customer expects. It also talks about the actual quality of the product which doesn't match with the product description. In other word, quality risk occurs when the products don't perform as what shoppers expected and shoppers fail to evaluate the quality of the product (Bhatnagar, Misra, & Rao, 2000). This happens because before purchase the product, consumers have few chances to review the physical product quality.

Quality has become the most important point in consumers mind when making the online purchasing decision. As perceived quality is the most important element in making decision, it makes consumers comparing the quality of the product with the alternatives with regard to price among the same category (Jin & Suh, 2005). In fact, the lower the perceived quality risk of the product, the high possibility of consumers wants to purchase online (Jaafar, Lalp, & Naba, 2012). According to Yee & San (2011), quality has a direct impact on customer purchase decision. So once a firm fails to deliver the product according to the standard of quality then it means the firm has failed in delivering the benefits (Zhang, Tan, Xu, & Tan, 2012)

H_4: There is a relationship between time risk and online intention

According to Griffin & Viehland (2010), time risk refers to the time needed by consumers to buy the product and time to obtain it. Then, according to Sim& Su (2012), time risk relates to the potential loss of time, accessibility or effort associated with making a bad purchasing decision and when a product purchased needs to be fixed. In fact, while doing online shopping, consumers can waste their time in researching product information. This can also cause perceived time risk. Time risks may also include the inconvenience experience that customers face during making online transactions, navigating and submitting orders and delays in getting the products (Forsythe, Liu, Shannon, & Gardner, 2006). Thus the time spent in waiting the transaction to complete consider as time risk also.

According to Broekhuizen & Jager (2004), if consumer perceived risks are higher, then it leads them to spend more time and effort to make a decision. Based on Featherman & Pavlou (2003), they defined time risk as the condition where consumers lose their time when making bad purchasing decision by wasting their time to research and make the purchase, then learn how to use the product again. Another researcher also stated that time risk is the potential loss of time related by making bad decisions by wasting time researching, shopping and replacing the unexpected goods.

2.2 Perceived Benefit

The term of online shopping depends on the consumers' perception over the activities that conducted through the Internet. Although the Internet provides some risks, in a different point of view Internet also gives big benefits to consumers. Customers would like to purchase online because they discover the advantages of using it. According to Forsythe, et al. (2006), perceived benefit replicates about what customers gain from online shopping. The

perceived benefit of online shopping can be measured from the level of satisfaction over the product and the benefit of online shopping. According to Kim et,al (2008), perceived benefit is the belief of consumers to which extend they feel this online transaction is much better rather than other online transactions. Internet shopping benefit has significantly related with attitude toward online shopping and intention to shop online (Jarvenpaa & Todd, 1996). In fact, the consumers' perceived benefits are the expansion of online shopping advantages or satisfaction that satisfies customers need and want (Delafrooz, Paim, & Khatibi, 2011). Researchers have identified various benefits associated with online intention such as shopping convenience, product selection, ease of shopping and shopping enjoyment Based on the dimension of perceived benefit, researcher proposed the following hypothesis:

H_5: There is a relationship between shopping convenience and online intention

According to Forsythe, et al. (2006), shopping convenience is perceived of the ability to shop anytime from different place regardless the location and without visiting the store. Convenience is measured based on the duration of time consumed, location to shop and the process of purchasing. Comparing between the traditional way of buying with the practice of Internet shopping, online shopping gives more convenient to customers (Harn, Khatib, & Ismai, 2006). Convenience here can be in the form of time, effort and stress. Shopping convenience was a strong motivator that influences the intention of potential internet shoppers to do online shopping (Koufaris, 2002).

With online shopping, consumers are allowed to browse and shop at any time convenient to them without having to worry about the shop service time, time zone and even a traffic jam (Juniwati, 2014). Customers can shop at any time as well without hassle and little interruption of other activities (Ko, Jung, Kim, & Shim, 2004). They can access and purchase good wherever and whenever they want as the service is always available, 24 hour availability of online shopping (McKinney, 2004). Every step that we did during online shopping contributes to convenience of shopping. For instance, while browsing the products that we want is easy to find and search, it contributes to search convenience (Seiders, Berry, & Gresham, 2000). Then, when the product is easy to obtain, it is possession convenience. While shopping can be done in quick time and the product can be delivered without delay, it is considered as time convenience (Kwek, Tan, & Lau, 2010).

H_6: There is a relationship between product selection and online intention

Product selection is the availability of the numerous products and product information on the market as to support in helping customers to make decisions. Product selection offers customers the opportunity to compare, contrast and select the products that meet their needs and wants from multiple choices (Dillon & Rief, 2004). Through online shopping, consumers are allowed to compare a large number of options and find substitute products under the same category (Rowley, 2000). The Internet allows merchants to offer a number of alternatives per category and look for unique products in the marketspace (Alba, et al., 1997). Based on Harn, et al., (2006), there is numerous product selections on the Internet due to there is no physical space limit. Thus, online consumers can discover a wide range of product available on the website that meets their needs. In fact, various product selections can increase online shopping intention and frequency (Luo, Ba, & Zhang, 2012). Product differentiation can become another component that can increase shopper purchasing intention as well as motivate them to shop online.

H_7: There is a relationship between ease of shopping and online intention

According to Chahal (2013), ease of shopping relates to how easy or difficult its customers want to shop. Customers nowadays want to find everything that can make their life easier and more efficient. As stated by Forsythe, et al. (2006), ease of shopping refers to a condition where consumers avoid going to the store to shop. Customers can buy anything through an Internet gateway by just type-in what they want. Most of the online shopping sites, categorize their products into categories, subcategories and even sub-subcategories to help buyers in browsing products (Hunt, 1999). According to Shu-Hung & Bayarsaikhan (2012), ease or comfort of shopping has a direct influence on online purchase intention.

Ease of shopping is defined as customer awareness that using the technology make them free from effort and difficulty (Ali Zaidi, Gondal, & Yasmin, 2014). This can be considered as the benefit that is provided in the online shopping environment where it gives consumer shopping opportunity without physical and time controls (Cemberci, Civelek, & Sozer, 2013). As the perceived ease of shopping is increased, attitude toward online shopping will become further positive.

H_8: There is a relationship between shopping enjoyment and online intention

Perceived enjoyment is a condition where consumers perceived an enjoyable online content service experience

as well as performance consequences that can be anticipated (David, Bagozzi, & Warshaw, 1989). According to Forsythe, et al. (2006), enjoyment refers to the fun or enjoyments that gain by customer in trying new experiences. According to Khoje et al., (2013) Beatty & Ferrell (1998) stated that enjoyment was the pleasure gain from the process of online shopping. It reflects to the consumer perception toward the entertainment potential of online shopping (Monsuwe, Dellaert, & Ruyter, 2004). Moreover, enjoyment is generated more from the fun and playfulness of online shopping experience rather than from the finishing point of shopping activity (Kwek, Tan, & Lau, 2010). The researchers named Harn, et al., (2014) suggested that perceived enjoyment positively influence consumers' purchase intention.

As stated by Wolfinbatger & Gilly (2001), in order to reach the level to which a website can lead to shopping enjoyment, the firm should design a website which is unique because researchers found out that once customers sees a unique website, there will be a big intention for them to buy, more positive mood and greater shopper satisfaction. It is also supported by Wen, et al., (2011) where he found out that website design and information provided on the website are the two main factors that help customers to increase the level of enjoyment. According to Koufaris (2002), shopping enjoyment has a significant impact toward an attitude and intention in online shopping. In addition, Jarvenpaa & Todd (1996) stated that shopping enjoyment can have a significant impact on attitude, behaviour on the web and increase customer intention toward online shopping.

3. Methodology

3.1 Participant Characteristic

The age group among consumers has played a significant role in the market because it can help the marketers to segment and influence the buying behaviour. Different people with different age group have different purchasing behaviour. Here, the scope of the study is conducted to Generation-Y individuals in Malaysia. Gen-Y is the potential customers in the market. Due to the technology development and the increasing of Internet popularity, nowadays a lot of consumers, especially Gen-Y like to utilize Internet to do online shopping. Gen-Y or young people are those individuals who was born in the range of 1977 to 1994 (Ruane & Wallace, 2013) whereby it means in the year of 2014, their age are from 20 to 37 years old. Gen-Y are more active, comfortable and interested with new technology as the Internet can help users to observe pertaining to product information, service, payment process and so on (Wood, 2002). This group of people has high purchasing power and has the potential of earning greater income (Jariah, Husniyah, Laily, & Britt, 2004)

3.2 Sampling

This study adopts a quantitative research approach. Looking into the sampling methodology, the total population of Gen-Y in Malaysia is 5,092,065 million whereby this number was considered as a big number of the sample group. In collecting the data about this research, a total of 200 questionnaire survey has been distributed to respondents through physical distribution and online survey. However, from 200 questionnaires distributed only 150 questionnaires were returned back successfully to the researcher. As a result, it gave a response rate of 75 percent. According to Sekaran (2003), 75 percent is considered sufficient and acceptable for statistical reliability.
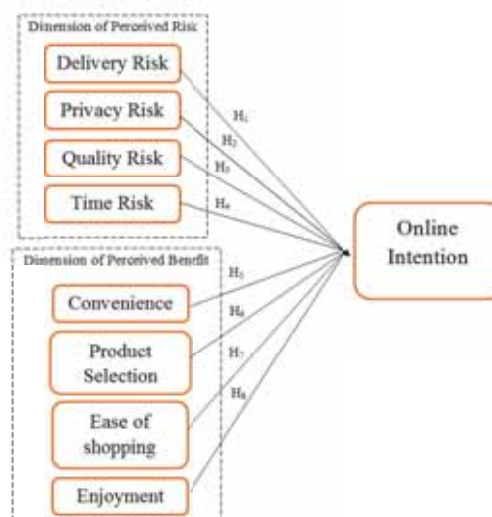
3.3 Measure

Figure 1. Theoretical framework

In finding the outlier, this study employed normality, reliability and EFA for testing the goodness of the data. Then, Pearson Correlation and Multiple Regression test for testing the hypothesis and examine the relationship between the variable. Following figure shows the theoretical framework of the research.

4. Empirical Results

Table 1. Demographic analysis

Variable and Component	Frequency	Percentage (%)
Gender		
Male	55	36.7
Female	95	63.3
Age		
Below 18	2	1.3
18-22	122	81.3
23-26	24	16.0
27-30	2	1.3
Nationality		
Malaysian	68	45.3
Non-Malaysian	82	54.7
Education		
High School	5	3.3
Institute Graduate (Diploma)	9	6.0
Undergraduate (Degree)	130	86.7
Postgraduate (Master)	6	4.0
Ever Tried Online Shopping		
Yes	140	93.3
No	10	6.7
Number of Times does Online Shopping		
Never	10	6.7
1-4	44	29.3
5-9	49	32.7
10-15	41	27.3
Other	6	4
Frequency of doing online shopping		
Never	10	6.7
Once a week	10	6.7
Weekly	4	2.7
Monthly	38	25.3
Occasionally	88	58.7

The table above shows the breakdown of the respondent's gender, age, nationality, education level, number of times doing online shopping and frequency of doing online shopping. Here, the questionnaires are distributed to different ranges of groups in order to have different point of view from different respondents.

4.1 Reliability Test

Table 2. Cronbach Alpha test

Construct	Number of Items	Cronbach Alpha Coefficient
Delivery	3	0.760
Privacy	4	0.794
Quality	5	0.778
Time	3	0.716
Shopping convenience	4	0.919
Product Selection	4	0.864
Enjoyment	4	0.801
Ease of Shopping	6	0.714
Online Intention	4	0.924

Reliability test is a test that used to examine the internal consistency of the data. Normally, it uses Cronbach Alpha coefficient to determine the value. The Cronbach Alpha Coefficient has to be above or at 0.7 in order to get good internal consistency or reliable value. When the value is above 0.7, it is considered as acceptable, while if the value is below than 0.7, it is considered to be poor (Pallant, 2013).

As we can see from the table above, the Cronbach Alpha for all 8 independent variable and 1 dependent variable is above 0.7 where this indicates there is a high internal consistency. In other word, all variables are reliable.

4.2 Exploratory Factor Analysis (EFA)

EFA is one of the analysis components that used to test the interrelationship of the variables. Two statistical measurements such as Bartlett and Kaiser-Meyer-Olkin (KMO) will be used to check the appropriateness of the factor analysis.

Table 3. EFA results

Construct	Approx. Chi Square	df	Sig. (p)	Kaise-Meyer-Olkin (KMO)
Delivery Risk	112.078	3	0.000	0.681
Privacy Risk	45.960	6	0.000	0.640
Quality Risk	183.708	10	0.000	0.817
Time Risk	353.004	3	0.000	0.633
Shopping Convenience	448.013	6	0.000	0.823
Product Selection	277.322	6	0.000	0.829
Enjoyment	181.973	6	0.000	0.789
Ease of shopping	297.298	15	0.000	0.705

According to the table above, the KMO value of all constructs is 0.6 and above. Then, the Bartlett Test value, especially the sig. value is less than 0.05. This indicates that the relationship among the variables is significant and factor analysis is acceptable. In fact, the value range for KMO is between 0 to 1 where 0.6 is the minimum value for a good factor analysis, whereas for Bartletts test, the sig (p) value has to be below 0.05 so that the factor analysis is considered appropriate (Pallant, 2013). Therefore, all the variables are appropriate as the p value is less than 0.05 and KMO value above 0.6.

4.3 Pearson Correlation

Pearson Correlation Coefficient is used to measure the correlation and the relationship between two variables. It also used to test the hypothesis. The aim of doing hypothesis testing is to reject the null hypothesis (Ho) and

accept the alternative hypothesis. In fact, the null hypothesis is rejected when the degree of significant is less than 0.05. If the significance of p is less than 0.05, then it indicates that there is significant correlation between independent and dependent variable. On the other hand, if the significance value is more than 0.05, it means there is no significant correlation between the two variables. In this study, to interpret the correlation coefficient (r), the model proposed by Cohen will be used (Cohen, 1988). The r value tells about the strength of the relationship and direction of the variables.

Table 4. Pearson correlation analysis

"r" value	Interpretation
0 < x < 0.3	Weak correlation
0.3< x < 0.7	Moderate correlation
>0.7	Strong correlation

Table 5. Pearson correlation results

Construct	Online Intention	N	Sig.
Delivery Risk	0.166	150	0.042
Privacy Risk	0.166	150	0.042
Quality Risk	0.194	150	0.018
Time Risk	0.165	150	0.043
Shopping Convenience	0.440	150	0.000
Product Selection	0.513	150	0.000
Enjoyment	0.466	150	0.000
Ease of shopping	0.494	150	0.000

The table above shows there is a relationship between the dependent variable and independent variables as follow:

- Correlation between delivery risk and online intention is a weak correlation because the r value is 0.166.
- Correlation between privacy risk and online intention is a weak correlation because the r value is 0.166.
- Correlation between quality risk and online intention is a weak correlation because the r value is 0.194.
- Correlation between Time risk and online intention is a weak correlation because the r value is 0.165.
- Correlation between shopping convenience and online intention is a moderate correlation because the r value is 0.440.
- Correlation between product selection and online intention is a moderate correlation because the r value is 0.513.
- Correlation between enjoyment and online intention is a moderate correlation because the r value is 0.466.
- Correlation between ease of shopping and online intention is a moderate correlation because the r value is 0.494.

To proceed with hypothesis testing regression analysis is used as it appears in next section.

4.4 Regression

Regression analysis is used when independent variables and a dependent variable are correlated one another. In this study, all hypothesis obtained from the correlation analysis are accepted. Although, it is accepted, the researcher has to ensure there is an actual relationship between two variables, thus regression analysis will be prepared. Multiple regression will be conducted as we would like to predict the value of a variable from the value of two or more other variables (Abdulahi, Samadi, & Gharleghi, 2014).

Table 6. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.594[a]	.353	.316	.61982

a. Predictors: (Constant), Ease, Quality, Delivery, Convenience, Time, Enjoyment, Privacy, Selection

Based on the table above, the value of R-square of the eight independent variables such as delivery, privacy, quality, time, shopping convenience, product selection, enjoyment, ease of shopping is 0.353. The value of 0.353 indicates that the eight variables can explain 35.3% of the variation of the dependent variable which is online intention. On the other hand, the remaining 64.7% of the variation of the online intention isn't being explained in this research. In other words, there are other factors that can be used to determine the impact of perceived risks and perceived benefit to improve online intention among Gen-Y in Malaysia.

Table 7. ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	29.574	8	3.697	9.622	.000[b]
1	Residual	54.170	141	.384		
	Total	83.743	149			

a. Dependent Variable: Intention

b. Predictors: (Constant), Ease, Quality, Delivery, Convenience, Time, Enjoyment, Privacy, Selection

According to the table above, the significance value (sig) for the variety of independent variables and the dependent variable is less than 0.05 which is 0.000. This indicates the relationship between independent variables (delivery, privacy, quality, time, shopping convenience, product selection, enjoyment, ease of shopping) and a dependent variable (online intention) of this research are significant. As a result, the overall regression model is considered to accurately predict the impact of perceived risks and perceived benefits toward online intention.

Table 8. Regression results

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	1.237	.478		2.591	.011
	Delivery	-.036	.015	-.040	2.404	.042
	Privacy	-.096	.036	-.062	-2.617	.044
	Quality	-.068	.110	-.057	-.617	.418
1	Time	-.033	.091	-.032	-.367	.243
	Convenience	.107	.100	.110	1.069	.101
	Selection	.243	.102	.245	2.384	.047
	Enjoyment	.195	.111	.176	1.751	.089
	Ease	.295	.108	.241	2.741	.036

a. Dependent Variable: Intention

From the result in coefficient table above, ease of shopping has the most significant relationship with online intention because the unstandardized coefficient of the ease of shopping (β= 0.295) is the highest among all the variables. In addition, the unstandardized coefficient of shopping convenience (β= 0.107), product selection (β= 0.243) and shopping enjoyment (β= 0.195) have a positive relationship with online intention, whereby this

means when the online intention is increased, then the shopping convenience, product selection and shopping enjoyment benefit are increased as well. On the other hand, delivery (β= -0.036), privacy (β= -0.096), quality (β=-0.068) and time (β= -0.033) have a negative relationship with online intention. This induces when the online intention increase, the delivery, privacy, quality and time risks of online shopper decrease.

5. Hypothesis Testing

Following table provides the result of hypothesis testing. Based on the regression results, hypotheses number 1, 2, 6, and 8 are accepted and the rest are rejected. This is obtained from the significancy of the variables in regression table.

Hypothesis	Variables	Coefficient value	Final decision
H_1	Delivery Risk	β= -0.036	Accepted
H_2	Privacy Risk	β= -0.096	Accepted
H_3	Quality Risk	β= -0.068	Rejected
H_4	Time Risk	β= -0.033	Rejected
H_5	Shopping Convenience	β= 0.107	Rejected
H_6	Product Selection	β= 0.243	Accepted
H_7	Enjoyment	β= 0.295	Rejected
H_8	Ease of Shopping	β= 0.195	Accepted

6. Conclusion

In a nutshell, based on the correlation result, all the variables such as delivery risk, privacy risk, quality risk, time risk, shopping convenience, product selection, ease of shopping and shopping enjoyment are correlated with improving Generation-Y online intention. In increasing consumer online intention, consumers perceived greater benefit and less risk. First of all in the dimension of perceived benefit: shopping convenience, product selection, ease of shopping and shopping enjoyment have a positive relationship toward online intention. In fact, marketers have to consider these factors if they would like to increase their sales through online channel. Through online purchasing, customers can access many brands and retailers from everywhere and they can get numerous selections of products available on the Internet.

Furthermore, in the dimension of perceived risk, quality, privacy, delivery and time risks are shown negative relationship toward online intention. Most of the respondents still perceived that online shopping is risky, this indicate as the quality, privacy, delivery and time risk increase, the online intention of Generation-Y is going to be deteriorated. In other word, if customer perceived online shopping is risky then they will reduce their intention to shop online. Customers worry to purchase goods online because they are afraid the items aren't delivered after the payment, their personal information will be leaked out to other companies that can affect their privacy and the product isn't delivered as what they expect. Therefore, firms have to improve their security requirements so that it can mitigate the risk perceived by the consumer. Among all the variables of perceived benefit and perceived risk, only four variables are found to be significant namely, delivery risk, privacy risk, product selection, and ease of shopping.

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Overview of Environmental Issues and Destruction of Soils in Turkey

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Abstract

This study examines environmental issues are becoming increasingly important and demanding immediate solution to the question of destruction of agricultural land in the country and foreign experience in this area.

Keywords: soil degradation, environmental problems, balance of nature, land reorganization, management techniques

1. Introduction

Due to the sharp increase in world population mankind continues to master new place to live and build new lines of communication. Moreover, the development of technologies and increasing purchasing power, humanity destroys the old and builds new. The destruction of the soil and the environment is often a product of the extractive industries, that is the result of an incorrect, ill-conceived human activity. In developed countries, has long been carrying out research programs aimed at solving the problems associated with the environment and the destruction of agricultural land, moreover, to develop appropriate criteria and standards, which, as we know, are the product of joint activities of universities, private organizations (civil society associations) and public institutions and structures (Tibet, 2009).

As a result of improper, ill-conceived activities, formed over centuries environment and the soil in particular, strongly destroyed and to restore the operational characteristics of the soil, requires serious investments. But even in this case, sometimes it is already impossible to return the soil of its former state. Therefore, our task - to be able to consider and evaluate all required elements in this area, without losing any of them.

2. Main Part

The lack of responsibility for the destruction of the soil and the environment among the enterprises (land users) Turkey allow these companies - with the exception of model - to get an easement on forests or dispose of the landed property worked out and pour the ground, where it is convenient. In the countries - members of the European Union, such as Germany, Belgium, France and Italy, there are similar practices in the management and reorganization of the quarries. That is the procedure for recovery of land and soil in these countries has a legal basis and to the enterprises in this sphere imposed a great responsibility.

In addition to the European Union, the activities to restore the land, in particular carried out in the field development of minerals mining companies, the creation of agricultural land, forests and agricultural land is carried out in countries such as USA, Canada, Australia, in the former Eastern bloc - Poland, Czechoslovakia as well as in the former East Germany, currently has become part of a unified Germany. Practical methods in these countries do not have significant differences, particularly in the US agricultural land returned to their owners after restoration. In East Germany, there is a requirement to restore agricultural soil for 5 years, and forests - within 7 years. In this country between mining companies and firms operating in the future, there is an arrangement for 1-5 years.

However, in the world there are not only the country attaches great importance to the environment, there are also backward or developing States where almost no measures are taken to prevent environmental destruction or reclamation. Despite the fact that to this day in our Constitution and other legislative acts were various provisions for the protection of forests and arable land, unfortunately, in the mountain right acutely felt the absence of any rules governing the prevention of destruction of soils and environmental pollution as a result of Extractive industries (Atik, Erdoğan, & Taşcıoğlu, 2009). Finally, 31.8.1956 on the conservation of natural

sources was enacted number 6831, which was attended by regulations that protect forests and prohibit activities, causing damage to forests. Later in the article 131 of the Constitution of 1961 were given points governing the protection and development of forests, forbidding ownership of the forest after some time, to eliminate servitude rights on the forests for the benefit of the public interest, prevented the decrease of forest boundaries and stimulate their expansion forbidding all agricultural and livestock activities within those limits. Studying the Subsoil Law №3213 from 15.06.1985 city, you will notice the absence of any provisions relating to the prevention and liability for the destruction of nature and soil resulting from the activities of mining companies. Perhaps in the next Law on Subsoil no measures to prevent this destruction. However, the Law on the environment, despite the lack of definition of the destruction of the soil itself, there is the following statement, which describes the activities for the protection of nature: "It is a complex work for the protection of the ecological balance, prevent violations and pollution of air, water and soil pollution and improve the environment" Despite on the definition in the Law on Environment number 2872, still lacks the necessary requirements for reorganization and recovery of land and soil. If now, as in previous years, that is, in the last 30-35 years, nothing is done, the destruction quietly reached its peak, and then take what ever measures or procedures is already meaningless. This situation requires immediate introduction of laws on subsoil use, the environment and other relevant provisions of legislation and start active work to resolve this issue. Reorganization and reclamation naturally needs funding. All of these costs can be included in the cost of mining, and this is true for those who use the income from the subsoil. Otherwise, the cost of environmental destruction will exceed government revenues derived from subsurface. At the same time the price for the damage caused by mining companies and mining companies to the environment, may have to pay the next generation, who probably will not be able to take advantage of the fact that these companies have extracted. To avoid this, you can more closely and efficient use of resources and land due to the optimal engineering and other activities, the company must act in harmony with the environment. Besides restoring the performance of the land, mining company to pay a smaller amount for temporary possession than full ownership, and if the land is still owned by the company, its recovery will return either to bring its cost. In any case, the measures taken in a timely manner and reduce the associated costs subsequent costs. The state in this area, too, must have its own project. If there is such a project, the proposal prepared by the mining company, will issue requiring careful consideration in terms of creating a new source. As can be seen from the above reduction and reorganization of land requires finances that are in accordance with the difference determined by the terms of the company would require new spending. However, the restoration of the land will not only reduce the damage to the environment, but will also use it in a variety of positive purposes, increasing the number of jobs and total employment. From this perspective, recovery and reorganization of land several enterprises to increase spending, but on the other hand, some others will reduce their costs and, furthermore, will provide new sources of income. The first step is to prepare plans for liquidating the damage caused businesses (users) of the soil and the environment. These plans should be implemented on a statutory basis under the control and supervision of institutions with a legal basis for it. The purpose of works covering natural objects, the operation of which is finished and which are at the stage of recovery, is the creation of new areas of residence, the respective natural socio-economic, cultural, human living conditions (Akpınar, Kara, & ve Ünal, 1993).

In the How to restore the land to a natural state, subjected to destruction as a result of mining activities, published in Turkey's Official Gazette number 27471, dated 23 January 2010, in the part of the "purpose" of Article 1 "Reconstruction of destroyed natural structures" touched sensitive issues. How to use the territory to failure? To what extent will be useful for the local population and environmental actions taken to restore? Reasons for work on the restoration of the destroyed natural structures are presented in subparagraph (i) of Article 7, where the reconstruction of areas suitable for agricultural activities should be made taking into account the decisions of the Ministry of Agriculture and Rural Affairs.

3. Conclusion

However, the fact that the characteristics of the soils of the area suitable for agriculture does not mean that exploitation of this territory must obtain permission from the Ministry. (Anonim, 2010) By the fact that, before the soil in the area have been destroyed must specify the provisions clarifying what this territory will be used and how these actions are harmful to humans and nature. If the area previously used for recreation, is now used in agricultural purposes, then what is the use of the area and the people living here? Is there a need for areas designated for relaxation of people? Or before the destruction of the area was a meadow or forest? What are the benefits they bring to people? Whether it be a corridor for the flora and fauna or restricts the movement? Without answering these questions, we can not say whether the area is suitable for agricultural or recreational interests or here you can create a pond or used for other purposes; in addition, should take into account the opinion of the

local population and satisfying its needs to restore the natural state of the territory (Anonim, 2010).

In close connection with the restoration of the land is creation of a fund in which to invest by guarantees provided by mining companies (landowners) from the use of the territory. If companies or landlords behave irresponsibly, guarantees received in respect of the Fund, which was later paid work to restore the land (Tibet, 2009).

Office of forestry affairs, agricultural production and animal husbandry shall provide technical and information assistance in the restoration of the environment and management of tourism and culture - in the protection of historical and cultural values.

From the mining, processing and other companies should be required not only of the activity license, but plans to restore use of the territory in the absence of such a plan - to prohibit activities of the company.

Forests need to recover the relevant forest management in accordance with the requirements of the authorities.

The Constitution and other legislative acts of the Republic of Turkey, there are many provisions on the prevention of reduction of forests, protection of cultivated areas and natural water sources and tanks, but despite this many mining companies continue to destroy the land and the environment, and exponentially. By destroying the soil and its properties, we break the ecological balance. That damage - a multilateral and multi-factor, so for Turkey and other developing countries, measures to prevent and prevent the destruction and restoration of the land has become an urgent issue that needs immediate solution.

Extraction plants efforts to prevent the destruction of the territory and the restoration of soil should be carried out simultaneously with the core business. Otherwise, if you leave the recovery activities for later, it costs rise dramatically, and the actions themselves are ineffective. To achieve this goal in the first place from the very beginning should prepare a plan of action. In essence, the main methods of extracting enterprises do not contradict the measures to restore the land, on the contrary, the use of elaborate methods allow to cope with both tasks simultaneously.

Except for a small number of countries in the world association of the main activity of the enterprise to the measures to restore the land is enshrined in law. The United Nations understands that if all countries do not protect the environment and prevent the destruction of nature, the world is in danger, which at some point can not be avoided, therefore, the organization supports the work in this direction.

To prevent the destruction of nature mining companies, as well as improve the efficiency of legislation and regulations in this area, the legislation is necessary to add new articles to prepare practical regulations requiring the mandatory restoration of natural objects. Those companies, which, together with the business plan does not present a plan to restore the land, will not be permitted to work (2013).

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The Impact of Internal Financing and Institutional Investors Control on Cash Flows Resulting from Investment Fluctuations (Evidences from Tehran Stock Exchange)

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Abstract

The aim of the present research is to study the impact of financing within a company and institutional investors control on cash flows resulting from investment fluctuations in companies listed on Tehran Stock Exchange. To this end, historical data of 103 companies listed on Tehran Stock Exchange in the time period of 2007 - 2012 were extracted and analyzed by using panel data. Results indicated that the more increase in cash flows, the more companies have interest for investment. In other words, investment fluctuations are sensitive to cash flows. Also, increased financing within a company reduces company's interest for investment of cash flows and vice versa. To this end, increased supervision of institutional investors increases company's interest for investment of cash flows and reduced supervision of institutional investors reduces company's interest for investment of cash flows. However, this effect was not statistically significant. Also, it was indicated that when there was an increase in activity volume of a company, on the basis of assets, there was an increase in company interest for investment of cash flows and a decrease in activity volume of a company, on the basis of assets, and the company interest for investment of cash flows. Also, increased cash dividends payment increases company interest for investment of cash flows and reduced cash dividends payment reduces company's interest for investment of cash flows. Age of the company and financial leverages did not have any effect on investment fluctuations sensitivity to cash flows.

Keywords: internal financing within the company, institutional investor control, cash flows resulting from investment fluctuations

1. Introduction

According to internal resource hypothesis, companies for taking advantage of investment opportunities need cash. Cash can be both financed through internal resource in a company and also through external resources of a company. In perfect and complete markets, the choice between different options of financing doesn't have an effect on investment decisions and company's value (Modigliani & Miller, 1958). However, existence of some imperfections in markets, such as information asymmetry and agency costs, increases the cost of external capital comparing to internal capital (Jensen & Meckling, 1976; Myers & Majluf, 1984). This difference in cost is caused because external capital financers (potential future investors) comparing to managers have less information about investment opportunities and also do not have sufficient power for ensuring that managers will act in their interests. Internal capital, the capital produced through company operations - belongs to the current shareholders of a company. These shareholders can monitor managers through governance mechanisms such as the board of the directors or through controlling institutional investors. If these monitoring mechanisms are effective, then agency costs that external capital financers are facing will be considerably higher than the costs that internal capital financers are facing (Pawlina & Renneboog, 2005).

In case of difference in financing costs, availability and access to internal recourses for pursuing and implementing investment opportunities increases company value. This increased value can be attributed to two factors. First, replacement of internal capital has a low capital cost comparing to external capital that has a higher cost in projects with positive net present value can increase the net present value of these investment opportunities. Second, those investment opportunities that their execution with external resources produces

negative net present value are justified economically with access to inexpensive internal resources (Schoubben & Cynthia, 2007). Operating cash flows are the main source of internal financing. The unpredicted changes in operating cash flows potentially causes investors to review their evaluation of the level of internal resources available for realization of final investment opportunities and in case of an unpredicted reduction in operating cash flows, they replace external resources with internal resources having a higher cost. Therefore, in perfect and complete capital markets, it is expected that all companies having an easy access to external resources for financing and to make their investment decisions merely on the basis of Expected future profitability and that aces to internal resources will not have any effect on these decisions (Babakhani et al., 2011).

However, in the real world considering the mechanism of asymmetric information, the cost of financing by using internal and external resources is different and in these environments, asymmetric information existing between Lender and borrower is effective and influential on the ability of companies for gaining access to credit and hence on their investment potential and economic activities (Tehrani & Hesar Zadeh, 2011) and since, Tehran Stock Exchange during the recent years has gone through so many ups and downs, in a way that few investors have gained wealth at the cost of so many investors losing their wealth which is due to existence of information asymmetry and agency costs in inefficient capital market of Iran, all the users do not have similar and equal access to the financial information of a business entity and its financial statements. In the present research, we seek to study this question that whether investment fluctuations are sensitive to cash flows. In other words, whether the level of companies investment changes due to their cash flows. AnD, in the case of existence of any sensitivity, what is the effect of internal financing on this relationship? Finally, whether institutional investment control as one of the effective mechanisms of monitoring and controlling can play a role in reducing information asymmetry and agency costs or not.

To this end, in the following section, the conceptual model of the study is presented and then research method, findings and conclusion are presented.
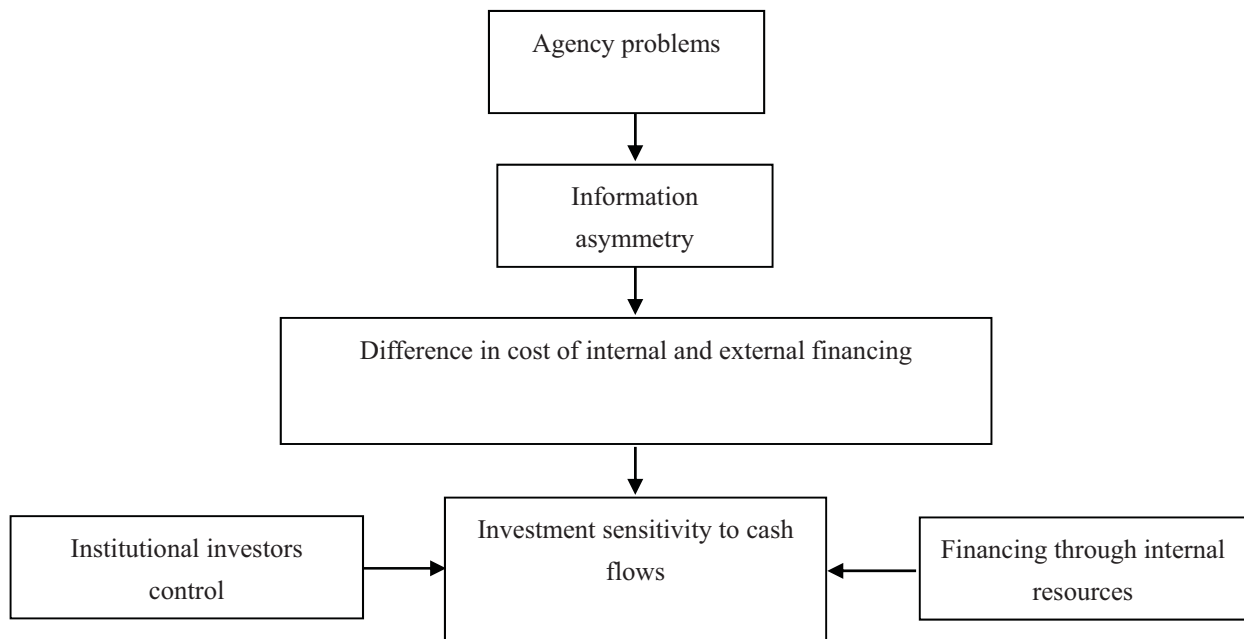

Figure 1. Research conceptual model

The dependent variable in this study is cash flows resulting from investment fluctuations that is measured on the basis on investment sensitivity to cash flows. Independent variables in this study are internal financing and condoling institutional investors that respectively have been measured on the basis of internal financing to external financing (IE) ratio and percentage or rate of institutional ownership (IO). Also, for avoiding the problem of correlation between the eliminated variables, the effect of company size (size), company age (age), dividend ratio (DPS) and debt ratio (Lev) variables have been controlled.

2. Research Method

The present study is an applied research in terms of nature and is a post-event study that tests research hypotheses by using historical financial data and information. The foundation of this study was based on Firth et al. (2014) method. First, the information and data related to internal financing to external financing ratio and institutional investors were collected and next the data and information related to cash flows resulting from investment fluctuations in companies have been collected. The present study is a descriptive study in terms of data collection method. Descriptive studies include a series of methods that their aims is describing the phenomena or situations being studied.

This study in terms of topic and subject is considered to be in the category of studies that are related to financial accounting and management and has been conducted in Tehran Stock Exchange. The reasons for selection of Tehran Stock Exchange are as per the following:

1. Access to financial information and data of the listed companies in Stock Exchange is easier. Particularly because some of these information and data are available in the form of databases on CDs.

2. Considering the fact that the financial information and data of companies listed on Stock Exchange are inspected and monitored; it appears that the information mentioned in the financial statements of these companies to be of a higher quality.

3. Considering the fact that the companies listed on Stock Exchange are bound to follow the rules and regulations of financial accounting standards in the preparation of their financial statements, it appears that the information of these companies stated on their financial reports are more homogeneous and have a higher potential for comparison.

The present study in terms of time period contains a 7-year period (from 2006 to 2012), however, considering the fact that creating a scalable investment model with the use of first-period net fixed assets requires the changes of year t to year t-1, practically a 6-year period has been selected for this study. As a result, the number of observations related to the study variables are 618 firm-year observations, the selection procedure of which has been presented in Table 1.

Table 1. Selection procedure of study sample

Description	Quantity	Percentage
All the companies listed in Exchange on 15th March, 2013	520	100
Companies listed on Exchange after 2006	(44)	9
Companies that during the time period of this study were suspended or have exited Exchange	(124)	24
Companies that fiscal year doesn't end in 15th March (29th Esfand) or have changed their fiscal year	(92)	18
Financial Broking Company (investment, holding, leasing, and banks (Note 1))	(18)	4
Companies that during the time period of the study their stock hasn't been traded actively in the exchange	(58)	12
Companies that haven't submitted their financial statements for the year of 2012 at the time this study was being conducted	(3)	1
Companies that their data and information wasn't sufficient for obtaining some of the study's variables	(78)	15
Total sample of the study with the consideration of presuppositions	103	20

2.1 Instruments and Data Analysis Method

In order to collect data, theoretical background and research literature bibliographical method (books, articles and journals related to the field of the present study), reliable dissertation and publications available online in internet bases and other reliable scientific sources were used. Raw data and information required for companies also, in order to study main and control variables of research hypotheses, were collected through Rahavard

Novin application and in case of necessity through direct reference to financial statements of companies that are available on Tehran Stock Exchange website (Research, Development and Islamic Studies).

Also, in this study considering the type of data and the available methods of analysis, panel data method was used. Panel data are the data related to different companies in different years and are considered as firm-year observations. This type of data have some advantages such as: provision of more information, limited Variance anisotropy, less colinearity between variables, higher freedom degree and higher efficiency. In the present study first initial calculations of data related to sample companies in Spreadsheet software have been performed and data have been prepared for analysis and them statistical analyses have been conducted with the use of multi-variable regression through the software.

3. Data Analysis and Results

The results of durability test of the study variables with the use of Hadri unit root test was presented in Table 2. Considering the z-value and its probability (the probability of being less than 5% error level), research variables are durable.

Table 2. Results of durability test of research variables

Value	CFLOW	INV	Q	IE	IO	Size	Age	DPS	Lev
z-value	86.7331	67.0089	63.5047	74.8580	70.5995	66.4832	266.204	53.7752	71.9237
p-value	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000

In research hypothesis one, the relationship between cash flows and investment fluctuations was tested by using hybrid regression. On this basis, investment in the role of dependent variable and cash flow in the role of independent variable and growth opportunities as possible influencing factor in the role of control variables were considered. Before final model fit, suitability test has been conducted for hybrid model against integrated model as well as for hybrid model with fixed effects against with random effect and the results of these tests were presented in Table 3.

Table 3. Results of selection of an appropriate pattern for 1st research model

Test value	Type	Value	Freedom degree	Probability
F-Limer value (Chaw test)	Cross-section	1.830407	(501,102)	.0000
Chi-square value (Hausman test)	Cross-section	1.778828	2	0.4109

The results indicate that as per F-Limer value (1.830) and its probability (.000) (p-value less than 5% error level), the use of hybrid model is appropriate . Also, the results indicate that as per chi-square value (1.778) and its probability (0.410) (p-value more than 5% error level) the method of random effects is suitable. In the end, with the selection of hybrid multi-variable regression model with fixed effects the 1st research model is fitted as follows.
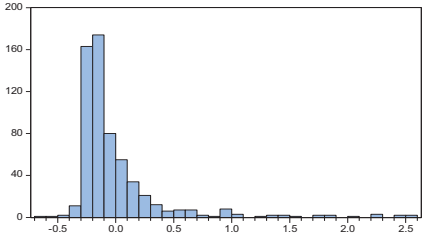
$$INV_{i,t} = \beta_0 + \beta_1 CFLOW_{i,t} + \beta_2 Q_{i,t} + \varepsilon_{i,t}$$

The results obtained from the above model fit were presented in Table 4. F-Fisher value (5.596) and its probability (0.003) (p-value less than 5% error level) indicate that the total regression model is significant in terms of existence of linear relationships in the model. Durbin-Watson value of the model (1.672) is in the range of 1.5 to 205 that indicates that there is no autocorrelation between residuals and error components of the model and hence model is suitable. Jarque-Bera value (6397.460) and its probability (.000) (p-value less than 5% error level) indicate that model residuals do not have a normal distribution, which might be due to lack of normality of distribution of the main variables of the study.

Table 4. Results of 1st research hypothesis test

Dependent variable: investment (INV)				
Descriptive variables	Coefficients	Standard error	t-value	p-value
Intercept	0.246102	0.046941	5.242780	.0000
CFLOW	0.047447	0.014412	3.292275	0.0011
Q	-0.001632	0.023873	-0.068354	0.9455
Fisher value	5.596221	Coefficient of determination		0.014967
Fisher p-value	0.003907	Durbin-Watson value		1.672580

Series: Standardized Residuals
Sample 1386 1391
Observations 606

Mean	-0.000572
Median	-0.130810
Maximum	2.530679
Minimum	-0.675458
Std. Dev.	0.420852
Skewness	3.474948
Kurtosis	17.32004
Jarque-Bera	6397.460
Probability	0.000000

$$NV = 0.0474468277814*CFLOW - 0.0016317980393*O + 0.246102035983 + [PER=R]$$

The results indicate that there is a significant and positive relationship (impact factor of 0.246) between the ratio of net cash flows resulting from operating activities to First-period net fixed assets as the cash flow (CFLOW) measure and investment (INV) on the basis of t-value (5.242) and its probability (0.001) (p-value less than 5% error level). It means that considering the obtained results, increase (reduction) in investment is a function of increase (reduction) of cash flows, indicating an investment sensitivity toward cash flows. In other words, the more an increase in cash flows , the more ' interest for investment among the companies. Therefore, 1st research hypothesis is confirmed. Also, the results indicate that there is no significant relationship between Tobin's Q indicator as growth opportunities measure (Q) and investment (INV), according to t-value (0.068) and its probability (0.945) (p-value more than 5% error level). Of course, in spite of this lack of significance in the relationship, the direction of the relationship is negative (impact factor of -0.001). In other words, considering the obtained results, increase (reduction) in investment is a function of reduction (increase) in growth opportunities; however, this effect does not have a statistical significance.

Second Research Hypothesis Testing

In 2nd hypothesis, the effect of internal financing on cash flows resulting from investment fluctuations was tested by using hybrid regression method. On this basis, investment in the role of dependent variable, cash flows and internal financing in the role of independent variables and growth opportunities, company size, company age, dividends ratio and financial leverage as possible influential factors in the role of control variables have been considered. Before final model fit, suitability test has been conducted for hybrid model against integrated model as well as for hybrid model with fixed effects against with random effects and the results of these tests have been presented in Table 5.

Table 5. Results for the test of selection of an appropriate pattern for 2nd research model

Test value	Type	Value	Freedom degree	Probability
F-Limer value (Chaw test)	Cross-section	1.662342	(468.102)	0.0002
Chi-square value (Hausman test)	Cross-section	23.738313	12	0.0221

The results indicate that as per F-Limer value (1.662) and its probability (.000) (p-value less than 5% error level), the use of hybrid model is suitable. Also the results indicate that as per chi-square value (23.738) and its probability (0.022) (p-value less than 5% error level) the method of fixed effects is suitable. In the end, with the selection of hybrid multi-variable regression model with fixed effects 2nd research model has been fitted as per following.
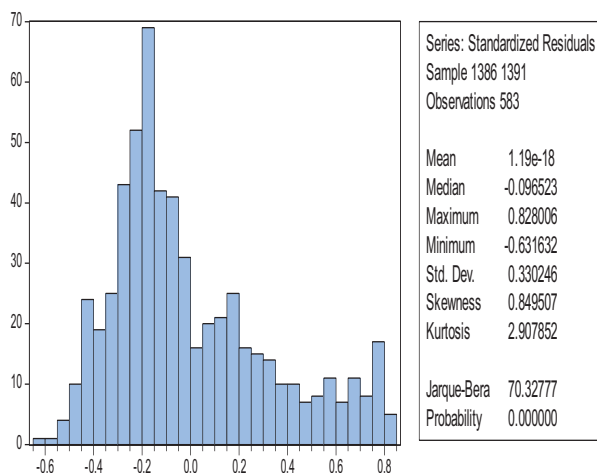
$$INV_{i,t} = \beta_0 + \beta_1 CFLOW_{i,t} + \beta_2 Q_{i,t} + \beta_3 IE_{i,t} + \beta_4 Size_{i,t} + \beta_5 Age_{i,t} + \beta_6 DPS_{i,t} + \beta_7 Lev_{i,t} + \beta_8 CFLOW_{i,t} \times IE_{i,t} + \beta_9 CFLOW_{i,t}$$

$$\times Size_{i,t} + \beta_{10} CFLOW_{i,t} \times Age_{i,t} + \beta_{11} CFLOW_{i,t} \times DPS_{i,t} + \beta_{12} CFLOW_{i,t} \times Lev_{i,t} + \varepsilon_{i,t}$$

The results obtained from the above model fit were presented in table 6. F-Fisher value (5.299) and its probability (0.000) (p-value less than 5% error level) indicate that the total regression model is significant in terms of existence of linear relationships in the model. Durbin-Watson value of the model (2.186) is in the range of 1.5 to 205 that indicates that there is no autocorrelation between residuals and error components of the model and hence model is suitable. Jarque-Bera value is (70.32777) and its probability is (.000) (p-value less than 5% error level) which indicates that model residuals don't have a normal distribution; which might be due to lack of normality of distribution of the main variables of the study.

Table 6. Results of 2nd research hypothesis test

Dependent variable: investment (INV)				
Descriptive variables	Coefficients	Standard error	t-value	p-value
Intercept	-0.452828	0.210514	-2.151058	0.0320
CFLOW	0.203225	0.020107	10.10722	0.0000
Q	-0.004243	0.005619	-0.755178	0.4504
IE	-0.000331	0.003026	-0.109374	0.9130
Size	0.069073	0.012797	5.397500	0.0000
Age	-0.008801	0.001456	-6.043832	0.0000
DPS	-0.060479	0.017433	-3.469320	0.0006
Lev	0.265282	0.068898	3.850366	0.0001
CFLOW×IE	-0.070052	0.008323	-8.417108	0.0000
CFLOW×Size	0.015307	0.002704	5.661722	0.0000
CFLOW×Age	0.000256	0.000594	0.430696	0.6669
CFLOW×DPS	0.049510	0.019783	2.502605	0.0127
CFLOW×Lev	-0.002023	0.052626	-0.038482	0.9694
Fisher value	5.299458	Coefficient of determination		0.457160
Fisher p-value		Durbin-Watson value		2.186822

Series: Standardized Residuals
Sample 1386 1391
Observations 583

Mean	1.19e-18
Median	-0.096523
Maximum	0.828006
Minimum	-0.631632
Std. Dev.	0.330246
Skewness	0.849507
Kurtosis	2.907852
Jarque-Bera	70.32777
Probability	0.000000

INV = 0.203225268084*CFLOW - 0.0042431082529*O - 0.000331020050524*IE + 0.069073391858*SIZE - 0.00880118156945*AGE - 0.0604789680412*DPS + 0.265281914986*LEV - 0.07005207430603*CFLOW*IE + 0.0153071481175*CFLOW*SIZE + 0.000256011025099*CFLOW*AGE + 0.0495101778057*CFLOW*DPS - 0.00202305111207*CFLOWLEV - 0.45282771629 + [CX=F]

The results indicate that there is a significant and positive relationship (impact factor of 0.203) between the ratio of net cash flows resulting from operating activities to first-period net fixed assets as cash flow (CFLOW) measure and investment (INV) on the basis of t-value (10.107) and its probability (0.000) (p-value less than 5% error level).

Also, there is a significant and positive relationship (impact factor of 0.069) between natural logarithm of assets as a measure for company size (size) and investment (INV) as per t-value (5.397) and its probability (.000) (p-value less than 5% error level); It means that considering the obtained results, increase (reduction) of investment is a function of increase (reduction) of company size; this indicate that the bigger the size of a company in terms of its assets, the more its investment rate would be. In other words, investment of larger companies is more comparing to smaller companies.

There is a significant and negative relationship (impact factor of -0.060) between cash dividends to earnings per share ratio as a measure of dividends (DPS) and investment (INV) ratio of a company as per t-value (-3.469) and it probability (.000) (p-value less than 5% error level); it means that considering the obtained results, an increase (reduction) in investment is function of reduction (increase) in dividends ratio.

There is a significant and negative relationship (impact factor of -0.070) between the multiplication product of cash flows and internal financing variables (CFLOW x IE) and investment (INV) as per t-value (-8.417) and its probability (.000) (p-value less than 5% error level).

Also, the results of 2nd research hypothesis test indicate that there is a significant and positive relationship (impact factor of 0.049) between the multiplication product of cash flows and company size variables (CFLOW x Size) and investment (INV) as per t-value 5.661) and its probability (.000) (p-value less than 5% error level) and there is a significant and positive relationship (impact factor of 0.049) between the multiplication product of cash flows and dividends ratio variables (CFLOW x DPS) and investment (INV) as per t-value 2.502) and its probability (0.012) (p-value less than 5% error level).

Thirs Research Hypothesis Testing

In the 3rd hypothesis, the effect of institutional investors control on cash flows resulting from investment fluctuations has been tested with the use of hybrid regression method. On this basis, investment in the role of dependent variable, cash flows, internal financing and institutional investors control in the role of independent variables and growth opportunities, company size, company age, dividends ratio and financial leverage as possible influential factors in the role of control variables have been considered. Before final model fit, suitability test has been conducted for hybrid model against integrated model as well as for hybrid model with fixed effects against with random effects and the results of these tests were presented in Table 7.

Table 7. Results for the test of selection of an appropriate pattern for 3rd research model

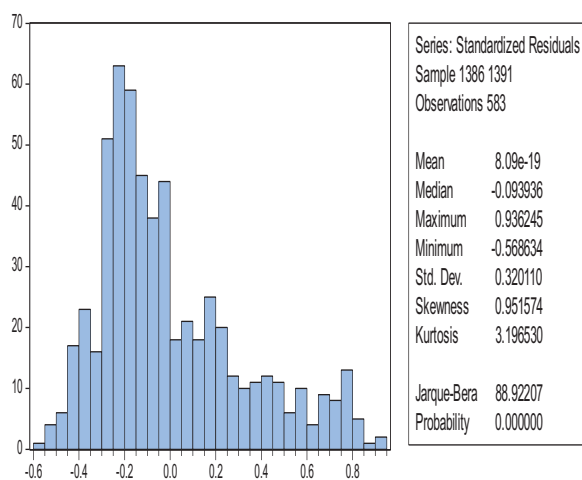| Test value	Type	Value	Freedom degree	Probability
F-Limer value (Chaw test)	Cross-section	1.699468	(464.102)	0.0001
Chi-square value (Hausman test)	Cross-section	31.730873	16	0.0108

The results indicate that as per F-Limer value (1.699) and its probability (.000) (p-value less than 5% error level), the use of hybrid model is suitable. Also the results indicate that as per chi-square value (31.730) and its probability (0.010) (p-value less than 5% error level) the method of fixed effects is suitable. In the end, with the selection of hybrid multi-variable regression model with fixed effects the 3rd research model has been fitted as per following.

$$INV_{i,t} = \beta_0 + \beta_1 CFLOW_{i,t} + \beta_2 Q_{i,t} + \beta_3 IE_{i,t} + \beta_4 IO_{i,t} + \beta_5 Size_{i,t} + \beta_6 Age_{i,t} +$$
$$\beta_7 DPS_{i,t} + \beta_8 Lev_{i,t} + \beta_9 IE_{i,t} \times IO_{i,t} + \beta_{10} CFLOW_{i,t} \times IE_{i,t} + \beta_{11} CFLOW_{i,t} \times IO_{i,t} + \beta_{12} CFLOW_{i,t} \times IE_{i,t} \times IO_{i,t} + \beta_{13} CFLOW_{i,t} \times Size_{i,t} + \beta_{14} CFLOW_{i,t} \times Age_{i,t} + \beta_{15} CFLOW_{i,t} \times DPS_{i,t} + \beta_{16} CFLOW_{i,t} \times Lev_{i,t} + \varepsilon_{i,}$$

The results obtained from the above model fit were presented in table 8. F-Fisher value (4.468) and its probability (0.000) (p-value less than 5% error level) indicate that the total regression model is significant in terms of existence of linear relationships in the model. Durbin-Watson value of the model (2.198) is in the range of 1.5 to 205 that indicates that there is no autocorrelation between residuals and error components of the model and hence model is suitable. Jarque-Bera value (88.92207) and its probability (.000) (p-value less than 5% error level) indicate that model residuals don't have a normal distribution; which might be due to lack of normality of distribution of the main variables of the study.

Table 8. Results of 3rd research hypothesis test

Dependent variable: investment (INV)				
Descriptive variables	Coefficients	Standard error	t-value	p-value
Intercept	-0.340355	0.284609	-1.195870	0.2324
CFLOW	0.248722	0.048318	5.147599	0.0000
Q	-0.001162	0.000634	-1.834298	0.0670
IE	-0.004051	0.010150	-0.399076	0.6900
IO	0.009508	0.022967	0.413984	0.6790
Size	0.058112	0.019131	3.037623	0.0025
Age	-0.009602	0.001359	-7.064702	0.0000
DPS	-0.052309	0.017222	-3.037328	0.0025
Lev	0.231109	0.070760	3.266116	0.0012
IE×IO	0.008658	0.012150	0.712565	0.4765
CFLOW×IE	-0.211975	0.036692	-5.777156	0.0000
CFLOW×IO	0.015249	0.039854	0.382620	0.7022
CFLOW×IE×IO	-0.007823	0.018919	-0.413486	0.6794
CFLOW×Size	0.019996	0.004036	4.954566	0.0000
CFLOW×Age	0.000131	0.000583	0.225261	0.8219
CFLOW×DPS	0.044281	0.016024	2.763519	0.0059
CFLOW×Lev	-0.027192	0.053580	-0.507492	0.6121
Fisher value	4.468925	Coefficient of determination		0.412912
Fisher p-value	0.000000	Durbin-Watson value		2.198886

Series: Standardized Residuals
Sample 1386 1391
Observations 583

Mean	8.09e-19
Median	-0.093936
Maximum	0.936245
Minimum	-0.568634
Std. Dev.	0.320110
Skewness	0.951574
Kurtosis	3.196530
Jarque-Bera	88.92207
Probability	0.000000

$$INV = 0.248722284934 \cdot CFLOW - 0.0011622808662 \cdot O - 0.0040507064012 \cdot IE + 0.0095081985885 \cdot IO + 0.0581116425994 \cdot SIZE - 0.00960222177921 \cdot AGE - 0.0523089361499 \cdot DPS + 0.231109018591 \cdot LEV + 0.00865779247085 \cdot IE \cdot IO - 0.211975340399 \cdot CFLOW \cdot IE + 0.0152490075091 \cdot CFLOW \cdot IO - 0.0078225873198 \cdot CFLOW \cdot IE \cdot IO + 0.0199960293091 \cdot CFLOW \cdot SIZE + 0.000131325004017 \cdot CFLOW \cdot AGE + 0.0442813035328 \cdot CFLOW \cdot DPS - 0.0271916349763 \cdot CFLOW \cdot LEV - 0.340355346804 + [CX=F]$$

The results indicate that there is a significant and positive relationship (impact factor of 0.248) between the ratio of net cash flows resulting from operating activities to First-period net fixed assets as cash flow (CFLOW) measure and investment (INV) on the basis of t-value (5.147) and its probability (0.000) (p-value less than 5% error level).

Also, there is a significant and negative (impact factor of 0.009) between institutional investors ownership as a measure for institutional investors control (IO) and investment (INV) as per t-value (0.413) and its probability (0.679) (p-value more than 5% error level); It means that considering the obtained results, increase (reduction) in investment is a function of increase (reduction) in institutional investors control; however, this effect is not statistically significant. Obtained results indicate there is a significant and positive relationship (impact factor of

-/058) between natural logarithm of assets as a measure of company size (size) and investment (INV) as per t-value (3.037) and its probability (0.002) (p-value less than 5% error level).

Also, there is a significant and negative relationship (impact factor of -0.009) between the number of years of activity of the company as a measure of company age (Age) and investment (INV) as per t-value (-7.064) and it probability (.000) (p-value less than 5% error level); it means that considering the obtained results, increase (reduction) in investment is function of reduction (increase) in the age of the company.

There is a significant and positive relationship (impact factor of 0.231) between debt ratio as a measure of financial leverage (Lev) and investment (INV) as per t-value (3.266) and its probability (.001) (p-value less than 5% error level).

Also, there is a significant and negative relationship (impact factor of -0.211) between the multiplication product of cash flows and internal financing variables (CFLOW x IE) and investment (INV) as per t-value (-5.777) and its probability (.000) (p-value less than 5% error level)

There is no significant and positive relationship (impact factor of 0.015) between the multiplication product of cash flows and institutional investors control (CFLOW x IO) and investment (INV) as per t-value (0.382) and its probability (0.702) (p-value more than 5% error level).

There is no significant and negative relationship (impact factor of -0.007) between the multiplication product of cash flows, institutional investors control and internal financing (CFLOW x IE x IO) and investment (INV) as per t-value (-0.413) and its probability (0.679) (p-value more than 5% error level).

There is no significant relationship between the multiplication product of cash flows and the age of the company (CFLOW x Age) variables as per t-value (0.225) and its probability (0.821) (p-value more than 5% error level); it means that considering the obtained results, age of the company doesn't have any effect on investment sensitivity on cash flow. The results indicate that there is a significant and positive relationship (impact factor of 0.044) between the multiplication product of cash flows and dividends ratio (CFLOW x DPS) and investment (INV) variables as per t-value (2.763) and its probability (0.005) (p-value less than 5% error level).

4. Conclusion

In the present study, the effect of internal financing of companies and institutional investors control have been studied on cash flows resulting from investment fluctuations with the use of evidences from Tehran Stock Exchange. Research dependent variable is cash flows resulting from investment fluctuations of the company that has been measured based on investment regression model to cash flow and growth opportunities. The independent research variables are internal fiancancing and institutional investors' control that respectively have been measured based on internal financing ratio to external financing and share percentage in the hand of banks, insurance companies, holdings, investment companies, pension funds, capital financing companies, investment funds, governmental and non-governmental organizations, institutions and companies. Control variables of this study include company size, company age, dividend ratio and financial leverage. Company size is a measure of the activity volume of company based on its assets. Age of the company is a measure of the number of years of its activity. Dividends ratio is a measure of stock cash dividend payment and financial leverage is a measure of debt ratio of the company.

For performing analyses and hypotheses test, a number of 103 companies listed on Tehran Stock Exchange for a 6-year time period during 2007 - 2012 have been studied and a total number of 618 firm-year observation have been considered for analyses.

Normal condition of data was studied and the results indicated that research variables does not meet this condition that, of course, due to large number of observations and as per Central limit theorem, analyses were performed as per the same data. For making sure of the proper simultaneous placement of all variables in the model, colinearity phenomenon was studied on the basis of correlation test between descriptive variables of the study and the results indicate that there is no significant correlation between the research variables and therefore, entering all research variables in one model simultaneously will not cause any problem. In the end, the method of panel data regression was used and the relevant models fit was performed for 1st, 2nd and 3rd research hypotheses.

Research findings indicate that as much as cash flow increases, companies show a higher level of interest for investment. In other words, investment fluctuations is sensitive to cash flows. Also, an increase in internal financing reduces interest for investment of cash flows among the companies and on the contrary reduced internal financing increases company interest for investment of cash flows. To this end, increased monitor and institutional investors control reduces company's interest for investment of cash flows. However, this effect is

not statistically significant. Also, the reserach findings indicate that increase volume of company's activities (on the basis of assets) increases investment of cash flows and reduces volume of company's activities (on the basis of assets) reduces company's interest for investment in cash flows. Also, increased cash dividends payment increases company's interest for investment of cash flow and reduced cash dividends payment reduces company's interest for investment of cash flows. Age of company and financial leverage also don't have any effect on sensitivity toward investment fluctuations and cash flow.

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Note

Note 1. Insurance companies have been eliminated after the application of 1st, 2nd and 3rd presuppositions.

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Brand Experience, Trust Components, and Customer Loyalty: Sustainable Malaysian SME Brands Study

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Abstract

Small and medium enterprises (SMEs) have been competing for survival in the business arena among established organizations. Competitive foodservice business today requires a unique and lasting brand experience to capture customer loyalty. Despite that, earning customer trust is vital to ensure ongoing revenue and profit for business sustainability. Due to the significance contribution from SMEs in the service sector to the nation economy, this study will examine the relationship between brand experience, trust dimensions (i.e. intentions and reliability), and customer loyalty on sustainable SME brands in Malaysia. Data were collected from 220 customers through intercept survey method. The result from SmartPLS 2.0 analysis provides significant support for every direct path between brand experience, intentions, reliability, and brand loyalty. Meaningful insights from the result are provided for SME owner-managers at the discussion section.

Keywords: brand loyalty, brand experience, brand trust, SME brands, foodservice industry

1. Introduction

Malaysia alongside with neighboring countries such as Indonesia, Singapore, Thailand, and Vietnam have been recognized as the driving force in the Southeast Asia foodservice industry with contribution of US$110 billion in 2011 (Euromonitor, 2012). In Malaysia, almost all of the business are Small and medium enterprises (SMEs). According to SME Corp. (2012), 99% of companies in Malaysia are SMEs which had played significance role in contributing toward the nation economy development. In particularly, most of the SMEs are concentrated in the services sector with more than 140,000 SMEs in the foodservices sector. The number signifies SMEs need to be competitive enough over their larger counterparts in order to sustain in the foodservice industry for over the years. Besides, SMEs usually depend on domestic market for survival (SME Corp., 2012). Therefore, it is important to investigate factors contributing toward SME brands sustainability.

A business without branding is just another company operating in the industry. Branding turns a company into a living entity with a better competitive edge. Several studies had shown that branding could enhance the performance of SMEs (Merrilees, Rundle-Thiele, & Lye, 2011; Reijnen, Laukkanen, Komppula, & Tuominen, 2012). Scholars such as Han and Jeong (2013) as well as Kim, Magnini, and Singal (2011) had argued that emotional benefits such as brand experience are more appealing for customers in the foodservice industry. However, the success of a brand to sustain in the industry does not only depend on branding strategy such as brand experience but also to gain customer trust. Brand trust has been argued as one of the important predictor of customer loyalty in the marketing literature (Belaid & Behi, 2011; Bowen & Shoemaker, 1998; De Chernatony, 1999; Lau & Lee, 1999; Morgan & Hunt, 1994; Nguyen et al., 2013; Sahin et al., 2011; Sung & Kim, 2010). According to reliable foodservice industry report, gaining customer loyalty is the main success factor for a business to sustain over time (FCSI, 2012). Therefore, this study would like to understand the role of trust in retaining customer loyalty.

The role of trust dimensions on the relationship between brand experience and brand loyalty has not been investigated in any empirical research from the perspective of SME brands in foodservice industry. In addition, there has been conflicting findings on their influence on customer loyalty (Brakus et al., 2009; Iglesias et al., 2011; Kim, Magnini, & Singal, 2011; Lin, 2010; Mohamed & Musa, 2012; Sahin, Zehir, & Kitapci, 2011; Ueacharoenkit & Cohen, 2013). This study posits that a deeper investigation on trust dimensions will provide a better insight on the experience and loyalty relationships. Moreover, it is important to examine these

relationships on SME brands because it may contribute different result as compared to global/ big brands (Berthon et al., 2008; Caloghirou et al., 2014; Upadhyay, Jahanyan, & Dan, 2011). Besides, there has been lack of studies on SME brand loyalty (Asamoah, 2014; Centeno et al., 2013; Krake, 2005; Reijonen, Laukkanen, Komppula, & Tuominen, 2012). Therefore, this study will fill this gap by developing a conceptual framework to investigate the relationships between brand experience, brand trust, and customer loyalty from the perspective of SME brands. The model builds upon the study of Delgado-Ballester and Munuera Aleman (2005) as well as Kantsperger and Kunz (2010) which studied role of trust from the perspective of its dimensions namely intentions and reliability toward customer loyalty. The finding of this study will provide a better understanding for managers of SME in creating and retaining loyal customers for their business, particularly in the foodservice sector.

2. Literature Review

2.1 Brand Loyalty

Brand loyalty helps SME brand to sustain in the market with positive performance through cost reduction and higher profits. Loyal customer usually tends to pay more as well as spreading positive word of mouth among friends and family (Chaudhuri & Holbrook, 2001; Ismail & Spinelli, 2000; Lau & Lee, 1999; Zhang & Bloemer, 2008). This is beneficial for business performance of SME given they highly rely on customer recommendations to get new customers (Hogarth-Scott, Watson, & Wilson, 1996). Besides, loyal customer needs little influencing effort to make purchase decision too (Blatberg & Deighton, 1996). In other word, the effectiveness of positive word of mouth will help reduce cost of SME business strategy from investment in advertisement in order to gain awareness until the purchase is made. Furthermore, such advertising investment has high risk of no success guarantee Reichheld & Sasser, 1990; Zeithaml et al., 1996). Apart from that, SME brands with already limited financial resources will face higher probability of being eliminated out of the market when customers did not return to make repeated purchase given the high number of SMEs business establishment in the foodservice industry mentioned above. Therefore, it is vital for SME brands to capture loyal customers to ensure ongoing revenues and profits (Chaudhuri & Holbrook, 2001; Lau & Lee, 1999; Rauyruen, Miller, & Groth, 2009; Zhang & Bloemer, 2008).

Provided with the literature above, this study is interested to investigate the link between brand experience, brand trust, and brand loyalty. The following section discusses on the relationships between the constructs of the proposed model (Figure 1) and derivation of research hypotheses.
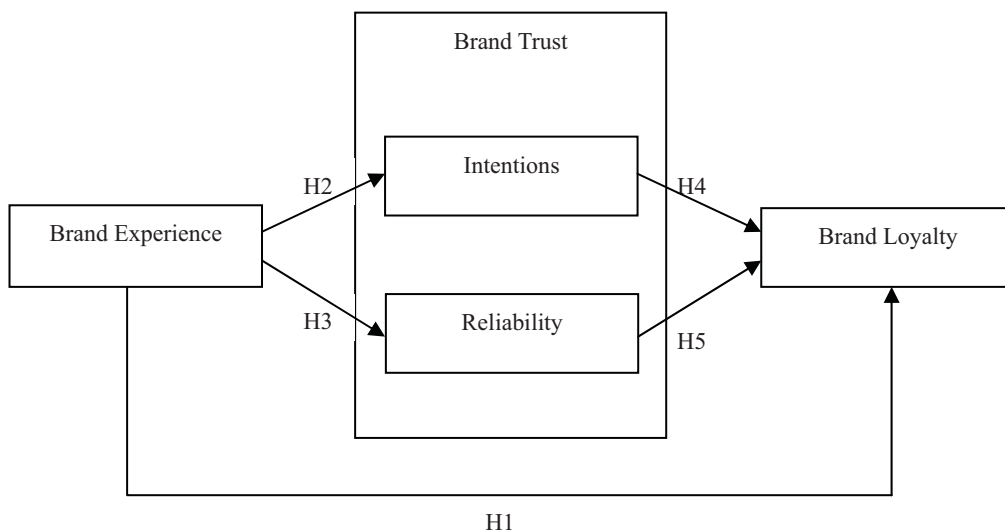

Figure 1. Proposed model

2.2 Brand Experience

Brand Experience is defined as subjective, inner responses of a consumer that can be categorized into sensory, affective, intellectual, and behavioral response evoked by restaurant brand related stimuli (Brakus et al., 2009). In the foodservice sector, customer experience with the particular food brand outlet is crucial to determine whether they will return for future visit (Mohamed & Musa, 2012). In fact, businesses should acknowledge that customers today are looking for benefits from both utility and emotional perspective (Walter, Cleff, & Chu,

2013). Therefore, brand experience is an important success factor in order to create differentiation for a particular brand in competitive industry (e.g. foodservice industry) to retain loyal diners (Brakus, Schmitt, & Zarantonello, 2009; Iglesias, Singh, & Batista-Foguet, 2011). However, literature has reported mixed findings on the relationship between brand experience and brand loyalty. Han and Li (2012) reported positive relationships between brand experience and brand loyalty in their study focusing on dairy products in China. Similarly, the positive relationship is further supported by Nysveen, Pedersen, and Skard (2013) in the studies focusing on telecommunication sector. Conversely, the positive notion was not supported in the studies of Iglesisas, Singh, and Batista-Foguet (2011) with varieties of consumer products in Spain. Despite the importance of brand experience has been acknowledged in the marketing literature, the current study hope to examine the relationship from the context of SME brands in the foodservice sector because the result might be different. Following past empirical studies, the same factors will exhibit different significance when tested between large organization and SMEs (Berthon et al., 2008; Caloghirou et al., 2014; Upadhyay, Jahanyan, & Dan, 2011). Hence, this study posits the following hypothesis:

H1: Brand experience directly and positively influence brand loyalty.

Next, the relationship between brand experience and trust has been empirically test and inconsistent findings have been reported. Some studies (Giantari et al., 2013; Lau & Lee, 1999; Sahin, Zehir, & Kitapci, 2011) reported positive relationships between brand experience and brand trust while other studies reported insignificant positive relationships (Lee & Kang, 2012; Ramasehan & Stein, 2014; Taleghani, Largani, & Mousavian, 2011). Despite that, the impact of brand experience on brand trust dimensions has not been investigated in any empirical research from the perspective of SME brands. Separate studies by Delgado-Ballester and Munuera-Aleman (2005) reported that satisfaction has a positive impact on intentions and reliability. Similarly, the research finding of Kantsperger and Kunz (2010) also support the positive relationships between satisfaction on intentions and reliability. Brand experience had been reported to exert positive influence on satisfaction (Brakus et al., 2009; Chinomona, 2013; Taleghani et al., 2011; Walter et al., 2013). Following this, the following hypotheses are proposed:

H2: Brand experience directly and positively influence intentions.

H3: Brand experience directly and positively influence reliability.

2.3 Brand Trust

Band trust is defined as the extent of reliability and intentions of a particular brand (Delgado et al., 2003). Reliability here refers to the consistency of the SME brand in delivering its value as promise. Meanwhile, intentions refer to the consumer belief that a particular brand will prioritize customers' welfare when uncertain situation arise (Delgado-Ballester et al., 2003). According to Reijonen (2010), SME rely on close relationship with customers to ensure ongoing revenues and profits. Besides, brand trust is has significance importance for SMEs in order to retain loyal customers given their small number of customers (Chaudhuri & Holbrook, 2001; Delgado-Ballester & Munuera-Aleman, 2005; Eggers et al., 2013; Rauyruen et al., 2009). Furthermore, researchers have made claim that loyalty stem as a result of consumer trusting a particular brand (Forgas, Moliner, Sanchez, & Palau, 2010; Lee & Back, 2010; Sahin et al., 2011; Zehir et al., 2011).

Despite the importance of brand trust on SME survival has been acknowledged in the marketing literature, this study would like investigate whether trust dimensions namely intentions and reliability exerts a positive influence on customer loyalty. Prior studies mainly investigate brand trust as a composite construct on customer loyalty (Chaudhuri & Holbrook, 2001; Delgado-Ballester & Munuera-Aleman, 2005; Eggers et al., 2013; Rauyruen et al., 2009). Despite that, scholars (i.e. Delgado-Ballester & Munuera-Aleman, 2005; Kantsperger & Kunz, 2010) had argued that the dimensions of trust namely intentions and reliability exhibit different influences on customer loyalty. In addition, there is also conflicting result of trust dimensions on customer loyalty. Some studies have found positive effect of brand trust on customer loyalty (Han & Jeong, 2013; Lee & Back, 2010; Lee & Kang, 2012; Sahin et al., 2011; Ueacharoenkit, 2012). Meanwhile, other studies fail to discover significance positive influence of brand trust on customer loyalty (Anabila et al., 2012; Haghihi et al., 2012). This sparks our interest to investigate whether brand trust components namely intentions and reliability influences customer loyalty positively. In addition, both intentions and reliability had been reported to exert positive influence on customer loyalty (Delgado-Ballester & Munuera-Aleman, 2005; Kantsperger & Kunz, 2010). Following the argument above, the current study proposes that intentions and reliability will have positive influence on customer loyalty.

H4: Intentions directly and positively influence brand loyalty.

H5: Reliability directly and positively influence brand loyalty.

3. Methodology

3.1 Research Settings and Subjects

Survey was carried out solely by the researcher himself with 214 customers who had dined in the particular local established SME brands restaurants. Two brands are chosen from the list of companies given at SME Corp. Malaysia (SME Corp., 2014) for the purpose of this study. These brand have been recognized with SMEs Bestbrand Awards in recognition for their successful branding (The BrandLaureate, 2014) for its success in branding as well as sustaining for more than 10 years in Malaysia. The selection of SME brand for this study follows the method of prior studies in selecting brand for loyalty studies where the brand are mainly established brands of at least 10 years in the industry (Brakus et al., 2009; Lee et al., 2009; Lin, 2010; Lin & Huang, 2012; Mengxia, 2007; Nam et al., 2011; Yoo, Donthu, & Lee, 2000). Meanwhile, the survey was carried out in several locations during a five weeks period from early November to early December in Klang Valley, Malaysia.

The sampling procedure used in this study is multistage area probability sampling as suggested by Sudman (1980). In the first step, Peninsular Malaysia is clustered into four region namely Central, East Coast, Northern, and Southern region (Ministry of Tourism and Culture, 2014). The common goal of a research is to manually collect data that are representative of a population to be studied (Bartlett, Kotrlik, & Higgins, 2001; Cavana et al., 2001; Hau & Marsh, 2004; Krejcie & Morgan, 1970). Therefore, central region is chosen due to highest number of population which is 7,209,175 (Department of Statistics Malaysia, 2011). In the second step, the central region is clustered into ten districts according to its local authorities namely Kuala Lumpur City Hall, Putrajaya Corporation, Selayang Municipal Council, Ampang Jaya Municipal Council, Kajang Municipal Council, Klang Municipal Council, Petaling Jaya City Council, Subang Jaya City Council, Shah Alam City Council, and Sepang Municipal Council. These ten districts consisting majority of the population within central region and is also known as Greater Kuala Lumpur or Klang Valley. Klang Valley is the largest metropolitan in Malaysia with approximately 6 million populations and contributed RM263 billion to Gross National Incomes (GNI) in year 2010 (Economic Transformation Programme, 2012; Department of Statistics Malaysia, 2011). Next, each SME brands were allocated equally and randomly among the ten district areas. One restaurant branch were selected randomly on each districts based on business volume as suggested by outlet manager. This research used systematic sampling to select the respondents in which every first of fifth diners were approached upon exiting the restaurant after paying their bill. The questionnaires were distributed on random weekdays and weekends during lunch (12pm-3pm) and dinner time (6pm-9pm).

Partial least squares structural equation modeling (PLS-SEM) is used to analyze data. Meanwhile, minimum sample size for PLS-SEM depends on the desired 80 percent statistical power in social science studies (Cohen, 1988; Gefen, Rigdon, & Straub, 2011). Therefore, power analysis with G*Power software suggested by Hair, Hult, Ringle, and Sarstedt (2014) recommend that at least 68 respondents needed to achieved significance level of 0.05 and statistical power of 80 percent for hypothesis testing. Despite scholars argue that SME required large sample size, PLS-SEM work well with smaller sample size even for a complex model as compared to CB-SEM which required at least 200 observation to avoid non-convergence and improper solutions (Boomsma & Hoogland, 2001, p. 8; Hair, Sarstedt, Hopkins, & Kuppelwiesier, 2014, p. 108). The final sample size is expanded to 210 respondents due to the higher non-response rate associated with intercept survey method used in this study (Gates & Solomon, 1982; p. 46; Hornik & Ellis, 1988, p. 539; Zikmund et al., 2009, p. 213).

3.2 Measurement

This study adapted existing scales for all constructs. Brand experience scales were measured using the 12 items developed by Brakus, Schmitt, and Zarantonello (2009). Brakus et al. (2009) identified brand experience in terms of four dimensions: sensory (3 items), affective (3 items), intellectual (3 items), and behavioral (3 items). Brand Trust scales for both intentions and reliability were adapted from items developed by (Delgado-Ballester et al., 2003). In particular, intentions scales were measured using the 4 items developed by (Delgado-Ballester et al., 2003) while reliability scales were measured using the 4 items developed by (Delgado-Ballester et al., 2003). Brand loyalty scales were adapted from items developed by Chaudhuri & Holbrook (2001), Ismail & Spinelli (2000), Lau & Lee (1999), Zhang & Bloemer (2008). All the statements were measured with six-point Likert scale (1=strongly disagree and 6=strongly agree). An even number response will encourage respondent to answer based on content of the questions and reduce bias in answering the middle or neutral point (Garland, 1991). Besides, Asian respondents have higher tendency to answer the middle point than the Western (Mitchell, 1999; Si & Cullen, 1998). There is also report that even number response scale has higher validity and reliability as compared to uneven number of response scale (Birkett, 1986; Coelho & Esteves, 2007). Therefore, the use of

six-point Likert scale is justified. In order to minimize translation issues, the translation of questionnaire were conducted as recommended by Brislin (1970). The final survey questionnaire were in both English and Malay version to suit the respondent understanding. Pilot study was conducted among 30 respondents of the particular SME brand in Penang. The amount of respondents for pilot study follows the recommendation of Malhotra et al. (2002). Pilot study result suggests that the survey questionnaires are highly reliable with all the Cronbach's alpha values were greater than .90 (Nunnally, 1978).

3.3 Data Analysis Technique

This study used the Partial Least Squares (PLS) version 2.0 (Ringle, Wende, & Will, 2005) as a technique to analyze the data for hypothesis testing. In addition, we used the bootstrapping method of 500 resamples to determine the significance level for loadings and path coefficients (Chin, 1998).

4. Analysis

4.1 Profile of Respondents

Table1. Respondent profile

Demographic characteristics	Frequency	%
Gender		
Male	61	29
Female	153	72
Age		
< 21	9	4
21-30	79	37
31-40	79	37
41-50	26	12
>50	21	10
Education		
Primary school	6	3
Secondary school	37	17
College (Certificate/ Diploma/ Advanced Diploma)	69	32
Bachelor degree	89	42
Postgraduate degree	13	6
Occupation		
Student	19	9
Employee	154	72
Self-employed	19	9
Unemployed/ Housewife	22	10

A total of 214 questionnaires were received at the end of data collection process. Despite that, the number of final survey is sufficient for data analysis provided it exceeds the minimum of 68 observations to achieve significance level of 0.05 and statistical power of 80 percent for hypothesis testing. There was no missing value in all the usable questionnaires. This may be due to the effort of the researcher informing the respondent upon returning the questionnaire that a free gift will be given as a courtesy participating in this study. Meanwhile, the researcher will check whether all the questions are answered correctly before a free pen is given to the respondent. If there is any unanswered question identified, the researcher kindly asked the respondent to answer it immediately. Therefore, the number of questionnaire is sufficient to proceed for data analysis given it has achieved the minimum sample observations required for this study to achieved significance level of 0.05 and statistical power of 80 percent for hypothesis testing. The profiles of respondents are analyzed according to gender, age, education, and occupation as summarized in Table 1. All the respondents were Malaysian. From the

total of 214 respondents, a total of 153 (72 percent) were female while 61 (29 percent) were male. This result is also consistent with other restaurant survey studies (Chang, 2013; Kim et al., 2012; Lee et al., 2009). One plausible reason for female dominant responses is due to the higher likelihood of female to answer survey as compared to men (Gannon et al., 1971; Green, 1996). The age group of 21-30 (37 percent) and 31-40 (37 percent) accounted for the biggest portion for the sample meanwhile age group less than 21 years (4 percent) are the smallest portion of the sample. Only 3 percent studied until primary education. Most of the respondents are working employees (72 percent).

4.2 Non Response Bias

Non-response bias was tested with extrapolation method which assumes who answered in an unprepared condition (answering late or after several reminders) are similar to non-respondents (Armstrong & Overton, 1977). Therefore, an independent t-test will be used to test whether mean score differ between early and late respondents. The early 50 responses were compared with the last 50 responses for mean difference. The number and equal size of responses for comparison is meet the minimum 30 responses and to avoid issues on statistical power reduction (Lindner, Murphy, & Briers, 2001). The result of shows the mean for every variable exceed the 0.05 significance level for both group indicating there is no mean difference for both groups (Pallant, 2010). Therefore, the issue of non-response bias did not occur in this study.

4.3 Measurement Model

A two-step approach was used in this study for data analysis (Anderson and Gerbing, 1988). Firstly, convergent validity and reliability were evaluated as shown in Table 2. In order to achieve convergent validity, loadings must be greater than 0.5 (Bagozzi & Yi, 1988), composite reliability must be greater than 0.7 (Gefen et al., 2000), and the average variance extracted (AVE) must be greater than 0.5 (Fornell & Lacker, 1981). As shown in Table 2, the measures achieve sufficient convergent validity and reliability because it achieves the criterion stated above.

Next, discriminant validity is evaluated as shown in Table 3. In order to achieve discriminant validity, the average variance shared between each construct and its measures should be greater than the variance shared between the construct and other constructs (Fornell & Cha, 1994; Fornell & Lacker, 1981). As shown in Table 3, the measures achieve sufficient discriminant validity because the correlation values for each constructs (included row and column) is lower than the square root of the average variance extracted (AVE) by the indicators measuring that construct which is displayed on the diagonal. Hair, Hult, Ringle, and Sarstedt (2014) suggest that the loadings of measurement items should be higher than the cross loadings to achieve sufficient discriminant validity. As shown in Table 4, the loadings of all constructs satisfy this criterion. Thus, we can conclude that discriminant validity is achieved.

Table 2. Result of measurement model

Model construct	Measurement item	Loading	CR[a]	AVE[b]
Brand experience	Brand experience 1	0.786	0.942	0.595
	Brand experience 2	0.797		
	Brand experience 3	0.817		
	Brand experience 4	0.805		
	Brand experience 5	0.765		
	Brand experience 6	0.781		
	Brand experience 7	0.751		
	Brand experience 8	0.707		
	Brand experience 9	0.748		
	Brand experience 10	0.771		
	Brand experience 12	0.749		
Brand loyalty	Brand loyalty 1	0.811	0.941	0.574
	Brand loyalty 2	0.803		
	Brand loyalty 3	0.803		
	Brand loyalty 4	0.738		
	Brand loyalty 5	0.749		
	Brand loyalty 6	0.629		

Model construct	Measurement item	Loading	CR[a]	AVE[b]
	Brand loyalty 7	0.822		
	Brand loyalty 8	0.828		
	Brand loyalty 9	0.729		
	Brand loyalty 10	0.597		
	Brand loyalty 11	0.743		
	Brand loyalty 12	0.801		
Intentions	Intentions 1	0.837	0.908	0.713
	Intentions 2	0.852		
	Intentions 3	0.788		
	Intentions 4	0.897		
Reliability	Reliability 1	0.873	0.930	0.768
	Reliability 2	0.877		
	Reliability 3	0.850		
	Reliability 4	0.903		

Note: items brand experience 11 was deleted due to loadings not greater than 0.50; [a]Composite Reliability (CR) = (square of the summation of the factor loadings)/{(square of the summation of the factor loadings) + (square of the summation of the error variances)}; [b]Average Variance Extracted (AVE) = (summation of the square of the factor loadings)/{(summation of the square of the factor loadings) + (summation of the error variances)}

Table 3. Discriminant validity of constructs

Constructs	Brand experience	Brand loyalty	Intentions	Reliability
Brand experience	**0.771**			
Brand loyalty	0.726	**0.758**		
Intentions	0.689	0.684	**0.844**	
Reliability	0.743	0.717	0.801	**0.876**

Note: Value on the diagonals represents square root of the average variance extracted (AVE) while the other entries represent the correlations value.

Table 4. Cross loadings of constructs

	Brand experience	Brand loyalty	Intentions	Reliability
Brand experience 1	**0.786**	0.607	0.561	0.597
Brand experience 2	**0.797**	0.559	0.514	0.625
Brand experience 3	**0.817**	0.548	0.528	0.600
Brand experience 4	**0.805**	0.570	0.616	0.656
Brand experience 5	**0.765**	0.525	0.579	0.628
Brand experience 6	**0.781**	0.518	0.534	0.554
Brand experience 7	**0.751**	0.616	0.454	0.506
Brand experience 8	**0.707**	0.485	0.403	0.456
Brand experience 9	**0.748**	0.532	0.475	0.499
Brand experience 10	**0.771**	0.638	0.604	0.600
Brand experience 12	**0.749**	0.544	0.537	0.543
Brand loyalty 1	0.649	**0.811**	0.586	0.642
Brand loyalty 2	0.497	**0.803**	0.487	0.496
Brand loyalty 3	0.496	**0.803**	0.469	0.487
Brand loyalty 4	0.458	**0.738**	0.424	0.446
Brand loyalty 5	0.476	**0.749**	0.487	0.490
Brand loyalty 6	0.473	**0.629**	0.448	0.397

	Brand experience	Brand loyalty	Intentions	Reliability
Brand loyalty 7	0.652	**0.822**	0.604	0.639
Brand loyalty 8	0.638	**0.828**	0.610	0.635
Brand loyalty 9	0.566	**0.729**	0.559	0.572
Brand loyalty 10	0.397	**0.597**	0.379	0.369
Brand loyalty 11	0.559	**0.743**	0.505	0.567
Brand loyalty 12	0.631	**0.801**	0.576	0.651
Intentions 1	0.598	0.539	**0.837**	0.668
Intentions 2	0.578	0.585	**0.852**	0.730
Intentions 3	0.473	0.491	**0.788**	0.553
Intentions 4	0.659	0.676	**0.897**	0.736
Reliability 1	0.632	0.610	0.671	**0.873**
Reliability 2	0.637	0.617	0.682	**0.877**
Reliability 3	0.630	0.604	0.686	**0.850**
Reliability 4	0.701	0.679	0.765	**0.903**

4.4 Structural Model

Next, the structural model was tested. Table 5 and Figure 2 portrayed the results of structural model for this study. Table 5 displayed all the hypotheses tested for this study. Firstly, brand experience ($\beta = 0.388$, $p < 0.01$) is positively related to brand loyalty. Therefore, H1 is supported. Secondly, brand experience ($\beta = 0.689$, $p < 0.01$) is positively related to intentions. Therefore, H2 is supported. Next, brand experience ($\beta = 0.743$, $p < 0.01$) is a significant predictor of reliability. Hence, H3 is accepted. Intentions ($\beta = 0.205$, $p < 0.01$) is not a significant predictor of brand loyalty. Thus, H4 is accepted. Lastly, reliability ($\beta = 0.265$, $p < 0.01$) also exerts positive influence on brand loyalty. The evidence provides sufficient support for H5.

Figure 2 exhibited both Q^2 values and R^2 values for the respective endogenous variables. The R^2 values are 0.475, 0.552 and 0.612 respectively which suggest that brand experience can explain 47.5 percent on intentions and 57.9 percent on reliability while the modeled variables can explain 61.2 percent on brand loyalty. Besides, the R^2 values respectively can be described as moderate (Hair, Hult, Ringle, & Sarsedt, 2014; Henseler et al., 2009). In addition, the Q^2 values are 0.336 for intentions, 0.421 for reliability, and 0.336 for brand loyalty respectively which suggest that the model has predictive relevance on the endogenous construct (Fornell & Cha, 1994; Hair, Sarstedt, Hopkins, & Kuppelwiesier, 2014).
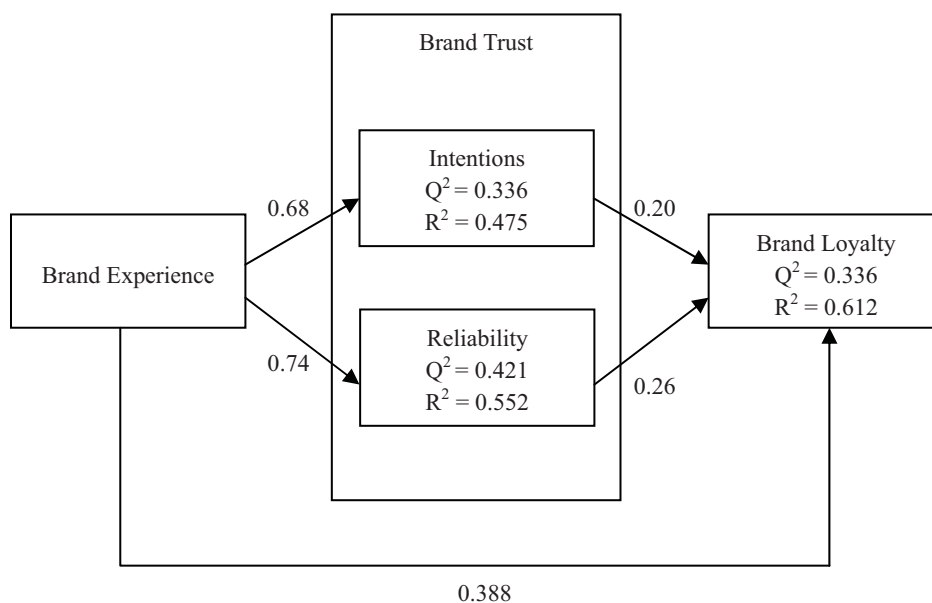

Figure 2. Results of the structural model analysis

Table 5. Path coefficients and hypothesis testing

Hypothesis	Relationship	Std Beta	Std Error	t-value	Supported
H1	Brand experience → Brand Loyalty	0.388	0.075	5.168**	Yes
H2	Brand experience → Intentions	0.689	0.036	19.393**	Yes
H3	Brand experience → Reliability	0.743	0.033	22.315**	Yes
H4	Intentions → Brand loyalty	0.205	0.076	2.711**	Yes
H5	Reliability → Brand loyalty	0.265	0.080	3.304**	Yes

Note: *$p < 0.05$ (1.645); **$p < 0.01$ (2.33) one tail

5. Discussion

The purpose of this study was to test whether positive relationship exists between brand experience, brand trust components, and brand loyalty. Result of this study found that brand experience have direct positive relationship on brand loyalty. This empirical evidence supports the findings in the literature from different research context that brand experience has positive effect on loyalty (Han & Li, 2012; Nysveen, Pedersen, & Skard, 2013). The result indicates that brand experience is one of the important factors in retaining loyal customer for the sustainable SME brand in the foodservice sector. One plausible reason is due to the difficulty for competitor to replicate the unique intangible aspect of brand experience. This is consistent with Aaker (1989) suggesting that intangible aspect of branding is a powerful competitive tool for business sustainability. Besides, customer experience with the particular food brand outlet is crucial to determine whether they will return for future visit (Mohamed & Musa, 2012).

Meanwhile, this study also found that both intentions and reliability components of trust is highly influenced by brand experience. This study is the first to examine the relationships between brand experience and trust components. Studies had reported positive influence of satisfaction on both intentions and reliability trust components (Delgado-Ballester & Munuera Aleman, 2005; Kantsperger & Kunz, 2010). One plausible reason to support such findings is the positive relationship found in past studies on the relationship between brand experience and satisfaction (Brakus et al., 2009; Chinomona, 2013; Taleghani et al., 2011; Walter et al., 2013). Besides, such findings are also consistent with researches in other context that found positive influence of brand experience on composite trust (Giantari et al., 2013; Lau & Lee, 1999; Sahin, Zehir, and Kitapci, 2011). The findings also indicate that brand experience plays a significant role in earning consumer trust that the SME brand will prioritize their welfare and deliver consistency in their offerings. According to Delgado-Ballester and Munuera Aleman (2005), customer perception of the good intentions and reliability in a particular brand derived from their past encounters. Therefore, positive brand experience will ensure trusting relationships between the brand and customers.

Lastly, the positive relationships between intentions and reliability component of trust are supported in this study. The finding is consistent with studies of Delgado-Ballester and Munuera-Aleman (2005) as well as Kantsperger and Kunz (2010) which they reported both intentions and reliability exert positive influence on customer loyalty. Reliability in the foodservice industry is highly related to fulfilling the promise made via promotions advertised. A good example here is when customer received their meal in the same portion as shown in the menu or advertisement. This ethical branding strategy will earn customer trust through the good intentions of a particular brand in making promotion honestly by excluding marketing gimmicks to deceive customers into making purchase for the sake of earning profits only. Besides, customer will also perceive the brand as reliable in a way it will deliver the value as promised. Therefore, branding strategy and advertising should be utilized to strengthen the claim made by the particular brand to strengthen perception of customers regarding the intentions and reliability of the brand (Kantsperger & Kunz, 2010).

6. Implications

The findings of this study may enhance the knowledge of SME owner-manager regarding the relationships between brand experience, brand trust components, and brand loyalty. Firstly, brand experience does exert positive influence on brand loyalty. Owner-manager of SMEs should start to see brand experience as a powerful tool to create a differentiation among competitors in the industry. Owner-manager should consider making the best out of the dining experience to increase customer satisfaction. One of the simplest ways is to start with an attractive and conducive physical environment for customer to dine in. The matching environment will enable customers to happily enjoy their visit prior, during, and after their meal. This positive emotional brand

experience will encourage customer to make a return in the future and spread positive recommendations among friends and family (Morrison & Crane, 2007).

Secondly, brand experience does exert positive influence on intentions and reliability components of trust. SME owner-manager should create an experience intended for the business to capture both component of trust among their customers. Experience can be created directly and indirectly among brand stimulus (Brakus et al., 2009). Apart of dining in experience, owner-managers of SME might consider a take-away experience. This might be something special among the customers who would like to buy home their meal. One may implement a strict take-away policy such as customers are not allowed to order for take-away food except the leftover food ordered. Such experience will influence the business negatively and positively. On the positive side, customers will feel the unique experience from the business that tried to provide them consistent quality meal of dining in upon served. On the other hand, some customers may be annoyed by such rigid policy. Besides, Walter, Cleff and Chu (2013) claimed that customers today are looking for benefits from both utility and emotional perspective. The example here shows the commitment of the particular brand outlet in delivering good intentions by prioritizing customer in their strict take-away policy; fearing that the take-away meal may have a poorer quality than the dine in meal. Besides, it also shows that customer can rely on the brand consistency in delivering quality food.

Lastly, the intentions and reliability of trust also positively influence customer loyalty. SME owner-manager should emphasize on the consistency in delivering their promise made to customers. According to Kantsperger and Kunz (2010), trust is earned from the customers after they encounter the so called moment of truth. Meanwhile, intentions in the foodservice industry are related to the good intentions of the particular brand. A good example here is the unfair treatment by the waiter or waitress which responded quickly for the food order made by a large group of family as compared to a small group of couple arriving earlier in the restaurant. Here, the particular brand employees had shown example of prioritizing their profits rather than their customers by treating all of them fairly. The intentions component of trust is derived when customer felt satisfied with the way they being treated (Delgado-Ballester & Munuera-Aleman, 2005; Kantsperger & Kunz, 2010). As such, customer who are satisfied and felt being valued as a result of a fair treatment will exhibit loyalty toward the particular brand.

7. Limitation and Future Research

Although the current study provides interesting findings on the relationships between brand experience, brand trust components, and brand loyalty, it has several limitations. Firstly, findings are limited to the foodservice sector among SME brands only since the result of this study is derived from data from the particular Malaysian SME brand in the foodservice sector. The result may be different if data were collected from other successful SME brand such ABX, G-Force and Infinity Logstic in the logistic industry (The BrandLaureate, 2014). Future studies should consider studying SME brand in other industry to further validate our findings. Besides, literatures had indicated there is dearth of branding studies in the context of SME brand in comparison to global/ big brand (Agostini et al., 2014; Asamoah, 2014; Reijonen, Laukkanen, Komppula, & Tuominen, 2012; Spence & Essousi, 2010). Hence, we strongly urge more researches on other SME brands to contribute on the SME branding literature. Secondly, the systematic sampling method had resulted in a skewed dominant female response over male respondents. Perhaps a quota sampling of equal number of male and female respondents might provide different outcome for the model tested in this study. Thirdly, this study chose intercepts every first of fifth respondents upon exiting the restaurant because outlet manager prohibited survey in their outlets. This method resulted in a higher non-response rate. Future studies may try to conduct the drop and collect method to gain more response in order to further validate the findings. Lastly, there is still much to discover from the trust component on other branding variables to enhancing our knowledge on branding. It would be interesting to improved the current model with inclusion of other variables such brand image and brand affect to study their relationships on both trust components and customer loyalty.

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Challenges of Nikkei Peruvian Second Generation in Japan: An Overview of Their Employment Status after the Lehman Shock 2008

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Abstract

This article analyzes the second generation of Nikkei Peruvians who are residing in Japan to overcome their employment status from the first generation of Nikkei unskilled workers. Using the mix methodology (Qualitative & Quantitative) the paper describes the main characteristic of Nikkei Peruvian second generation after the financial crisis 2008, and focus in the main variables that influence their differences in employment status. The study involved the interview made since 2009 from the first generation Nikkei Peruvian to the second generation Nikkei Peruvian during 2015. They were asked to answer a socio-economic questionnaire and deep interview. Results of the study demonstrate that the main characteristics for Nikkei Peruvian second generation living in Japan are gender, civil status, place of birth, age group, study, social aid and employment status. Unlike the first generation unskilled workers the second generation employment status differs case by case due to their Japanese background. Even though some percentages of second generation continue as unskilled workers in Japanese factories even their social and human capital differs from the first generation of Nikkei Peruvian. The main differences between factory and no factory workers have to do with their civil status, age group, study status, and social aid. The second generation with background of two cultures and two languages who become unskilled workers means that their human and social capital as a bridge of two cultures will be devalued that would be consider by local government.

1. Introduction

1.1 Background

The Japanese law revised in the 1990s permitted to Nikkeijin enter and work in Japan (Ishi, 2008). "Nikkeijin references those who appear to be Japanese but may not behave like or specific Japanese (because they are the descendants of Japanese emigrants and were raised abroad)" (Yamashiro, 2008). One of the main group were Peruvians Nikkeijin who after enter to Japan, started to work as unskilled workers at the factories with very little upward mobility (Cornelius, Tsuda, & Valdez, 2003). Foreign workers of Japanese ancestry can legally be employed in Japan as unskilled labor (Tanno, 2010; Nishi, 2008; Kondo, 2008). Most of them came with the contract employment by private agencies, these agencies provided to Nikkei Peruvians helped to be accommodate in Japan. Therefore they did not need to use Japanese language at all for survive in Japan. As a consequence Nikkei Peruvians did not think too serious about Japanese language, they could not imagine how difficult would be in their future to be integrated in Japanese society.

The global financial crisis, the globalization and the great Japan earthquake cause the labor transformation after the Lehman Shock in Japan (Takashi, 2013). Peruvians who stay in Japan have to challenge with this labor transformation too. The situation was difficult from Nikkei first generation because they did not have the agency companies to help them as in the past, so, many of them lost their jobs and then it was more difficult for them to look for a new job with low or no Japanese ability. As a result they have to move from their places looking for a new job with their family. The other problem was the education of their children, because there is not any special programs for helping Peruvians children education, children have to attend lessons in Japanese even they could not understand Japanese language, so the problem of language learning process became the principal issue for children education, they could not maintain the mother tongue in a good level and they could not learn Japanese good level either as a consequence, it will become a limitation for second generation to choose their employment

status in Japanese society, even they grow up in Japan. On the other hand the first generation did not want their children second generation to do the same unskilled job in Japan.

The first generation of Nikkei has been investigated by many researchers (Takenaka, 2012; Tano 2010; Hiromi 1996; Yamanaka, 1993). In recent years, there has been an increasing interest in education of second generation of Nikkei in Japan (Brody, 2002; Sueyoshi, 2014). Sueyoshi studies have primarily concentrate on educational and Professional careers of Nikkei second generation, her results demonstrated that foreign parents are not involved at all in their children education to understand that the Japanese language limitation is one of the consequence to performance into the Japanese educational system and to improve their mother tongue become assets to enter at the job market in Japan (Sueyoshi, 2014). But there is no data regarding the employment status of second generation especially after the world crisis 2008. Therefore this study aims to describe the main characteristics of second young generation to reside in Japanese society after the financial crisis and to find the main variables that influence the differences in employment status of second young generation of Nikkei Peruvian.

1.2 Research Statement, Objective and Questions

During Lehman Shock the Japanese government prepare some programs to help the unemployment situation in Japan, most of the program benefit to one group of Nikkei Peruvian second generation who lost their jobs and were enrolled in these programs, the other group have to use different strategies to overcome their tertiary education and the last group is the heterogeneous group who use other strategies to maintain their employment status in Japan. However, an empirical research for this issue is not yet available to explore what kind of strategies these different groups used to overcome the world crisis and what is the situation of their employment status in Japan for the Peruvian Nikkei second generation after the Lehman Shock. To that end, the study utilized survey, micro ethnographic research with deep interview and the Chi-square Test to answer the following questions; first; what are the main characteristics for second young generation of Nikkei Peruvian to reside in Japanese Society after the financial crisis? And second: which are the main variables that influences in employment status in the second young generation of Nikkei Peruvian? This means how those problems explain above were overcome by Nikkei Peruvian second generation and how are they living in Japan. This paper will be implemented in the following way: section 2 describes the second generation Nikkei Peruvian relevant problems in Japan, especially focus in education, identity, social, and employment problem; section 3 describes the methodology; sections 4 and 5 interpret the qualitative and quantitative analysis; section 6 explains the results and discussions; and the last section presents the conclusion.

2. Nikkei Peruvian Second Generation

2.1 The Development of Language and Education of Nikkei Young People of Second Generation

2.1.1 Language

After the first generation of Nikkei Peruvian arrived in Japan in 1990, it had been two and half decades. While they were living in Japan they decided to bring their family included their children. Their spouses usually started to work at the Japanese factories, but the problem started for them, when their children have to attend Japanese schools. " …Peruvians still have a little interaction with Japanese society, partly due to language and culture barriers and partly due to their marginal position on the job market" (Karsten, 2010, p. 69) Therefore, Japan is not prepare at all for foreign residents. Japanese school law accept any foreign children to enter the elementary and junior high school as Japanese children do, but all the lessons are taught only in Japanese. Foreign children who start to study at Japanese school at their early age can overcome the language easy in a few years. On the contrary, those foreign children who already started their education in their country have difficult to assimilate the Japanese education system, especially because of their difficult for learning Japanese language.

Then, Nikkei second young generation could not maintain the mother tongue in a good level and they could not learn Japanese at good level either. Peruvian children who enter Japan in the early age started to have a language problem in their houses to communicate with their parents, because they are speaking in Spanish at home with parents and talking in Japanese at Japanese school. As a result, students cannot communicate very well in Spanish with parents and sometimes cannot have good communication at school in Japanese either, because they did not receive any support in home with Japanese language. Consequently, Nikkei second young generation have to challenge these problems by their selves.

The principal reason that Nikkei Peruvian first generation came to Japan was for working at the factories. In consequence, the majority of Nikkei Peruvian people work many hours at job and they do not have enough time for learning Japanese and help to their children. On the other hand they do not assimilate the importance for

children to learn Spanish until they have communication trouble in house. Nikkei Peruvians do not understand the importance of supporting their children in learning Spanish and Japanese language. Fortunately this situation was not in all families, some Nikkei families attended some Japanese lessons, especially during the world crisis 2008 (Lehman Shock). During this period the Japanese government offered some Japanese lessons and technical courses as a program for unemployment people. This program helped some families to be involved in Japanese courses, therefore some second generation children received some support from their parents.

As conclusion, some second generation Nikkei Peruvians who received the support of their parents could go for tertiary education, the other group could not attend tertiary education in Japan, and other percentage of them could not finished the high school either. To settle in Japan and become accepted in Japanese society, foreign residents of Japanese descent need to acquire Japanese language skills as the means of communication in Japanese society and for their children it is necessary to maintain the Spanish as the mother tongue as the possibility of returning to the home country in the future. Lack of Japanese-language limited in different aspects their life in Japan, including child education, employment, and communication with government offices and with Japanese neighbor.

2.1.2 Education

The education development and its connection with the labor market for the Peruvian Nikkei second generation it's an important point to be analyzed, for understanding the characteristics of second generation Peruvian Nikkei in Japan. Ana Sueyoshi, in her research "Second Generation of South Americans in Japan: Building Educational and Professional Career" found that "there is a group of conspicuous but unfortunately still few unexpected achievers, whose educational attainments have not always been singled out by the current literature. This second generation of South Americans is building their educational and professional careers in Japan or in their homeland" (Sueyoshi, 2014).

Sueyoshi examined her result by interviewing 24 Latin American second young generation who are studying or working in the Kanto area, to identify the main common determinants in continuing high school and post-secondary education. Most of her interviewer were students at high school or university who succeeded the barriers of the language by using different strategies of Japanese system education (letter of recommendation, interview). But what happen with those who could not overcome the barrier of the language, who did not have the support of their parents and who lost the motivation to go for tertiary education. It is difficult to determine from the total population of young second generation of Peruvian in Japan, but it is important to know both parts the failure and successful cases who continue or not their education in Japan; to finally understand; what are their background to have differences in employment status within the labor market in Japan.

2.1.3 Identity Problem

Nikkei Peruvian children who stayed living in Japan with their parents have different background they are heterogeneous group. It means that some of them came at their early age, other at elementary school age and the most difficult group came at junior high school age. Therefore the situation of each one are very different and the problematic of each of them too. Nikkei Peruvian Children had new challenge when they went to Japanese school while their parents worked at the factories. But, parents do not need to use the Japanese language as their children, who have to challenge with the new Japanese society at school; most of them never traveled to Peru, but they are Peruvian, most of them cannot speak Spanish as their native language but they are Peruvian native speakers, as a consequence; they feel confusing about their identity too.

During the interview that I did to Nikkei Peruvian second generation who grow up in Japan, I found that some of them feel confusing about their identity. Many Peruvians children who grow up in Japan attending Japanese schools from early age think that they are Japanese. Some of them feel confusing when they have to talk about their family background and the other group feel just they are different from Peruvians. However, when they become adult and they have to decide between Peruvian or Japanese nationality they feel more confusing. One of the big problems is the question that sometimes they ask by their selves: who am I? Am I Japanese? Am I Peruvian? Am I half? Which is my country? Different questions that make them confuse about their identity and citizenship.

On the other hand, some of them nationalized as Japanese. Nevertheless one of the interviewer told me that when he applied for a job in Japanese company, they separated him from the Japanese group and considered him as a "Japanese naturalized abroad". Therefore even Nikkei Peruvian second generation speak fluently Japanese, study at Japanese school, his physical appearance is like Japanese, and grow up all their life in Japan they will never feel as a Japanese in Japan, because of their foreign background. As Robert Moorehead affirmed that "The youth report a range of identities (*hāfu*, *Nikkei*, Peruvian, Japanese, Japanese+Peruvian), but they struggle to articulate

how being Peruvian is a part of their daily lives. Instead, a Peruvian identity is symbolic, reduced to expression in birthday cakes, Christmas dinners, and occasionally speaking Spanish" (Moorehead, 2014). Many reasons are pushing the Young second generation to assimilate the Japanese society, as I mentioned before, one is the Japanese system education which obligated them to overcome the language limitation if they want to go to tertiary education.

2.2 Nikkei Second Generation Employment Status Problem in the Labor Market in Japan

The Second young generation of Nikkei Peruvian, become divided in two groups. First the succeeded group who overcame the barrier of the language and continued high school or tertiary education and second group formed by the young Nikkei Peruvians who did not finish high school or tertiary education. As a consequence, their differences in employment status depend on which group they belonged to. Before the Lehman shock 2008, most of the second group were working as part time job or full time workers at factories, and the second group studying or working in Japanese companies as *"SALARY MAN" (office workers)*. Most of the Peruvian first and Nikkei Peruvian second generation has a contract job *(KEIYAKUSHAIN)*, not permanent job *(SEISHAIN)*, therefore, many of them lost their jobs during the world crisis, and especially those who worked at the factories, due to many companies stopped their production in manufacture. What happened with the second generation Nikkei Peruvian in Japan after this period of time? For Peruvian Nikkei second with their Japanese background, their future is staying in Japan. Many second generation also compare the salary of their parents working at the factory (Blue collar workers) with the salary of salaryman after studying at the university (White collar workers) and some group realized that to earn more money it is better to work at the factory. In Peru this situation is opposite, if people want to earn more money, they have to study at the university because working at the factories, in Peru it means earning salary only for surviving.

2.3 Lehman Shock and Its Consequences in Nikkei Peruvian Second Generation as Labor Force in Japan

Regarding to the study of Takenaka in 2009, the generational succession, would be one mechanism to change Peruvian Nikkei First Generation low social status at Japan to upward mobility. But now many years later and after a world crisis happened (Lehman Shock), Nikkei Peruvian second generation did not cover at all the perspective of the first generation. In addition Takashi Moriya (2013) affirmed that "the middle-class is collapsing even in Japan, and with an increase in non-regular employees as a result of the changes in human resource management and labor after the Lehman Shock". This problem also affected Nikkei Peruvian second generation considering that the recruitment of new graduates in 2012 was extremely low in Japan. In addition Moriya showed that "The Great East Japan Earthquake has further increased unemployment of a large number of young people. As a result of continued high unemployment, after the Lehman Shock, 1.93 million people received Japan's welfare benefits in August 2010. There is increased participation by the NPO's or social enterprises in dealing with poverty issues. (Moriya, 2013)

Takashi also indicated that the three major causes of the labor transformation after the Lehman Shock in Japan are (in that order): 1. the global financial, 2. The Great East Japan Earthquake, which caused widespread devastation and destroyed several business units across Japan. 3. "Globalization", which was particularly exposed after the Lehman Shock. (Takashi, 2013) "The people most affected by the Lehman Shock in the fall were foreign workers in non-regular employment. In Japan, low-skilled foreign workers are legally not permitted." (Moriya, 2013) As a result, not only the global financial crisis, but also the globalization and the great east Japan earthquake causes the labor transformation after the Lehman Shock in Japan. Therefore, Regarding to the literature review the Nikkei Peruvian immigrant family and the important variables for second generation Nikkei Peruvian settled in Japan, are main points for research to understand the characteristics of second young generation of Nikkei Peruvian and their differences in employment status especially during the labor transformation in Japan after the Lehman shock.

3. Methods

Qualitative methods, which are used more often in anthropological research, can provide descriptive and analytical explanation to a single phenomenon, like Nikkei Peruvian second generation family. It consisted in a micro ethnographic research in deep interviews with Nikkei Peruvians second generation who live in Japan. As is usual ethnography method refers to fieldwork, in this case I made a fieldwork in Japan especially in the places where most of Nikkei are living with their families. Therefore I try to live with them, participating in many activities. I also used the Chi-square Test because it is used to determine whether there are statistically significant differences between expected and observed frequencies in categorical variable. It helped me identify effective differences, which are not due random sampling variation.

3.1 Interview in Aichi Prefecture (2009-2015)

I have been interviewing Nikkei Peruvian since 2009 researching Nikkei Peruvian first generation using the micro ethnographic research, this experience helped me to connect and meet with Nikkei Peruvian second generation with who I continued interviewing between January and June 2015, in the Aichi Prefecture area. "Aichi Prefecture has the highest number of foreign workers of all the Japanese prefectures as well as the highest number of Nikkei workers" (Brody, 2002, p. 59). The interview was made in Spanish and sometimes in Japanese for those second generation who cannot understand Spanish very well. Kanto-area concentrates most of the Nikkei Peruvian families after Tokyo and Osaka, because most of the manufacture industry are located in these cities. I interviewed about 33 Nikkei Peruvian young generation and some official public workers in two different cities who are working several years as a translator helping Nikkei Peruvian first and second generation.

3.2 Data Collection

The data collection method was one interview questionnaire survey, observations and deep interviews. The objective was to describe the main characteristic of second young generation of Nikkei Peruvians to reside in Japanese society after the financial crisis and to find the main variables that influence the differences in employment status of second young generation of Nikkei Peruvian. The exploration of the data base was based on various types of analytical approaches: Descriptive, exploratory and interpretative. After obtained the main variables from the ethnographic research, I made a statistical analysis to observe the differences of these variables with employment status and to support this result, I used the Chi-square test to prove if these differences are statistically significant.

3.3 Data Description

The interviewers were 33, some of them were born in Japan, other came in their early age, another group came to Japan at elementary school age and the final group came at junior high school age. Each group has different background in their education. Therefore, it measures the difficult in learning Japanese language regarding to what age they had at the moment of arrival to Japan. On the other hand, they can speak Spanish as a mother tongue and while they continue their studies in Japan some of them learned Portuguese, Japanese, and English. But for some of them, their level in all those language are not well, because they could not learned the all process of learning language (listening, speaking, writing and reading) most of them can speak but writing and reading even in their mother tongue was not complete at schools at all. Most of them have Peruvian parents and a little percentage Japanese father or mother.

3.4 Empirical Analysis: Chi-Square Test

In Qualitative method I used the two ways tabulation between the dependent variable (employment status) and the independent variable (age, social aid, education, marital status, place of birth and gender)

3.5 Variables under Study

A statistical analysis of employment status is performed using six relevant variables from the micro-ethnographic case study: (1) Gender, (2) Civil Status (3) Place of birth (4) Age group (5) Study Status (6) Social Aid.

4. Quantitative Analysis
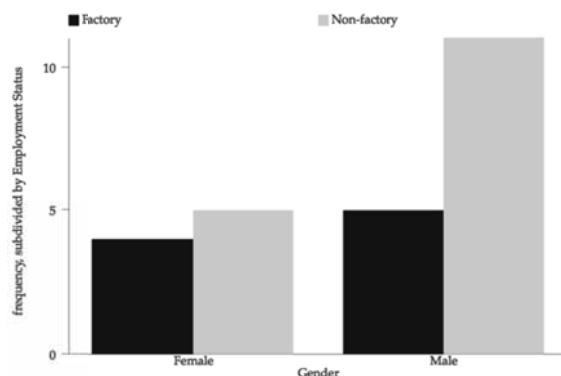
4.1 Tabulation of Variables

4.1.1 Gender

Figure 1. Interpretation of the variable gender

Most women and men have no factory jobs. Regarding to my interview 44% of women Nikkei second generation works in the factory and 56% are not working in the factory. On the other hand 31% of men are working in the factory and 69 % are not working in the factory. Thus there are observed differences. But are these differences statistically significate? To answer this question in the next section I will use a Chi-square test.

4.1.2 Civil Status

Between employment status and civil status first in my sample people who work in factory (56%) are single and (44%) are single no factory workers. whereas marry and divorce work somewhere else.
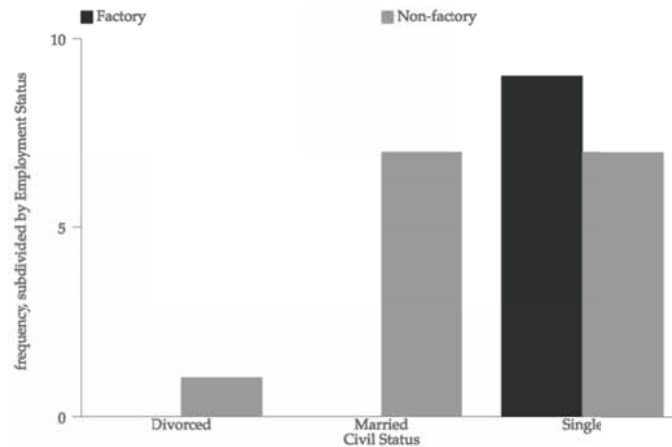
Figure 2. Interpretation of the variable Civil Status

4.1.3 Place of Birth

Between employment status and place of birth. Most of the people second generation who were born in Peru are not working in the factory (67%) but 33% continue working in the factory. The other group of the people who were born in Japan, 50% of them continue working in the factory.
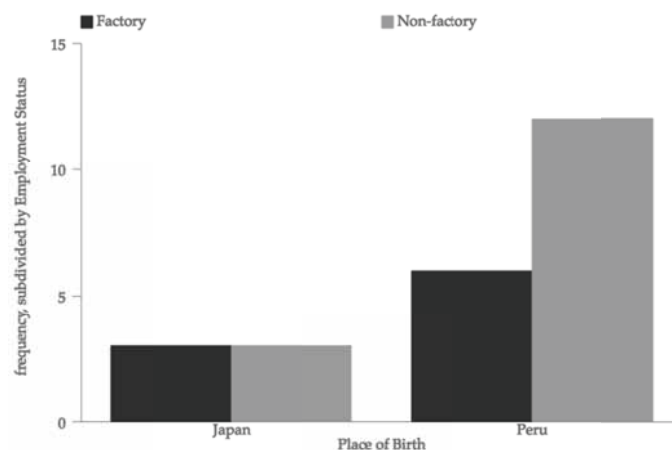

Figure 3. Interpretation of the variable Place of birth by data tabulation

4.1.4 Age Group

This is a two way tabulation between employment status and age group. Most people of second Nikkei generation between 21 1nd 30 years old (64%) are not working in the factory but the other group about 37% continue working in the factory. People between 15 and 20 years old are working in the factory, maybe most of them dropped out the school. And people between 31 and 40 years old are not working in the factory, some of them have their own business, or they are fleeter. Thus there are observed differences that later I will show if these differences are statistically significant.
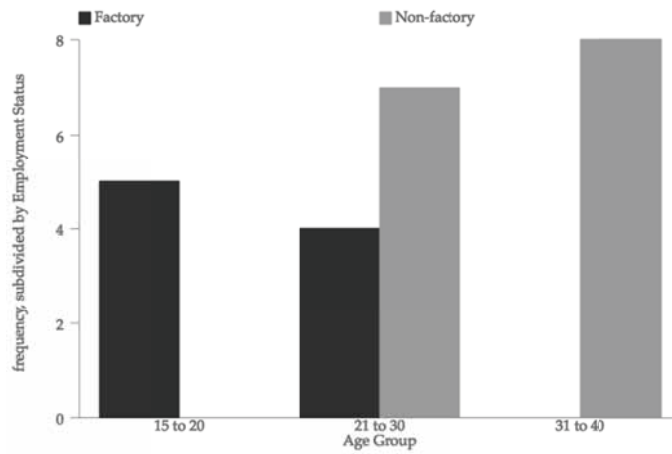
Figure 4. Interpretation of the variable Age group by data tabulation

4.1.5 Student Status

Between employment status and student status from my interview group, people who do not study are in total 80% and people who study are 20%. Most of the people who do not study (75%) are not working in the factory and only 25 % of the people who does not study work in the factory.
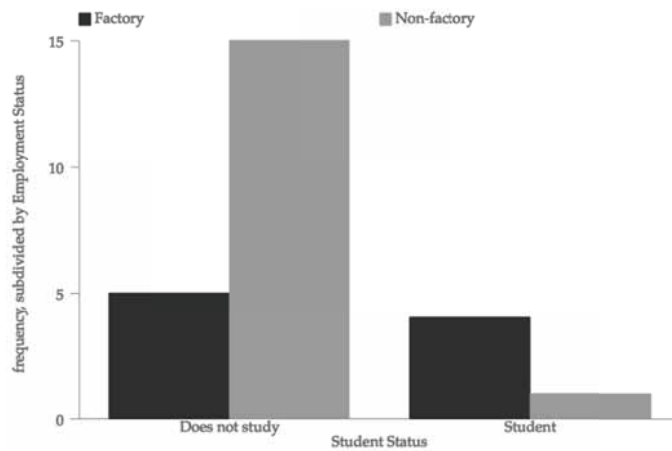

Figure 5. Interpretation of the variable Student Status by data tabulation

4.1.6 Social Aid

This is a two way tabulation between employment status and social Aid. Most of the people who are not in the factory received more social Aid as the benefit from the government.
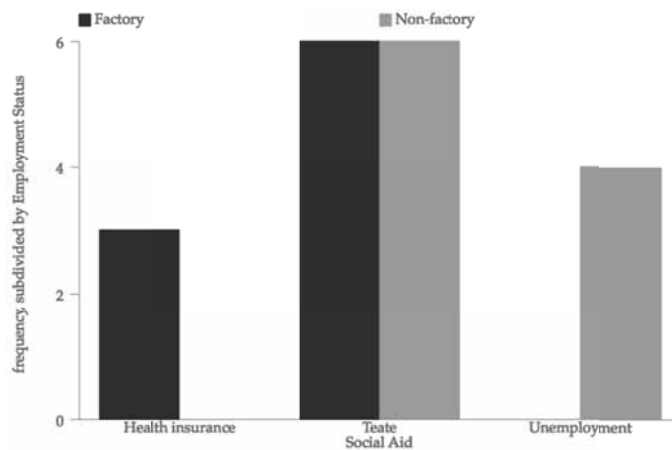

Figure 6. Interpretation o f the variable Social Aid by data tabulation

After performed the statistical analysis of employment status, using the six relevant variables: (1) Gender, (2) Civil Status (3) Place of birth (4) Age group (5) Study Status (6) Social aid that I found from the micro-ethnographic research. I observed some differences but to support this result I used the Chi-square test to prove if these differences are statistically significant.

Table 1. Q-square Test 2015

| Characteristics | Employment Status | | | | Chi-Square |
| | Factory Work | | Non Factory Work | | |
	Number	Percentage	Number	Percentage	Significance
Gender					
Female	4	44%	5	31%	0.4352
Male	5	56%	11	69%	Pr = 0.509
Total	9	100%	16	100%	
Civil Status					
Divorced	0	0%	1	7%	7.2
Married	0	0%	7	47%	Pr = 0.027
Single	9	100%	7	47%	
Total	9	100%	15	100%	
Place of Birth					
Japan	3	33%	3	20%	0.5333
Peru	6	67%	12	80%	Pr = 0.465
Total	9	100%	15	100%	
Age Group					
15 to 20	5	56%	0	0%	13.1394
21 to 30	4	44%	7	47%	Pr = 0.001
31 to 40	0	0%	8	53%	
Total	9	100%	15	100%	
Study Status					
Does not study	5	56%	15	94%	5.2517
Study	4	44%	1	6%	Pr = 0.022
Total	9	100%	16	100%	
Social Aid					
Health Insurance	3	33%	0	0%	6.9667
Teate	6	67%	6	60%	Pr = 0.031
Unemployment Insur.	0	0%	4	40%	
Total	9	100%	10	100%	

Source: author's field survey.

4.2 Significant Differences between Variables: The Chi-Square Test

Table 1 reports that there are significant differences between factory and non-factory workers. In particular, the Chi-square test shows that the main differences between these two groups have to do with their civil status, age group, study status, and social aid. On the other hand, differences in gender and place of birth do not show significant over employment status. (1) For gender : if the P value is less than 5 % then the differences in gender explain the differences in employment status but in my case the P value is 50 % thus the differences in gender do

not explain employment status. (2) For civil status: P value is 2.7% thus differences in civil status explain differences in employment status. (3) For place of birth: the P value is 46.5% thus differences in place of birth do not explain differences in employment status. (4) For age group: the P value is 0.1% thus differences in age group explain differences in employment status. (5) For study status: the P value is 2.2% thus differences in study status explain differences in employment status. (6) For social Aid: the P value is 3.1% thus differences in social aid explain differences in employment status.

5. Qualitative Analysis

The data collection method was one interview questionnaire survey, observations and deep interviews, prepared by the research. The objective was to describe the main characteristic of Nikkei Peruvian second generation to reside in Japanese society after the financial crisis and to find the main variables that influence the differences in employment status of Nikkei Peruvian second generation. The exploration of the data base was based on various types of analytical approaches: Descriptive, exploratory and interpretative. I also used the Chi-square Test.

5.1 Categorization Result from the Interview 2015 from Nikkei Peruvian Second Young Generation

The interviewers were classified in seven typologies groups:

Table 2. Typologies of Nikkei Peruvian Second Generation

Typology	Description
1	Second young generation who was born in Japan.
2	Second generation who came to Japan in their early age (1, 2, 3, 4, 5, 6 years old)
3	Second generation who came to Japan when they were at early elementary school (1, 2, 3, grade).Their age are between 7, 8, 9 years old.
4	Second generation who came to Japan when they were at 4, 5, 6 grade (between 10, 11, 12, years old)
5	Second generation who came to Japan when they were in Junior high school (13,14,15 years old)
6	Second generation when they were in high school (16, 17 years old)
7	Second generation who made u-return between Japan and Peru

5.2 Qualitative Results

The findings from this study suggest that the main characteristics variables for Nikkei Peruvian second generation living in japan are gender, civil status, place of birth, age group, study, social aid and employment status. Regarding to the main variables that influence the differences in employment status in the Nikkei Peruvian second generation this study found that there are significant differences between factory and non-factory workers. In particular, the Chi-square test shows that the main differences between these two groups have to do with their civil status, age group, study status, and social aid. On the other hand, differences in gender and place of birth do not (significantly) explain differences in employment status.

5.2.1 Gender

Both results show that it does not affect the employment status, both men and women have the same right to obtain a job wherever they plan and choose. But, I have to mention that the difference in salary exist between men and women especially in the factories. Some interviewers said that "Men can earn more salary per hour than women because they can do hard jobs and of course more dangerous job. I prefer to work in "*OBENTO" (FOOD FACTORY)*, even the salary is low it is cleaner job and not dangerous" another interviewer said "My boyfriend can earn 1,200 yens per hour but I received 950 yens per hour working at the factory". As the interviewer mentioned, men can earn more at the factories but regarding to the office worker they earn according to their academic background.

5.2.2 Civil Status

Regarding to observation and deep interview to Nikkei Peruvian second generation who works in factory are

single whereas marry and divorce are not working in factory.

5.2.3 Place of Birth

Nikkei Peruvian second generation regarding to their place of birth are divided in two groups, the first who was born in Japan and the second who was born in Peru. This difference does not influence in their employment status because even the group who was born in Japan are working in the factory unless they grow up in Japan and their ability with Japanese language is better than the second group.

5.2.4 Age Group

Some Nikkei Peruvian second generation who came to Japan at their early age (Typology 2) are not working at the factory, and some of the other group who came to Japan later are working at the factory. And the others are using different strategies of studies to overcome the language barrier limitation and low level scores to continue tertiary education.

5.2.5 Student Status

The observation and deep interview suggest that Nikkei Peruvian second generation who studied tertiary education used different strategies to overcome the different barriers case by case regarding to the 7 typologies that I classified. Strategy 1: students with low Japanese level, return their country then after finished their basic education return to Japan and enter to junior high school while studying Japanese at *"JUKUS "* or at school (Typology 7). Strategy 2: students who were born in Japan and decided to study Spanish language as a career during their university studies made a short return to their country to improve their Spanish and as a result when they apply for job hunting in Japan have one more advantage to obtain a job. (Typology 1). Strategy 3: student with low Japanese who came at 10, 11, and 12 goes to low level high school or technical high school. After finishing high school they continued their studies at *"SENMONGAKO "*[9](technical school) (Typology 4). Strategy 4: students who came at high school level, studied English as a second language in their country. Therefore, coming to Japan use their high score in *"TOEIC"* test to enter the university even they cannot manage well Japanese because of their short time in Japan (Typology 7). Strategy 5: some young second generation who were born in Japan (typology 1) enter low level university and study business after that they work as a seller. For example selling insurance health plan. Therefore they use their Spanish ability to enter the Spanish speaker community. This strategy helps those people to improve and maintain their status employment. Strategy 6: on the other hand, some Nikkei Peruvian second generation during the world crisis (Lehman Shock) took advantage studying technical career as the Japanese government offered during the crisis for unemployment people. Some of them studied Japanese course, computer, home helper, web design, aromatherapy and other technical career while receiving a percentage of salary because of their unemployment condition.

5.2.6 Social Aid

Just all the interviewers received some aid from the Japanese government, especially the aid called *"Jidou Teate Nintei Seikyu Sho.* This kind of government aid helped the family to alleviate the economic burden of the children.

6. Discussion

The findings from this study suggest that the main characteristics variables for Nikkei Peruvian second generation living in Japan are gender, civil status, place of birth, age group, study, social aid and employment status. Regarding to the main variables that influence the differences in employment status in the Nikkei Peruvian second generation, this study found that there were significant differences between factory and non-factory workers. In particular, the Chi-square test showed that the main differences between these two groups had to do with their civil status, age group, study status, and social aid. On the other hand, differences in gender and place of birth do not (significantly) explain differences in employment status.

6.1 Civil Status

First in my sample people who work in factory are single whereas marry and divorce work somewhere else. This result also has statistical differences in the Chi-square test between employment status and civil status.

6.2 Employment

Most of Nikkei Peruvian second generation are not doing the same job as first generation who came to Japan in the 1990s, (factory workers) the second generation has different typologies compare to the first generation. Nikkei Peruvian second generation has higher social and human capital than first generation because they grow up in Japan. Therefore, some of them are working in different types of job like office workers, micro entrepreneurs, restaurants, shops and some of them became university students. On the other hand, somewhat

surprisingly is that some percentage of them are doing the same job as first generation (factory workers) even they have better social and human capital. The findings of this study regarding the employment variable can be summarized in the next figure.

Table 3. Employment status

Employment Status in Japan	Meaning	Factory	No factory	Main requirements
Shain (Seishain)	Permanent Job (direct)	Yes	Yes	Language
Keiyakushain	Contract Job (direct)	Yes	Yes	Language
Hakenshain	Job by contract & intermediary	Yes	Yes	Intermediary person
Arubaito	Part time job per hours	Yes	Yes	Language
Fleeter	Change constantly their job	Yes	Yes	Language

6.3 Social Aid

During the interviews just 100% of the Nikkei Peruvian second generation affirmed that they received at least one of social aid from Japanese government, for example: the "*Jidou Teate Nintei Seikyu Sho*" : this means that the parents of children aged 15 years or under can receive "Child Allow". The monthly stipend changes according to the age of the child, the order of births of the child, and the income of the guardians. Children under 3-years-old receive 15,000 yen per month from Japanese government; over 3-years-old and prior to elementary school graduation receive 10,000 yen per month for first and second children; 15,000 yen per month for third and subsequent children and Junior high school students receive 10,000 yen per month.

In addition, in Aichi Prefecture for example they can receive also other types of aid: (1) Accident Insurance which include workmen accident and compensation insurance. (2) Employment and unemployment insurance which included benefits for elderly people. (3) Employment benefit for elderly: child care benefits and family care benefits. (4) Educational: school expenses subsidy system and high school tuition support found. (5) Scholarship: student scholarship loans for high school students and for two years College, vocational and University Students scholarship by (JASSO). (6) Medical insurance: employment health insurance and national health insurance. (7) Public pension system: national pension, employees' pension insurance and mutual aid pension. (8) Single parent household benefit: child rearing allowance, Aichi orphan allowance and Medical System for Single Parent Household. (9) Public houses which included prefectural, municipality and Urban Renaissance Agency. (Aichi hand book, 2015).

6.4 Study

According to the investigation by Sueyoshi "In spite of being stigmatized as academic underachievers, a conspicuous but unfortunately still limited second generation of south Americans are building their professional careers in Japan or in their homeland" (Sueyoshi, 2014, p. 126). This result also found that only small group of second generation continued tertiary education. On the other hand my result showed that many Nikkei Peruvian second generations do not have too much motivation to continue studying at university, professional or technical schools even they do not have the language barrier. One of the reason is as one of them explain that: "even if I go to the university finally my salary will be equal or less than factory workers" Unless they work in a big company, because in Japan the successful student who went to the high level university will work in a big and successful company. Going to the university in Japan does not mean that they will find a job in their major or the job they desire to work, it depends on the job hunting and from which university they will graduate. In the case of Peru there is no job hunting process as well as Japan, after graduation students have to find a job by their selves, university does not support with this process.

6.5 Age

In the two way tabulation between employment status and age group most people between 21 and 30 years old are not working in the factory but the other group about 36% continues working in the factory. This difference in the Chi-square test demonstrated also that there are statistical differences between age group and employment status. In the ethnographic research I observed that some young people (25 years old) who are working in the factory as a "HAKENSHAIN" said: "I was working as a "*SHAIN* "but I felt discrimination because I was obligated to work more hours, extra hours without extra salary and I felt the company prefer the Japanese because they are more year working there…" to corroborate this feeling I asked some Japanese people who had

the same experience, but the feeling is different even the situation is the same. One of the interviewer; a Japanese woman told me that working as a "*SHAIN*" is very hard not only for foreign people also for Japanese people. Therefore, to obtain a better job as a "*SHAIN*"; she decided to retire from the hard job; and she enter at graduate school. As a result, I can say that the way how some Nikkei Peruvian second generation think compare to Japanese is different but the treatment at job is the same. Some Nikkei Peruvian second generations think that to obtain more money it is not necessary to become "*SHAIN*" and to endure the Japanese hard system at those jobs. Next graph shows the summary of the result that I interviewed to a Japanese woman worker as a "*SHAIN*".

Table 5. Japanese salary man working hours

Feature	Description
Interview sample (a Japanese person)	Japanese salaryman 2015
University	Literature
Job Hunting	6 interviews before obtain the job
Job	Wedding company
Type of Job	Shain
Training	2 months
Salary	220,000 yens
Hours working	Monday through Friday working 12 hours
Extra hours	Saturday and Sunday 17 hours
Extra hours	No payment

The findings provide evidence that, working as a "*SHAIN*" in Japan is very hard in some companies as a part of the system not only for foreign people as well as for Japanese too.

The most striking result to emerge from the data is that, during the Lehman shock some unemployment young second generation took advantage of the technical studies. Because the Japanese government offered technical courses during the crisis for unemployment people. Some of them studied Japanese course, computer, home helper, web design, aromatherapy and other technical career.

7. Conclusion

To answer question one: What are the main Characteristics for second generation of Nikkei Peruvian to reside in Japanese society after the financial crisis? This study used an ethnographic research as a descriptive analyzes, using observation, deep interviews and surveys for Nikkei Peruvian second generation after the world crisis. The results showed that the main characteristics for Nikkei Peruvian second generation living in Japan were gender, civil status, place of birth, age group, study, social aid and employment status. Where civil status and age variables are similar to the first generation. The most relevant here is the employment status because regarding to the first generation the employment status for just all of them were as unskilled factory workers. However, the results of this article suggest that Nikkei Peruvian second generation employment status differs case by case. Therefore, some percentages of them are doing the same job as the first generation; working at the factory; even their social and human capital are better than the first generation. Unlike the first generation; Most of them are not working as a *HAKENSAHIN,* because they studied and grew up in Japan; and they can manage at least two languages (Japanese and Spanish) most of them do not need the intermediary as their parents needed.

To answer question two: Which are the main variables that influence the differences in employment status in the second young generation of Nikkei Peruvians? A statistical analysis of employment status was performed using six relevant variables from the ethnographic study: gender, civil status, place of birth, age group, study status, and social aid. Table (1) showed that there were significant differences between factory and non-factory workers. In particular, the Chi-square test showed that the main differences between these two groups had to do with their civil status, age group, study status, and social aid. On the other hand, differences in gender and place of birth did not (significantly) explain differences in employment status.

The results also showed that some group of Nikkei second generation had the intention to continue tertiary

education going to the technical career or going to the university. But some of them could not finish high school because of their low grade, bullying or economic problems. Therefore, these people are divided in two groups; one decided to work in the factories as their parents, and the other one who do not work in the factory are working as "*ARUBAITO*", "*FLETEER* " or as "*HAKENSAHIAIN*" in small jobs. These kinds of jobs need the Japanese ability as they already acquired while living in Japan even in different levels. Therefore, they do not continue looking for better academic level even they have the ability in Japanese language. As a consequence their salary will not increase for their future. Most of them are thinking in their present earning but they do not think so seriously that the difference between people who had tertiary education and who do not have it. Because, people in Japan working in the same place and doing the same job can obtain different salaries regarding to their academic background at the Japanese companies.

Unlike the first generation, who's main characteristics was unskilled workers, second generation challenged to be involved in other types of employment status *(Shain, Keiyakushain, Hakenshain*, *arubaito*) due to their Japanese ability even in different levels, some of them are continue working at the factories. But their types of contract *(Shain, Keiyakushain)* at the Japanese company differ from the first generation (Only *Hakenshain* in most of them). Therefore, the Japanese ability of second generation also is helping them to improve their employment status and to increase their social networking in Japanese society. Then, their decision to stay in Japan (according to the interview), are helping them to see Japan as a country for settlement, having their own family in Japan.

Nikkei Peruvian second generation has significant characteristics as a human and social capital but without the support of their own family to push them to obtain a better academic level, their human capital and social capital as a bridge of two cultures will be devalued. Further research might explore more deeply this problem. Important conclusions drawn from this work include that during the Lehman Shock, some Nikkei Peruvian second generation took advantage learning technical career offered by Japanese government for unemployment people. The crisis and the aid policy of Japanese government during and after the crisis push them to improve their knowledge and as a consequence to improve their employment status for some of them.

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Attribution of Elderly Responsibility in Relation to Income in Qatar

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Abstract

This study investigated the attribution of kinship responsibility by drawing on attribution theory of locus and controllability. The analysis draws on the actor versus observer model using income as an intervening variable. A cluster sampling technique resulted in a sample of 935 respondents. Analysis of covariance using gender as a covariate resulted in non-significant main effects. An interaction effect was statistically significant in the high income group who supported the attribution of responsibility of the government and the low and middle income groups who supported their parents. Social actors were more inclined to provide an attribution of the responsibility for elderly care to the government, whereas high income individuals than those in the middle and low income group.

Keywords: responsibility of elderly, attribution of responsibility, Qatar, income, parental support, parent supporting child

1. Introduction

1.1 Introduce the Problem

Historically, care of elderly has been in the bounds of close family members (Lee, Parish, & Willis, 1994). In modern days, increasing social and economic woes, has changed the typology of elderly care. The increased work hours, demand for flexible and mobile labor force and commuting to work conditions have allowed for greater reliance on public and governmental support for care (Haberkern & Szydlik, 2010). Many social pressures felt around the world and in particular in the Middle East are challenging the intergenerational ethos were now families are out-sourcing family care (see for instance Doumit and Nasser. 2010 in Lebanon). But even with these conditions, intergenerational affinities still predominate in most cultures. Many sociologists point out to the "family-filial" relation there is a crowding effect and normal for the family to provide care for the elderly when the welfare state has the primary role of the financial provider (Daatland & Lowenstein, 2005; Motel-Glingebiel, Tesch-Roemer & Kondratowitz, 2005; Sundstrom, Malmberg & Johansson, 2006). The intergenerational care in most Arab countries is generally very high, not because of a legal obligations but of normative behaviors in which there is a mutual support in the family. In contrast with many Western and individualistic societies care in many Arab countries is generally still a family matter (Naldini, 2000).

From the past time, the rise of the family emerged with humanity in cooperation, regeneration and continuation (Gough, 1971). The family in modern times, especially in the Arab world is structured around subordination and domination. Two to three decades ago the confinement of women in homes and creation of the small nuclear family women had found their role organized around structures and responsibilities, especially for children and elderly care. However, in modern day, prolonged care ceases to be a basis for women subordination with the availability of community, public or private nurseries and care homes and permissibility of shared responsibility with men. Extensively women and men have shared care through supportive social institutions. And the family remains an essential component of modern day social organization. The transformation of the family has allowed for a vast qualitative leap forward in cooperation, purposive knowledge, love, and creativeness. Thus, care between family members may be a "human gift for personal love that will make some form of voluntary, long-term mating and of individual devotion between parents and children to continue indefinitely" (Gough, 1971, p. 770). Even responsibility of dependents is now emerging alongside public responsibility for domestic tasks and specifically for the care of elderly. The family remains an essential organization having support from

the public and welfare government agencies.

1.2 Qatar as a Context

Qatar is a welfare state and one of the wealthiest in the world. It provides financial and economic incentives for its citizens (CIA, 2014). Qataris constitute less than 20% of the population, and the remaining population includes expatriates/laborers mostly coming from the sub-Indian region. The government of Qatar provides financial support to needy Qatari family members especially the elderly, widowed or disabled. However, with the growing work burdens and the strain of modern life, there is some evidence of the withering of the family unit. In many households, both men and women are in the workplace and the care for dependents, especially elderly, is left to hired domestic care (Shah, Badr, & Shah, 2012). There is a great need to address the wellbeing of elderly and dependents in situations where family members are less likely to have the time and energy to care for them. Many family members may forego care of dependents of elderly as they may feel that they have no responsibility to care for the elderly and are less likely to do so because they think others in the family or government have equal responsibility.

Understanding the etiology of the responsibility helps policymakers understand the economic perspective and beliefs about welfare and whether the policies of "excessive welfare" are in line with people's attributions and perceptions. In Qatar, the welfare state covers the huge costs of needy dependents, even for those elderly who are residing in their family homes. Being a society having a close-knit structure, care coming from outside the family is considered a social aberration. Government support of needy individuals in terms of care is dismissed and ridiculed but where financial help is needed there is a general acceptance of financial support for the care in family homes. While the current perception suggests that a moral and physical care is the responsibility of family. People in Qatar may believe that its wealth bears financial responsibility of the government for the elderly as a privilege deserved. In this study, we were interested to understand how Qataris attribute the responsibility of elderly care in light of the behavioral structure of Qatari society.

1.3 Causal Responsibility of Elderly

There are different beliefs about the responsibility of elderly care; the etiology of such beliefs depends on the situation at hand. People generally demonstrate certain behaviors in reaction to certain events. They attempt to understand what causes the events to reach closure and take responsible actions to research possible outcomes. The attributions of responsibility of care have several implications and are significant to all societies in the world. Those who may see care as the responsibility of family members they see themselves as actors whether in providing financial support as well as bearing the physical and moral responsibility of care. Many may also see this role as a natural outcome when someone seeks to answer to the causes of the event, they may give reasons for the causes which are generally called attributions. The severity of the effects usually entreats an attribution. It is generally central to the consequences of events to identify the causal actors or causes that have brought about the event or behavior (Brewin & Antaki, 1987). Some events may be common and typical, and therefore, fewer people analyze the function of these events. Other events, especially those that impact people negatively, fuel them to seek answers and investigate the causes of such events to find closure for negative and painful experiences. As Pyszczynski and Greenberg (1981), Weiner (1980), and Weiner (1985) suggested that attributions are motivated by simulated feelings of threat, anxiety, anger and/or pity that impel people to understand what may have caused those events. Depending on the explanation of event causality and the nature of the events, people may show positive or negative attitudes toward them (Mohanty & Begum, 2012). By shedding light from this theory on responsibility, we draw closer to understanding people's beliefs about family responsibility and whether it is aligned with welfare policy in Qatar and the Middle East.

1.4 Attribution Models

Specific models of attribution have been developed since the 1970s. The external-internal attribution suggest that people make two kinds of attributions one internal to the individual and the second external and caused by others or blamed on others. The observer-actor crossed with external–internal attribution forms a complex combination of the different contexts and dispositions of the attributer. The classic actor-observer model by Jones and Nisbett (1971) suggested that actor-observer differences influence how people explain events. Those who perceive negative events in light of their actions, they tend to externalize the attribution related to the outcomes, whereas observers see outcomes (negative) attributed to others' personal causes. The latter model is currently accepted by social psychologists (Baron, Byrne, & Branscombe, 2006; Kenrick, Neuberg, & Cialdini, 2006), and it is backed by a large number of theoretical and empirical studies in this area. However, the asymmetry or the cultural context of this attribution might change the dominant and theoretical thinking on this matter due to a number of interconnected factors, which include locus of causality, stability and controllability (Weiner, 1985). Locus of

causality explains causality in the context of the event. Stability suggests the constancy of the events over time. Lastly, controllability is the degree of influence a person has over the cause of the event.

The first aspect of this model is control; an external and internal attribution is made according to the degree to which the act is perceived to be due to an inability or lack of effort to control the event. For instance, a man in public performs an anomalous behavior; the behavior is attributed to either a lack of the ability to control oneself or a lack of effort. While ability is perceived to be uncontrollable, effort, on the other hand, is perceived as controllable. Thus, the attribution of a certain behavioral outcome is based on whether the individual is seen as exerting effort or whether they are unable to do so. An elderly person or a child who behaves in a certain way because of a physical or mental disability calls for empathy leading to pity and concern. Thus, the causes are not attributed to the individual, who is the victim and unable to control his/her faculties. In contrast, for the elderly who are able but lack the effort, the attribution of the behaviors is externalized or blamed on the young adult. Based on the controllability of the behavior, the individual will assign an external or an internal attribution. Weiner (1993) explained that controllability is a major component that can define how people react to stigmatized individuals (see also Werner, 2005).

The second and third aspect is locus and controllability there are two important aspects of Weiner's (1985) model that is significant to the conceptual framework of this study. As this study was a cross-sectional study, measurements were taken at one time, and therefore, stability was excluded from the model. Locus provides an orientation to how people make attributions and generally operate on the proximity of the accepted behavior to the event's cultural context. In certain cultures, attributions are made irrespective of the perceived personal outcomes or whether the event is due to an actor's specific action. Al-Zahrani (1991) provides a cross-cultural perspective that does not fit well with the internal and external attribution model. For instance, behaviors that are seen as alien to certain cultures are stereotypic in their attribution of the behavior. These attributions will generally be very negative when the causes or the nature of the behavior is not understood. Al-Zahrani gave an example of two Arab men kissing upon greeting one another. When this greeting is seen by a heterosexual American observer, the Arab men may be perceived negatively based on this anomalous public act, thus leading to an externalization of attributions linking the actors and inherent behavior of the observed. Likewise, a heterosexual Arab man which may have kissed another man in public in form of greeting, may observe a man and a woman kissing in public, would regard the act as shameful, and the attribution would be externalized to a decadent western behavior and see kissing another man in form of greeting as an internal behavior. Irrespective of whether one is an actor or observer or what the perceived outcomes are, the locus of attribution suggests that the type of attribution made, is based on one's cultural identity and the closeness the individual to cultural practices and traditions experienced when making the attribution (Al-Zahrani, 1991). Thus, when individuals make attributions of responsibility, they make these attributions not based on their own personal and perceived outcomes but instead may be culturally socialized to make one type of attribution that is consistent with cultural norms they ascribe to. For instance, elderly care in the Middle East is still largely collectivist with strong family connectedness. The nuclear family or the extended family is perceived to be responsible for the long-term care of its dependents. Thus, a culture that values social relationships over individual interest might motivate the individual to make different attribution styles than that found in the West. This culture might also call for greater levels of externalization because of the active role in supporting close family members. Thus, integrating social and cultural context in the attribution model suggests that causes and consequences are necessarily aligned with the actor-observer- dichotomy (Hamilton, 1979).

Therefore, when people make responsibility attributions, the individual reflecting the behavior is not judged on the basis of causality (what was done) or an expectations of what should have been done. Rather attribution is strongly related to the locus (Hamilton, 1979). In reviewing the available literature, little is known about family care in Qatar. Generally, hospitals, not homes are considered public care facilities or care that exists outside of kinship in Qatar, for the elderly. Most care of the elderly and young infants take place at home and the responsibility of family members such as a daughter, a son or a domestic "servant."

Today, many Qataris rely on domestic servants, who are unskilled immigrants surviving on meager wages and are completely dependent on their sponsor, i.e., the employer (Shah, Badr & Shah, 2012). Generally, home care tends to be women's responsibility or managed by women. Men are also generally more inclined to provide the link to the public world. Power and hierarchy in providing care are evident in the Qatari family. The divisions of labor in the Qatari home in which men are more prone to engage in public space are entitled to greater freedom and have more leisure activities than women. Women are more likely than men to stay at home as caregivers. However, more recently, women have had a substantial amount of freedom in movement and work, and they are more likely to be in the work place and rely heavily on immigrant sub-Indian domestic help to take care of their

children and elderly. This phenomenon has been fueled by the new national wealth due to the discovery and production of liquid gas; it has brought great comfort, privileges and affluence to Qataris (Asmi, 2013). With this great wealth available to people in Qatar, consequently they could make attributions that are not in line with the general attributions reflecting those societies, where income is close to, or normally distributed.

1.5 Causal Attribution: Wealth and Poverty

Research examining causal attributions for poverty and wealth offers some suggestions about how the wealthy make attributions. "Three primary explanations for poverty are documented in the research literature: individualistic explanations, that emphasize the role of characterological flaws among the poor in causing poverty (for example: alcohol and substance abuse, lack of thrift, laziness); structural attributions, which focus on the causal significance of societal factors (for example: discrimination, inferior schools, low wages), and fatalistic attributions (for example: bad luck, unfortunate circumstances)" (Bullock, 2006, p. 4). The research on sociodemographic and socioeconomic aspects have been researched in the United States specifically in the award winning paper by Hunt (1996), that middle income groups-- European Americans attribute negative events as poverty attribute or externalize the causes to a lack of effort in laziness. Many studies have shown the individualistic nature of high socioeconomic groups in making attributions about wealth (Prins & Schafft, 2009). In a study on Arabic speaking people; Nasser's (2007) study showed the structuralism in attribution among Middle Eastern Lebanese students across socioeconomic levels. The main contention is that attribution of responsibility which reflect a more structural attribution among (i.e., responsibility of the government) different economic groups in Qatar.

These conceptualizations thus guide our work on attribution. We are expanding this framework of attribution to assess support for other explanations in family responsibilities.

1.5 Caveat

Society in Qatar is close-knit and collectivist and has an in-group interdependence. People in Qatar and the Middle East in general may perceive personal care for adults as the responsibility of the family, but at the same time, whenever they are unable to provide those needs, they may rely on the government for assistance (mainly financial). Qatar society, like others in the Middle East, and worldly societies see care of the elderly as a moral obligation (Horowitz & Schindelman, 1983; Hamon & Blieszner, 1990; Sung, 1999; Iecovich, & Lankri, 2002). However, in the West, when a public institution is available, families may choose not to support dependents, by seeking public or private care and consequently place the elderly in homes or community support homes for care. By situating the study in Qatar, we draw on the socioeconomic and social conditions of a wealthy conservative, collectivist and in-group society. Given this locus, we can speculate that those adults who are either supporting or being supported by their parents may make different attributions than that in a Western nation.

Thus, we attempted to understand how the closest of kin respond to obligations to the elderly. Contextual significance was addressed in this study by studying attribution among adults who are living with their parents.

2. Method

This study was part of a larger national study investigating family values, intergenerational relations and interaction in Qatari households. A cluster sampling approach was used to sample all of Qatar. The sample clusters included the four municipalities with large population pockets, including the capital city Doha, a second major cosmopolitan area Al-Khor, and the South and North of Qatar. The large majority of the sample came from the capital. Each respondent was the head of a household (either male or female).

The first analysis compared the means of the respondents who were close kin members (i.e., a son or a daughter) and were supporting their parents and second, those whose parents were providing support for their children. The second analysis included a 2x3 analysis of covariance that included those respondents who were providing support to family and respondents whose parents were providing support crossed by level of income (three levels: lowest income, middle income and highest income).

2.1 Participants

The sample was composed of 568 male and 251 female respondents. The ages of respondents ranged between 20 and 84 years (M= 37.64, SD=13.73). Table 1 shows the demographics of the study sample. Those respondents whose parents were deceased were not included in the study.

2.2 Instrument/Questions

Two main questions were developed for this study and administered through a questionnaire. The questions asked respondents to rate whether the government or family was responsible for elderly care. The response

format for responsibility was a 5-point scale, where 1= "Always the government's responsibility," 2= "Usually or mostly the government's responsibility," 3= "Equally the government's and family's responsibility," 4= "Usually or mostly the family's responsibility" and 5= "Always the family's responsibility." *A mean rating less than 3 indicated a higher attribution of government responsibility; conversely, a mean value greater than 3 indicated a higher attribution of family responsibility.* The second question measured the degree to which the respondent was providing financial support for the family. This item was rated as 1= "very frequently," 2= "often," 3= "sometimes," 4= "seldom" and 5= "not at all."

2.3 Independent Measure

To measure whether the parent or the adult was providing support, two main questions were used. The first question asked the respondent whether the parent was providing support, and they were asked to rate their level of support on a scale from 1= "very frequently," 2= "often," 3= "sometimes," 4= "seldom" and 5= "not at all." A second question asked whether the respondent was providing support for their elderly parent and to rate their level of support from 1= "very frequently," 2= "often," 3= "sometimes," 4= "seldom" and 5= "not at all" to obtain a valid and single measure of support. Those who responded to "providing support to elderly parent" as 1= "very frequently" or 2= "often" and responded to the second question: "parent providing support" with responses: 4= "seldom" and 5= "not at all" were classified as adults who were providing support to the parent. In this way we validated the first question by a second and aggregated both to get a measure of support. The respondent in this case would be classified as an actor. On the other hand, if the respondent answered "parent providing support" as 1="very frequently" or 2= "often" and responded to the second question "providing support to elderly parent" as 4= "seldom" or 5= "providing support," this would indicate that the parent was providing support and that the respondent (i.e., next of kin or adult child) would be classified as an observer who was receiving support from parents.

We asked each respondent a number of socio-demographic questions such as age, employment, occupation, income, sibling and parent information (age, whether alive or deceased). Based on this information we removed those respondents whose parents were deceased.

2.4 Dependent Measure

Two dependent measures were included. The first dependent measure was the responsibility for medical costs. The second dependent measure was the responsibility for elderly livelihood (financial support for domestic labor to support the elderly, food, shelter, clothing, etc.). The dependent measures were the average of the rating from 1= "Government Responsibility" to 5="Family Responsibility." The higher the score, the higher was the family responsibility. Sex was used as a covariate, as men in the Arab world are generally the bread winners and women have a limited role in supporting the family. By controlling for the sex of the respondent, we would be removing the surrogate factors of income and financial support.

3. Results

The sample of respondents was predominantly male (N=568, 69.4%). The highest percentage (N=367, 44.8%) of respondents were between the ages of 20 and 29 years. The income distribution was based on the equal 1/3 sample distribution in each level of low, middle and high income of the sample, and thus, the lowest income was of those respondents who had an income of less than $50,000. Middle incomes were those between $51,000 and $90,000, and the highest incomes were those above $90,000.

Table 1. Sample demographics

Variable		N	%
	All respondents	819	100
Sex	Male	568	69.4%
	Female	251	30.6%
Age	20-29	367	44.8%
	30-39	154	18.8%
	40-49	150	18.3%
	50-59	123	15.0%
	60-69	25	2.1%
Income			
	Lowest Income (<20,000 to $50,000)	343	34.1%
	Middle Income ($51,000 to $90,000)	291	29.0%
	Highest Income ($91,000 to >151,000)	332	33.0%

The main analysis crossed the support (two-levels); closest kin supporting family and a parent supporting adult. The first analysis used the family support variable bifurcated into adult providing support and second, guardian providing support, crossed with the three income levels (low, middle and high income) on the rating of responsibility for elderly medical treatment. As mentioned in the methodology section, the rating for the dependent variable was a 5-point scale, with "1" for government responsibility to "5" for family responsibility. A 2x3 analysis of covariance (ANCOVA) was run using the gender of the respondent as the covariate. The marginal means are reported in Table 2. The higher means for the dependent variable, suggest the higher the attribution to family responsibility (see Table 3 for main effects). In addition, no significant differences were found for the income. The results of the first ANCOVA on the dependent variable of responsibility for elderly medical treatment as the dependent attribution variable indicated no main or interaction effects.

Table 2. Means and Standard Deviation of the responsibility attribution by Income on whether providing elderly livellihood and responsibility of medical treatment

	Income	Elder's livelihood			Responsibility elder's medical		
		Mean	Std. Dev.	N	Mean	Std. Dev.	N
Adult Providing Support to Elderly Parents	Lowest Income	2.69	1.20	73	3.24	1.03	45
	Middle Income	2.52	1.11	58	3.38	1.13	32
	Highest Income	2.61	1.16	131	2.75	1.34	6
	Total	2.56	1.30	55	3.07	1.2	133
Parent Providing Support to Adult	Lowest Income	2.45	1.25	69	2.68	1.16	37
	Middle Income	2.50	1.27	124	2.62	1.24	50
	Highest Income	2.55	1.01	77	3.12	1.034	34
	Total	2.20	1.03	54	2.78	1.17	121
Total	Lowest Income	2.41	1.03	131	2.99	1.12	82
	Middle Income	2.60	1.16	205	2.91	1.25	82
	Highest Income	2.40	1.15	181	2.89	1.24	90
	Total	2.50	1.16	386	2.93	1.20	254

The second main analysis used the same independent factors and showed higher means (attribution of responsibility to the family provider) for adults providing support for their adult parents compared to those whose parents were providing support crossed with three-level income on the dependent variable of responsibility for elderly livelihood. Although no main and no covariate effects were found, however, there were interaction effects. Figure 1 presents these interactions in the study. The interactions showed that the high income group was more likely to attribute the responsibility of elderly livelihood to the government, whereas those in the middle income and lowest income groups attributed the responsibility of elderly livelihood internally to themselves. Furthermore, it is clear that in the high income groups, the parent or elder who was supporting the adult respondent attributed elderly livelihood responsibility to family members. On the other hand, the middle and lowest income groups whose parents were providing support tended to attribute the responsibility to government.

Table 3. ANCOVA results using income and support on medical treatment and elder's livelihood

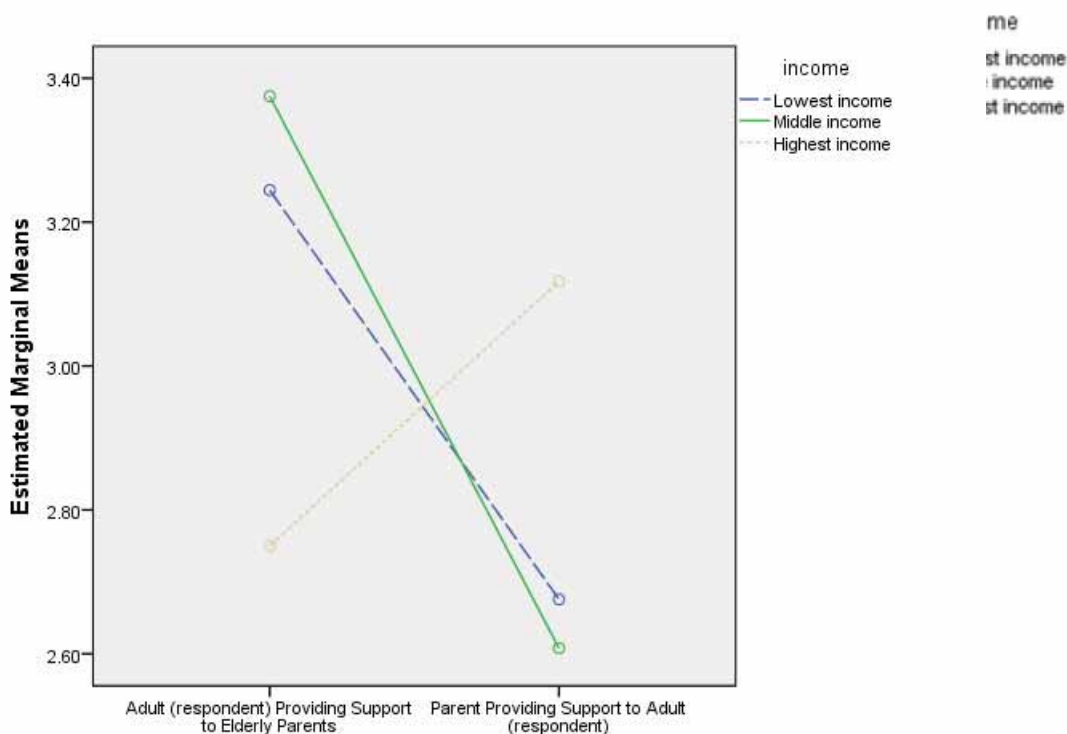|	Responsibility elder's medical treatment and nursing care			Elder's livelihood		
	df	F	Partial Eta Squared	df	F	Partial Eta Squared
Gender (covariate)	1	1.713	.004	1	.613	.002
Income	2	1.154	.006	1	.353	.002
Support	1	3.226	.008	2	3.69	.009
Income*Support	2	0.432	.650	1	3.02*	.015

*Significant at the 0.05 level

Figure 1. Interaction effects of income by support

4. Discussion

In this study, we bifurcated close of kin: Those who were supported by their parents and defined as "observers", while the second group called "actors," were those supporting their parents. Against this backdrop, we wanted to investigate respondents' beliefs about responsibility for the elderly. We wanted to understand the locus of attribution in a welfare state such as Qatar. We controlled for controllability in that, we selected elderly who are unable to support themselves and compared those who could. The main purpose of this study was to understand the level of responsibility for the elderly even though factors such as locus increased welfare and increased wealth could have an adverse impact on the attribution of responsibility.

There was interaction effects found in this study, the interactions suggest that when parents were providing support to the adult, the observer, of the lowest and middle income levels; responsibility was attributed on oneself or one's family for elderly care. On the other hand, those of the high income group were more likely to attribute responsibility to external factors as the government. McArthur and Post (1977) suggested that among high income groups, the responsibility was attributed to dispositions when attention was focused upon salient situational factors. Our findings are quite interesting and may be in line with what Sidanius and Prato (1999) considered as "legitimizing myths" in which the lower classes tended to legitimize or believe in an ideological structure of society and accepts their status quo, the lower income groups are more likely to justify the existing social system. In accepting the obligation of financing and supporting their parents, they make the moral and just belief that they think society expects of them. While on the other hand, those in the upper income group may have a sense of individualism because of retracted collectivism. More importantly, the findings also negate the locus and cultural perspective of attribution which might be evident in economic laissez-faire economic conditions where extreme capitalism might produce a wealth differential and inequities; it is probable that those with lower incomes and those who are disadvantaged are more likely to justify existing social systems in justifying the existing social structure. Feagin (1972) described North Americans as overly meritocratic societies and worryingly individualistic. Since Feagin's original study on the attribution of poverty in American society, a

number of other studies in non-western societies suggested heavy structuralism in the attribution of negative events as poverty (Cozzarelli, Tagler, & Wilkinson 2001; Lepianka, Oorschot, & Gelissen, 2009). The latter review suggests an international continuum from structuralism to individualism extending from Eastern to Western cultures, respectively. The perception of the low and middle income groups leads to their attribution of responsibility to their own ability. However, among the high income groups, this relationship is reversed. When these individuals are supporting their family, they believe that the government should take responsibility. The possible externalization of responsibility among the high income group suggests that individualists are immersed in a "culture of wealth" insulated from the public life and intentionally blinded from the culture of poverty, which draws them much closer to individualistic behaviors. They may see the economic predicament in the externalization of the attribution rather than seeing its moral or social components.

5. Conclusion

In the Middle East, there are no filial responsibility laws dictating who should support and provide care for the elderly. Generally, the family and the extended family or adult children accept responsibility for caring for the elderly. This study thus attempted to understand how adults in Qatar attribute the responsibility of elderly livelihood. It is widely accepted in the Middle East that financial support of an elderly from the closest of kin is a given. In general, whenever the elderly are unable to fulfill financial and medical needs independently, intergenerational filial affinities intervene to provide financial, physical, psychological and moral support. The caring and love for close family members remains a genealogical human trait existing well before the creation of the nuclear family—kinship and care for parents out of a sense of obligation and love (Horowitz & Schindelman, 1983; Sung, 1994; Iecovich, & Lankri, 2002). Research studies have come to the conclusion that family has a natural filial responsibility to close loved ones when support is needed (Hamon & Blieszner, 1990). We saw however, that there are certain beliefs that pupil about family responsibility which they hold that is differentiated among different economic groups. In line with the research on the poor, we would consider that future approaches to this kind of work could take a qualitative approach to unearth people's beliefs about responsibility in Qatar and the Middle East.

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Women's Empowerment through Small-Scale Dairy Farming in Selected Areas of Bangladesh

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Abstract

In this study, we investigated the role of small-scale dairy farming and related factors in promoting empowerment among women in the Salakandi (V1) and Binpara (V2) villages in the Mymensingh district of Bangladesh. Data were collected from 50 rural women involved in dairy farming practices in each village through direct interviews using questionnaires. A combination of criteria was modeled using Multiple Linear Regression, revealing that, for all criteria, women from V1 exhibited greater empowerment than women from V2. Through small-scale dairy farming, rural women from V1 were able to increase their confidence and decision-making power with regard to their household and personal care and experienced increased self-esteem, expansion of their social circles, and ultimately enhanced empowerment through the breakdown of traditional socio-cultural norms. Thus, the expansion of small-scale dairy farming in other rural areas of Bangladesh is likely to contribute to the empowerment of more rural women.

Keywords: Bangladesh, dairy farming, rural women, women's empowerment index

1. Introduction

Women's empowerment is one of the significant issues for upholding status of rural women in Bangladesh. Women's empowerment involves improving decision-making, control over income, awareness about personal rights and freedom, improving position in the family, and in general the confidence of rural women in their capabilities. In Bangladesh, rural women are largely deprived of autonomy as their lives are controlled by male governance in the patriarchal society. The women are subjected to aggressive behavior at the hands of their husbands and other male members of husband's family. Due to long-standing traditions in rural Bangladesh society regarding the role of women, a husband will commonly seek to limit the autonomy of his wife in all regards and will not show affection or respect, in contrast to standards in many western cultures. Following the marriage, a woman enters her husband's house and immediately takes on responsibility for all household work. Her most important duty, however, is to bare a male child. These women are not at liberty to express opinions in front of their husbands or to make their own decisions and instead must obey any rules dictated by their husband or members of the husband's family. Rebellion against the mandates of the husband can result in physical and mental and even threats of divorce. This oppression is a common experience for every woman in the traditional rural Bangladesh society and highlights the importance of fostering women's empowerment to remove gender inequality both within the family unit and in society. Because rural Bangladesh society seeks to suppress even female independent thought, if these women will successfully escape the patriarchal society, they must first be taught and encouraged in building a strong independent mindset. Only by establishing a new standard of personal independence will these women gain confidence in their own capacity for governing their lives and thereby develop the strength to stand strong in the face of subsequent oppression.

Additionally, gender equality and empowerment of women are vital to achieve sustainable improvement in the rural society (Afzal et al., 2009). Shefner-Rogers et al. (2009) stated that women's empowerment is the construction of a route to foster women's ability to be self-reliant and to improve internal power. Promoting the participation of rural women in income generating activities is one important route toward encouraging

independence and facilitating empowerment.

Indeed, more recently, the situation within rural societies in Bangladesh is changing, due to increasing involvement of rural women in economic activities, which can foster the development of increased self-confidence, self-motivation, personal and economic mobility, decision-making ability, and general autonomy. Through their participation in income generating activities like small-scale dairy farming, rural women are able to transcend traditional barriers and have the potential to escape oppression such as domestic violence that limits their empowerment. Small-scale dairy operations run by rural women are growing increasingly popular in Bangladesh due to the limited costs of rearing dairy animals on personal homesteads. Currently, small-scale dairy farming is considered one of the best ways for these rural women to utilize their limited resources and to develop skills that will contribute to their empowerment. The goal of the present study is to quantify the empowerment of rural women in the Bangladesh villages Salakandi (V1) and Binpara (V2) and to identify key factors affecting their empowerment.

2. Review of Literature

A widely-accepted definition of women's empowerment remains intangible given the popularity and wide use of the term in academic and general sectors. However, discussions of women's empowerment often place emphasis on decision-making roles, economic self-reliance, legal rights to equal treatment, education, and inheritance, and protection against discrimination. Reasonably so, then, women's empowerment has been described as a process through which women gain authority in previously restricted areas of their lives (Kishor & Gupta, 2004; Haque et al., 2011) and whereby women direct their lives with the purpose of changing inferior status (Keller & Mbwewe, 1991).

Women's empowerment may also be generally defined as an ongoing process where in a woman acquires the ability to define and successfully pursue personal objectives (Kabeer, 1999). Page and Czuba (1999) similarly defined empowerment as a multi-dimensional process that helps people gain control over their own lives (see also Sen, 1999; Malhotra, 2003) and also fosters empowerment in communities and society.

According to Kishore and Lekha (2008) empowerment entails a woman's increased control over her life, body, and external environment, while Charmus and Wieringa (2003) note that it is a process that encompasses the development of consciousness, choice, resources, voice, agency, and participation. Hashemi and Schuler (1993) identified a number of domains in which women have traditionally been stripped of autonomy, such as physical mobility, financial security, and freedom in social interactions, thus as Batiwala (1994) highlighted, women's empowerment must encompass a direct challenge of institutions of power (e.g. family, media) and power structures (e.g. legal, economic) toward the goal of gaining autonomy. Similarly, Mujahid et al. (2015) highlighted the importance of economic and social equality for women's empowerment in Pakistan. Economic empowerment is fostered by decreases in poverty, access to credit programs, and lucrative work while social empowerment encompasses education, health care access, and other social opportunities. Workshops and media campaigns can further encourage rural women to break away from traditional views.

Within Bangladeshi society, empowered women possess freedom for self-development and decision-making and equal access to domestic and community resources (Kumar et al., 2013). Nazneen et al. (2011) examined women's empowerment in post-independence Bangladesh and noted improvements in female education, treatment in health facilities, and participation in the labor force. However, due to traditional patriarchal attitudes, social and financial inequalities still prevail among men and women. Similarly, Haque et al. (2011) used three dimensions to define women's empowerment index and found that economic and family decision-making authority is satisfactory while mobility is very low, and negative social views about female autonomy are still prevalent.

Islam et al. (2014) examined the impact of microcredit on women's empowerment in rural Bangladesh, defining empowerment with the dimensions of economic and household decision-making, mobility, property ownership, and social awareness. Their results showed that the microcredit program was positively associated with each dimension of women's empowerment and overall empowerment. Sultana and Hossen (2013) also investigated the role of employment in women's empowerment in Khulna, Bangladesh and found that employed women were more empowered than the unemployed, with age, educational access, and household income also having a significantly positive effect on women empowerment. Islam et al. (2012) also identified that homestead poultry rearing among rural women in Bangladesh promotes empowerment by encouraging independent decision-making and increased involvement in family affairs.

Based on this collection of previous research, we identified two factors that are important to consider in the measurement of women's empowerment. First, empowerment is not directly measureable and must be quantified

via other indicators. These indicators have to be selected to measure agency, such as participation in household decision-making, spending money and freedom of mobility. Second, women's empowerment is a multidimensional system. Accounting for these dimensions is important in more clearly offering a potential roadmap for measuring women's empowerment. This study is a unique contribution to studies on rural women's empowerment in two respects. This study is the first to provide a comparison of women's empowerment through small-scale dairy farming in two villages of the Mymensingh district in Bangladesh. This study is also the first to assess different factors that are anticipated to be important in women's empowerment through small-scale dairy farming in these selected areas of Bangladesh.

3. Research Methodology

3.1 Selection of the Study Area and Data Collection

The field research was performed in 2014 in the villages Salakandi (V1) and Binpara (V2) of the Mymensingh district of Bangladesh. These locations were selected based on their dense concentrations of dairy farms. Small-scale dairy farm owners constituted the population of the present study. 50 households actively engaged in small-scale dairy farming from each village were randomly selected for interviews. Research data was collected by direct observation of women interviewees and through their interview questionnaire responses. All collected data was entered into Microsoft Excel.

3.2 Construction of a Women's Empowerment Index

In this study, women's empowerment was quantified by making a women's empowerment index using the dimensions in accordance with Malhotra (2003), Haque et al. (2011), and Mahmud et al. (2012). The dimensions used are: decision-making, economic empowerment, social empowerment, legal empowerment and psychological empowerment. Each dimension further contains several indicators which have been identified according to Hashemi et al. (1996), Schuler et al. (2010), and Islam et al. (2012). Figure 1 represents these different dimensions with their relevant indicators for the eventual construction of the women's empowerment index. Questionnaire responses were based on a four point Likert scale (1 = not at all, 2 = to some extent, 3 = to an average extent and 4 = to a great extent). In order to standardize the results and generate a scale with minimum and maximum levels of empowerment, the score for each dimension was assigned a maximum value of 1for highest empowerment and minimum value of 0 for lowest empowerment. Thus the standardized scale ranges from zero to one.
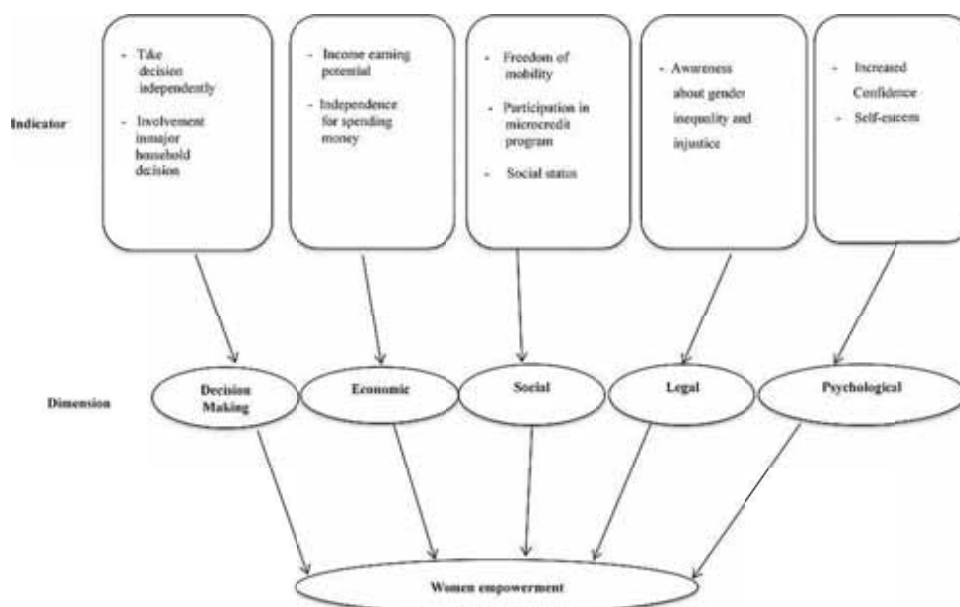

Figure 1. Conceptual framework of the women's empowerment index employed in this study, including dimensions and indicators

3.2.1 Decision-Making Index

Two indicators have been used for the dimension of decision-making. Empowerment in decision-making is represented by the following formula:

$$\text{Decision-making index, } I_1 = \frac{X1+X2}{2} = (\textstyle\sum_{i=1}^{2} X\,i)/2 \tag{1}$$

$$\text{And for standardization, } I_1 = 0 < \frac{(\sum_{i=1}^{2} Xi)/2 \,-1}{3} < 1$$

Where, X_1 represents independent decision-making and X_2 represents the involvement in major household decisions.

3.2.2 Economic Empowerment Index

Two indicators have been used for the dimension of economic empowerment. Economic empowerment of women is represented by the following formula:

$$\text{Economic empowerment, } I_2 = \frac{X1+X2}{2} = (\textstyle\sum_{i=1}^{2} X\,i)/2 \tag{2}$$

$$\text{And for standardization, } I_2 = 0 < \frac{(\sum_{i=1}^{2} Xi)/2 \,-1}{3} < 1$$

Where, X_1 represents income earning potential and X_2 represents autonomy of choice over how income is spent.

3.2.3 Social Empowerment Index

Three indicators have been used for the dimension of social empowerment. Social empowerment of women is represented by the following formula:

$$\text{Social empowerment, } I_3 = \frac{X1+X2+X3}{3} = \textstyle\sum_{i=1}^{3} X\,i)/3 \tag{3}$$

$$\text{And for standardization, } I_3 = 0 < \frac{(\sum_{i=1}^{3} Xi)/3 \,-1}{3} < 1$$

Where, X_1 represents a woman's freedom of mobility, X_2 represents her participation in a microcredit program, and X_3 represents a woman's social status.

3.2.4 Legal Empowerment Index

One indicator has been used for the dimension of legal empowerment. Legal empowerment of women is represented by the following formula:

$$\text{Legal empowerment, } I_4 = \frac{X1}{1} = (\textstyle\sum_{i=1}^{1} X\,i)/1 \tag{4}$$

$$\text{And for standardization, } I_4 = 0 < \frac{(\sum_{i=1}^{1} Xi)/1-1}{3} < 1$$

Where, X_1 represents the awareness raised about injustices suffered and women's corresponding legal rights.

3.2.5 Psychological Empowerment Index

Two indicators have been used for the dimension of psychological empowerment. Psychological empowerment of women is represented by the following formula:

$$\text{Psychological empowerment, } I_5 = \frac{X1+X2}{2} = (\textstyle\sum_{i=1}^{2} X\,i)/2 \tag{5}$$

$$\text{And for standardization, } I_5 = 0 < \frac{(\sum_{i=1}^{2} Xi)/2 \,-1}{3} < 1$$

Where, X_1 represents increases gained in confidence and X_2 represents level of self-respect.

3.2.6 Overall Women's Empowerment Index

The overall women's empowerment index was calculated with the following formula:

$$\text{Overall women empowerment index, } I = \frac{I1+I2+I3+I4+I5}{5} \tag{6}$$

Where, I_1-I_5 represent the standardized levels of empowerment as classified in Decision-making, Economic empowerment, Social empowerment, Legal empowerment, and Psychological empowerment, respectively.

3.3 Factors Affecting Women's Empowerment through Dairy Farming

3.3.1 Specification of the Variables

The variables that may affect women's empowerment through dairy farming are: the husband's behavior,

successful reduction of the dependency of rural women, increase knowledge and skill, and breakdown of traditional socio-cultural norms, and types of dairy animal breed (see below).

3.3.2 Explanation of the Variables

Types of Breed

This variable was defined by using the following designations: 1= local cow and 2 = crossbred cow.

Husbands' Treatment of their Wives

This variable was measured by using a 3-point Likert scale with the following designations: 3 = good, 2 = moderate and 1= bad

Breakdown of Traditional Socio-Cultural Norms

This variable was further broken down into two categories, namely reduction in domestic violence and reduction in prevalence of early marriage. These variables were measured using a five point Likert scale ranging from 5 = strongly agree to 1 = strongly disagree.

Increase in Knowledge and Skill

This variable was assigned 1= yes (increase in knowledge and skill) and 0 = no.

Reducing Dependency of Rural Women

This variable was assigned 1= yes (reduction in dependency) and 0 = no.

3.3.3 The Model

The following multiple linear regression model was used to estimate the effect of the above independent variables on the dependent variable, women's empowerment:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e_i \qquad (7)$$

Where, Y = women's empowerment index, X_1 = types of breed, X_2 = husband's behavior, X_3 = breakdown of traditional socio-cultural norms, X_4 = increase in knowledge and skill and X_5 = reducing dependency, $\beta_1, \beta_2, \beta_3, \beta_4,$ and β_5 are the corresponding coefficients, and e_i is the error term.

3.4 Data Analysis

Data were analyzed using a multiple linear regression model to measure the effects of the different independent variables on women's empowerment. Results were considered at 1%, 5%, and 10% significance levels.

4. Results and Discussion

4.1 Women Empowerment Indicators

In this study, several empowerment indicators have been used to measure the level of empowerment among women living and working on small-scale dairy farms in two rural Bangladesh villages, V1 and V2. Regarding the different empowerment indicators, the percent distributions of all women's responses are shown in Table 1 (ranging from 1 to 4).

Table 1. Percent distribution of V1 and V2 women's response on empowerment indicators

Women empowerment indicators	V1				V2			
	To a great extent (%)	To an average extent (%)	To some extent (%)	Not at all (%)	To a great extent (%)	To an average extent (%)	To some extent (%)	Not at all (%)
Independent decision	54	20	6	20	16	40	26	18
Major household decision	34	32	12	22	14	24	26	36
Income earning potential	42	18	20	20	0	22	54	24
Independence in spending money	24	32	20	24	18	24	26	32
Freedom of mobility	18	38	44	-	10	18	68	4
Participation in microcredit	22	42	12	24	6	28	54	12
Social status	18	34	32	16	6	20	50	24
Injustice and legal right	22	44	12	22	14	28	28	30
Confidence	42	26	22	10	18	24	32	26
Self-esteem	32	22	28	18	8	32	40	20

In general, higher scores for most variables were observed for V1, indicating that women's empowerment was higher in V1 than V2 (see Table 1 and Figure 2).
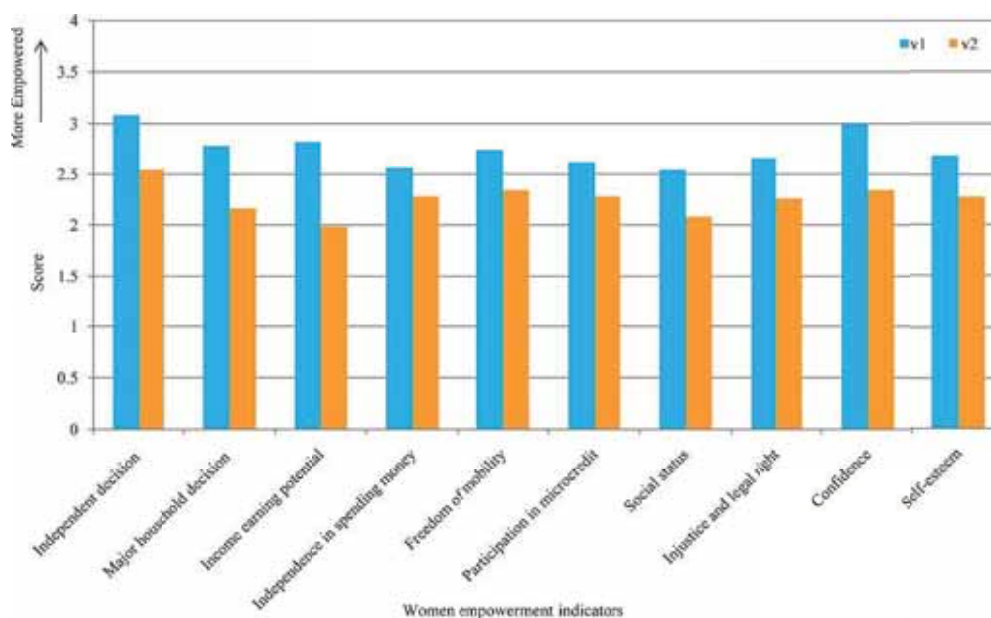

Figure 2. Women's empowerment indicators for V1 and V2

4.2 Result of Measuring Women Empowerment Index

A women's empowerment index was been used in this study to measure women's empowerment in V1 and V2. The fitted women's empowerment index of both villages is shown in Figure 3, confirming a higher empowerment index for V1 than V2. V1 women were much more benefitted and empowered than V2 women through their role in rearing small-scale dairy animals. The decision-making, economic and psychological dimension indices were very also more important for V1 women's empowerment than V2 (Figure 3).

4.2.1 Decision-Making Index

Independence or autonomy refers to the freedom for expression of a women's personal preference, a freedom of choice when presented with many alternatives, the successful improvement of self-worth, and eventual achievement of target future goals. The higher a woman's level of independence, the greater the potential for her to be empowered (Panda, 2000). Freedom of decision-making plays a substantial role in corresponding quality of life for women, and here we used two indicators to quantify the dimension of decision-making: 1) the power of taking independent decisions and 2) the extent of involvement in major household decisions. By comparing these factors between the two villages, from the Figure 3, it was found that decision-making index was higher in V1 (0.64) than V2 (0.45). Women in V1 have more power to make independent decisions and work freely than do women in V2.

In V1, historically the lives of the women have been dominated by a patriarchal social system and upon marriage, typically a woman is expected to obey all the rules mandated by her husband, is prohibited from making independent decisions, and has no right to challenge her husband's authority. All decisions regarding activities within and outside of the household are made solely by male members (Mujahid et al., 2015). During childhood, women are dependent on male family members and not educated or taught self-dependency. Upon marriage, bearing children, and in particular a son becomes a prime responsibility for these women, along with household duties such as cooking for family members. This historical treatment of women has changed notably within V1 with the advent of small-scale dairy farming, however, and women's sense of self and self-determination has increased. Through our research we found that rural women in V1 served significant decision-making roles in family affairs, including decisions about their own health and the health of their children. In particular, in the face of sickness, pregnancy, or related health matters, the women in V1 were able to choose independently to visit a hospital or health clinic. Women were also allowed to make decisions regarding the health and general care of their children, such as choosing to vaccinate their newborns, making nutritious food choices, and opting to seek better treatment for their sick children. The women from V1 also exhibited increased expression of

personal preference and had the freedom to make good daily food and nutritional choices for their family and had similar authority in deciding how to feed their dairy cattle to improve productivity. The women were also involved in major family decision-making on issues related to family members, the marriage of a son or daughter, household repairs, and large purchases. In contrast, women in V2 had few decision-making rights within the family because they had little autonomy and power. Ultimately, the increased decision-making power exhibited by the women in V1 is representative of significant progress toward the achievement of gender balance in their society.

	I1	I2	I3	I4	I5	I
V1	0.64	0.56	0.54	0.55	0.61	0.58
V2	0.45	0.38	0.41	0.42	0.44	0.42

Dimension of women's empowerment
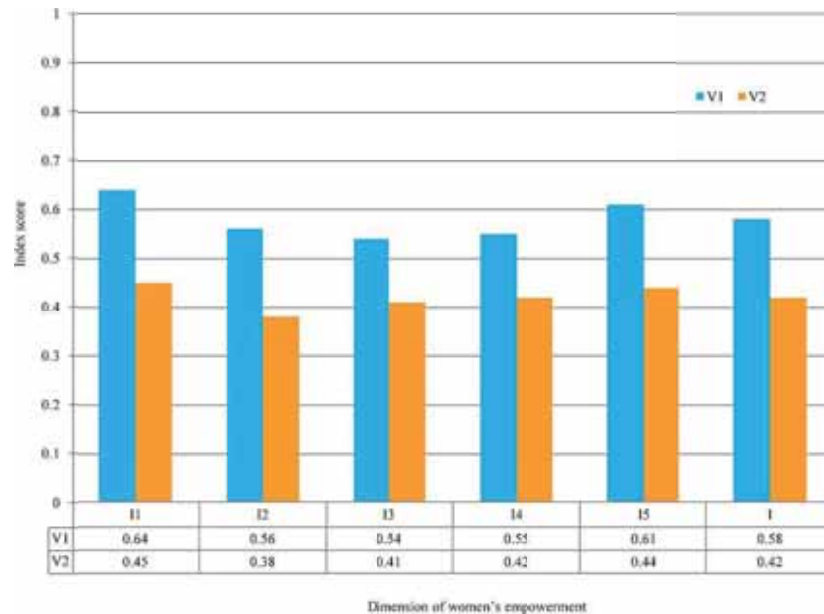
Figure 3. Women's empowerment index of V1 and V2

Note 1) Different women's empowerment dimension index scores, where the empowerment index score ranges between 0 and 1

4.2.2 Economic Empowerment Index

Economic empowerment is another significant dimension of women's empowerment and research has suggested that economic empowerment of women enhances through their participation in economic activities (Parveen & Chowdhury, 2009). Rural women involved in income-generating activities experience greater empowerment rather who are not engaged in any economic activity (Nessa et al., 2012). From the results gathered in this study, the economic empowerment index was found to be higher for women in V1 (0.56) than V2 (0.38). V1 women earned much more money from dairy farming than the women in V2, due to their ability to provide adequate nutrition to dairy cattle and thereby improve farm productivity. The economic decisions the women make in dairy farming also foster independence with regard to making other expenditures for their family, on items such as clothing or medicine. In contrast, V2 women did not have autonomy in financial decisions surrounding the care of their dairy cattle and did not exhibit the same economic success as women in V1.

4.2.3 Social Empowerment Index

Social empowerment is the process of accessing opportunities and resources in order to make personal choices. Poor rural women are socially empowered through the improvement of their practical knowledge, self-perception, and physical mobility and this process serves to remove social barriers and obstacles. Social empowerment among the women in V1 and V2 was quantified by considering three indicators: mobility, participation in a microcredit program and social status. As can be seen in Figure 3, social empowerment was determined to be higher in V1 (0.54) than V2 (0.41). Indeed, women from V1 exhibited greater freedom of mobility than women from V2 and were able to leave their home and visit the market, health care center, or the house of a neighbor or relative without permission from their husband or other elder members of the family. Following their involvement in dairy farming, the women were able to extend their social network and mobility, increase communication with those outside of their family, and develop further independence. For many women in V2, we found that permission is still required for going outside of the home and their mobility is restricted. Women in both villages also participate in the microcredit program, where they can interact with other women

and exchange knowledge, skills, and experiences. Research evidence has previously demonstrated that microcredit programs can improve the productivity and development of income-generating activities (Alhassan & Akudugu, 2012), thus the women who partake in these programs they are more socially empowered than their peers who do not partake (Awojobi, 2014). Involvement in the microcredit program did expand the social network of women in V1 and enhance their social status and social recognition. However, for the women in V2, participation in the microcredit program did not lead to the same social empowerment.

4.2.4 Legal Empowerment Index

Following the above trend, the legal empowerment index was also found to be higher in V1 (0.55) than V2 (0.42). Since becoming involved with dairy farming, V1 women are now more conscious of their legal rights. Through the process of earning money and using this income for family purchases, the women acquired bargaining skills and could express their differing opinions and disagree with their husband or other family members. Banu et al. (2001) have shown that rural women who involved in Bangladesh Rural Advancement Committee's Program, are able to acquire more knowledge of property rights and other legal issues such as lawful marriage age, dowries, and divorce. For example, some women learned that it is illegal for their husbands to remarry without the first wife's consent. In contrast, many women from V2 are less conscious about their legal rights and powerless to seek them.

4.2.5 Psychological Empowerment Index

Psychological empowerment is vital for the development of poor rural women in Bangladesh. The results revealed that women in V1 have experienced an increase in their confidence level and this has helped to enhance their efficiency and productivity in dairy farming. Level of self-respect is another important indicator for psychological empowerment, and in comparison with women from V2, V1 women exhibited an increase in self-respect and enhanced status in their family after becoming involved with dairy farming. In V2, the patriarchal social system is still strong and the women are dependent on their family, have limited self-confidence, and are less inclined to take initiative. Including the psychological empowerment index with the others above, we find overall that the empowerment index in V1 (0.58) is higher than V2 (0.42).

4.3 Factors Affecting Rural Women's Empowerment through Small-Scale Dairy Farming

Table 2. Descriptive statistics

Variables with category		V1			V2		
		Frequency	Percent	Mean	Frequency	Percent	Mean
Types of breed	Local	19	38.0	1.62	50	100.0	1.00
	Crossbred	31	62.0		0	0.0	
Husband's behavior	Good	33	66.0	2.50	4	8.0	1.48
	Moderate	9	18.0		16	32.0	
	Bad	8	16.0		30	60.0	
Breakdown of traditional socio-cultural norms	Reduce violence — Strongly agree	23	46.0	4.00	0	0.0	2.36
	Agree	15	30.0		4	8.0	
	Undecided	1	2.0		11	22.0	
	Disagree	11	22.0		34	68.0	
	Strongly disagree	0	0.0		1	2.0	
	Reduce early marriage — Strongly agree	30	60.0	4.48	0	0.0	1.90
	Agree	15	30.0		4	8.0	
	Undecided	4	8.0		3	6.0	
	Disagree	1	2.0		27	54.0	
	Strongly disagree	0	0.0		16	32.0	
Increase in knowledge and skill	Yes	37	74.0	0.74	15	30.0	0.30
	No	13	26.0		35	70.0	
Reduce dependency	Yes	32	64.0	0.64	13	26.0	0.26
	No	18	36.0		37	74.0	

A multiple linear regression model was used to estimate the effects of different factors on women's empowerment through small-scale dairy farming in two villages. Table 2 presents the descriptive statistics of independent variables which were used for analysis.

The results of multiple linear regression analysis are shown in Table 3. Types of breed were considered in this model as an important determinant for women empowerment in V1. The sign of its coefficient was found to be positive and significant, specifically the women in V1 were more conscious about dairy farming and wanted to maximize their profits and thus they started to rear crossbred cattle. In V1, the majority of the respondents (62%) reared crossbred cattle (Table 2). This type of cattle is more productive compared to local cattle raised by women in V2. By earning more money from dairy farming through their choice of cattle, the women of V1 were more empowered.

Table 3. Results of factors affecting women's empowerment in both villages

Predictors	Standardized Coefficient(Beta)		Sig.	
	V1	V2	V1	V2
Constant	-	-	0.000	0.605
Types of breed	0.330(4.814)	-	0.000***	-
Husband's behavior	0.282(4.534)	0.210(1.473)	0.000***	0.148
Breakdown of traditional socio-cultural norms	0.269 (4.480)	0.181(1.278)	0.000***	0.208
Increase in knowledge and skill	0.187(2.971)	0.162(1.169)	0.005***	0.248
Reduce dependency	0154(2.176)	0.097(0.695)	0.035**	0.490
R^2	0.899	0.135		
Adjusted R^2	0.887	0.058		
Durbin-Watson stat	1.746	1.531		

Dependent variable: Y (women's empowerment index)

Note 1) *** indicates significance at 1% level, ** indicates significance at 5% level and * indicates significance at 10% level and t values are in parenthesis

Note 2) Source: Primary data analysis, 2014

In V1, the husband's behavior was found statistically significant in women's empowerment (Table 3). In rural areas of Bangladesh, traditionally husbands do not allow their wives to participate in family or major household decisions. Rural women married to especially patriarchal and controlling husbands have been constrained in pursuing empowerment (Schuler et al., 2010). More recently, however, traditional ways of thinking are changing among V1 women. For example, women in V1 now have the right to spend the family income and make decisions independent of permission from their husband or other male members of the family. Similar social progress is stalled in V2 and women have little influence in personal and household matters. Women receive little respect from their husbands and the family-in-law may even consider the wife and her children as expense burdens on the husband, contributing to family conflict. It was observed from Table 2, with the majority of the respondents (66% from V1) reporting good behavior from their husbands while a higher percentage of respondents (60% from V2) reported bad behavior from their husbands. Particularly in V1, women's involvement in dairy farming is fostering a desire for independence. Their husbands are supportive of these efforts, recognizing the financial support the women can bring to the family. Therefore, in V1, rural women are being empowered through small-scale dairy farming and able to redefine their position in their family. The husbands' supportive behavior towards their wives is therefore an important factor for women's empowerment in V1. Research evidence has also previously reported that when women are allowed to start and run their own business, their status in the family improves considerably (Islam et al., 2012).

The breakdown of traditional socio-cultural norms was observed to be another important factor contributing to the greater empowerment of women in V1 (Table 3). Before beginning dairy farming, the primary role of these women was as housewives and they had no independence. According to Parveen and Leonhauser (2004), the most common forms of domestic violence against women at the hands of their husband or family include physical abuse, threats of divorce from the husband, unwillingness from the husband to provide family support, and mental abuse. All these can have a serious negative consequence on women's health and quality of life and prevent empowerment. Since participating in income-generating activities such as dairy farming, however, these women play a more active role in family finances and acquire some bargaining power within their family, thus

diminishing the prior gender inequality and providing some protection against domestic violence. In V1, the majority of the respondents (46%) strongly agreed that violence against them have been reduced (Table 2). The women were also able to increase their mobility, develop more interpersonal interactions, and through exposure to the media (via television), are made more aware of illegal treatment at the hands of their husbands and may seek to demand their rights

Another consequence of women's involvement in dairy farming is the increased awareness of education and in particular the importance of educating girls from a young age. Previously, early marriages were a predominant factor preventing the education of young girls and stalling any empowerment process (Hossain, 2011). Additionally, early marriages could often lead to early motherhood and various health risks to mother and child. The prevalence of early marriage has now begun to decrease as education level has increased, leading also to improved health among young women. Additionally, previously it was a common perception that sons were more valuable than daughters and were more capable of supporting the family and caring for parents in old age (Parveen & Leonhauser, 2004). Women might suffer abuse at the hands of their husbands for bearing a female child, and would be coerced to continue to carry children until successfully bearing a son. Women now have more control over the number of children and pregnancies they have, which has led to an overall improvement in the health of the women from V1. This social and cultural progress has not been made in V2, where early marriages and repeated pregnancies are still common and gender discrimination is still prevalent. In V2, the majority of the respondents (54%) disagreed that early marriage was reduced (Table 2).

Overall women in V1 experienced an increase in knowledge and skill through small-scale dairy farming (Table 3). It was observed that 74% of the respondents increased their knowledge, skill and capability through dairy farming in V1 (Table 2). In addition to factors such as access to television and mobile phones, the V1 is situated near Bangladesh Agricultural University, and thus women are able to seek input from professors, veterinary surgeons, and Artificial Insemination (AI) center scientists to improve their farming ability. Research evidence has already shown such learning and proactive involvement in business decision-making is profitable for dairy farming (Ogdand & Hembade, 2014). The inhabitants of V2 are not located near the University, and have no easy access to this additional tool for improving their farming capabilities.

As also shown in Table 3, the income earned through dairy farming has reduced the dependency of women from V1 relative to women in V2, as the women in V1 no longer need the same financial support from their husbands. It was observed that 64% of the respondents in V1 reduced their dependency and in V2, lowest percentage of the respondents (26%) reduced dependency (Table 2). Indeed, research evidence has shown that if Bangladeshi women in are gainfully employed outside the household, their contributions to the household are not only more visible but their economic dependence on their husbands is decreased (Kamal et al., 1992). The women also have more freedom to make decisions, go to the market, and make purchases without approval, as research evidence has shown previously for Bangladeshi women (Banu et al., 2001).

5. Conclusions

From this study, we have observed that small-scale dairy farming is increasing empowerment among women in V1, though less progress has been made in V2. Rural women in V1 are more empowered than women from V2 with regard to decision-making, in achieving economic, social, and legal rights, and are experiencing more general psychological growth. The greatest factors influencing this empowerment among women in V1 were the support from the husband, the successful breakdown of traditional cultural norms, the ability to increase knowledge and skill, and finally the breed of cattle raised. While these factors were not as significant for the women in V2, we still observed a positive correlation between dairy farming and the above factors. Overall, we find empirically that the women of V1 are more empowered through small-scale dairy farming than the women of V2.

These findings have important implications for the potential substantive role of small-scale dairy farming in other rural areas of Bangladesh. By encouraging and promoting small-scale dairy farming in additional rural communities, gender inequality may be further diminished and correspondingly more women may be empowered. Such economic activity has the potential to reduce the prevalence of early marriages, decrease spousal abuse, and foster the development of new practical knowledge, skills, and confidence, thus making an important contribution to the improved female status in families and society.

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Comparative Study on Hong Kong and Macao and the Mainland College Student Association

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Abstract

To strengthen the research on youth work under the new situation, is the inherent requirement of the Communist Youth League to thoroughly implement the spirit of the 17th CPC National Congress, also is urgent need of doing youth work well under the new situation. Student community college students and social relations as a bridge, is the important content of young college students work, learn from each other advanced corporation management experience has important theoretical and practical significance to make the Communist Youth League work in new period. This subject to Hong Kong and Macao and the mainland college students as the research object, by way of comparative study of colleges and universities in mainland students in Hong Kong and Taiwan differences and common function, in order to provide a reference and learning for mainland college student societies.

Keywords: college, student Association Hong Kong, Macao and Taiwan, revelation

1. Introduction

College Student Association is an important way of quality education and effective way in strengthening the campus culture, improve their overall quality, and guide students to adapt to society, promote student taught employment has played an important role. In a certain sense, the existence of these associations and activities is both objective and rational reflection background, but also to lead a modern academic thinking, scientific thinking and ethics of the "source." Community college students in order to promote China's development, we must actively participate in domestic and international exchanges, study, learn from universities abroad, especially in Hong Kong, Macao and Taiwan advanced experiences and practices for effective research, which grafted into our community college students, the as I used to.

2. Hong Kong, Macao, Taiwan and the Mainland Before the Development of Community College Students

2.1 Hong Kong, Macao and Taiwan Students Associations Overview

Hong Kong, Macau, Taiwan, due to the different historical backgrounds, different educational development, so three college student groups also showed different characteristics. Hong Kong College Student Association's organizational structure and operational mechanism with mainland universities are quite different, it is not primarily dependent on the administrative funding, but rather self-activity, self-financing, independent community organizations, with high independence. But one thing and the Mainland, Hong Kong is also the main activities of college students rely on student organizations and all levels of society. While many colleges and universities in student societies operate completely independent form, but in practice, the Student Affairs Office Student Association still some degree of guidance, management and supervision, foreign student organizations increased from the Student Affairs Office is responsible for the problem. Hong Kong university student societies are generally operate independently, with separate office, in order to promote student government, the campus goal of governance, internal and actively participate in school governance, and promote students' awareness of and participation in society, co-ordinate student organizations and activities, to provide students welfare, organization of cultural activities. Externally, on behalf of the students to express their views, issued a statement, participation in social affairs.

Cadres of community college students in Hong Kong are usually generated through the campaign, but there are

some ways through interviews produced. Hong Kong University Students' Union General Council and Executive Committee on behalf of the establishment, and some set up in accordance with the principle of separation of powers, the arbitration will be. Community is an important part of the student union, to accept the leadership representatives. Behalf by the Chairman, Vice Chairman, the Secretariat and a number of standing committees, each representative of the general faculties affiliated to affiliated clubs and societies Halls units assigned, depending on how many places depending on the number of its members, each of which occupies a very strong community weight. Their important duty is to safeguard the interests of students, the students organized activities. Hong Kong University Students' Union affiliated to both affiliated faculty, but also the affiliated societies. Graduate will be different with the Mainland, Hong Kong's affiliation graduate students include various functional departments and graduate associations affiliated to graduate faculty will generally do not, their activities tend to student organizations, the main activities are carried out through the community. Hong Kong university student hostel also has its own student union and community organizations, called the Halls Halls Residents' Association or Union. Halls students, community development in the long term also formed their own characteristics and varying between Halls culture, students can choose according to their own interests for their own hostel. Students and faculty student hostel almost the same position in the Student Union also has its own behalf, Halls student organizations also have a representative will be other agencies and officials, and set up a floor grassroots organizations regularly organize Scotia occasion, sports events between floors. The annual October to March is the student organization when the general election. Formal election by an organization's entire membership suffrage, generally site voting member of the organization, but now many organizations also use a network ballot. Students and community posts campaign in Hong Kong, also known as "the village", "village" is the meaning of the Cabinet.

Hong Kong College Student Association's main source of funding have membership dues, social and alumni donations, student organizations operating and investment income, the school and the SAR Government funds. Some students in Hong Kong as well as cultural associations, sports federations, associations such Society set up in accordance with the student categories Associations, societies need to go to such a category in the first registered before they can once again become the student union affiliated to become affiliated student organizations, hostel boarders will be able to apply for the student Union's resources. Student Union affiliated clubs and societies on offer financial allocations, activities, network services, interest-free loans. School students will also affiliated clubs and associations to review the qualifications and financial condition, including the constitution, membership, institutional settings, activity plan, the validity of the election results and dues payments, financial reporting, student grants, etc. using . Such as Hong Kong Chinese University Student Affairs in a number of student activities offered each semester funds for organizations to apply for their students, including student activities funded Alumni Student Activities Fund and HSBC Hong Kong student activity funds. Funding for Student Union of the Chinese University of Hong Kong under the student body (not including college groups) apply, funding to finance student groups organize more meaningful extracurricular activities, financing activities in the amount of visual significance, size, nature, number of beneficiaries the group to help the healthy development and other factors, depending on the diet group events expenditure not funded. Societies need assistance in the economy, the first to submit a report to the Student Affairs Office applications.

Macau and Hong Kong community college students is similar to student organizations, with their own unique rules and regulations, and management systems clear, clear division of labor, with its comprehensive membership criteria, organizational structure, financial system and the withdrawal mechanism. Macao University Students' Union, for example, by a member of UM Students Conference, Council and Board of Supervisors composed. Member General Assembly is the highest authority of the Council by all the Members, and a bureau. The Chairperson, Vice-Chairman and Secretary of a composition. Consists of over sixty affiliated student organizations, including the Student Union and various community organizations, community organizations directly managed by the students, student organizations whose main academic associations, cultural associations and sports leagues three categories. Academic Council which mainly academic research based, including Chinese Society, Communication Society, Economics Society, English Society and other 14 community organizations, civic associations mainly in the arts, entertainment-based activities, including State Society, Chess Club, the Catholic Alumni Association, Drama Club and other 18 organizations, and sports leagues are mainly in sports, physical fitness activities, mainly with Athletics Club, football Club, Dragon Boat Club, martial Arts Club and fitness will be other types. Macau University of Science and a specialty societies - foreign student club, which is composed of non-local students by the students, is Australia's largest HKUST students will be subordinate, and to serve non-local students for the purpose of student organizations.

2.2 Mainland Students Associations Overview

History of the development of student clubs later, the first one was in 1920 by the student societies Deng Xia Peking University students and other established Marxism Research Society. Of community college students have gone through two peak periods, the first one is the "May Fourth" Movement, the second is after the 1980s. "May Fourth" before and after exercise, a time when fierce collision various trends of the period, literati Patriots efforts to explore the road of salvation, so at that time to establish and participate in student societies are mostly discussed in social thought and revolutionary practitioners, a relatively strong political overtones . In the late 1970s, along with the restoration of the college entrance examination system, a large number of young people who enter the university campus, student organizations then appeared in large numbers, to the mid-1980s, community hot culminated, community activities almost become the main form of student extracurricular activities, in an active campus culture and improve their overall ability to play an important role. "According to statistics, in 1986, Beijing, Wuhan, Anhui, students participate in community colleges and universities accounted for 30%, respectively, 40%, 40% or more."

Since the 1990s, along with the gradual promotion of quality education and the CYL Central Committee and the Ministry of Education, the National Federation "Students' Quality Development Plan" is unfolding, the rapid development of community college students, community organizations the number, type and number of members have developed rapidly . 2002 CYL Central Committee, the Ministry of Education, the National Federation for the further implementation of the "CPC Central Committee and State Council on deepening education reform and the decision to promote quality education," the spirit to adapt to economic and social development of human resource development, especially young urgent need for human resource development, service quality Education for the full implementation of the majority of young students to adapt to growth and success, the urgent need for employment and entrepreneurship, some colleges and universities in the country to carry out "students' Quality Development Plan" pilot project, and in 2003 in full swing, the objective has greatly promoted the university the rapid development of student organizations. According to the Communist Youth League Central Committee and the China Youth Research Center in 2005, a survey showed that China's current total number of community college students in about 45,000 or so, the average has 20 colleges and universities; 59.7% of the students involved in the campus community, the average person involved in number of associations 1.8.

At present, in China the number of community college students showed increased scale, management increasingly sophisticated, the students gradually increased cohesion and influence the characteristics, but also showing a lot of new situations and new trends, one is academic, scientific and technological and comprehensive class societies, network societies increased, community activities and society, media contacts increased, interscholastic, extracurricular activities increased, reflecting the development of innovative societies. The other is the lack of scientific value-oriented, activity blindness and utilitarian and more prominent; internal management loose, lack of norms; lack of funds and the funds management and use of chaos; community continuity is poor, meaning and deep enough, repeat established phenomenon and so on. In response, many colleges and universities under the auspices of the Central Committee in strengthening student organizations work, Student Associations have been established in order to achieve self-management of student organizations, but the effect is still not ideal, can not fully meet the rapid development of the situation of student societies requirements.

3. Hong Kong, Macao, Taiwan and the Mainland Differences in Community College Students

Hong Kong, Macao, Taiwan and the mainland differences in community college students, the first is management, funding sources, such as different forms of organization, which also contributed to two different colleges and universities produce differences in function of the important reasons. Mainland student organizations mainly in the school committee established under the guidance Associations or Societies management center and generally by the person responsible, the school's student organizations are included in the Associations (or management center) unified management. Associations are responsible for various student organizations set up a preliminary review and report to the relevant departments for approval school. For student organizations to supervise and manage the daily work, such as student organizations responsible for the establishment, alteration or cancellation of the registration and filing of student organizations conduct annual inspection, violations of school regulations for student organizations on issues of supervision and inspection and processing. Through the organization of large-scale community activities enhancing their contacts and exchanges between communities for community development technology, information, and other resources to support . Despite the different universities in Mainland specific management of societies in different ways, but they are in the planning of these basic framework under.

3.1 The Characteristics of Hong Kong, Macao, Taiwan Community College Students

Hong Kong and Macao college student organizations to improve their overall quality and service for students as the fundamental starting point, attention to student counseling for students through the provision of appropriate and high-quality service and support for students, and create a challenging and diverse learning environment to promote multifaceted round development of students and the growth of the students life-long learning, training for the community with self-confidence, a sense of justice, social responsibility and international perspective talent. Hong Kong and Macao college student organizations working to achieve the goals of higher education SAR mission, the students organize indirect management, and actively support the students creative activities to enrich campus life, student organizations have to play the role of the vast space independently. Hong Kong's community colleges and universities pay more attention to cultural and Halls Halls student organizations, the student residence halls opened into student education classroom to help students establish a sense of team, learn to get along with others practice.

Taiwanese university student organizations working in its "Ministry of Education" physical and moral, aesthetic five balanced education goals under the guidance of the student club activities as the focus of the work at all levels of school discipline has initiated normal leisure, love of Chinese culture, gregarious cultivate virtue, conservation service sentiment, temper academic research, cultivate leadership role. Taiwan's colleges and universities to promote university education is no longer overly elitist education, more attention to balanced development of education to help students establish a complete personality of the "all-round education." Thus, many universities and community activities as students will practice holistic education, the potential education, general education goals and ideals of the best way to spread in the school's various community activities, not only to university life colorful, but can develop interest broaden knowledge and develop social skills, hone leadership skills, promote university's overall educational function. Meanwhile, community activities so that students leave school a go, with rich social practice . Taiwanese college students in the community, with a wide range of people, benign operation, and develop a diversified characteristics.

Hong Kong, Macao and Taiwan are mostly college student societies and distinctive features, clarity of purpose and a large organization, with the following characteristics: First, the social mode of operation. Their student community management model, is often a microcosm of society, a high degree of social management. Second, standardized management system. Community colleges and universities have their purpose and create a strict charter, signed by the student officers will be reviewed and approved before implementation, although nominally under its Student Societies Officer will manage, but in fact the development community has great freedom and autonomy . Student officers will just played in the development of guidance on the direction of the role, does not directly interfere in the internal affairs of society. This makes the community and students closer together, but also to society and the Director-General will be closer to its broader space for development. Of a society Internally, president, vice president and other members of the Executive Committee and there is no strict distinction between. Third, schools and social forces support. School students to give full play to the role of associations in this second class provides the necessary basic conditions. Some colleges and universities for each community dedicated to open an online space for the community to create their own websites, but also for their nature, each community activity room provides fixed and corresponding venues in order to facilitate their activities, while providing the necessary equipment and funds. Student organizations in the community have a basic underlying support them private or non-profit organization, and many have established long-term partnership. There are many student clubs or organizations have registered as an official in the government's social groups.

3.2 The Characteristics of Community College Students in Mainland

Mainland Universities Student Association has initially formed a relatively complete some of the rules and regulations, such as "the rights and obligations of student societies," "community fund management system", "student organizations Responsibilities", "student assessment Member Societies Ordinance," etc. These rules and regulations with the relevant provisions of the education sector of societies from different levels of management were the norm. Such as "ordinary college student management regulations" require "students on campus organizations to participate in student groups, students formed groups, according to school regulations should apply in writing, at schools approved student groups should be in the Constitution, laws, regulations and school management activity within the system, to accept the school's leadership and management. "and each school on the management of student organizations have clear regulations, these regulations provide the institutional and community management associations operating mode. Communist Youth League organizations are generally business community college students in Mainland authorities, universities and student organizations to guide the Communist Youth League and being guided relationship. Its mode: student organizations directly affected by the

school committee unified management, specifically belonging to the school Associations (HKCSS) direct guidance, developed by the Social Union specific activities and programs. Student Associations in the school under the leadership of the Communist Youth League student organizations responsible for managing the daily affairs of the body. The establishment of student organizations must first submit a written application to the Societies Federation, the Communist Youth League and reported to the school for approval, consent before recruiting members. Student organizations have some internal organizational structure, which is usually social (will) long under the corresponding work department or workgroup number, each working unit or working group is constituted by a number of members, members of Congress is the highest authority of community , the principle of democratic centralism is a community organization. Student organizations can be divided into school (hospital), the Department of two. Main cadres of student organizations responsible for inspection by the Associations, Societies cadres should be high academic achievers, enthusiastic community work, with a strong ability to work and a strong mass base. Development at all levels of society according to their need to charge membership fees, charged at the standard shall obtain the approval of the competent authorities, shall establish a complete management fee income and expenditure account .

Mainland, the main purpose of community college students stay in the richness and functional campus life, students hobbies, and participate in school activities, expanding the field of knowledge, to increase the scope of dating, rich inner world and other levels. While focusing on strengthening the scientific spirit and humanistic quality education, well-organized cultural activities on campus, to carry out rich content and form of new, attractive and strong ideological education, academic science and technology, cultural and sports activities such as campus culture, the moral, intellectual, physical, aesthetic infiltrate campus cultural activities among the students in the activities of benefit . Meanwhile, the mainland community college students also formed its own characteristics and advantages, train and bring up a number of outstanding student leaders. College students and community activities Mainland mechanism makes part of their postgraduate academic strengths better play, student exchanges more common, more general network resources more mature use .

4. Issues, Experiences and Inspiration

Because systems, culture, history and other factors, Hong Kong, Macao, Taiwan and the mainland compared to community college students, there are many different. Community college students through Hong Kong, Macao, Taiwan and the mainland student societies comparison community college students in the study of the problems facing the development, you can provide each other with experience and methods, thus contributing to Hong Kong, Macao, Taiwan and mainland joint development of community college students. Student organizations are not perfect, there are many negative factors, which requires us to face the Mainland and Hong Kong, Macao, Taiwan community college students lack of community college students. Through the above comparative study, we find that, compared with Hong Kong, Macao, Taiwan's community colleges and universities, student organizations Mainland guiding philosophy of working either in or in practice there is a certain lack of urgent further strengthened.

4.1 Problems

4.1.1 Participation in Society Motives, the Actual Effect Is Poor

In the university community management can easily arise in two extremes is a student club activities and the imbalance between learning and student participation in extracurricular activities too social motivation. The first phenomenon is the community members based on the same interests and hobbies, tend to learn lessons aside and blind to participate in some of the communities to go, engrossed in community activities, participation in community activities and the resulting imbalance between learning, performance plummeted. Another phenomenon is the motivation too utilitarian, direct, founder of the purpose is to enrich community college life, cultivate students' comprehensive ability, but with the continuous development of market economy, market concept also continue to impact people's values. Some students to participate in community activities, are more concerned about personal interests, concerns participate in extracurricular activities plus the comprehensive evaluation of beneficial activities without concern whether it makes sense, with serious utilitarian overtones.

4.1.2 Is Not Standardized, the Lack of Scientific, Humane Management System

Community management is a complex systems engineering, is also an art, very particular about the management methods and techniques. The reason why the Hong Kong community colleges and universities do a great success, which comes from the advanced management mechanism and operation mode, each community has its own purpose and create strict charter, signed by the student officers will be reviewed and approved before implementation, because of its own is an independent legal entity, if the member to withdraw because of dissatisfaction with the fate will be a direct result of community, which makes the relationship between members

and the community more closely. Community college students compared to the mainland part of the internal management of confusion, not strictly regulate the constitution, ignoring members and community spirit contact, not in the interests of our members. Meanwhile, some schools supported by administrative bodies, student organizations, lack the necessary guidance and guidance, there is no unified management system, resulting in some societies nominal.

4.1.3 Single Active Content, Innovation Ability and Not Attractive Enough

Although community variety in colleges and universities, involving eight class community types, but specific to certain activities tend to appear content boring, a single, and so on and so forth. Such as give priority to in order to develop science and technology innovation ability of technology student community on the quantity and quality also is very limited, club activities lack of innovation, content of dogma. While some literary arts community due to insufficient attraction activities, club activities, community activities, form a single, lack of characteristics level is not high, causing many members basically out of from the state. Exist from the perspective of the contents of club activities, through the motions, such as some of the sports community just took the membership to some sports activities, organize collective activity, one or two times no deep content, lack of communication between members, meaning is not big.

4.1.4 A Single Source of Funding, Social Functioning Level Is Not High

Because society is mainly funded grants and membership dues from school two aspects, and in order to encourage the community scale, collect dues rarely, most community activities are present inadequate funding phenomenon, which led directly to the effects of community activities. Many of the activities of student organizations is dependent on sponsorship money, but because the student experience and energy are limited, sponsorship with a lot of uncertainty, and too easy. Compared with Hong Kong, Macao and Taiwan universities, community colleges and universities in the Mainland is not high functioning pervasive social problem, commercial operation mode much, too dependent on school funding allocations, funding sources and the lack of investment in community colleges and universities for students with Hong Kong, Macao and Taiwan Universities gaps.

4.2 Experience and Inspiration

4.2.1 To Establish a Relatively Stable Community Cadres Team

For one group, the outstanding leadership team is undoubtedly the most important, and therefore, it is necessary scientific selection, careful cultivation, improve community is the backbone of the student leaders, especially the overall quality and effectiveness of leadership on the important role of community work. At present, although the general university community Associations specific co-ordination by the school, but the community is relatively independent, autonomous extracurricular activities often lack an overall outstanding community cadres training and selection. Community development and community leaders have a great overall quality of contact, must pay attention to the training of cadres of societies and guidance offered through cadre training, outdoor development, community activities and other forms of exchange of experience, the person in charge of societies systematic training, the main student organizations and cadres into the assessment, reward and punishment mechanism, establish relevant accountability mechanisms, the latter shall be removed by the ranking events eligibility.

4.2.2 The Implementation of More Scientific and Humane Forms of Organization and Management Mechanisms

Scientific management is the basis for healthy functioning of society, humane society mechanisms to maintain a constant source of development. The success of the Hong Kong community college experience shows that only by constantly improving student club management system construction, a clear management responsibilities, develop a standardized university community management approach in order to ensure the healthy development of community activities. Management system includes not only its own charter, regulations, financial systems, etc., should also include management's responsibilities, incentives, monitoring mechanisms, advocacy mechanisms. At the same time, adhere to the student-oriented, respect for community self-management, self-service, self-development under the premise of the majority of members to actively carry out the activities required to respect the needs and requirements of the general membership, through the General Assembly and other forms of community activities to develop the plan, rather than by several student leaders decided to form community activities to enforce.

4.2.3

Build community features, innovative activities. Subjectivity college student organizations are playing an important carrier of the development potential of students, a stage to show themselves, but also the prosperity of campus culture, an effective platform for a strong academic atmosphere. Community activities attractive or not

directly affect the quality and influence, only the active content and form of constant innovation in order to meet students from radically growing spiritual and cultural needs. Therefore, efforts should be made to expand community participation in activities face, build community features to attract more students to participate in student clubs and extracurricular activities. Societies should explore the establishment of certain internal demands and supervision mechanism, through joint meetings and other forms of associations to mobilize broad membership of initiative and creativity, brainstorming, so that the activities to make the brand, to make features, making results.

4.2.4 To Expand Funding Sources, and constantly Enhance the Degree of Social Functioning

Associations to carry out all the activities financed basic protection, Hong Kong, Macao and Taiwan universities operate on the source of funding is relatively mature, so carry effect is obvious. In contrast, most of our colleges and universities in the source of funding is relatively simple, the limited amount of funds, under the present conditions, the school actively seek policy on the one hand, due to increase in financial support, through established between universities and enterprises more forms long-term and stable cooperative relationship for student organizations access to relevant resources. While the other student organizations should be encouraged to actively use professional advantages and team strengths organize various social services, access to social and corporate sponsors, and actively carry out social work. In addition, schools should encourage students to take the business community patterns, from a mere "blood" to "blood" way to change, laboratories and other entities through entrepreneurship, so that gradually become an administrative appropriations mainly dependent on voluntary activity, self-financing organizations, free services and paid services through a combination of funding sources to achieve multi-source community.

5. Conclusion

In this study, we adopted Hong Kong, Macao, Taiwan and the Mainland College Student Association Student Association comparative analysis, summed up some of the existing problems, such as management is not standardized, single source of funding, lack of teamwork, etc., through the comparative study, we also derive obtained some experience and enlightenment, it is relevant to establish accountability mechanisms, humane forms of organization and management mechanism, enhance the level of social functioning, strengthen risk awareness, through exploring some have referential significance of new theories and new ways of promoting the healthy development of higher education under the new situation.

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Approaches for Human Capital Measurement with an Empirical Application for Growth Policy

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Abstract

This study aims at providing a theoretical concept of human capital and its measurement that have been continually developed for decades and empirically testing the casual relationships between human capital, measured by educational spending, and economic growth of Thailand. The methodologies are through literature synthesis and qualitative analysis as well as time-series quantitative analysis; the data is annually collected during the period 1980 – 2010. The finding indicates that human capital can be defined in different frameworks because its definition changes over time. Nonetheless, owing to a key attribute, it should be defined on a broader view and its spillover effects should be taken into account as well. The other finding is that the standard approaches to human capital measurement are cost-based, income-based and output-based. The empirical results suggest bidirectional causality between human capital and economic growth of Thailand but much clearer for the causation running from human capital to growth. As such, the policy implication is that if the government aims to achieve the long-run economic growth, both increasing the educational opportunity and improving the quality of education are imperative.

Keywords: economic growth, government spending on education, human capital measurement, Thailand

1. Introduction

For centuries, human capability is deemed valuable and indispensable to the wealth of nations as pointed out by classical economists, Adam Smith, Marshall, and Say. Smith (1776) stated in "The Wealth of Nations" the importance of human capital in that one's educational expenses can be comparable to the value of expensive machinery. The role of human capabilities on economic growth has received much scholar's attention to further peruse. Schultz (1961) originated the term "human capital" and referred it to the value of human capabilities. He asserted that human capital is not dissimilar to other types of capital, at least since it could be invested in various ways such as education and training. That is, the more education and training, the higher the accumulated human capital stock is. As a result, such investment will generate higher productivity, thus raising one's earnings and resulting in higher aggregate level of production, and so does the national income. His belief influenced a great deal of successive research on human capital. Becker (1964), Arrow (1962), Mincer (1962), Uzawa (1965), and Romer (1986) among others conceptualized and emphasized its impact on one's well-being and economy in diverse analytical framework. This challenges scholars to come up with various techniques and models to transform such concepts and afterwards relate it to observable within-and-cross country data. Consequently, numerous studies center on defining and measuring human capital. Its scope and measurements, nevertheless, are subject to controversies. In part, it is because the society nowadays is much more complex than ever. Globalization, knowledge-based economy, skilled-bias technology, innovations, advances in software and cyberspace industries, better quality and longer data sets as well as newer econometric techniques make it even harder to arrive at inclusive meaning of human capital. Other than these complications, human capital is something pertaining to qualitative per se, so that previous attempts to provide its range and quantitatively measure it were not successful. Why does it so hard to come up with one agreeable meaning? Perhaps because it is diversified, dynamic by nature and it has spill-over effects on economy and society. This implies that human capital as pertaining to "social capital" should be taken into consideration when defining it comprehensively. Regardless of such difficulties, aiming to provide the definition of human capital in a practical manner by taking advantage of its evolving notions and theoretical developments is beneficial. In so doing, we may define and

underpin practical approaches for human capital measurement. As such, in this paper, one of the main focuses is to identify approaches for human capital measurement as well as pros and cons of each approach. This is significant since the researchers are able to adopt the most suitable method for their work or even develop their own measurement of human capital based on the results. That is to say the frontier of human capital research involves identifying human capital measures as well as quantifying the human capital stock. Further, utilizing the well-measured human capital to test its validity is also crucial. One possible way is through the creation of human capital accounts, and then tries adding it into the National Accounts. Another interesting way is through investigating causal relationships between human capital and economic growth. The former should be considered the "ultimate goal" because it takes a considerable amount of time and deep understanding of human capital issues through thoroughly synthesized learning processes. The latter can be validated at once. However, at least a few complications arise. That is, what should be used as a proxy or proxies for human capital and how appropriate? Having responded to such queries is somewhat challenging and painstaking. Even so, those carefully chosen are subject to the validity check by the real data and sensible causal explanations.

However, there are a number of studies to investigate the relationship between human capitalin terms of education or educational attainment and economic growth. Mankiw, Romer, and Weil (1992) have built a model to explain the growth endogenously by extending the Solow growth model to enlist human capital as a separate input from labor. The variables in their model can be expressed in terms of efficiency unit of labor. Based on the similar production function and by assuming that the country specific shock is not correlated with the saving rate and population growth, the OLS estimation can be employed. They use average percentage of working people in secondary school to proxy for human capital investment rate and other traditional variables as well as the baseline coefficients, and establish relations among the variables through the so called Augmented Solow model. The results show this model can explain over 67% of the cross-country difference in income per capita. Also, another interesting result is that the poor countries tend to converge to the steady state faster than the rich countries. Abhijeet Chandra (2010) studied the causal relation between government expenditures on education and economic growth of India. He employed an econometric approach suitable for macroeconomic time-series data. The data are collected annually for the 1951-2009 period. To identify the direction of causality, he used both linear and non-linear Granger causality test to increase the likelihood of getting accurate results. The findings are that there exists bidirectional causality between government spending on education and economic growth. However, economic growth causes higher expenditures on education irrespective of lag numbers while expenditures on education do cause economic growth after some time lag. According to these empirical results, a policy suggestion is that the government of India should focus on increased investment in education as it is fundamental to better quality of human capital, thus leading to higher economic growth and then being followed by improved education quality. Yildirim Nurtac, Deniz Hulya, and Hepsag Aycan (2011) studied the effect of government educational expenditures on economic growth of Turkey. They argue that using the total government expenditures would lead to a possibility to ignore the positive externality of human capital so that its effect on economic growth cannot be accurately comprehended. Having employed the data over the period 1973-2009, they focus on the 19 causality analyses through augmented VAR model in levels which is superior to typical VAR in that it allows dynamic relationship among variables. The finding is that the causality only runs from growth to education, neither education to growth, nor bidirectional causation. Muhammad Imran et al. (2012) investigated the relationship between human capital and economic growth in Pakistan. Their main purpose is to find the direction of causality between the government expenditures on education and government expenditures on health as proxy for human capital and economic growth. The data are yearly from 1973 to 2002 and tested to make sure that all variables are appropriate for time-series econometric estimations. They started with unit root test, co-integration test, and Granger causality test. The model specification is in natural logarithmic form. GDP is used as dependent variable while all independent variables are one-period lagged. Other than the expenditures on education and health, debt service payment and gross fixed capital accumulation are also included to allow the interaction among variables. The results show that expenditures on health do cause GDP. Therefore, they recommend that the government of Pakistan should pay special attention to public's health spending. Sovathana Sokhom (2012) examined how intangible human capital impacts economic growth in the less developed countries (LDCs) by taking Cambodia as a case study. The aim of his study is to understand the role of intangible human capital on the economic development and growth in LDCs, especially Cambodia although recent studies indicate a strong positive relationship between human capital and social capital and economic development/growth. To examine whether such conclusion holds true in LDCs, the likert scale to measure the self-esteem and motivation is used as the quantitative tool. This is a common method in psychology because self-esteem and motivation are thought to be an apparatus to gauge part of intangible human capital within the political economy framework. That is to say the higher self-esteem and motivation, the higher economic growth is. Through the ordinal scale, t-test and another test

are carried out to compare the satisfaction's average scores after the training program. According to the scores from 133 observations for control groups and 139 for treatment groups, the findings indicate that persons that get training have little more activities than those who do not get training, so that the contributions to growth are not much different. In words, political efficacy through self-esteem and motivation scores after training plays a little role in LDCs, in particular Cambodia.

As implied by previous literature, the point of investigating causations of human capital and growth lies in that such causal patterns might be correlated with the level of GDP and economic growth. A large number of studies found evidence consistent with an endogenous growth framework - human capital is the engine of growth - while others found the opposite or even reciprocal relationships. One question arises naturally. Is there any noticeable relation between human capital and the level of economic development and growth? More specifically, if the government expenditures on education are used as proxy for human capital, then does human capital cause growth? What if we test for causation in countries with different levels of growth and development? These questions once again challenge the validity of both human-capital-based endogenous growth theory and human capital measurements as part of human capital theory.

As an application of the endogenous growth theory, the human capital and growth causation is straightforward and relatively conclusive. In particular, the answer to such query is central to developing countries. Thailand, a country listed in this category, would clearly benefit from understanding the apparent patterns between human capital, measured by government spending on education, and economic growth. There exist policy differences whether such relation reconciles with the theory of endogenous growth. In other words, it is still plausible to see the reverse or even bidirectional causality in the case of Thailand. It might occur as the consequence of having moved up to the certain level of growth and development, thus resulting in better education. The higher quality of education can be determined by higher percentage of spending on education as compared to the GDP. This is presumably an increase in human capital investment, leading to more productivity and national income as well as a higher level of economic growth.

Having defined human capital either narrow or broad, by single or multiple measures, one had better bear in mind that the meaning should be ample, historically thorough, and practical. This might include giving an emphasis on various measurements such as cost-based, output-based, and lifetime-income-based. Thus, the main purposes of this study are to thoroughly explore the context of human capital, to specify various measurement approaches, and empirically test the causative directions between human capital and Thailand's economic growth. The findings would be the springboard for understanding the causal patterns as applying the same technique for other countries. One of the advantages is that we are able to compare the results and probably detect the patterns of causality when different levels of development and growth are taken into consideration. Such investigation is supposedly the subsequent research project. But, now let's focus on the present study.

The rest of this paper is organized as follows. The method and econometric model are encapsulated in the next section. It provides a review of related theoretical concepts and approaches for human capital measurement and how to estimate as well as how the results would be interpreted. This includes the sources of data, periods of data observed, and data description. The next section presents the results. And the last section is discussion, conclusion and recommendation.

2. Method

The methods corresponding to the objectives are described separately. This study employs both qualitative and quantitative methodologies as follows.

2.1 A Review of the Concepts of Human Capital and Its Meaning

This section uses a qualitative investigation method. Analytical comparison among the existing literature on human capital is the first step. This stage is to delineate the structure of human capital as well as explain how the scholar's viewpoints have evolved through time. An integration of the body of knowledge is performed in order to build one explanatory conceptual framework so that the scope of human capital is developed. After such synthesis stage, the validity of concepts is ensured through investigating current empirical studies relevant to this invented conceptual framework.

2.2 Approaches for Human Capital Measurement

This section begins with a qualitative investigation of the ways to measure human capital. The next step is explaining each approach for human capital measurement including analyses of the rational for each approach. Then, advantages and disadvantages are critically analyzed, approach by approach, including various aspect comparisons among different approaches. And a number of previous empirical studies concerning human capital

measurement are discussed in detail as to ensure their validity and practicality.

2.3 Causal Relationships between Human Capital and Thailand's Economic Growth

This section is in essence a time-series macroeconomic analysis. The growth rate of gross domestic products as indicative of economic growth, the percentage of government spending on education to GDP as proxy for human capital, which could be separated by levels of education (if the data is available throughout) are variables of interest. Based on unit root test, all data are examined by Augmented Dickey Fuller test to see whether nonstationary problem is present. If variables are stationary, then proceed to the next step; otherwise, data differencing with appropriate lag number is needed to be certain that the estimation does not lead to spurious results. The variables are tested for the co-integration. If they do co-integrate, the unidirectional or bidirectional causation is identified using Granger causality test or other recently-developed tests if appropriate. Describe the procedures for selecting participants, including (a) the sampling method, if a systematic sampling plan was used; (b) the percentage of the sample approached that participated; and (c) the number of participants who selected themselves into the sample. Describe the settings and locations in which the data were collected as well as any agreements and payments made to participants, agreements with the institutional review board, ethical standards met, and safety monitoring procedures.

The data employed in this study are annually during the period 1980-2010, totaling to 31 observations. Sources of data are as follows. The GDP and GDP growth rate is from the Bank of Thailand and the percentage of government expenditures on education are obtained from the United Nations. All data are recalculated and utilized in terms of the current prices (billions of baht).

2.4 The Econometric Model

According to a framework of endogenous growth model, the production function takes the Cobb-Douglas form as the following.

$$\ln Y(t) = \ln A(t) + a \ln K(t) + b \ln L(t) + c \ln H(t) + \varepsilon(t),$$

where Y is GDP or output, K is the capital stock, L is labor, H is human capital, *ln* is natural log, ε is disturbance term, *a, b, c*, and *ln A*, are coefficients. The coefficient in front of each variable is the elasticity of output with respect to that input. Such interpretation explicitly makes human capital an endogenous determinant of growth because if the stock of human capital increases by one percent, how many percentages the GDP rise, which is the same notion of growth. However, the objective of this section is to find the casual relationship patterns between human capital and economic growth, a prerequisite that needs to be verified is the existence of linear relationship as assumed by the econometric estimation method widely used, so called OLS (Ordinary Least Squares). In addition, according to the endogenous growth, the dependent and independent variables are set as follows.

$$yg(t) = \alpha + \beta HC(t) + \psi(t),$$

where *yg* is the growth rate of GDP. *HC* is the share of spending on education to GDP as proxy for human capital. ψ is the disturbance term, α and β are parameters to be estimated. After the linear relationship is established, then the standard processes used in time-series analysis are performed as mentioned earlier. Note that if the unit root problem (based on the Augmented Dickey Fuller test) is not present, cointegration test is performed to check whether any two macroeconomic variables are co-integrated. If they are, the causality test can be used to determine the causal relation patterns. To test for causality between human capital and economic growth of Thailand, an econometric technique that can verify such causations will be employed, typically the Granger causality test.

3. Results

This section provides the results of the study. First is to provide a theoretical review of the core concepts and scope of human capital. Second is to identify approaches for human capital measurement. And last is to investigate the causal relationships, if there exists, between human capital and economic growth of Thailand using the share spent on education to GDP as proxy for human capital. The results are the following, respectively.

3.1 Human Capital Definitions and Its Scope

Perhaps human capital is the crux of modern labor economics since it has long been known that labor can be regarded as both brain and brawn. However, the brain is much harder to measure; in fact, there is no consensus on the exact definition of Human Capital. To be able to define human capital in a meaningful way is actually a challenge. It should also reflect both what has been involving and the present society which is so complex. Why does it so hard to define it? Probably because it is multidimensional, keeps changing, and its role on social and

economic dimensions can be comparable to a positive externality. Regardless of such difficulties, this part aims to provide the definition of Human Capital in a practical fashion by taking advantages of its development that is constantly changing through time, perhaps, broader and more abstract. The methods for qualitative analyses are comparison, explanation, and integration (synthesis). In addition to scoping the human capital, approaches for human capital measurement are analyzed using the qualitative analysis as well. It is to rationalize and express how to measure human capital. Next, the empirical investigation is provided as evidence to check the congruence of a concept of human capital, measured by the share of expenditures on education to GDP, with the economic growth of Thailand. The frontier of researches on human capital would be summarized, accordingly. As mentioned earlier searching for what it means by human capital is not an easy task since it is an endeavor to quantify something that qualitative intrinsically. In addition, its meaning keeps changing through time. However, dated back to Classical period, Adam Smith (1776) emphasized that human capital is a type of capital and education is important to the wealth of nations. He claimed that the educational expenses are as vital as those of expensive machines. This means the cost of education is considered as the indicator of such an investment in education. After the Classical times, Lewis (1954) compared human capital as "unlimited supply of labor." Later, Pigou raised the point that investment in human capital does exist. The connotation is that investment at least can be separated into physical investment and human capital. Jacob Mincer (1958) reiterated the importance of human capital investment. Schultz (1961) used the term "Human Capabilities" in the context of economic development and paid close attention to the need for the disentangle of human capital and physical capital. He also defined human capital as all useful skills and knowledge that is part of intended investment. More specifically, his examples are made clear about what it means by "Human Capital," so that it is worth the direct quote. *"Much of what we call consumption constitutes investment in human capital. Direct expenditures on education, health, and internal migration to take advantage of better job opportunities are clear examples."* (Investment in Human Capital, 1962, page 1)

Thus far, human capital has been perceived as several dimensions. In particular, it gives rise to an understanding that education is not the only form of human capital but a crucial one. That human capital investment centering on education and other forms which can be measured by their direct costs is also pivotal since it is a way to measure human capital that is essentially intangible. Moreover, the costs or expenses of investment imply both at present and in the future, which would be paid off later.

Around that time, Gary Becker (1964) turned human capital to the production scheme, which is considered a significant application and interpretation of human capital. He, in addition, made the comparison between human and machines that can be used to produce output in the same manner. In words, the methods of production are stressed in that additional investment leading to more output is similar to how the machines give rise to the output. Education, training, health among others are the crystal clear forms of such investment. Since then, the investment in human capital had been consistently underlined on these bases. The fruit of human capital can be, to certain degree, specified by the rate of return on human capital one owns.

Again, Becker provided a more insightful detail of human capital in that it can be distinctively separated into "specific" and "general." Specific human capital concerns skills or knowledges that are useful only to a single employer but general human capital is those useful to all employers. According to such separate viewpoints on human capital via training, a belief that human capital investment is risky emerges if it is deemed "general."

Romer (1986) and Lucas (1988) are the other two prominent scholars who contribute a great deal to this issue. Romer defined capital not only as factories, machines, tools, and the like, but also as the consequence of investment in research and development (R&D), innovations, or ideas to produce new products. This leads to a new form of capital called "knowledge," which might be accumulated through time. Such capital can generate the positive externality that would benefit the economy and economic development by its ramification. Though not exactly the same, one of the Lucas's viewpoints dissimilar to Romer is the positive externality of knowledge. Lucas asserted further that advancement of knowledge and technological progress are hard to disintegrate so that they must be thought of a composite outgrowth from human capital. Technology bundled with the knowledge arising from human capital accumulation can be envisioned as two aspects. One happens without externality but the other comes with positive externality, which could benefit all people. That is, an increase in human capital accumulation, implying more advanced knowledge and technology, moves forward the economy and economic development.

Both Romer and Lucas basically focused on the external effects of human capital, generally the knowledge resulting from more human capital accumulation which in turn would generate more and advanced knowledge. Their models are based on the notion that human capital is an endogenous variable that can describe the economic growth and the marginal product of this input shall not and would never be zero, as a typical

framework of endogenous or new growth theory. A way out is build a model that the returns to human capital be classified as "increasing returns to scale" or IRS. Consistent with defining human as such knowledge by nature, this would give rise to positive externality. Undoubtedly, the definition of human capital is influenced by the new growth theory, more specifically by the mechanisms of modeling and the need to be able to explain the real world phenomena.

With the advent of advanced technology, creative innovations, and new products, human capital is defined with the inclination as to "the knowledge with technological progress." As the term suggests, anything formerly defined seems to dwindle in its role as human capital. By contrast, anything closely fitted into that is a standout. For instance, in Lucas model, human capital can be thought of two different strands, one with that accumulated off-the-job training and another with that accumulated on-the-job training (learning by doing). This easily leads one to perceive a lesser role of formal education but a greater role of training as such the interpretation of human capital. Mankiw, another well-known contributor to human capital issue, has convincingly argued for defining "human capital" as that amount of knowledge, basically via studying, which is embedded with technology progress. He stated that since lifetimes are finite, there is an upper bound to the amount of human capital that can be accumulated. Thus, increasing human capital, say more years of schooling, may be able to be raised to some point up to the transition period in a growth model, but human capital accumulation cannot explain the growth at the steady state. This is to say knowledge cannot be accumulated without a bound. As such, in the context of the endogenous growth model, as it predominately impacts how the human capital definition should be. The point is that the amount of human capital accumulation might not be a strong candidate to explain the long-run economic growth aspect.

In a famous work by Mankiw, Romer, and Weil (1992), human capital is defined, interpreted, and measured by education - still, the way that model is built and other restrictions are of influence, making use of the percentage of the working-age-population that is still in secondary school as the rate of human capital accumulation. They admitted that using this variable has a number of flaws but arguably suitable in terms of the model setting. Once again, a variable concerning education is used as proxy for human capital. One question arises. Is it appropriate to define human capital narrowly, simply to follow the models, or desperately to conform to the availability of the world data? In the beginning of the twenty centuries, the Organisation for Economic Co-operation and Development (OECD) in 2001 announced and defined human capital as "The knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being." (OECD, 2001, 18) Furthermore, the OECD in 2011 has, in addition, provided its broader definition as the following. "It incorporates various skills and competencies that are acquired through learning and experience but may also include innate abilities. Some aspects of motivation and behavior, as well as the physical, emotional, and mental health of individuals are also regarded as human capital in this broader definition" (OECD, 2011). This broader view of human capital is consistent with a recent work by Polachek, Das and Thamma-Apiroam in 2013. Such congruence is that they have attempted to adopt the broader view and quantify them through complicated models and make use of rather up-to-date econometric techniques. Part of it is to explicate the innate ability both ability to learn and ability to learn which are used to be a persistent problem called "unobserved heterogeneity" due to the difficulty to pull them out. In addition to these hard-to-measure abilities, there are three more parameters to be estimated, all well known as cognitive abilities commonly used in psychology. In detail, they derive a tractable nonlinear earnings function which is estimated separately for each individual in the National Longitudinal Survey of Youth conducted in 1979 (NLSY79) data of the United States. These estimates yield five important parameters for each individual: three ability measures (two representing the ability to learn and one the ability to earn), a rate of skill depreciation, and a time discount rate. Moreover, they obtain a population wide estimate of the rental rate of human capital and illustrate heterogeneity in the production of human capital, and plot the distribution of these parameters along with NLSY79 reported AFQT scores. By utilizing these parameters, they can verify a number of untested theorems implied by the life-cycle human capital model. Also, they are able to show how these human capital production function parameters relate to cognitive ability, personality traits, and family background. Among results, they find that individuals with both a high internal locus of control and self-esteem exhibit greater ability, lower skill depreciation, and smaller time discount rates. Individuals inclined towards depression have higher time discount rates. Agreeable, open, conscientious and extrovert individuals have a greater ability to learn but not necessarily a greater ability to earn. Neurotic individuals have a lower ability to learn. Higher parental education is associated with a greater ability to learn, lower skill depreciation, and a smaller time discount rate. Educational stimuli are associated with higher ability. In contrast, growing up poor is associated with lower ability.

Clearly, from the above work, a number of never-been-measured-before concepts have been measured here.

These together with other traditional definitions of human capital constitute a broader perspective on how one can define and quantitatively measure human capital. It can be considered a pertinent contribution in this area. Altogether, with the past developments of human capital definition, today another substantial consideration comes into play. That is, social capital. What is exactly social capital? To answer this, we first should understand that it is diverse and keeps changing over time, just like human capital. In addition, to define it requires a great deal of understanding and interpretation associated with networks, norms, externalities, especially the external returns. It seems that there exists a large part that both human capital and social capital have in common but one of the most distinct roots is the positive externality. As a result, human capital is currently defined and interpreted in the context of social capital as well.   The previous attempts to provide human capital definition and its scope posit that there are various factors that influence what human capital may be comprehended. They are for instance the need to quantify it, the level of social and economic development, the model considerations, the level of technology, the empirical consistency as well as the availability, accessibility, and accuracy of relevant data, etc. The following chart (Figure 1) expresses the main definitional grasp of human capital that keeps evolving through time. Also, a comprehensive chart of human capital divided by cognitive ability and non-cognitive ability aspects is shown in Figure 2.

Figure 1. A chart showing the focus of human capital definition developments
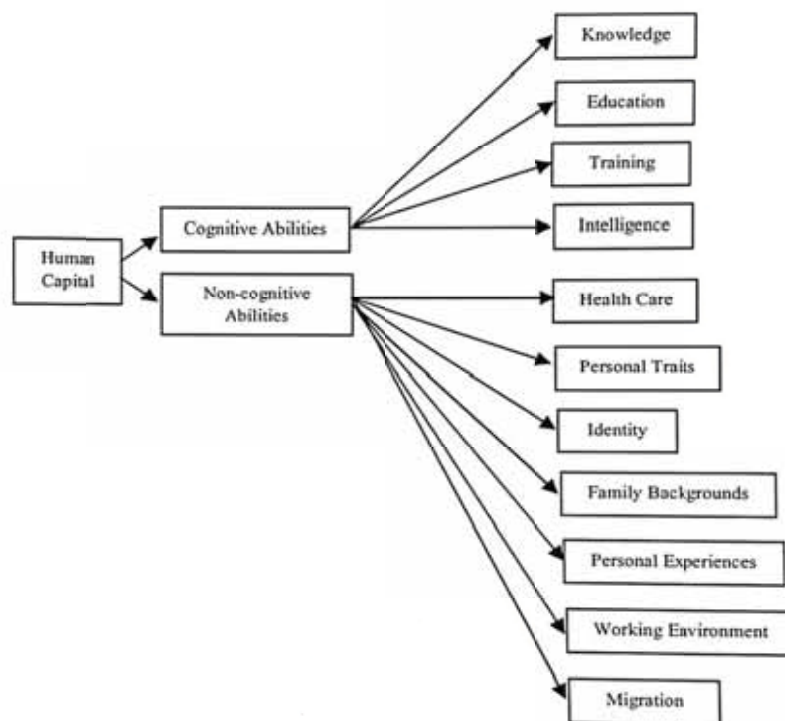

Figure 2. A Comprehensive chart showing the of human capital definition

According to Figure 1, we see that in the past human capital had been focused on as investment, afterwards as a vital input along with physical capital necessary for production. The education definition is provided as the rate return as well as training that comprises of general and specific schemes. Among others, one of the most popular interpretations is the years of education or schooling. Next, there are various attempts to fit into the human capital meaning which presumably gets broader and broader. This concerns cognitive and non-cognitive abilities.

And currently the social capital is reasonably understood that it is somewhat similar to human capital. In part it is because they share the essential property of positive externality. According to Figure 2, we can separate the human capital into two distinct strands. One concerns cognitive abilities and the other concerns non-cognitive ones. Cognitive abilities deal with brain-based skills which include personal intelligence, advanced knowledge, education in a particular field and trainings, etc. For non-cognitive abilities, they concern health care, personal characteristics, identity, family backgrounds, personal experiences, working conditions set by employers, migration contribution, etc. Unlike the cognitive skills or abilities, non-cognitive abilities are much harder to measure in part it is difficult to enlist what they are. Therefore, when it comes to the measurement, the intrinsic problem is mainly from the non-cognitive. The next section, however, attempts to provide the basic approaches for human capital measurement.

3.2 Approaches for Human Capital Measurement

There are several viewpoints vis-à-vis the meaning of human capital. Different points of views almost always lead to incongruent measures. There are two strands which are indicators or non-monetary respect and monetary one. The indicator-based may be either qualitative or quantitative. The quantity might take the form of average years of schooling, educational attainment levels whereas the quality might be assessed by standardized or unstandardized test scores - overall combined or a specific section - class size and the ratio of student per teacher, for instance. The other strand, in contrast, is in the form of monetary term since human capital measures might be either direct or indirect estimates. The indirect estimates are derived from what can be inferred or the residual approach while direct estimates, resulted from direct estimations based on various components. The direct estimates can be divided into two major methods, the cost-based and the income-based approaches. These methods are standard and frequently used since if we consider human capital as a form of investment, then it is typical to think of its cost and returns, measured by income obtained from such investment. This regard has been backed up by theories and studies, so that the approaches for human capital measurement are provided as follows.

1) The Cost-Based Approach

This approach originally measures human capital by viewing it as the cost of production. However, this method is frequently referred to the sum of the depreciated value of past investment undertaken by individuals, households, firms, organizations, and governments, so sometimes it is called "backward-looking" approach. It also encompasses all of costs or expenses incurred as human capital has been producing such as the opportunity cost associated with attending school. Not only does this method include monetary outlays by the agents previously mentioned, but also take in non-market inputs such as time spent to education by students and other related persons. The cost-based measure is simple enough to measure when dealing with both private and public expenditures on education at aggregative level. Similarly, this method can legitimately incorporate the expenses of adult training, health, safety, as well as the values of in rearing and mobility. This is so because they are part of such costs of investment in human capital, too. In terms of mathematical formula, the cost-based approach can be expressed as the following.

$$C = \sum_{j=1}^{r} c_j = \sum_{j=1}^{r} \left[\sum_{i=t=1}^{m} s_i^{\,e} \Big/ (1+r)^i \right]_j$$

where C is the discounted total cost

c is the expected cost in the year j,

s is the expected cost in the year i

and *r* is the discount rate

According to the structure of this cost-based approach, the flows of resources used for the purposes of human capital investment in education and other related parts can be measured. As a consequence, this approach is consistent with the income-based approach since one can easily envision it as the cost-benefit analysis, which is widely used when it nails down to investment.

Pros and Cons: One of the flaws pertaining to this method is that it should not be taken as an estimation of human capital since it is just a summation of historical costs and ignores the social costs that are invested in people. This means that if we aim to measure it more accurately, the stock of human capital by the cost-based approach should be separated into tangible and intangible. The tangible part consists of the costs required to produce the physical human being. In contrast, the intangible investment should aim at enhancing the quality or

productivity of workers. They should include expenditures on health, mobility, education and training, and the opportunity costs of students attending school. This will provide an estimate of the resources invested in the education and other human capital respects, which can be useful for cost-benefit analyses. The bright side, though, it is quite easy to apply, owing to the ready availability of data both on public and private spending. Nevertheless, as is well known with physical capital, there is no relationship guarantee between investments and the quality of output. The value of capital is determined by the demand for it, not by the cost of production. This problem tends to be more serious with human capital per se.

2) The Income-Based Approach

This approach measures human capital by summing the discounted values of all future income streams that all individuals expect to earn throughout their working life or lifetime. Since this method is essentially the total expected returns on investment after the time deductions and they start to pay off when one begins working, sometimes it is called "forward-looking" approach. This forward-looking approach attempts to evaluate one's earnings profile, so that human capital valued is appraised at the market prices. This is because the labor market deems workers many factors, including abilities, efforts, education, and the institutional and technological structures of the economy. Mathematically,

$$Y = \sum_{j=1}^{T} y_j = \sum_{j=1}^{T} \left[\sum_{t=1}^{m} w_i^e / (1+r)^i \right]_j$$

where Y is the discounted total expected income

    y is the expected income in the year j,

    w_i^e is the expected income in the year i

    And r is the discount rate

According to this formula, there are some underlying assumptions worth mentioning. First, it is taken for granted that people invest in human capital just once in their life time. Second, the returns to investment would incur after one stops investing, before that and after the retirement age, such the returns are presumably zero. And international trade does not exist in this model.

<u>Pros and Cons</u>: One salient characteristic of this income approach is that it is forward-looking. Thereby, a dynamic economy that aims at measuring its income capacities would clearly get more benefit than the backward-looking cost approach. Nevertheless, this approach suffers from its consistency with the real world. For example, the model assumes that differences in wages can perfectly reflect differences in productivity. In reality, wages do vary, so income-based measures of human capital will be biased. Also, these measures are subject to the discount rate and the retirement age. Whether maintenance costs should be deducted is another drawback. There are controversies over this issue. Some scholars point out that this income approach has a serious problem due to not deducting maintenance costs from gross earnings, so some others attempt to account for this but still face difficulties. For instance, what kind of expenditure should be classified as maintenance, and how to account for economies of scale and 'public' goods when estimating per capita consumption for different members in the same household? Another weak point lies in that data on earnings are not as widely available as data on investment. This is especially true for developing countries, where the wage rate is often not adequately observable or even unreliable. However, a number of people flavors this approach because it simple to measure and it represents the notion that if if one has more human capital, he or she should earn more as well over the course of the lifetime.

3) The Output-Based Approach

This approach measures human capital by its output. In other words, several indicators that can sufficiently represent the stock of human capital as a whole or at least as a group might be employed as the proxy. It is important to note that this approach does not directly view human capital as accumulated. Rather, it tends to find a suitable indicator or index that reflects the amount of human capital of an economy or a group of people. They might be average years of schooling, literacy rate, enrolment rate, net enrolment, gross enrolment, or some other educational attainment indexes. Because of its variegated indicators, average years of schooling which is one of the most popular and easy-to-measure proxies for human capital following this output approach stand out. The formula can be expressed below.

$$\overline{H} = \sum_i L_i H_i,$$

Where $\overline{H}$ is human capital, L_I is the proportion of the labor force with the ith level of education and H_I is the number of years of schooling associated with the ith level of education. Furthermore, educational attainment can be separated into several levels of education: no education, incomplete primary, complete primary, incomplete secondary, complete secondary and higher education – bachelors' degree or beyond.

<u>Pros and Cons</u>: Like other approaches, this output-based measure has a number of drawbacks. Firstly, if the school enrolment is used as the proxy, it would be problematic since the school enrolment is the flow but human capital is a stock per se. Secondly, when dealing with international data, the gross enrolment is used rather than the net because of conformity and availability. This would lead to an econometric issue called "measurement error." Nevertheless, its advantage includes the data availability, simple calculation, and easy interpretation and understanding.

3.3 Estimation Results

The last part of the results is through quantitative techniques and empirical evidence. This study uses time-series econometric models pertaining to unit root test, cointegration test, and Granger causality test. Key macroeconomic variables of Thailand employed in this study are GDP, growth of GDP, share of government's expenditures on education to GDP as proxy for human capital. The data used in this study is aggregate annual time series at constant prices during the period of 1980-2010. The statistical methods utilized are the Ordinary Least Squares Method (OLS) and the Granger causality test. Before applying the Granger causality, standard tests such as unit root and co-integration were performed as well. The yg is used as the dependent variable while HC is used as the independent. Running the regression yields the results as shown in Table 1.

Table 1. Regression results when HC is independent variable and yg is the dependent.

Variable	Coefficient	t-value	R-squared	p-value	F-statistic
			0.113		3.192
yg/alpha	3.184	4.992		0.000	
HC/beta	0.108	1.787		0.086	

According to Table 1, there exists a linear relationship at 10 % level of statistical significance because the p-value of HC/beta is less than 0.10. Therefore, the next step is to test whether the series has a unit root process. The results are shown in Table 2.

Table 2. Unit Root test

Variables in levels	Variables in		ADF value
	ADF value	First Difference	
ln(yg)	-3.710	Dln(yg)	-8.088*
ln(HC)	-1.322	Dln(HC)	-7.817*

Note: * sig. at 5% level

According to Table 2, the ADF value for the first difference in ln(yg) is -8.088 and the ADF value for the first difference in ln(HC) is -7.817, so that both series do not have a unit root problem at first differencing. The Next step is to test for co-integration. The results are shown in Table 3.

Table 3. Co-integration test

Null Hypothesis	Max. eigenvalue	5% Critical Value	Trace Statistic	5% Critical Value
None*	87.752	15.410	100.606	14.070
At most one	12.905	3.760	12.905	3.760

According to Table 3, the max eigenvalue is 87.752 and the 5% critical value is 15.410, so that it indicates that these two series are co-integrated. The next step is to determine whether casual relationships exist. If so, which

direction? However, it is theoretically impossible to claim that the growth rate definitely leads to the human capital or vice versa, so the empirical evidence following Granger causality test is then investigated. The specifications are as follows.

$$\ln yg\,(t) = \gamma_0 + \sum_{i=1}^{k+d} \alpha_{1i} \ln yg\,(t-1) + \sum_{j=1}^{k+d} \beta_{1j} \ln HC\,(t-1) + \varepsilon_1(t),$$

$$\ln HC\,(t) = \delta_0 + \sum_{i=1}^{k+d} \alpha_{2i} \ln HC\,(t-1) + \sum_{j=1}^{k+d} \beta_{2j} \ln yg\,(t-1) + \varepsilon_2(t),$$

Then, with maximal order of integration (dmax = 1) and optimal lag (k = 1, 2, 3),

$$\ln yg\,(t) = \gamma_0 + \sum_{i=1}^{k+1} \alpha_{1i} \ln yg\,(t-1) + \sum_{j=1}^{k+1} \beta_{1j} \ln HC\,(t-1) + \varepsilon_1(t),$$

$$\ln HC\,(t) = \delta_0 + \sum_{i=1}^{k+1} \alpha_{2i} \ln HC\,(t-1) + \sum_{j=1}^{k+1} \beta_{2j} \ln yg\,(t-1) + \varepsilon_2(t),$$

The Granger causality test results are provided in Table 4.

Table 4. Granger causality test

Null Hypothesis	Lag	No. of Obs.	F-statistic	Prob.	Decision
Yg does not Granger Cause HC.	2	29	0.412	0.661	Accept
	3	28	2.720	0.070	Reject*
	4	27	1.525	0.237	Accept
HC does not Granger Cause yg.	2	29	3.306	0.054	Reject*
	3	28	2.419	0.095	Reject*
	4	27	2.520	0.077	Reject*

Note: 1) No. of observations in this table is calculated after lag. 2) * sig. at 10% level

According to the results shown in table 4, the hypothesis that yg does not Granger cause HC is accepted after 2 and 4 lags but rejected at 10% of statistical significance level after 3 lags. This means that the growth rate of GDP causes human capital. In this case, it indicates that as the economy grows after 3 years, it will induce a rise in the percentage of government spending on education to GDP. In other words, it takes about 3 years that the growth will affect such the spending. Conversely, the hypothesis that HC does not Granger cause yg is rejected after 2, 3 and 4 lags at 10% of statistical significance level. This indicates that HC does cause economic growth at every lags. That is to say the higher share of spending on education to GDP, the higher economic growth rate is. Note that this keeps on occurring year after year.

4. Discussion and Conclusion

The results above are worth discussing. Like other developing countries, Thailand's economic growth depends on the percentage of spending on education to GDP. It is clear that to simulate growth, one way is to keep increasing the expenditure share on education to the GDP. This empirical result is coherent with the national social and economic development plan, so that the policies concerning educational development should be implemented urgently.

4.1 Limitations and Comments

Like all research, this study has some limitations as well. First of all, human capital is qualitative so that it is impossible to find a measure or a long list of measures that can accurately quantify it. This means that it's impossible to find any proxy that is free of flaws. In fact, every single proxy suffers from one or more shortcomings. In this study, there are at least two reasons why the share of spending on education to GDP is utilized as proxy for human capital. One is that this study employs both qualitative and quantitative analyses. For the quantitative scheme, it is lucid clear that the main focus is on an application to the endogenous growth theory through macroeconomic variables. It aims to investigate and distinguish the patterns of causal relation between human capital and economic growth of Thailand, so that such spending on education is considered suitable. One might point out some disadvantages of this variable. In Thailand case, the majority of expenditures are the salaries of teachers and lecturers in public schools and they cannot directly measure the student quality or educational accomplishments. Such viewpoint is not dissimilar to an understanding in a narrow spectrum and

concomitantly it leads to a fallacy that underestimates the power of earnings. Let's analyze.

As well known, the earnings or income is frequently used as the proxy for human capital as the fruit of human capital investment. The earnings have been thoroughly analyzed and synthesized for the power and coherence of human capital measurement as upheld by Mincer and other distinguished scholars in the field of human capital, irrespective of some drawbacks. As such, using the expenditures on education is common and logical at least in theoretical perspective. In addition, when dealing with aggregative macroeconomic variables, one ought to keep in mind that not every aggregative variable would possess enough weight to be called "macroeconomic variable." In particular, as it comes to the causal relation investigation with the economic growth rate. Dividing it into smaller pieces either fails to capture the "education" as a whole, to make economic sense when interpreting the casual relations, or both. Moreover, due to the data limitations, it's not a discrepancy choice of human capital. Next, Thailand's educational system or management can be prominently divided into private and public like other countries. In general, it is strongly perceived or evidently realized that the quality of education privately managed is not equivalent to that managed by the public or the government. This is true for almost all levels, especially at high school and university. Thereby, it is to say that on average the quality of education administered by government is at worst equal or somewhat superior to that administrated by the privates. This claim might be invalid when considering at junior high school or lower levels. As such, the salaries of teachers and lecturers in public educational institutions can better represent the quality of students and educational attainments than those of private educational institutions. Of course, one might argue again that such better quality of education still does not directly represent the aforementioned overall education quality. The data used in this study, nonetheless, not only includes the salaries of the public school teachers but includes the expenditures on education for private schools as well, though partially. That is, taking into consideration of the data availability as well as previous explanations, the proxy for human capital used in this study has been carefully chosen and reasonably sound.

Some might raise another point that by definition human capital is the stock variable while the expenditures on education without a doubt are flow variables. They do not match in terms of quantitative weight. Nevertheless, no such thing could ever match human capital because it's qualitative not quantitative and something qualitative cannot be measured accurately per se. So the point is to look for a decent candidate for human capital not to indeed weigh it. Once again, as indicated the third objective of this study is to establish the casual relationships between human capital and economic growth. Using such expenditures on education, which are flows as proxy for human capital is perfectly consistent with the GDP, which is also a flow variable.

In summary, Human Capital has been identified as an indispensable factor of production and it becomes increasingly significant in terms of knowledge and capabilities embedded in labor either innate or later acquired throughout one's lifetime. For the definition of human capital developed and changed over time, it can be expressed both cognitive and non-cognitive abilities. The cognitive abilities basically are intelligence, advanced knowledge, education, training while non-cognitive abilities typically are personal traits, identity, family backgrounds, personal experiences, and working environment. The approaches for human capital measurement can be distinctively separated into three types which are cost-based, income-based and output-based. And the empirical evidence based on Granger casualty test as an application to human capital theory and endogenous growth theory indicates that Thailand needs to focus on education since it is a way to spur the economic growth. And as the economy grows at a certain level, there would be a reverse effect too that the growth might higher the human capital as measured by expenditures on education as percentage to GDP.

4.2 Recommendations

4.2.1 Recommendations from This Study

1. Since human capital definition is multi-dimensional and keeps changing, the uses, interpretations and measurements significantly fall back on the purpose of individual research. For example, if one wants to test the relation between human capital and economic growth, the definition and interpretation in macroeconomic sense is a necessity.

2. In general, to provide the definition of human, we need to consider a broader view, which includes social capital aspect as now it is clear that human capital does impact culture, society and economy in rather complicated and reciprocal fashion.

3. For the empirical test section, the results suggest bidirectional casual relationships between economic growth and human capital measured by the share of spending on education to GDP. However, the causality running from human capital to growth is much clearer. The policies that pay more attention to education and quality of education through more spending on education as the percentage to GDP should be promptly implemented.

4.2.2 Recommendations for Future Research

1. For further study, the emphasis should be on the measurement of human capital since there are new methods to measuring it, thus leading to the new methodologies to study its effect on economic growth.

2. For the empirical test, this study presumably takes education as the main proxy for human capital basically because it is practical and the data is readily available. Nonetheless, there are a large number of well-measured and defined which can be used as the quantitative measure of human capital as well. The validity of the human capital and the endogenous growth theory might be challenged again.

3. This present study takes Thailand as a case study. However, there are over a hundred more countries to be examined by the same method, so that we can see the big picture of what kinds of relation between human capital and economic growth in the world. Further, the same can be done separated by different levels of development. Doing so might result in a clearer understanding of such relationships or some interesting relationship pattern suggested by the empirical results.

4. Apart from focusing on the casual relation between human capital and economic growth, there are some other interesting points to explore such as estimating human capital through the nonlinear earnings functions which can take a number of forms. Also, one can use cross-country data and compare the goodness of fit for those with the shapes of the production functions.

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The Applicability of Prophet Muhammad's Strategies in his Battles and Campaigns in Modern Business

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Abstract

The choice of strategy is prudently done by top managers and business strategists in order to maintain the company's survival, sustainability and achievement of its mission and objectives. This study attempts to examine the applicability of the specific Prophet Muhammad's strategies in his battles and campaigns in modern business. Eight Prophet's strategies were tested that comprise (1) jihad, (2) swiftness, (3) steadfast (al-sabirun) (4) vigorous image, (5) harm prevention, (6) hijrah (migration), (7) peace (al-silmi) and (8) dynamic. Eight respondents consisting of four managing directors, three chief executive officers and one chief operating officer of SMEs in Malaysia who are in the role of strategizing their companies participated in this study. The study found that all of the eight strategies are applicable and being practiced in modern business. This paper opens a new direction of research, discovering the strategic management framework in the of Prophet Muhammad's war strategies.

Keywords: business strategy, Prophet Muhammad, Islamic management

1. Introduction

1.1 Background of the Study

This study is concerned with the strategies in battles and struggles of Prophet Muhammad and how they can be applied in the modern business setting. The choice of strategies is considered for survival and achievement of competitive advantage (Porter, 2008) and realization of the companies' mission and objectives (David, 2009).

Consistent with the objective, the research draws on two research literatures that have been rarely integrated, the strategies in strategic management research and biography of the Prophet Muhammad. From Islamic perspective, there is a lot to be learnt from the strategies used by the Prophet in his 23 years of struggle to establish Islam in the Arabian Peninsula. It is, therefore, necessary and important to bridge this gap in order to empirically address the research objectives.

The literature related to campaign and battle strategies of Prophet Muhammad is still sparse. Higher learning institutions are lacking of reference sources. They rely heavily on the Western management research and theories, especially theories and models emerging from the USA and Europe (Ali & Camp, 1995). Thus, this study is undertaken to fill this knowledge gap.

The starting points of strategy stem from ancient military strategy. The term strategy is rooted from 'strategos', a Greek word which stands for 'a general'. The earliest modern authors connecting the notion of military strategy and business were Von Neumann and Morgenstern (2007) who proposed the theory of games and economic behavior. Later on, many other authors followed their footsteps in integrating both fields.

There are many similarities between business competition and military warfare. First, both business and military struggles are to overcome their competitors. Second, both organizations need to be administered properly. Third, both organizations need strategies and tactics. Fourth, the head of both organizations determines the success of the organization. Fifth, both need capability and competitive personnel. Finally, both need information (Chen, 2004; Stokes, 2007).

1.2 The Strategies in the Prophet Muhammad's Battles and Campaigns

An extensive review and content analysis of literature have been conducted to discover Prophet Muhammad's strategies in battles and campaigns. The result suggests eight strategies based on the Prophet's strategic choices.

Table 1. The major battles and campaigns of Prophet Muhammad and their related strategies

No.	Battles and Campaigns	Year	Strategies
1.	Hijrah	1*Hijriah* (622 A.D.)	•*Hijrah* • Harm prevention • Peace
2.	Badar	2*Hijriah* (623 A.D.)	• Vigorous image • Steadfast
3.	Uhud	3*Hijriah* (624 A.D.)	•Vigorous image • Steadfast
4.	Khandaq	6*Hijriah* (627 A.D.)	• Dynamic • Harm prevention • Vigorous image
5.	Hudaibiyah	6*Hijriah* (627 A.D.)	• Peace • Dynamic • Swiftness
6.	Khaibar	7*Hijriah* (628 A.D.)	• Harm prevention • Jihad • Swiftness
7.	Mu'tah	8*Hijriah* (629 A.D.)	• Jihad • Vigorous image • Harm prevention • Steadfast
8.	The Conquest of Makkah	8*Hijriah* (629 A.D.)	• Jihad • Swiftness • Dynamic • Harm Prevention
9.	Hunain	8*Hijriah* (629 A.D.)	• Jihad
10.	Thaif	9*Hijriah* (630 A.D.)	• Jihad • Dynamic
11.	Tabuk	9*Hijriah* (630 A.D.)	• Jihad • Dynamic • Swiftness

Sources: Al-Mubarakpuri (1996), As-Sallaabee (2005), Ahmad (2006)

The study has categorized the eight strategies of the Prophet into three groups. There are three primary or major strategies; namely, engagement, prevention and adaptation. Engagement strategy is face-to-face or bumper-to-bumper type of strategies. It covers three secondary strategies which are jihad, swiftness and steadfastness (al-sabirun).Prevention strategy is the strategy that is intended to alleviate the threats and risks facing the business. It covers two secondary strategies which are vigorous image and harm prevention (daf' al-darar). Adaptation strategy is the strategy to adapt to the changes in internal and external environment. It employs the elements of flexibility and innovation. It covers three secondary strategies which are hijrah (migration), peace (as-silm) and dynamic approach.

1.2.1 Engagement (Jihad) Strategy

The Jihad strategy is most employed by the Prophet in the later stage in Madinah after he accumulated strength. There are evidences of employing this strategy from the biography of Prophet Muhammad, for instance in the Conquest of Mecca (Ramadhan, 8H), the Prophet's fighters entered the city from all four corners. The Prophet entered Makkah from its upper end, at Azkhar, ahead of his green squadron. Khalid bin Al-Zubair bin A-Awwam entered at the left flank, Kudan. Meanwhile, Sa'ad bin Ubadah entered from upper-Makkah, paving the way for the entrance of the Prophet. The only resistance occurred was at the lower end, where Khalid was coming from at al-Khandamah.

Another example is in the Ghazwah Bani Qainuqa' (Syawwal, 2H), as the enemy found out that the Prophet was marching towards them, they stayed quiet in their fortresses. The Prophet surrounded and imposed upon them a siege that lasted for 15 nights. Then, they unconditionally surrendered to him (As-Sallaabee, 2005).

In today's harsh reality, the term 'jihad' is more often than not associated with terrorism and extremism committed by Muslims. This phenomena is accentuated by the infamous 9/11 tragedy, which are allegedly carried out by al-Qaeda, a Muslim terrorist group. Majority of the Western community views jihad as a religious holy war among Muslim fundamentalists against anyone who is not a Muslim, which negatively positions the image of Islam (Kalin, 2004). Muslims who are thought to be a jihadists and believe in martyrdom, are often portrayed as extortionist, polygamist, murderer (of 'infidel' Muslims who convert to other religions), and anti-Semitic (Darwish, 2006; Khan, 2008).

Maira (2009) who debated from the western lens argued that 'good' Muslims are public Muslims who can provide information about the oppression of women in Islam, and support the American 'war on terror' policy under the pretext of 'benevolent imperialism'. On the other hand, 'bad' Muslims are the ones who advocate hatred, racism, and anti-Semitism among the Arabs and Muslims. Nevertheless, Khan (2008) highlighted positive statements by academicians across the United States on jihad, which is viewed positively as a struggle to build a society that is fair and practices morally acceptable conduct. It is difficult to completely dispel the commoners' misconception of the true meaning of jihad, as news on offensive jihad military acts are prevalent in the mass media compared to jihad in the social and economic context discussed by academic theorists and advocators that are published in journals.

1.2.2 Swiftness Strategy

The swiftness and surprise strategy was frequently employed by Prophet Muhammad in his battles and campaigns. An example of this strategy is in Ghazwah Badr (Ramadhan, 2H), Muslims used difficult a route via mountains to reach Badar faster than their enemy and control the water (resources) and strategic location (Rahman, 1990). In Ghazwah Uhud (Syawwal, 3H), in order to gain time-based competitive advantage or swiftness, Muslims used difficult route via mountains to reach Uhud faster than their enemy and control the strategic location (Rahman, 1990).

Moreover, in Ghazwah Khaibar (Muharram, 7H), the Prophet and Muslims moved very fast towards Khaibar. Their enemies, the Khaibar Jews were taken by surprise and they screamed, "Muhammad is coming, Muhammad is coming!" The Prophet's supporters moved very fast to cover 160 kilometers within 6 days and the alliance of their enemy; Bani Ghatafan, did not have the opportunity to help them (Rahman, 1990).

The concept of swiftness is reflected in modern military through the first mover advantage approach. In this regard, first mover advantage refers to development, adoption and sustainability of innovative warfare system against its less-advanced opponents, who will attempt to equalize the level of playing field (Silverstein, 2013). In high-velocity and turbulent business environments, being able to enter the market faster than others is often regarded as an important recipe of success.

The concept of first mover advantage (FMA) was mooted by Liberman and Montgomery (1988) who defined FMA as benefits gained by firms that enter the market earlier than other businesses. FMA mostly occurs in businesses that market consumer electronics and fast moving consumer goods, in which new technology can rapidly become obsolete in a short period of time. Among the advantages earned for being the pioneer in the field include technological leadership, scarce asset pre-emption and increased buyer switching costs (Woolley, 2013).

More often than not, a good initiative will always be accompanied by other competitors that are seriously attempting to catch up. In this case, a first mover can become a trap if the business is not properly sustained, where the advantage will not last (McGrath, 2013). Lieberman and Montgomery (2013) suggested that the initial advantages possessed by the early movers are not guaranteed and they may not last forever. Being a first mover not necessarily brings advantages as a study among Taiwanese semiconductor players found that the late entrants display better performance and higher productivity than the first movers (He, Hung & Lu, 2013).

1.2.3 Steadfast (al-sabirun) Strategy

This strategy has its origins in Al-Quran as Allah named a group of people (al-sabirun) who were brave enough to challenge a bigger sized enemy army. This characteristic is shared by guerrilla strategy in the Western literature; nevertheless, both strategies are coming from different cultures and worldview. In Islamic perspective, the steadfast strategy is employed only by those who are brave, have tawhid and tawakkul (belief and trust in Allah) in order to achieve Al-Falah (success in this world and the hereafter) and pleasure of Allah. Whereas, in

the Western perspective, the guerrilla strategy is used by anyone who is brave in order to gain worldly profit and success.

In Al-Qur'an, Allah said: "... How often a small group overcame a mighty army by Allah's grace?" And Allah is with As-Sabirun (the patient or steadfast persons) (Al-Quran, 2:249). In another verse, Allah commanded, "O Prophet (Muhammad)! Urge the believers to fight. If there are twenty steadfast persons amongst you, they will overcome two hundred, and if there be a hundred steadfast persons they will overcome a thousand of those who disbelieve, because they (the disbelievers) are people who do not understand (Al-Quran, 8:65).

There is an obvious indication of employment of steadfast strategy especially when the Muslims were not strong when they were in the early phase in Madinah. During that time, they just occupied the new ground. This strategy is well suited for the weaker organization to face the well-equipped organization (Michaelson & Michaelson, 2011).

In Ghazwah Badar (Ramadhan, 2H) and Ghazwah Uhud (3H), the Prophet and his armies fought with a bigger sized enemy army. For Ghazwah Badar, the Prophet's army consisted of 313 fighters who fought 1,000 Quraishy fighters, whereas, in Ghazwah Uhud, 1,000 of the Prophet's supporters fought 3,000 Quraishy fighters.

Al-Sabirun appears 13 times in the Holy Quran. In general, it refers to a person who is patient, loyal, faithful and devoted to the cause or belief that the person succumbs to. Specifically, Muslims are bound to be patient with calamities that may befall them while they are committed to God's cause. In relation to modern management practices, the Al-Sabirun concept relates to an organization's firm belief in its corporate mission and values that explain its reason for existence in the first place. A steadfast organization shall portray unwavering commitment, determined support and unswerving position of their anticipated goals.

The term Al-Sabirun also closely synonyms with 'Istiqamah', which means to go straight into the direction, acting rightly whilst allowing no deviation. Abu 'Amrah Sufyan bin 'Abdullah, who said:

I said: "O Messenger of Allah, tell me something about Islam which I could not ask anyone to save you." He answered: "Say: 'I believe in Allah', and then 'istiqam' (stand firm and steadfast)."

Ibn Qayyim (1292-1350 A.D.), an Islamic theologist, outlined five conditions to achieve 'Istiqamah' which are sincere in doing things for the sake of Allah (God) alone, doing things on the basis of knowledge, obedience to Allah in the correct manner, perform one's best, and restricting oneself to what is lawful while performing those deeds.

The ability to portray such devotion and fixed perception towards a particular goal can be associated with end values upheld by people concerning other people, things or ideas. Values are fundamental beliefs that a person regards to be important, that are relatively stable over time and have impact on attitudes, perception and behavior (Ravlin & Melino, 1987). End values are beliefs on the types of outcomes that are worth trying to pursue (Rokeach, 1973). Muslims strongly hold to the belief that paradise awaits those who patiently withstand the tests and challenges that they face in life. These challenges involve avoiding misdeeds and sins, and upholding moral principles through righteous behavior. According to the Al-Quran, "Do you think that you will enter Paradise before Allah tests those of you who fought (in His Cause) and (also) tests those who are As-Sabirun (those who are patient)?" (Al-Quran, 3:142).

Regardless of religion, people are striving for things that they consider very important in life. Values are shaped and learned through family upbringing and education. Although there are limited work that directly link religion with values, people who value certainty, self-restraint and submission to the external verity are inclined to be more religious, while those who value openness to change and self-expression are inclined to become less religious (Hitlin & Piliavin, 2004). Being steadfast in performing a task and being steady towards achieving goals can be considered as a part of work-related values. This type of work-related values helps employees to make steadfast decisions and determine necessary actions at work (Ravari, Bazargan-Hejazi, Ebadi, Mirzaei & Oshvandi, 2013).

Steadfast strategy is sometimes regarded as the opposite of innovation and change. In a qualitative and comparative study of two giant e-commerce businesses in China, it is found that each culture can prosper in its specific context of environment and time (Ye, Hu, & Li, 2008). However, steadfastness does not necessarily prohibit innovation and change, as the main idea of being steadfast revolves around the ability of oneself to stay on track according to the original established mission and remain committed to complete the goals.

1.2.4 Vigorous Image Strategy

This strategy is meant to show a strong image in front of the enemy. Allah commanded Prophet Muhammad and

Muslims to prepare and show their strength, "And muster against them (the transgressing enemy) whatever force and war mounts at your disposal so that you may strike terror into the enemies of Allah and your enemy, and others besides them whom you do not know, but Allah does..." (Al-Quran 8:60).

In Ghazwah Bani Sulaim (Syawwal, 2H), as the report came of the gathering of the tribes of Bani Sulaim and Bani Ghatafan with intent to attack Madinah, Prophet Muhammad proceeded with a force of 200 men to stop them. When he reached their watering place, called Al-Kudr, he found that the place was empty as the enemy had fled upon hearing the arrival of Muslim force.

In another case when leaving Uhud (Sya'ban, 4H) the leader of the enemies, Abu Sufyan, had challenged the Prophet and promised him another encounter at Badr. At the promised time, the Prophet stayed at Badr for eight days. However, Abu Sufyan went back to Makkah from Al-Zahran. He said to his people that it was a year of famine, so they should return. Surely, a year of aplenty and prosperity would suit them better. The Prophet also returned without fighting.

The vigorous image strategy applied during Prophet's battles has many similarities with strong corporate image when viewed through the lens of modern business practices, despite not involving any element of intimidation towards competitors. Reputation and brand image of a company are vital tools for competitive advantage when competing in turbulent business environment. Strong corporate reputation and brand image bring credibility, create trust and add value to product offerings by eliminating uncertainty among the consumers and stakeholders.

There are many beneficial outcomes from the implementation of strong corporate image and reputation. According to Aaker (1997), strong corporate and brand image enable efficient communication between the company and the customers, especially if the newly entered market is not within the current market scope of the company. In order to create a strong corporate brand, three 'strategic stars' ought to be aligned. These interdependent elements are vision, culture and image (Hatch & Schultz, 2001).

Customers will also progressively build positive perceptions about the services offered by companies which possess strong corporate image (Brown & Dacin, 1997). Even if these companies are losing customers to other competitors, the customers shall not view the company negatively with regard to its image and reputation. Nevertheless, Nguyen and Leblanc (2001) found that there is a strong relationship between customer loyalty and corporate image and reputation. Positive corporate reputation is also able to deter competitors' entry when a sturdy stance is adopted (Weigelt & Camerer, 1988).

1.2.5 Harm Prevention Strategy

This strategy was applied by the Prophet in Ghazwah Bani Mustaliq (Zul Qa'idah, 5H). The leader of the Banu Mustaliq or al-Muraisi influenced the people of his tribe and other Arab tribes to fight against Prophet Muhammad. The Prophet set out with a small force of his companions; they marched and reached the spring of Muraishi. Whereas, in Ghazwah Al-Hudaibiyyah (Zul Qa'idah, 6H), an Al-Hudaibiyyah peace treaty was made by Muslims and Quraishy (As-Sallaabee, 2005; Ahmad, 2006). This was to prevent Muslims from harm.

Another example of harm prevention is in Ghazwah Khandaq in Muharram, 7H, risk management is taken into account, the Prophet instructed the digging of a ditch as it was the best option to protect the Muslims against an enemy army that outnumbered his army by about three times. In the case of Jews of Khaibar, Khaibar fortresses were used as the place to plan and to launch attacks on Muslims. The Prophet employed the harm prevention strategy through pre-emptive strikes to launch an attack to counter the threats of Khaibar Jews.

A company struggling in a competitive business landscape is analogous to a helpless victim who is stranded in the ocean where the person has the option of either to swim or sink. The challenges become more accentuated when these companies expand into new markets where potential returns are always accompanied by risks. These risks can either be related to predictable business risks such as market, capital, labor, legal, raw material supplies, foreign exchange or uncontrollable risks such as deceased leaders (managerial succession planning) and natural disasters.

Venturing into a new and unfamiliar market without proper risk management strategy is akin to a hunter who arbitrarily explores into the unchartered jungle in search of wild deer yet unaware that dangerous predators are always on the lookout to scavenge their next victim. The analogy is applicable to established brands which are too dependable on customers' loyalty and brand image to an extent that they ignore the threats of potential substitutes which may fulfill certain customers' needs that the brands are unable to satisfy. While harm prevention in the medieval ages is all about suppression of physical intimidations, harm prevention in the knowledge era deals with mitigation of the external threats that seek to reduce a company's performance.

In the context of business rivalry, harm prevention strategy is exemplified through Michael Porter's (1980) five forces model of environmental threats, which recognize the threat of entry, threat of rivalry, threat of substitutes, threat of suppliers and threat of buyers as external forces that promote businesses to become more competitive and productive. The most attractive segment is one in which entry barriers are high and exit barriers are low. This means that few new companies can successfully enter the industry and non-performing companies can exit easily. If the threats in a particular industry is powerful enough to appropriate most of the profits that companies in that industry might generate, then the anticipated average level of performance will be low, and vice versa (Barney & Hesterly, 2010).

1.2.6 Hijrah Strategy

In Prophet Muhammad's war context, hijrah strategy means to migrate and transfer the dakwah (calling) centre from Makkah to Madinah. The Islamic scholars extend the meaning of hijrah as changing from anything bad to better, and from anything better to the best. Hijrah strategy can be seen clearly when the Prophet and his companions migrated to Madinah. The people of Madinah welcomed him, unlike the other places such as Makkah, so the opportunity and market for his dakwah (calling) was available. In addition, Madinah was not easy to be attacked by the rivals, as two sides of Madinah were hilly and full of lava blocks in the south and the west side, plus there were gated gardens in the south area. In the east side, there was lava plain. Only the north side had a clear space that was open to be attacked by the enemies (Rahman, 1980). Furthermore, the Prophet gave Madinah its name; from its former name Yathrib to Madinah Al-Munawwarah which means the 'the enlightened city', which was also a type of hijrah (Al-Mubarakpuri, 1996).

The underlying principle behind the Hijrah strategy is effective change management. The Prophet managed to adapt well to the changes in the external environment. Islam may not have spread all over the globe if the Prophet decided to stay and preach in Mecca where hostility and dissent among the inhabitants were at its peak and life-threatening. The Prophet had earlier anticipated that Madinah was a land of opportunity and the migration proved to be rewarding as the first mosque was built there once the Muslims arrived and welcomed at the city.

The prophet's hijrah strategy was very much similar to current organizational change practices. The lesson to be learnt is that a company should move away from the markets which are not environmentally favorable, and settle in at markets that provide better opportunities. Despite being linked with organizational improvement, change is difficult to implement as people and organization often resist the idea of change (Trader-Leigh, 2002). Thus, change does not happen easily and it requires leaders to play active roles through guidance, alliance building, empowerment, communication, celebration of short-term milestones and continuous encouragement (Kotter, 1996). Motivating for change is an arduous task for the management as people do not support change unless there are compelling reasons convincing them to do so in the face of uncertain future benefits (Cummings & Worley, 2009). Therefore, understanding employees' reaction and responses are crucial in assessing the readiness for change and overcoming resistance to change.

Vakola, Armenakis and Oreg (2013) developed a model that depicts the different types of reaction to change which directly influence the change outcomes. These types of reaction are categorized into affective, cognitive and behavioral. Affective reaction is present when the people involved provide positive reactions to change (that are shown in the form of satisfaction or positive emotions) and negative reactions to change (stress, anxiety and negative emotions). The cognitive aspect of reaction relates to the views and thoughts about the change from the change recipients. It involves decision on satisfaction, strategic commitment, attitudes meant to support the change, openness to the change and readiness for change. Behavioral reaction is categorized as active and explicit behaviors in the change process (to be actively involved or to withdraw), behavioral intentions (to resist or to support) and coping behavior (confronting or avoiding the stress).

1.2.7 Peace Strategy

In the Prophet's war and Qur'anic context, peace strategy materialized when two or more fighting parties were willing to stop fighting, whether to have peace with co-operation or just peace without co-operation. Its application in business context is when two or more competing businesses are willing to give up the competition and collaborate among themselves. They may or may not form a joint-venture, partnership or strategic alliance. The example of this strategy is in the very early years after migration to Madinah, the Prophet and Muslims had peace with Jews through the Madinah constitution. In Ghazwah Ghatafan (Rabi'ulAwwal, 3H), the Prophet stayed in Nadj and made some peace treaties with local tribes concerning the blocking of commercial routes by the Quraish.

The Prophet's act towards peace is compatible with the win-win approach that is frequently applied in modern

businesses. The concept of win-win collaboration is one of the hallmarks of relationship marketing. Gummesson (2002) emphasizes that collaboration can only be effective when there is a win-win relationship, be it with the customers (external) or the employees (internal). In this case, a party should view the customer as (1) a partner and a co-producer rather than as an adversary, (2) knowledgeable instead of amateur, (3) revenue compared to cost, and (4) having individual needs as opposed to sharing common needs with the masses.

Furthermore, Hunt, Lambe and Wittmann (2002) argued that resource-advantage theory can be used effectively to measure business alliance success as the model integrates several well-established views namely (1) Resource-based view, which is the availability of organizational resources to produce valuable market offerings, (2) Competence-based view, which is the organizational capability for securing, developing and managing alliances, (3) Relational factors view which is the adoption of positive relationship exchanges (cooperation, trust, shared values, and absence of opportunistic behavior), and (4) Competitive advantage view, which is gaining advantage in terms of generating a relatively higher product value or incurring a relatively lower resource costs when compared to the competitors.

The main motive underpinning strategic business alliances can be attributed to organizational adaptation, which can be classified as either exploitation or exploration (March, 1991). Exploitation refers to the enhancement of already available assets and capabilities to increase a company's efficiency while exploration refers to experimentation of new assets and capabilities that may have the potential to increase a company's performance. Based on March's (1991) exploration-exploitation theory, Koza and Lewin (2000) introduced three types of strategic alliances which are learning alliances, business alliances and hybrid alliances.

Learning alliances happen when companies jointly share strong exploration intents with the aim of reducing information asymmetry between the alliance partners and have joint creation of new knowledge (Koza & Lewin, 2000). Contrary to learning alliances, companies linked through business alliances have strong exploitation intents and these alliances focus on utilization of merged assets to achieve increase in revenues. Lastly, hybrid alliances tie-up companies with strong exploration and exploitation intents which result in costs savings derived from efficient utilization of capabilities and assets (exploitation) and increase in profits due to the assimilation of knowledge or best practices as a result of joint learning activities (exploration).

1.2.8 Dynamic Strategy

The analysis of various strategies has shown that dynamic strategy and its principle became the integral part of Prophet Muhammad's military organization. The dynamic strategy is also essential in current companies as the business environments are constantly changing.

There are a few cases where the Prophet adopted the dynamic strategy such as in Ghazwah Uhud (Syawwal, 3H). The Prophet gave consent to a companion who just converted to Islam to threat the rivals who were going to attack the Muslims. In Ghazwah Ahzab (Syawwal, 3H), the Prophet gave consent to companions to disturb the unity of rival alliances. Besides, in Ghazwah Al-Hudaibiyah (Zul Qa'idah, 6H), the Prophet discarded his prior strategy and goal in order to adapt with the environment. His prior goal was to perform the Umrah. Whereas, during the siege of Taif (Syawwal, 9H), the Prophet learnt that Taif was a very rich city, with many resources. It was not easy and costly to defeat them. The Prophet changed his strategy and called upon his army to retreat (Al-Mubarakpuri, 1996; As-Sallaabee, 2005; Ahmad, 2006).

Through the lens of non-muslims, it is often believed that Islam is dominated with rigidity, rigor and tight compliance with regards to shariah-related rules and laws (Shehada, 2009) and an apparent lack of religious freedom and rights for democracy (Rowley & Smith, 2009). However, the Prophet was known as a dynamic leader who respected the rights of his people, especially during the establishment of the Madinah charter and the treaty of Hudaibiyah. During the prophet's reign of Mecca and Madinah, it was agreed that Muslims, Jews and Christians should live together in peace and harmony with freedom to practice their religions. Through Shura (consultation or mutual consent), the Prophet also sought advice of his people, exchanged views and opinions with his followers, and open to round-table negotiations when it comes to major issues (Othman, 2004).

Quinn's (1988) four-quadrant model of competitive values framework (CVF) describes an organization's culture through the dimensions of control orientation (flexible versus stability) and function (internal or external). The quadrants of adhocracy culture and clan culture are symbolized through minimal levels of control and conformity which give freedom to the employees to be creative (adhocracy) and also people-friendly (clan). Cultural change is difficult to achieve considering that it involves change in values and belief among people who earlier developed and remained faithful to the current culture (Hooijberg & Petrock, 1993).

Organizational culture, from the Islamic perspective may address the issue of lack of understanding towards the

fundamental nature of human beings and total reality from the conventional perspective (Kazmi, 2004).

The preceding discussion on the eight Prophet strategies is summarized in Table 2 below:

Table 2. The Eight Prophet Muhammad's Strategies

Prophet Strategies	Detailed Strategies	Meaning	Business Interpretation
Engagement	*Jihad*	A type of offensive strategy plus *belief in Allah*	Aggressively attack the market and competitors
	Swiftness	Speed	In product development, decision, responding to customers etc.
	Steadfast	A type of guerrilla strategy plus *tawakkul (trust in Allah)*	Small company attacks and competes with the bigger companies while trusting Allah
Prevention	Vigorous image	Appear or show the strong image	Reputation and brand image
	Harm prevention	Preventing from harm	Prevent the companies from environmental and competition threats
Adaptation	*Hijrah*	Migrate or transfer or changing from anything bad to better, and from anything better to the best.	i. Moving business location, establish new type of business ii. Business, introduce new product or repositioning
	Peace	Stop fighting	Peace and co-operation with competitors
	Dynamic	Flexibility	Flexible and progress towards company's goals

Source: Al-Mubarakpuri (1996), As-Sallaabee (2005), Ahmad (2006)

1.3 Research Objectives

There are two objectives of this study. First, the study is meant to examine whether the specific strategies of Prophet Muhammad in his campaigns and battles are applicable and implemented by owners, chief executives and senior managers of SMEs in strategizing their organizations. Second, the study is intended to provide a foundation for developing Islamic strategic management in future studies.

2. Method

In achieving these objectives, the study employs qualitative method by interviewing subject matter experts to explore and share their viewpoints and experience. In obtaining comprehensive data, the researchers administered face-to-face interviews. The interviews used a set of questions as a guide. These were given to them before their interviews. Additional questions were asked to clarify the terms or support the main set of questions. This procedure allows both the interviewer and interviewee the flexibility to explore the details of the issues under discussion. Nevertheless, respondents have the option to not respond to any of the questions given to them.

2.1 Research Participants

The respondents consist of eight Malaysian Muslim practitioners, five men and three women. The number of respondents was determined based on the responses received. When the responses achieved saturation (the same answers were given by the additional respondent) the process of data collection was put into a halt, resulting in only eight respondents. Seven of them were owners or chief executive of manufacturing firms and one of them is a senior manager from a retail firm. The selection of companies for this study was based on small and medium businesses (SMEs) registered with Small and Medium Enterprise Corporation Malaysia (SME Corp. Malaysia), which are based in Selangor and Kuala Lumpur. Only business organizations which have been in operation for more than 5 years were selected for the study.

The respondents were selected using non-probability purposive (judgment) sampling as the information was obtained from the specific target groups, which are owners, chief executives or senior managers who are involved in the process of strategizing their companies and the ones who have the adequate information required by the study. Judgment sampling was thought to be the most appropriate sampling design for the study for the reason that the judgment sampling involves the choice of subjects who are in the best position to provide the information required (Sekaran & Bougie, 2010).

Table 3. Profile of participants

Respondent	Gender	Title and Organization	Age	Working Experience
Respondent 1	Male	Managing Director (Medical supplies manufacturer)	46	24 years
Respondent 2	Male	Managing Director (Medical supplies manufacturer)	51	27 years
Respondent 3	Female	Chief Executive Officer (Electrical cables manufacturer)	44	20 years
Respondent 4	Female	Managing Director (Cooking oil manufacturer)	58	35 years
Respondent 5	Male	Chief Executive Officer (Sugar refinery manufacturer)	61	38 years
Respondent 6	Male	Chief Executive Officer (Oil lubricant manufacturer)	51	22 years
Respondent 7	Male	Chief Executive Officer (Plastic manufacturer)	66	45 years
Respondent 8	Female	Chief Operating Officer (music album and book publisher)	33	10 years

2.2 Data Collection and Analysis

The researchers administered face-to-face interviews with the participants. The in-depth interviews were administered in agreement with the participants following a qualitative interview format. The interviews lasted approximately 45 minutes to 80 minutes and were administered at the convenience of the participants. Most of the participants prefer not to review a brief copy of questionnaire before the interview was conducted; nevertheless, two of them received the copy of questionnaire through e-mail. All the interviews were recorded by audio tape, transcribed and coded into a set of themes. Before each interview, concepts contained in the questionnaire were explained to the respondents, aided by Table 2.

3. Results

This part presents the results of the exploratory interviews on the views of the top managers regarding the Prophet Muhammad's strategies in the modern business.

3.1 Jihad Strategy

Respondent 1 highlighted that in competing with the rivals; the company needs to have better products, better technology and has to educate the customers that it is better than its rivals. Respondent 2 agreed with the implementation of the jihad strategy which has the element of offensiveness provided that the company has to follow the Islamic rulings. Respondent 3 mentioned that the nature of her company is not suited to implement this strategy, but it is applicable to other types of businesses. Respondent 4 stressed the importance of this strategy as the nature of the strategy itself is part of Muslim responsibilities.

Respondent 5 affirmed the implementation of this strategy, stating that the business has to compete with the rivals' strengths, not their weaknesses. Respondent 6 said that in real competition, "we have to kill others or otherwise we will be killed", provided that the competition must be fair. Respondent 7 mentioned by using this strategy, companies have to deliver their promises to customers, better quality of product, on time delivery and competitive price. Respondent 8 reiterated that her company always applied this strategy especially to the closest rival.

All of the respondents agreed that jihad strategy is applicable and even most of them view it as an important strategy in modern businesses. In applying this strategy, the respondents mentioned about certain conditions that need to be fulfilled such as it should follow the Islamic rulings, suitability of the strategy to the nature of business, competition must be fair, attack the strengths and not the weaknesses and attack the weaknesses without mentioning bad things about the competitor products.

3.2 Swiftness Strategy

Respondent 1 used swiftness strategy by having in house research, collaborating with the competitors and acquiring the ready product licenses. Respondent 2 listed the important elements of swiftness strategy. Among them are being fast in decision making, fast in replying the customer enquiries and fast in delivering the product. Respondent 3 mentioned another element of swiftness strategy, which is, the business should recognize

customers' complaint, product problems and customer choice faster than its competitors.

Respondent 4 was in agreement with this strategy when she accentuated the importance of speed in servicing the customer and the speed in identifying the changes in the industry and adapting to the new requirements. Respondent 5 prioritized this strategy in his business; he emphasized the necessity of speed in decision making and team work. He further made the connection between the concept of speed and the need to perform prayer on time, if one needs to qadha' (perform the undone) a prayer, he or she has to do it immediately.

Respondent 6 agreed on the call for speed in terms of decision making; responding to customers and developing new products. Respondent 7 used the analogy on the importance of speed in business with car racing; those who arrive first will win the market. Respondent 8 thought that it is important to have this strategy. With speed, the company is able to introduce new products at the right time. However, in the case of a company that could not afford to become the first to introduce the product in the market, it should introduce a better product compared to the existing one.

All of the respondents agreed that swiftness or speed strategy was applicable and viewed it as an important strategy in modern businesses. The respondents viewed the elements that create swiftness are: having own research centre, collaborating with competitors, acquiring ready product licenses, being fast in decision making, responding speedily to customers' enquiries and complaints, being quick in delivering the product, gaining faster information about products and customers than competitors, being fast in developing new products and servicing them, being prompt in identifying the changes in the industry and adapting to its new requirement, and being sharp in thinking and having good team work.

Moreover, through swiftness strategy, the company is able to introduce new products at the right time. If the company could not afford to become the first to introduce a product in the market, it should introduce a better product compared to the existing one.

3.3 Steadfast (al-sabirun) Strategy

Respondent 1 cautioned that a small company has to make a maximum effort before tawakkul. Similar to respondent 1, respondents 2 and 7 reminded that effort should come first before tawakkul. Respondent 2 further added that in applying steadfast strategy, the business should have fair competition and not become enemies with rivals. Respondent 3 mentioned that "we have to try first to compete with the bigger companies because we do not know our sustenance as it comes from Allah".

Respondent 4 affirmed that supplicating to Allah and tawakkul are crucial in competing with bigger companies. Respondent 5 warned that a small company has to evaluate itself before competing with the bigger rivals. If it is not capable to compete then it has not to do so. Respondent 6 agreed with the strategy and suggested that in applying this strategy, the business has to become a niche whether in products or services. Respondent 8 asserted that patience strategy is applicable in business provided that it has a factor or few factors that would give advantage to the company such as the market demand and opportunity to collaborate with other small rivals.

All of the respondents agreed that jihad strategy is applicable in modern businesses. In relation to steadfast strategy and tawakkul, there are a few points taken such as effort should come first before tawakkul, the need to put the best effort before tawakkul and supplicating to Allah and tawakkul are crucial in competing with bigger companies. A small company has to evaluate its strengths and weaknesses before competing with the bigger rivals. In applying this strategy, the business has to be niche whether in products or services. Furthermore, this strategy is applicable in business provided that it has a factor or a few factors that would give advantage to the company such as the market demand and opportunity to collaborate with other small rivals.

3.4 Vigorous Image Strategy

Respondent 1 opined that this is an important strategy in business especially for marketing purposes. He viewed that a business should not show that it is small and weak. He further stated that Islam asks Muslim to be 'Qawiy' (strong) and show strength which makes rivals fear, and not to show weakness. Respondent 2 mentioned that certain businesses need this strategy in order to convince the customers. He said that the customers are always required to evaluate the business, if the appearance of a business is not convincing, they should not do business with it. He gave an example, "if the customer intents to grant a RM10 million project, but the businessman came to the customer on a motorbike, he would not trust him or her, even though there is a funder who would back him or her up".

Respondent 3 affirmed the suitability of this strategy for certain industries. She herself prefers to show the strength to the customer but not to the competitor. In fact, she pretends to be weak to the competitor. Respondent 4 affirmed that this strategy is important to gain customers' confidence but it should not be overused and

deceiving to the customers. Respondent 5 affirmed the need to be able to make their strength known to others.

Respondent 6 mentioned the need to show a vigorous image while building that image concurrently. In other words, the business needs to have a vision of a strong image while building it. It is unethical when a business projects a strong image without the effort to achieve it. He added, "The people will know later that you are telling lies". Respondent 7 also asserted this strategy and mentioned that small players should show that they are big; otherwise they will be wiped out from the market. He insisted that small companies should try to do something that has not been done before to know their real capabilities. He further stated that the strength of small companies like his company is that they are more focused than the bigger companies.

Majority of the respondents (seven out of eight) agreed that vigorous image strategy is applicable in modern businesses. One of the respondents did not give clear opinion about this strategy. According to the respondents, the advantages of this strategy are to attain a bigger market share, to convince the customers, to make their strength known to others. The other two respondents cautioned that a business that has the intention to apply this strategy needs to think about its suitability for the business and not to deceive the customers by not making the effort to achieve the projected strong image.

3.5 Harm Prevention Strategy

Respondent 1 mentioned the requirements of this strategy. In preventing harm, he suggested, "to understand the environment, know the environment, know competitors and meet the surroundings requirements, and not go against them". Respondent 2 highlighted the importance of monitoring the environment, keeping updated on product information from manufacturers and attending international expositions, exhibitions and seminars.

Respondent 3 asserted that dealing with harm prevention using information management is by collaborating with universities and customer's research and development department. Respondent 4 insisted on the involvement of networking in applying this strategy. She argued, "Through networking, you obtain the information to strategize your business" and "when you have networking, a direct attack on you would be lesser".

Respondent 6 agreed with this strategy. Respondent 7 affirmed the strategy, nevertheless, he stated that the threat is not a big challenge to him as long as his company is kept updated and fulfills the environmental change requirements. Respondent 8 mentioned that in applying this strategy in her company, the legal and technological threats are to be tackled efficiently.

The majority of the respondents (seven out of eight) agreed that harm prevention strategy is applicable in modern businesses. One of the respondents did not give clear opinion about this strategy. The respondents suggested a few ways to prevent harm to the company such as understanding the environment, understanding the competitors, monitoring the environment and keeping updated on the product information, managing the information by collaborating with universities and customer's research and development department, meeting the surroundings requirement and being involved with networking.

3.6 Hijrah (Migration) Strategy

Respondent 1 agreed that the hijrah strategy is not necessarily migration of location and mentioned that the spirit of hijrah is similar to Kaizen concept that is continuous improvement. He reminded that a Mu'min should make today better than yesterday, and tomorrow better than today.

Respondent 2 agreed with this strategy but warned that in order to migrate to another type of business the company should have the necessary capabilities. Respondent 3 asserted that hijrah covers migration to new location, changing to new and profitable products and repositioning. She has repositioned her company from trading to manufacturing company and now heading towards becoming a servicing company. Her company has gained the right staff, knowledge, experience and capabilities. Respondents 4 and 6 opined the need for this strategy as the business is not static. Respondent 5 stated that hijrah strategy would open up new opportunities to the business.

Respondent 7 claimed that this strategy is needed at certain times but not most of the time as it involves high costs. He gave the example of when he himself needed to migrate because his current factory did not have enough space for new machines and not enough infrastructures to expand his business. Respondent 8 highlighted the need of the hijrah strategy when developing new products for company survival. In developing new products, the company welcomed new ideas from apprentices and new staff as it believed they had fresh ideas, and were more brave and willing to make a change.

All of the respondents agreed that hijrah or migration strategy is applicable and viewed it as an important strategy in modern businesses. According to the respondents, the reasons for this strategy are the business is not

static, to facilitate the continuous improvement as in Kaizen concept, to open up new opportunities to the business, to develop new products for business survival and sustainability. A respondent cautioned that the migration of business location applies in certain time only as it involves high cost. Another respondent reprimanded that in order to migrate to another type of business a company should have the necessary capabilities.

3.7 Dynamic Strategy

Respondents 2, 3, 4, 5, 6 and 7 asserted the applicability of dynamic strategy in the business. Respondent 3 stated, "The environment always changes, and it does not wait for us". Respondent 4 agreed with the requirement of this strategy, "Because business environment is never static". Respondent 6 mentioned, "A lot of things need to be flexible", while respondent 7 stated that the business needs to be flexible in order to achieve the company's goal. Respondent 8 claimed that as they are in the creative industry, the element of flexibility is crucial.

All of the respondents agreed that dynamic strategy is applicable and viewed it as an important strategy in modern businesses. Respondent 1 quoted the words of Prophet Muhammad in hijrah strategy with the dynamic strategy that the business has to improve every day. He asserted that there is a strong relationship between hijrah and dynamic strategies through this Prophet's saying. The improvement may come in terms of technology, process, packaging, product presentation, product offering, product outlook, and product material.

3.8 Peace Strategy

Respondent 1 believed in the strategy of peace and cooperation with competitors but stated that some competitors are not interested in collaboration, so they have to keep of track of their competitors. Respondent 2 maintained that it is a good strategy. He claimed that he never makes enemies with the competitors. Respondent 3 accepted it and expressed, "If you can't beat them, you join them". Respondent 4 stated, "It is an important strategy but we build network and co-operate through a number of associations". Respondent 5 agreed with the peace strategy by saying, "…as long as it does not bring negative impact to the company". Respondent 6 admitted that he is applying this strategy. He added, "every week I see (meet) my competitor". Respondent 7 believed in the advantage of this strategy although he himself was having difficulty in getting a suitable competitor to collaborate with. Respondent 8 held that she encouraged her staff to apply this strategy especially in acquiring information and sharing information with the industry players.

All of the respondents agreed that peace strategy is applicable and view it as an important strategy in modern businesses. Even though all of the respondents viewed the peace strategy as a good strategy, the constraint is to find a suitable competitor or competitors who are interested to co-operate and collaborate.

4. Conclusion

To sum up, this study through the content analysis identified eight categories or themes representing the strategies that emerged in the biography (Seerah) of the Prophet. They were employed by the Prophet in his battles and campaigns. The strategies are (1) jihad, (2) swiftness, (3) steadfast (al-sabirun), (4) vigorous image, (5) harm prevention, (6) hijrah (migration), (7) peace, and (8) dynamic. These eight strategies were later categorized into three groups of strategies, which are engagement, prevention and adaptation.

The current study tested all of the eight strategies of Prophet Muhammad with the practices of several Muslim top managers. The results indicate that all of the eight Prophet Muhammad's strategies are applicable and are being implemented by top management of modern businesses. Specifically, all of the respondents agreed that jihad, swiftness, steadfast, hijrah, peace and dynamic strategies are applicable and being implemented by modern businesses. Moreover, 7 out of 8 respondents agreed that vigorous image and harm prevention strategies are applicable and are being implemented by modern businesses.

This work has initiated a new direction of research, discovering strategic management in the framework of Prophet Muhammad's war strategies. The findings of this study indicate that contemporary business has a lot to learn from Prophet Muhammad. It is important to note that the present work has just scratched the surface of the subject. We believe that there are a lot more strategic management principles that can be discovered in this new and unexplored field.

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Personality-Major Congruence among the Hearing-Impaired Students in Malaysian Polytechnics

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Abstract

Studies in the Person-Environment fit (P-E fit) framework suggested that the greater the match between students' personality types and their academic major operationalized as personality-major congruence, the more likely they are to succeed. Surprisingly to date, little research has been done on the hearing-impaired population. Thus, this preliminary analysis examined the students' personality types and the degree of personality-major congruence based on Holland's theory of vocational personalities and work environment (1997). To provide theoretical focus, gender differences in congruence measure were also investigated. Samples consisted of 26 hearing-impaired students (N=26) undergoing Special Skills Certificate in 4 Polytechnics all across Malaysia. An adapted Malay version of Holland's Self Directed Search-Form E (SDS-E) was used to measure students' personality types. Findings on students' personality-major congruence were descriptively analysed and further discussed. Mann-Whitney U Test was used to analyse differences in personality-major congruence by gender. Findings indicate that gender did not play any significant roles in academic major selection among the hearing-impaired students in Malaysian Polytechnics. However, to certain degree this preliminary analysis provides general information into the largely unstudied question of how the congruence between hearing-impaired students' personality types and academic major play important role in promoting their educational outcomes. Finally, practical and theoretical considerations were also discussed.

Keywords: gender, hearing-impaired, Malaysian Polytechnics, person-environment fit, personality-major congruence

1. Introduction

1.1 Widening Hearing-Impaired Accessibility: Special Skills Certificate

Department of Polytechnic Education provides access and equity for Person with Disabilities (PWDs) in tertiary education through the establishment of Special Skills Certificate (Department of Polytechnic Education [DPE], 2012). The program involves technical and vocational training which are specialized for the hearing-impaired students. Each of the selected polytechnics offers one academic major except *Politeknik Ibrahim Sultan* (PIS) which offers three majors; Hotel and Catering, Apparel and Fashion Design, and Graphic Design while *Politeknik Sultan Abdul Aziz Shah* (PSA) and *Politeknik Ungku Omar* (PUO) offers Mechanical Maintenance and Civil Construction respectively. Hotel and Catering is also offered by other two polytechnics; *Politeknik Tuanku Syed Sirajuddin* (PTSS) and *Politeknik Kota Kinabalu* (PKK).

In order to widen accessibility, hearing-impaired students are given opportunities to enrol in any of the academic major regardless of their pre-entry qualifications (DPE, 2012). For graduation purposes, students are required to complete the courses in four academic semesters inclusive of one full semester of industrial training. Given such scenario, assumptions could be made that hearing impaired students would be enjoying better academic success as compared to those previous days where there were limited access and equity in tertiary education. However, DPE (2012) has stated that although there is an increase of awareness among the policy makers and stakeholders, there are still unresolved issues regarding PWDs access to tertiary education. On top of that, DPE (2012) also believes that the absence of academic major selection system may also be one of the contributing factors which lead to students' ineffectiveness.

1.2 Research Background

DPE (2012) has found that hearing-impaired students in Malaysian Polytechnics have difficulties to learn effectively due to absence of academic major selection system. As result, students may choose academic major which is incongruent to their personality types due to failure in estimating their own interests and abilities. According to Holland (1997), incongruent between the students' personality types and their academic major may lead to dissatisfaction which in turn affects their academic achievements.

Studies in the Person-Environment fit (P-E fit) framework suggested that the establishment of academic major selection system may help to match the students' personality types and their academic major; thus leading to positive educational outcomes (Wong, 2006). When congruence is achieved, we believe that this would in turn promote hearing-impaired students' educational outcomes in tertiary education.

P-E fit literatures have suggested that there were plenty of research conducted to investigate the interaction between the hearing students' personality types and academic majors in tertiary education context. For example, studies have found that P-E fit correlates to academic satisfaction, major change intention, academic achievement and major persistence (Li, Yao, Chen, & Wang, 2012; Schmitt, Oswald, Friede, Imus, & Merritt, 2008; Tracey & Robbins, 2006; Wessel, Ryan, & Oswald, 2008; Westernman, Nowicki, & Plante, 2002).

In Malaysia, P-E fit involving the hearing students at tertiary education have also been extensively studied (Azura, Mastura, Shahrani, Noor Faridatul Ainun, & Rohizah, 2014; Hamdan, Mohamed Sharif, & Syed Shafeq, 2004; Mastura, Ishak, & Hamdan, 2008; Norida, Ahmad Rozelan, & Hafzan, 2006; Wong, 2006). These studies provide important information on students' personality-major congruence and the outcome of this pairing in improving students' educational outcomes (e.g: academic satisfaction and academic achievement).

Previous studies have also suggested that gender plays important roles in the congruence measure, with male students dominating the engineering and science related fields while the females in social sciences (Gitonga, Orodho, Kigen, & Wangeri, 2013; Gottfredson & Holland, 1991; Smart, Feldman & Ethington, 2000). As of this point in time, P-E fit literatures which primarily focus on the same aspect among the hearing-impaired students have yet to be found.

Thus, in order to understand the scenario, this preliminary analysis is conducted to (1) determine the hearing-impaired students' personality codes; (2) determine the hearing-impaired students' academic major codes; (3) determine the degree of personality-major congruence and (4) determine the difference between personality-major congruence and gender. This article shall begin with defining P-E fit framework in Holland Typological Approach (1997); followed by educational outcomes of personality-major congruence and finally gender differences in academic major selection. We do hope that this article may help to give a brief overview of personality-major congruence among the hearing-impaired students in Malaysian tertiary education's context as well as how P-E fit studies could be adapted to suit the needs of the students.

2. Literature Review

2.1 Person-Environment Fit Theory: Holland's Typology Approach

P-E fit theories are psychological theories (Dawis, 1992) which are also referred as the degree of congruence, match or similarity between the individual characteristics and their environment (Dawis, 1992; Edwards, Caplan, & Harrison, 1998; Kristof, Brown, & Guay, 2010; Schneider, Kristof, Goldstein, & Smith, 1997). Holland's theory of vocational personalities and work environment (1997) is one of the most prominent theories in the P-E fit framework. According to Holland's Theory (Holland, 1997), individual's personality types and environment can be categorized into six types such as Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (RIASEC). As been theorized, the congruence between these two may results in improved career and academic outcomes (Holland, 1997).

According to Holland (1997), each personality type is produced by interactional characteristics among variety of cultures, heredities and individual factors including peers, social class and physical environments. Through these experiences and situations, individual learn to develop their interests, which will then affect their thinking style, perception and action. Each personality type also serves as repertoire of attitudes and skills for coping with various environmental problems and tasks. In terms of perceiving or processing information, each personality type is unique in their own way, which in turn allows them to exercise their abilities, skills, and talents in order to achieve desired goals.

Holland (1997) believed that an individual's dominant personality type can be determined by comparing his attitudes with Holland's hexagonal personality model. This model also allows determination of second and third most dominant personality types. These three most dominant personality types are represented by Holland's

3-letter codes. For example, RIA codes consisted of Realistic type, followed by Investigative and Artistic in descending order. This 3-letter code allows us to obtain a profile of resemblance which represents the complexity of personality. By using these 3-letter codes, individuals could possibly determine their best fit educational or occupational environment which may allow them to maximizing their skills, abilities and talents.

Holland (1997) also stated that each environment is dominated by a given type of personality, for example Realistic environment is mostly dominated by individuals with Realistic personality type. These people may surround themselves with those who shared common interests, dispositions, and competencies, as well as viewpoints on certain situation and problem solving. Holland (1997) believed that when these people congregate, they will create an environment that reflects their dominant personality type. This explains why an environment may be assessed in the same term as individual personality types.

Holland (1997) also highlighted that individual may search for environment which allows them to exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles. This explains why individual with Realistic personality type feel more satisfied in Realistic environment; Investigative type will tend to search for Investigative environments, and so forth. This process is carried out in various ways at different level of consciousness over the time (Holland, 1997). Individual behaviour is also determined by interaction between personality and environment. Holland (1997) emphasized that when an individual personality-environment profile is known, the outcome of this pairing such as vocational or academic major selection, job or academic major persistence, vocational or educational achievements, personal competence, educational and social behaviours may also be predicted.

2.2 Personality-Major Congruence and Tertiary Education's Outcomes

In educational settings, congruence can be defined as the match between students' personality types and their academic major (Holland, 1997). Hence, in this present study, it is termed as personality-major congruence. Personality types are also regarded as strong predictors of students' academic major selection (Jones & Jones, 2012). Studies have found that, when students choose academic major which is congruent to their personality types, the more likely they are to survive in terms of earning higher grades, persist in the chosen major, graduate on time, more academically satisfied and thus experience more success in their future career (Logue, Lounsbury, Gupta & Leong, 2007; Porter & Umbach, 2006). Studies also indicated that personality-major congruence is one of the main criteria which may affect students' academic achievements at tertiary level (Allen & Robbins, 2010; Tracey, Allen, & Robbins, 2012; Wong, 2006).

Although students may be given a chance to select their own academic major based on their interest and pre-entry qualifications, there were also cases where students were offered courses which incongruent to their personality types (Mastura et al., 2008). There were also cases where students successfully enrolled in the chosen major, but later realized that it was not as congruent as expected. This statement is in line with Stinson & Walter (1992) who stated that hearing-impaired students failed to complete their tertiary education due to changes in career interests which are closely related to their academic major. Academic major indecision was also reported by Scherer and Walter (as cited in Lang, 2002) as the main reason of hearing-impaired students' withdrawal and changing of academic major. This explained how academic major dissatisfaction may occur which in turn affect the students' academic major persistence and their survivability in tertiary education.

In contrast, there were also cases where students easily get depressed when their academic major change application was rejected by the faculty. Like it or not, students have to force themselves to persist in the current academic major until they successfully graduated. Although there were a few of them who managed to graduate, they were less likely to be satisfied or successful in their future career (Smart et al., 2000). Their grades (CGPA) also may not be as good as their peers (Graunke & Woosley, 2005; Tracey & Robbins, 2006). Study by Tracey & Robbins (2006) also found a strong positive correlation between students' personality-major congruence and overall GPA. This statement is in line with Holland (1997) who stated that students will be academically satisfied and may earn better grades if they choose academic major that matches their dominant personality types.

As discussed above, the role of personality-major congruence in ensuring students' educational outcomes are well-documented in most of P-E fit literatures involving the hearing students. However, little attention has been given on the minority groups involving PWDs at tertiary education. We believe that in promoting accessibility and equity of PWDs in technical and vocational education at tertiary level, this preliminary analysis would serves as a platform for more P-E fit studies concerning the hearing-impaired students.

2.3 Personality-Major Congruence and Gender

Although there are numerous of research that support Holland's typology theory, however this theory has also

been criticized to be gender bias (Wong, 2006). This statement is in line to Holland's study on SDS which found that females scored higher on the Conventional scale as compared to males. On the other hand, males scored higher on the Realistic scale as compared to females. Gender stereotypes is said to be influenced by individual's experience and their innate potential (Holland, 1997). Despites of the critiques, his theory has the underlying properties especially in helping individuals to make decisions in term of current assets or liabilities (Brown, Brooks, & Associates, 1990).

Smart et al., (2000) also reported gender stereotyping where science related fields and social sciences were dominated by males and females respectively. However, there are also studies that reported an increasing number of female students in engineering and other science related field, but the number is still considered small as compared to the males (Bix, 2004; Gitonga et al., 2013). The result implies that gender is one of the factors that influences academic major selection with majority of females avoiding science related field and vice versa.

Hersh (2000) also stated that female students tend to avoid subjects perceived as masculine. Females often view themselves as having weak mathematical and science abilities as compared to their male counterparts (Betz, 2005; Maimunah, 2003). Furthermore, females are normally associated with caring for people and thus are not expected to show interest nor engaged in any activities which requires more physical energy (Gitonga et al., 2013).

Cultural beliefs are considered to be a contributing factor with females preferring feminine responsibilities and males assuming roles perceived masculine (Eccles, Jacobs, & Harold, 1990). In academic major selection, Gitonga et al. (2013) have reported gender differences where more males dominated the Realistic and Investigative fields while more females in Social scales. However, their study has found a weak correlation between gender and Artistic, Enterprising and Conventional scales.

As discussed above, it is apparent that gender differences are apparent in Holland's theory due to individual's cultural beliefs and innate potential (Holland, 1997). Although our sample size is relatively small as compared to previous studies, we do hope that this preliminary study provides an exploration of gender differences in academic major selection among the hearing-impaired students in Malaysian Polytechnics. According to Messer, Holland & PAR Staff (2013), Hotel and Catering is categorized as Realistic, Graphic Design is Artistic and Civil Construction is Investigative in nature.

As been theorized, we expect more males would be in Hotel and Catering, followed by Civil Construction and Graphic Design majors. However, emerging findings on these gender differences may also be taken into consideration as the ratio of male and female students is imbalanced especially in Civil Construction where more females were assigned to the field as compared to male students. Despite of these limitations, we strongly believed that our findings may show some important contributions so that further studies could be done to provide better understanding on academic major selection among the hearing-impaired students in tertiary education.

3. Methodology

This study involved a descriptive quantitative survey to measure the congruence between the hearing-impaired students' personality types and their academic majors in Malaysian Polytechnics. Respondents consisted of 26 hearing-impaired students' of second and fourth semester (June 2014 intake) from four Polytechnics all across Malaysia. Students' personality types were assessed by using an adapted version of Self Directed Search-Form Easy (Holland, 1996) (R=0.921). This instrument consisted of 2-way closed-ended questions (Yes/No). Although the framework of the study is adapted from the hearing population, extra precautions were given in selecting the instrument for the study. This is to ensure that all of the items could be easily understood by the respondents.

Since this study involved hearing-impaired students who have limited reading abilities as compared to their hearing peers (Hallahan & Kauffman, 2000), we have decided to use Holland's SDS-E which is specially design for individual with limited reading abilities (Holland, Fritzsche, & Powell, 1997). On top of that, a few items were modified to accommodate the respondents reading ability. In addition, picture booklet was also provided to give graphical explanation on selected items. Sign-language interpreter and individual assistance were also provided during data collection to accommodate students' special needs.

Academic major codes were determined by using Educational Opportunities Finder[TM] (EOF) by Messer et al. (2013). Personality-major congruence was then identified by using Iachan's index (1984, 1990). The personality and academic major (environment) codes represented the 3 most dominant types in the RIASEC scale.

Descriptive and inferential statistics were used to analyse all the research data. Descriptive analyses include frequencies, percentage and mean to explain the respondents' demographic factors, personality types and the

degree of personality-major congruence. The research questions are as follows:

i) What is the hearing-impaired students' personality code?

ii) What is the hearing-impaired students' academic major code?

iii) What is the hearing-impaired students' degree of personality-major congruence?

For inferential analysis, Mann Whitney U Test was used to analyse the difference between the students' degree of personality-major congruence and gender. The research hypothesis is formulated as follows:

There is no significant gender difference in the personality-major congruence scores.

4. Findings

4.1 Respondents' Demographic Factors

Descriptive analysis in Table 1 shows that there is only a slight difference between the female (N=14; 53.8%) and the male respondents (N=12; 46.2%). Malay respondents (N=14; 53.8%) dominates the analysis, followed by Chinese (N=7; 27.0%), others (N=4; 15.5%) and lastly Indian (N=1; 3.8%). Majority of the respondents age between 21 to 22 years old (N=14, 53.8%), followed by 19 to 20 years old (N=11; 42.4%) and the eldest is 31 years old (N=1; 3.8%). Hotel and Catering had the highest number of respondents (N=13; 50%), followed by Civil Construction (N=8; 30.8%) and Graphic Design (N=5; 19.2%).

Table 1. Demographic analysis

Sample Characteristics		Frequency	Percentage (%)
Gender	Males	12	46.2
	Females	14	53.8
Race	Malay	14	53.8
	Chinese	7	27.0
	Indian	1	3.8
	Others	4	15.4
Age	19-20 years old	11	42.4
	21- 22 years old	14	53.8
	> 23 years old	1	3.8
Academic Major	Graphic Design	5	19.2
	Hotel and Catering	13	50.0
	Civil Construction	8	30.8

4.2 Personality Codes

Table 2 shows respondents' personality codes which are obtained by summated means of the three most dominant personality codes. For Graphic Design, the highest score is Artistic personality types (M = 5.40), followed by Social (M = 4.20) and Enterprising (M = 4.0). For Hotel and Catering, the highest score is Social personality types (M = 4.60), followed by Realistic (M = 4.23) and Artistic (M = 3.54). Finally, for Civil Construction, the highest score is Social personality types (M = 4.50), followed by Realistic (M = 3.88) and Conventional (M = 3.38). The analysis concludes that the personality code for Graphic Design is ASE, Hotel and Catering is SRA and Civil Construction is SRC.

Table 2. Personality codes analysis

No	Academic Major	Mean						Personality Code
		R	I	A	S	E	C	
1.	Graphic Design	2.20	2.40	5.40	4.20	4.0	2.80	ASE
2.	Hotel & Catering	4.23	2.77	3.54	4.60	2.77	3.00	SRA
3.	Civil Construction	3.88	2.75	2.50	4.50	3.50	3.38	SRC

Note. R=Realistic, I=Investigative, A=Artistic, S=Social, E=Enterprising, C=Conventional.

4.3 Academic Major Codes

Table 3 shows three academic major codes in Polytechnic as obtained from the EOF (Messer et. al., 2013). Academic major code for Graphic Design is AES, Hotel and Catering is RAS and Civil Construction is IER.

Table 3. Academic major codes

No.	Academic Major	Academic Major Code
1.	Graphic Design	AES
2.	Hotel & Catering	RAS
3.	Civil Construction	IER

4.4 Degree of Personality-Major Congruence

Table 4 shows degree of personality-major congruence analysis among the hearing-impaired students in three academic majors in Polytechnics. Graphic Design shows the highest degree of congruence and thus indicates a good match between the students' personality types and their academic major. In contrast, Civil Construction has the lowest degree of congruence which indicates a poor match between the students' personality types and their academic major. Hotel and Catering which consists of PKK and PTSS students have low to moderate degree of congruence which indicates a not close match between the students' personality types and their academic major.

Table 4. Degree of personality-major congruence

No.	Personality Code	Academic Major Code	Degree of Congruence	Level of Congruence
1	ASE	AES	26	Good Match
2	SRA	RAS	16	Not Close Match
3	SRC	IER	4	Poor match

4.5 Differences of Personality-Major Congruence by Gender

A Mann-Whitney U test was run to determine if there were differences in degree of personality-major congruence between male and female students in each of the academic major. Distribution of the personality-major congruence scores for males and females in Graphic Design, Hotel & Catering and Civil Construction were not similar, as assessed by visual inspection. For Graphic Design, Table 5 shows that personality-major congruence for male students (mean rank = 2.83) and female students (mean rank = 3.25) were not statistically significantly different (U = 2.500, z = -.296, p = .767). For Hotel & Catering, personality-major congruence for male students (mean rank = 6.31) and female students (mean rank = 8.10) were not statistically significantly different (U = 14.500, z = -.812, p = .417). Finally, personality-major congruence for male students (mean rank = 2.00) and female students (mean rank = 4.86) in Civil Construction were not statistically significantly different (U = 1.00, z = -1.104, p = .269). Since all the p-values are >.05, we failed to reject the null hypothesis. Thus, there is enough evidence to conclude that the personality-major congruence scores between males and females are equal.

Table 5. Differences of personality-major congruence by gender

Academic Majors	Males		Females		U	Z	p
	n	Mean Rank	n	Mean Rank			
Graphic Design	3	2.83	2	3.25	2.500	-.296	.767
Hotel & Catering	8	6.31	5	8.10	14.500	-.812	.417
Civil Construction	1	2.00	7	4.86	1.000	-1.104	.269

p<0.05

5. Discussions

From the findings, Graphic Design is mainly dominated by Artistic personality, followed by Social and Enterprising personality types. Although there is a slight change in the second and third letter's order (i.e ASE instead of AES), this result indicates that the personality-major congruence is achieved. In other words, the hearing-impaired students' personality type fits their academic major. The result also implies that Graphic Design students expressed themselves as imaginative, idealistic, values aesthetics and creation of art forms, impulsive, independent, values social, ambitious, energetic, religious, aggressive, leadership skills, self-confident and sociable (Holland, 1997).

These characteristics are in line with Holland (1997) third assumptions which stated that students will search for

environment that allows them to exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles. As result, academic major satisfaction is achieved which may in turn affect their academic major persistence and academic success (Nye, Su, Rounds, & Drasgow, 2012). Allen & Robbins (2008) also found a large effect of personality-major congruence on major change intention.

On the other hand, both Civil Construction and Hotel and Catering show contradictory findings as compared to Graphic Design. The first and second environmental codes for both academic majors were made up of Social and Realistic types. This implies that, students from both academic majors perceived themselves as having interests in educational activities, concern with social problems, believe in equality, helpful, forgiving, religious, having mechanical, technical, and athletic abilities and love to work with people as well as machines or instruments (Holland, 1997). Realistic personality type also appears to be among the three most dominant codes in both academic majors as students mainly exercise their realistic skills and abilities in the training and practical sessions, workshops or industrial training.

Findings for both Civil Construction and Hotel and Catering implies that students' personality types showed lower congruency with their academic major as compared to Graphic Design. According to Holland (1997), the mismatch between the students' personality and academic major may lead to academic dissatisfaction. This will eventually affect their academic achievements as well as their future career path, as the academic major selection will directly impact students' future career selection (Wong, 2006).

The mean analysis of the RIASEC scales also found that Social personality type was among the three most dominant scales for all the academic majors (Table 2). This finding is also in line to Hamdan et al., (2004) who found Social personality type being the most dominant types in almost all 60 academic majors under study. This current study implies that possibly majority of the hearing-impaired students of different personality types may choose an academic major with one substantial Social component in his or her personality.

Albeit the small sample size, this study also attempted to analyse any significant gender differences in the congruence measure. The hypothesis testing of gender differences for all the three academic majors showed that there were no significant differences among the male and female students' personalities. This could be explained by disproportional distributions between male and female students as shown in Table 5. For example, Civil Construction which is regarded as Investigative environment in nature (Messer et al., 2013) was mainly dominated by female in 7:1 ratio as compared to male.

Previous studies have reported that more males were found in Investigative majors who require more scientific abilities as compared to females (Gitonga et al., 2013; Ranson, 2003; Smart et al., 2000). We believe that unequal distribution of enrolment between male and female students in Polytechnics might be partly due to absence of establish academic major selection system. Although hearing-impaired students in Polytechnics were given opportunities to select their own academic major, the final decision is still subjected to panels' discretion (DPE, 2012). Furthermore, the absence of academic major selection system is said to be one of the factors leading to students' failure in estimating their own interest and abilities (St. John, 2000; Wong, 2006).

Although our findings on gender differences contradicted several studies (e.g Gitonga et al., 2013; Haliburton, Thweatt, & Wahl, 1998; Thompson, Donnay, Morris, & Schaubhut, 2004), but it is in line to Hamdan Abdul Kadir et al., (2004) who found insignificant gender differences in 49 out of 60 courses including those under Civil Engineering faculty. Cultural differences may partly explain this situation, but we strongly believe that gender differences would be significantly apparent if larger samples were introduced; thus leading to more valid and significant result.

6. Conclusion

This research may be subjected to limitations as previously discussed. However, it does in certain degree contribute to the understanding of Holland's typology in the selection of academic major among the hearing-impaired students in Malaysian Polytechnics. The findings imply that students may experience difficulties in choosing their academic majors due to multiple interests in multiple field of study or they simply have no preferences for any field of study (Amir Awang, 1983). As a result, they may choose academic major which is incongruent to their personality types. This is known as academic major indecision which refers to students' failure in estimating their own interests and abilities (Wong, 2006).

This scenario is worrisome and requires urgent attention especially when special population groups are involved; e.g the hearing-impaired students. Studies indicate that, although hearing-impaired students' have normal cognitive abilities, their academic achievements are lagging far behind than their peers of the same age and academic level (Akinpelu, 1998; Antia, Jones, Reed, & Kreimeyer, 2009; Lang, 2002; Qi & Mitchell, 2012).

There are many contributing factors leading to academic achievements and other educational outcomes which are specific for the hearing-impaired population (e.g: degree of hearing loss, the use of hearing aid, early intervention and etc.). However, limited focus has been given on the P-E fit context.

Thus, the findings of this study provide general information on the importance of personality-major congruence in ensuring hearing-impaired educational outcomes at tertiary level. Thus by implementing P-E fit framework, a more extensive study could be done to provide empirical information on the factors that contributes to hearing-impaired students' outcomes at tertiary level. Emphasis should be given on personality-major congruence since Holland (1997) believes that the congruence between these two may contribute to educational satisfaction and academic achievements.

Hence, educational authorities especially the Department of Polytechnic Education should also consider the establishment of specialized academic major selection system in addressing the issues of personality and academic major mismatch. This allows for more scientific and systematic way of choosing an academic major; thus leading to positive students' outcome. Counsellor intervention is also expected to provide effective career planning, followed by proper intervention to suit the educational needs of the hearing-impaired students.

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Public Perception towards the Election Commission in Malaysia

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Abstract

This study analyzed the public perception towards the Election Commission (EC) in Malaysia using quantitative analysis in order to evaluate the conduct of the EC in terms of free and fair conduct. The population of this study involved a total of 1104 registered voters. Using Statistical Package for the Social Science (SPSS) to analyze the data, the study arrived at certain pattern of results. An instrument namely; questionnaire was utilised in gathering the data needed. Likert scale was employed in the questionnaires in order to classify the public perception. The study found out that the public perception towards the EC in Malaysia vary according to the qualities that the EC should hold; independency (strong leadership), impartiality, professionalism and integrity, and transparency and accountability. The study concluded that it is important for the EC in Malaysia to improve on certain aspects in practice that effect public perception towards the qualities of the EC because it is the pivotal role of the EC to conduct free and fair electoral process in the country for the benefit of the country and the people.

Keywords: election commission, election in Malaysia, public perception, quantitative analysis

1. Introduction

Election is an essential element in a democratic country like Malaysia. Democracy has been practiced since 1955 when Malaysia was on its way to regain independence. The electoral framework under 1955 general election and the earlier elections have been strengthened with the constitutional structure. The Reid Commission had proposed four important elements of election in the new Constitution namely, the functions and organization of the Election Commission (EC), the delimitation of constituencies, election petitions and the right to vote (Fathi, 2013). The EC is responsible to prepare and maintain the electoral rolls, determine the boundaries of constituencies, and to conduct elections on every level. Thus, we regard it as a matter of great importance that this Commission should be completely independent and impartial. We therefore recommend that the EC should be a permanent body that its members should be persons in whom all democratic parties and all communities have complete confidence (Note 1).

Meanwhile, the right to vote goes to the public subject under constitutional framework. So, it will be the main purpose of this study to investigate the public perception towards the EC in Malaysia. Specifically, we investigated the aspects of free and fair conduct of the EC from the public point of view. The survey was conducted in June 2014 and finished by March 2015. 1104 respondents among voters participated in answering the questionnaires. Upon receiving all answered questionnaires, the data were analyzed using Statistical Package for the Social Sciences (SPSS). A questionnaire with 7 questions concerning justice and freedom in EC's treatment to political parties, leadership practiced, the implimentation of electoral delineation process, attitude while working and distribution of voting districts, had been distributed.

2. Problem Statement

Free and fair in the conduct of an election management body significantly determine the public perception on the realibility of the EC. Based on the concept of free and fair conduct, the EC must ensure that all electoral laws and procedures are accurately and meticulously implemented. Moreover, the election procedures must be precise, clear and consistent. This is because in any competitive election, the laws and procedures play an important role as 'the rules of the game' among the contesting political parties, therefore any changes to them, without adequate notice and by illegal way would unfairly affect their chance to win the election (Muhammad Fathi, 2013). However, as was the case during the general election in 2013, an issue regarding the indelible ink used in voting

process has been raised by the public along with the transparency issue in the counting process. The EC's creadibility and integrity are in question. The institution that manages the electoral process must be credible, independent and perceived as completely fair by the public as well as by the political parties and election candidates (Fathi, 2013).

There have been many other cases including the allegations of power abuse and money politics including the infamous 'you help me, I help you' remark made by the Prime Minister Datuk Seri Najib Abdul Razak during the Sibu by-election in 2010. However, the EC repeatedly declined to take a clear stand, arguing that corruption is out of its purview and it should be determined by other government agencies (Election Management Report, 2013). Thus, by studying the data, we are able to analyze the perception made by the public towards the EC as a respond to all the issues mentioned above.

Therefore, it would be the major objective of this study to examine the public perception towards the EC to find out whether the EC is successful in conducting a free and fair election. The questions were designed based on the following discussion in the literature review below. There are certain qualities that the EC should possess in order to be seen as free and fair.

3. Literature Review

In a functioning democracy, an institution that manages the electoral process must be credible, independent and perceived as completely fair by the public. A competent and neutral electoral management body is essential as it plays the central role in free and fair elections. So far, there are works by Goodwin-Gill, Boda, Elklit and Reynolds who provide a significant reference for the study of quality of elections at local level. The combination of several methodologies in judging elections as well as the theoretical study on the link between democracy and election provides a useful guide for evaluative research on electoral system in Malaysia. Another study regarding the election management body is by Wall and International Institute for Democracy and Electoral Assistance (2006) who provides international perspective on electorate standards as the foundation for research on electoral process in Malaysia. But it is insufficient to understand the question of free and fair practice of the EC in Malaysia. For that reason, a study on free and fair conduct of the EC in Malaysia requires a thorough examination not only on the international law and principles, but from the public perspective as well.

Meanwhile, there are works on the quality of elections in Malaysia which focus on specific area of electoral process or on specific general elections. In this group, there are two types of documents i.e.: academic works on democratic elections and reports of election observers on general elections or by-elections. There are a few recent works which give some account on specific elements such as the works by Horowitz (2005) and Kessler (2005) who focus on the electoral system. There are also researches on the electoral rolls (Ong, 2005), the role of the Election Commission (Lim, 2005), and the electoral delimitation (Lim, 2003; Ong & Welsh, 2005). On the other hand, there are also a number of reports on electoral observation missions. Since the electoral observation activities in Malaysia is very limited, there are only two significant reports on general elections i.e. the report of Election Watch consist of six Malaysian prominent figures led by the former Lord President Tun Suffian Hashim and the report of the Commonwealth Election Observation-both reports were made based on the conduct of 1990 General Elections. These works are helpful in understanding the conduct of election and to assess certain aspect of the electoral process, but they do not offer sufficient analysis on the works of the EC in the current political landscape. Besides that, the works only come from the researchers' or observers' observations while this research investigates the public perception towards the EC.

The only close work related to free and fair conduct of the EC is a work by Muhammad Fathi (2013). Based on systematic scholarly work on free and fair elections in Malaysia using the constitutional and legal settings, the research showed a credible EC should has certain basic qualities such as independency, impartiality, transparency and accountability as vital prerequisite for free and fair elections. In order to create a good perception among the public, the EC must conduct the election professionally and efficiently, with adequate funds and independent human resources. However, the work focuses more on constitutional and legal settings instead of the public perception. Therefore, given the nature and scope of the available literature, this study seeks to fill the gap and study the free and fair conduct of the EC by looking at the public perception towards the EC. The qualities observed are independence, impartiality, transparency and accountability, professionalism and integrity of the EC.

4. Methodology

The research design for this study is quantitative method specifically survey-based in order to find the data needed. The population of this study is the ensemble of eligible registered voters in the country. This study used an instrument namely; questionnaire. The questionnaires instrument is divided into two sections: the

demographic and psychographic section. The demographic section is used to gather information about the biodata of the respondents while the psychographic section focused on the research questions. The questionnaire is drafted in short sentences consisting of 7 questions. It used close and open ended techniques in order to give the respondents enough room to fill in responses to the questions.

The questionnaires were distributed among 1104 public respondents. This instrument was ministered by several researchers. The researchers and research assistants were given four weeks to collect and return the filled instrument. As for the respondents, they were given 15 minutes to answer the questionnaire. In order to ensure the reliability of the study instrument, a pilot test was conducted among the college students to ascertain the reliability of the research instrument (questionnaire). 15 respondents were chosen to perform this purpose.

5. Data Presentation and Analysis

Below are the data generated using quantitative data analysis-SPSS. Data analysis is presented in tables and charts. The tables below provide the demography of respondents in the cause of this study.

Table 1. Sex of respondents

	Frequency	Percentage (%)
Male	501	45.4
Female	603	54.6
Total	1104	100

Table 1 above described the sex of respondents. From the table, 501 (45.4%) respondents are male while 603(54.6%) respondents are female. This result shows that there are more female than male in the sample studied.

Table 2. Age of respondents

	Frequency	Percentage (%)
20-24	568	51.4
25-29	220	19.9
30-35	114	10.3
40-50	95	8.6
51-60	62	5.6
Over 60 years	45	4.1
Total	1104	100

From the table above, half of the respondents, 568 (51.4%) fall within 20-24 years. Whereas, the rest fall within 25-29 years, 220 (19.9%), 30-35 years, 114(10.3%), 40-50 years, 95 (8.6%), 51-60 years, 62(5.6%), and over 60 years, 45 (4.1%). The number of respondents decreased as the age grow. According to the statistic, it means majority of the respondents are within the prime age of participating in election as voters.

Table 3. Ethnicity of respondents

	Frequency	Percentage (%)
Malay	940	85.1
Chinese	95	8.6
Indian	41	3.7
Others	28	2.5
Total	1104	100

In the table above, 940 (85.1%) from the total respondents are Malay. Only 95 (8.6%) are Chinese, 41 (2.5%) are Indian while other ethnics are 28 (2.5%). This means, majority of the respondents are among the Malay voters in Malaysia.

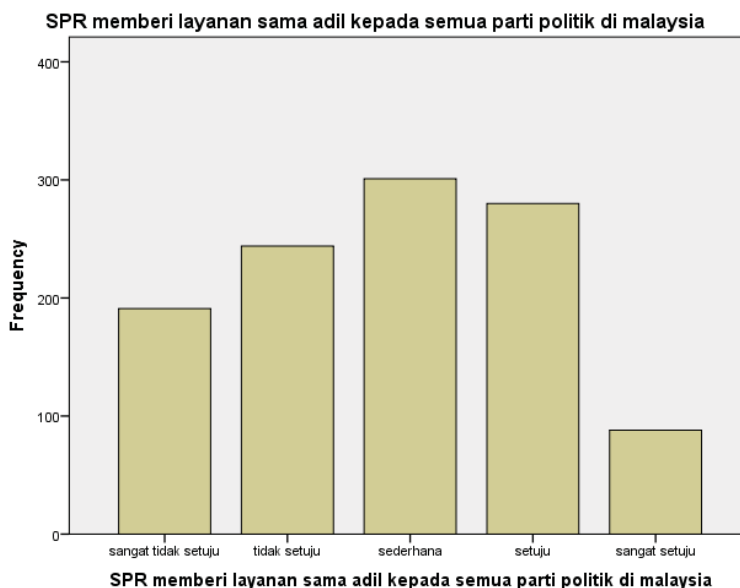*5.1 Research Question 1: The EC Gives Equal Treatment to All Political Parties in Malaysia*

Figure 1. Respondents view on whether the EC gives equal treatment to all political parties in Malaysia

From Figure 1, 280 (25.4%) respondents agree that the EC gives equal treatment to all political parties in Malaysia along with only 88 (8.0%) strongly agree with the statement. However, 301 (27.3%) of respondents have the average opinion regarding the statement whereas 244 (22.1%) and 191 (17.3%) respondents disagree and strongly disagree that the EC gave equal treatment to all political parties in Malaysia.

The result shows that majority of the public disagree that the EC gives equal treatment to all political parties in Malaysia. Only a small percentage of the public see the EC as being equal to all political parties in Malaysia.

5.2 Research Question 2: I Am Convinced That the EC Leadership Is Free and Fair

Figure 2. Respondents view on whether they convinced that the EC leadership is free and fair

From Figure 2, 94 (8.5%) respondents strongly agree while 277 (25.1%) respondents agree that they convinced the EC leadership is free and fair. Meanwhile, 308 (27.9%) respondents are average in their view whereas 180 (16.3%) respondents along with 245 (22.2%) respondents strongly disagree and disagree on the statement above.

Since majority of the respondents are of the opinion that they convinced the EC leadership is free and fair is low, it therefore means that the public perceived the EC leadership in Malaysia as not free and fair.

5.3 Research Question 3: The Process of Electoral Delineation Is Fair, Transparent and Equal
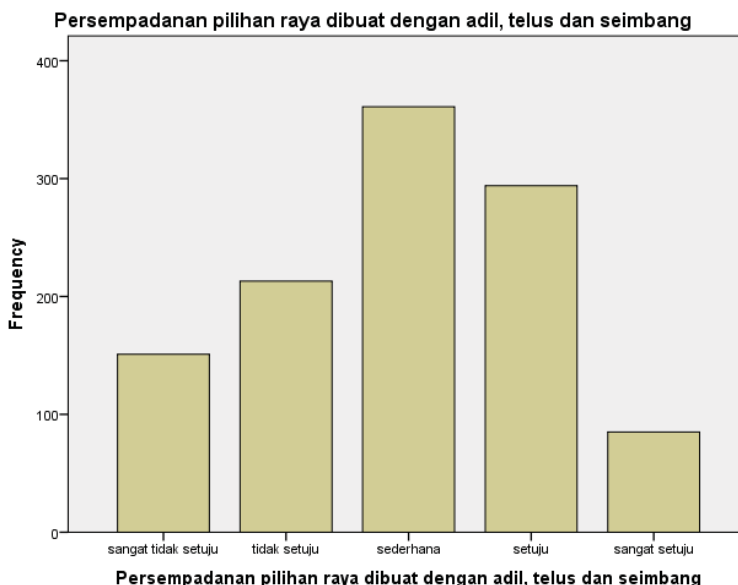
Figure 3. Respondents view on the process of electoral delineation is fair, transparent and equal

Figure 3 analyses the opinion of respondents on whether the process of electoral delineation is fair, transparent and equal. From the figure, 361 (32.7%) of respondents chose to have average view. Only 85 (7.7%) of respondents strongly agree with the statement while 294 (26.6%) respondents agree that the process of electoral delineation is fair, transparent and equal. However, 151 (13.7%) strongly disagree whereas 213 (19.35) disagree with the statement.

Thus, the analysis shows that majority of the public perceived the process of electoral delineation is fair, transparent and equal with very low percentage of the respondents who disagree with the statement.

5.4 Research Question 4: I Am Convinced That the Election Officer Is Free and Fair

Figure 4. Respondents view on whether they convinced that the election officer is free and fair

The fourth research question analyses whether the respondents convinced that the election officer is free and fair. According to Figure 4, 98 (8.9%) respondents strongly agree while 293(26.5%) agree that they convinced the election officer is free and fair. However, 126 (11.4%) and 219 (19.8%) of respondents strongly disagree and disagree that the election officer is free and fair. Meanwhile, 368 (33.3%) of respondents chose to be average with their view.

Therefore, it can be said from the analysis that majority of the public see the election officer as free and fair. However, although only small percentage of respondents disagree with the view, the percentage of strongly disagree is much higher than respondents who strongly agree.

5.5 Research Question 5: The EC Is Successful in Ensuring Total Distribution of Voters in Each Areas Is Relevant and Fair
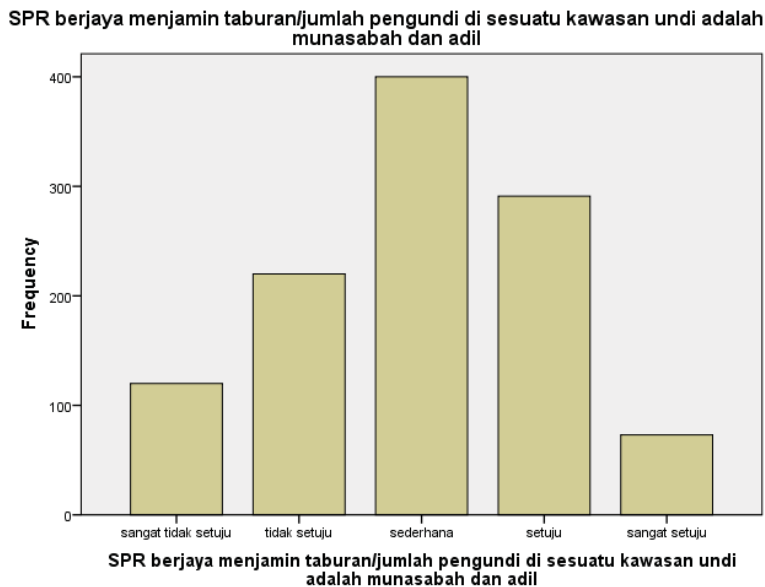
Figure 5. Respondents view on the EC is successful in ensuring total distribution of voters in each areas is relevant and fair

Figure 5 looks at respondents view on the EC successfulness in ensuring total distribution of voters in each areas is relevant and fair. From Figure 5, only 73 (6.6%) of respondents strongly agree that the EC is successful in ensuring total distribution of voters in each areas is relevant and fair. At the same time, 291 (26.4%) of respondents also agree with the statement. Meanwhile, 120 (10.9%) chose to strongly disagree and do not view the EC as successful in ensuring total distribution of voters in each areas is relevant and fair with another 220 (19.9%) also disagree. The remainder of 400 (36.2%) respondents remain average.

The analysis indicates that among those who viewed the EC as successful in ensuring total distribution of voters in each areas is relevant and fair, majority opined that the EC successfulness is just average.

5.6 Research Question 6: The EC Has Carried Out Their Duties in Transparency and Accountability
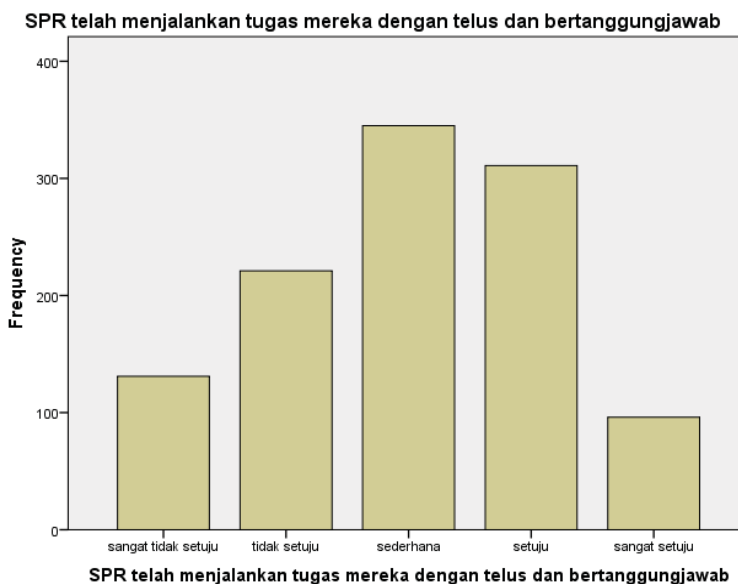

Figure 6. Respondents view on the EC has carried out their duties in transparency and accountability

Figure 6 looks at respondents view on the EC carrying out their duties in transparency and accountability. The figure indicated that 96 (8.7%) along with 311 (28.2%) of respondents strongly agree and agree that the EC has carried out their duties in transparency and accountability. While the other 345 (31.3%) of respondents chose to be average with their view, another 131 (11.9%) and 221 (20.0%) of respondents strongly disagree and disagree that the EC has carried out their duties in transparency and accountability.

The result from Figure 6 shows that majority opted to view the EC as carrying out their duties in transparency and accountability. However, there is still respondents who view the EC performance as average and the percentage is the highest among all scales if view separately.

5.7 Research Question 7: The EC Has Abided by the Rules and Regulations in the Elections
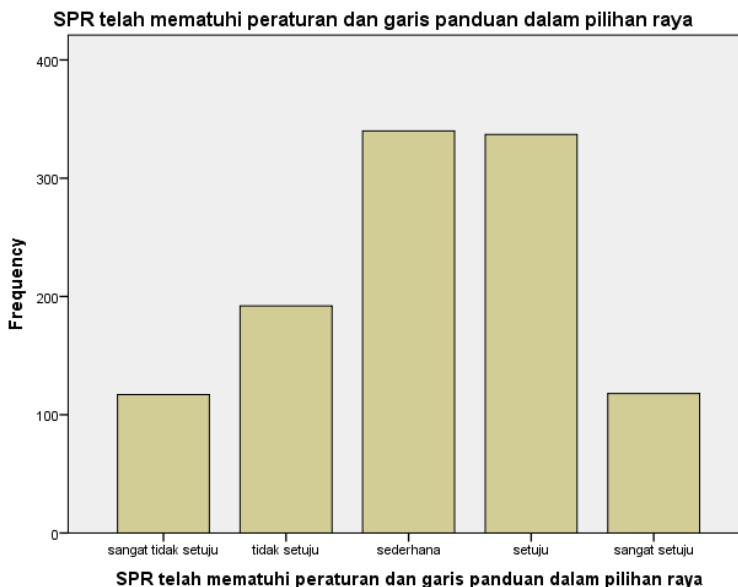
Figure 7. Respondents view on the EC has abided by the rules and regulations in the elections

The last research question analysed the respondents view on how far they view the EC has abided by the rules

and regulations in the elections. The result in the chart above finds that 118 (10.7%) and 337 (30.5%) of respondents strongly agree and agree that the EC has abided by the rules and regulations in the elections whereas 117 (10.6%) and 192 (17.4%) of respondents strongly disagree and disagree with the statement. The remainder of 340 (30.8%) remains average with their view.

A big majority of the respondents chose to agree that the EC has abided by the rules and regulations in elections. Thus, it can be said that the public perceived the EC has abided by the rules and regulations in the elections in Malaysia.

6. Discussion of Findings

In analysing the data collected, the study showed that there is higher percentage of women than men in the sample studied. It also revealed that most of the people sampled are majoritily from Malay ethnic and falls within 20-24 years of age, which means that they are active citizens participating in the country political process. From the result of the analysis above, we could evaluate the public perception towards the EC from the specific qualities that the EC should possess as discussed in the problem statement; independency, impartiality, transparency and accountability, professionalism and integrity by classifying the questions into the related qualities.

Table 4. The classification of qualities of the EC by questions

Question	Quality
Research Question 1: The EC gives equal treatment to all political parties in Malaysia	Impartiality
Research Question 2: I am convinced that the EC leadership is free and fair	Independence (strong leadership)
Research Question 3: The process of electoral delineation is fair, transparent and equal	Impartiality
Research Question 4: I am convinced that the election officer is free and fair	Professionalism and integrity
Research Question 5: The EC is successful in ensuring total distribution of voters in each areas is relevant and fair	Impartiality
Research Question 6: The EC has carried out their duties in transparency and accountability	Transparency and accountability
Research Question 7: The EC has abided by the rules and regulations in the elections	Professionalism and integrity

6.1 Independence (Strong Leadership)

The analysis from the quantitative approach reveals that majority of the public disagree that the EC gives equal treatment to all political parties in Malaysia. Only small percentage see the EC as being equal to all political parties in Malaysia. This is evident from the fact that only 88 (8.0%) of respondents strongly agree and 280 (25.4%) agree, while 435 (39.4%) disagree with the statement that the EC gives equal treatment to all political parties in Malaysia.

From the result above, it can be concluded that majority of the public are not convince with the EC leadership. It shows the EC is not perceived as being an independent body which should be the vital quality of a strong leadership in an election management body in order to conduct free and fair election in Malaysia. It is important to have the commitment to neutrality and the culture of independence among members of the EC and officers. A credible and dedicated leadership will build the public confidence in the conduct of election. The factors that influence the existence of these normative qualities are the mode of appointments of its members and officers, the security of tenure, their background, and personal integrity (Fathi, 2013). For example, the appointment of former civil servants as election commissioners is another main factor behind the EC's conservativeness as they were used to act under government's instructions (Kuek Ser, 2011).

6.2 Impartiality

The study revealed that the public perceived the EC leadership in Malaysia as not free and fair since majority of the respondents are not convinced that the EC leadership is free and fair. Total respondents who disagree is 425

(38.5%) compared with only 371 (33.61%) respondents who agree and 308 (27.9%) who chose to be average with their view. However, the analysis then shows majority of the public perceived the process of electoral delineation is fair, transparent and equal with low percentage of the respondents who disagree with the statement. In the meantime, the analysis also indicates that among those who viewed the EC as successful in ensuring total distribution of voters in each areas is relevant and fair, majority opined that the EC successfulness is just average.

By the different results reveal, the public perceived the EC as having a tendency towards split opinion, hence showing that impartiality is not clear. However, in the aspects of carrying out the process of electoral delineation and distributing voters, the public trusted the EC as being transparent. There were cases prior to Bersih 2.0, the deputy of election commissioner, Wan Omar Wan Ahmad called the co-chairperson of Bersih 2.0, S.Ambiga as the 'Destroyer of democracy' and said the EC will not deal with Bersih 2.0 in matters related to electoral reform aside from calling the opposition leader, Datuk Seri Anwar Ibrahim as 'King of slander' over Anwar allegation that 500 000 early ballots from security force personnel had been tampered with (Election Management Report, 2013).

Nevertheless, the EC is required to treat all election participants equally, fairly and evenhandedly, without giving advantage to any political tendency or interest group. The complete impartiality of the EC is an essential element of the commission as proposed by the Reid Commission. However, since the impartiality is a state of mind more than a statement in law, the practical aspect of the impartiality of Commission significantly depends on the EC's behaviour and attitudes to its stakeholders.

6.3 Transparency and Accountability

The result from the chart above shows that majority opted to view the EC as carrying out their duties in transparency and accountability. However, there is still respondents who viewed the EC performance as average and the percentage is the highest with 31.3% among other scales if viewed every scales separately. Nevertheless, it can be concluded that the public still finds the EC as having the transparency and accountability qualities. Even the Merdeka Center as an independent election watch body find the EC as failed in being transparency with its conduct of election. According to the Merdeka Center (2013);

> In the case of advance voting, the EC had said that the party agent are allowed to stay overnight in the police lock up which was used to keep the ballot boxes of advance voting provided that they abide to the police lock up rules. However, we have noticed that the party agents were not allowed to stay in the police lock up to watch over the ballot boxes. This has raised doubt whether the ballot papers were being tampered with, as the advance voting were carried out five days before the polling day. The counting of the advance voting ballots only began on 4 pm on May 5.

Above is few cases involving the conduct of the EC in terms of transparency. As the most important body to conduct democratic elections, the EC must be independent and impartial. Hence, to achieve this, the EC must have a high standard of transparency and accountability. Transparency suggests that the EC must discloses all material facts that underlying its important decisions such as choice of election date, enforcement of certain regulation, rejection and acceptance of nomination forms in disputes, and decisions or actions such as redistribution of voters particularly postal voters and change of status of voters that requires comprehensive explanations from the EC. Besides that, transparency also covers the aspect of integrity in voting, counting and tabulation processes. The failure of the EC to exercise transparency would lead to public assumption that it has made decisions impartially to favour certain political party.

Undoubtedly the transparency and accountability are important features of a credible and fair EC to ensure that the election management carry out their duties in accordance to the concept of free and fair election.

6.4 Professionalism and Integrity

The analysis then reveals that majority of the public perceived the election officer as free and fair. However, although only small percentage of respondents disagree with the view, the percentage of strongly disagree is much higher than respondents who strongly agree, that is 126 (11.4%) compared with only 98 (8.9%) of respondents. Meanwile, a big majority of the respondents chose to agree that the EC has abided by the rules and regulations in elections. Thus, it can be said that the public perceived the EC has abided by the rules and regulations in every elections held in Malaysia.

Therefore, in terms of integrity and professionalism, the public viewed the EC as having those qualities and perceived them as following the rules and regulations in managing the election despite all the issues raised by the opposition parties. For example, in the 2014 general elections, the EC had suddenly announced two hours

extension of the voting period to 7:00 for all polling centres in Selangor. This extension was contrary to the authorized voting time as stipulated in the Notice of Contested Election which was published in the Gazette (Fathi, 2013). Based on the concept of professionalism, the EC must ensure that all electoral laws and procedures are accurately and meticulously implemented. Moreover, the election procedures must be precised, clear and consistent. This is because in any competitive election, the laws and procedures play an important role as 'the rules of the game' among the contesting political parties, therefore any changes to them, without adequate notice and by illegal way would unfairly affect their chance to win the election.

Hence, the professionalism and integrity of the EC is a pre-requisite for a free and fair election. Non-compliance with the election procedure and directive, although in some cases not nullify the election, is a serious fault and discrimination. Inconsistency of the EC in issuing directives and in implimenting election procedures had caused unnecessary confusion among voters and political parties significantly eroded the public confidence. In most cases the victim is the opposition, since the ruling party has advantage of having direct access with the EC-making process.

7. Conclusions

In summary, we have quantitatively verified that, public perception towards the EC tend to vary according to specific qualities of the EC in terms of strong leadership (independent), impartiality, professionalism and integrity, and transparency and accountability. However, the public still perceived the EC as a trusted election management body although there are still few disputed issues on the free and fair conduct of the EC during the elections. Nevertheless, there are need to reform the laws on the election management body to reduce the partial involvement of the government and ruling party in the affairs. The EC also deserves a wider autonomy in its legislative authority, financial allocation, human resource system, and so on, so that it can have more freedom to conduct free and fair elections. As a conclusion, in line with the findings in this study, it is important for the EC in Malaysia to improve on certain aspects that effect public perception towards the EC during elections because it is the pivotal role of the EC to conduct free and fair electoral process in the country for the benefit of the country and the public.

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Notes

Note 1. Para 71 of the Reid Commission Report.

Note 2. See Regulation 11(5)(d) and Form 8 (First Schedule) of the Election (Conduct of Elections) Regulation 1981. In 2006, this provision was amended by substituting for the words 'cause to be published in the *Gazette* and also in such manner as he thinks fit a notice' the words 'give, in such manner as he thinks fit, a notice to the public' Section 3 of the Elections (Conduct of Elections) (Amendment) Regulations 2006 (P.U.(A) 164.)

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Game Theory and the Unrest in Thai Southern Border Provinces

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Abstract

The unrest in the three southern border provinces of Thailand which occurred in January, 2004 has been reviewed by several different groups of people, especially from the view of the high-level civil servants and politicians. After the problem started, the main inevitable question raised by the society concerned the motives of those individuals or the terrorists who were behind the attack. In this particular case, a generic social theory may not be able to explain the phenomenon of the situation. The members of the public were given various types of information by the state and by other players in the game and were in a "not knowing the enemy and not knowing themselves" interaction with other players. Therefore, through applying the game theory to the unrest in the south of Thailand, people would be able to apply a different aspect of information to make sense of the situation and create a new strategic relationship in the economic interaction with the state and other game players. The interaction, in this case, is the "game" itself.

Keywords: terrorists, game theory, Thai's southern border unrest

1. Backgrounds

Since January 2004, many violent incidents were committed in the three southern border provinces of Thailand including arson attacks on more than 20 schools, a robbery of military weapon from the 4th Military Development Unit, the killing of monks, police officers, teachers, students and villagers, and an arson attack on the Islamic Council office in Yala, a province locating in the southern part of Thailand. The violent acts posed by those militants were considered terrorism, which were seen by the outsiders as a new round of terrorism. In 2002, the Thai Intelligence Agency declared that terrorism in the south of Thailand had come to an end because it was not supported by the majority of Muslim countries. This was consistent with the CIA's report (Manager Daily News, 2005). Therefore, the unrest in 2004 suggested that the problems might have arisen internally from a loss of influence or for benefit gaining of staff or local agencies (Manager Daily News, 2005) while the former Prime Minister, Thaksin Shinawatra, also confirmed that the incident was not related to transnational terrorism of any kind but it was a disruptive action of a few people using the methods employed by ordinary criminals.

Concerning the scale of problem, there are several viewpoints and opinions to the root of the problem especially the views of high-level civil servants and politicians of the country. For example, General Thammarak Isarangkun Na Ayudhaya, the former Minister of Defense believed that, according to the testimony and evidence, this was an attempt to groom young people to have a new political belief dictated by a religious school. It was believed that the action was a consequence of the need to achieve a political change (Daily News, 2012). Wan Muhammad Noor Matha, the former Minister of the Interior, believed that such situation was created from the actions of some thieves who were addicted to drugs and unemployed. It was unrelated to local politicians or community leaders. General Han Lenanon, a former Commander of the 4th Regional Army, also confirmed that the terrorist group in the three southern border provinces was the militants who tried to create a feud between the Buddhists and Muslims. This was not an act of Islam, but was actually opposed to Islam with an intention to create a religious war (Manager Daily News, 2005).

The problem was linked to issues of political controversy. The local MPs, which belonged to the Wada group, and local religious leaders who campaigned for local politicians harshly criticized the operation of the 4th Regional Army and especially at General Thammarak Isarangkun Na Ayudhaya, for his excessive response to the situation. The local MPs and religious leaders believed that the problem was related to the fact that people in the local community did not provide information and did not cooperate with the government because they did not

have faith or trust in the government or, in some cases, felt suspicious of the government's intention. This is a crucial factor that can allow terrorism to grow and expand. The problem needs the government's attention and investment in social costs. Thus, the problem cannot only be resolved by force and the state power to suppress the conflicts. Such action can provoke a backlash. The government has to understand that Muslim communities are part of the local communities in the southern border provinces. They have ownership of the communities, their unique culture, and religious belief. The government needs to change the attitude towards the Muslim communities. To be able to develop and maintain the state, the government must allow equal rights and freedom to the Muslims to realistically and appropriately manage and govern their own communities (Techapeera, 2004).

2. The Conflict between the State, Terrorists, and Game Theory

In the past 10 years, terrorism in the south of Thailand has drawn an attention from around the world, especially in the humanity and social sciences studies. Before the unrest in 2004, the southern communities lived their lives peacefully. Because of the geographical features of the south of Thailand, the majority of population in the south worked in rubber plantations. Their routine involved rubber tapping and collection in the plantations from dawn until midday. After that, they spent the rest of the day socializing with others in the community. In the southern area, not including Songkhla and Satun, 85 percent of the population was Muslim. Most population practiced agriculture while a few people were civil servants. The Buddhists and Muslims in the community lived alongside one another and supported each other through social economic activities such as selling and buying agricultural products in the community.

After the unrest occurred, several questions were raised to find the cause and motive of such act including why it happened in the southern border region. Many theories have been employed to explain the phenomenon of the situation and have not yet answered all the questions. It seems that the insurgents did not aim only for an impact on the government, but also an impact other governing bodies such as politicians, social institutes, economic system, which the insurgents considered as their enemies (Friedland, 1985). The operation might also aim at the ratification of the group whereby an impact of the operation caused a direct and indirect damage to the economy of the state and the local communities. This type of damage was considered worse than natural disasters because it decreased a sense of security in the communities with high risk from terrorism and the surrounding communities, which indirectly had an impact on a decrease in tourists, commercial activities, and business activities. This also affected the government budget allocation, which means most of the budget was wasted on national security instead of in stimulating the economy of the country.

However, the acts of terrorism would not meet their goals if it was not through the media. In other words, the target of terrorism was not directly to destroy, but to create terror as a means to an end to create a sense of insecurity and lack of safety in the community. This would make it easier for the terrorist to manipulate the state or the target community for their own purposes. These tactics of terrorism were not at all new measures. They have been intentionally employed for a long time (Schmid & Jongman, 1988).

When considering the tactics of terrorism and the situation in the southern border provinces, it can be said that the issues concerning the current terrorism are as follows (interviews with government agencies, 2012).

Firstly, the conflict over a political ideology is long-standing and has been used by the terrorist group to create a violent act to claim the separation of the region. The separatist ideology started nearly 100 years ago when Haji Sulong, the founder of the Pattani People's Movement, launched a petition campaign to the government. The campaign disappeared many years later.

Secondly, the conflict over drug dealing is an act with financial motivation. It is a crime between the drug dealers and drug users while political issues have often been raised among the campaigners.

The third conflict involves religious motivation. A campaign concerning inequality between the Buddhist Thais and the Muslim Thais, especially those who did not work for the government, was raised. For example, it was questioned why female Muslim students who studied in the public school did not wear hijab (Note 1). The question of inequality started a new feud in the area.

Therefore, the unrest in the south of Thailand rooted from several issues and resulted in different tactics and operations (Enders & Sandler, 1993). The separation of the borderland was not the only motivation of terrorism. Other motivations also involved political conflicts, especially the election campaigns and border trading problems. Separatism was argued to have very little influence in the new form of terrorism in the south. It was an old ideology which was said to be long gone. It was concluded that the main reasons of the conflicts were personal issues and drug dealing problems. The new insurgents tended to primarily target the government officials as the more lives of the government officials were lost, the more fear was created among the public. As

a result, a sense of security in the community was lessened. The second target was the people in the community. Targeting the people in the community was to impose direct fear to the community. If there were 20 families in the village and one family was killed and burned, the other 19 families would live in fear and were very likely to leave the village (interviews with government agencies, 2012). This tactic of terrorism aimed for a direct impact to the target audience.

These inhumane actions in attacking innocent people could be seen as outrageous and irrational for most people. However, such actions could create a politically motivated impact more easily than other tactics. These inhumane actions are actually considered justifiable according to the game theory. In other words, although the actions, in this case the illegal actions, were conducted with limited resources, the value of the actions was determined by the profit gained from the actions. Therefore, it could be said that killing the innocents, although it was despicable, could create a huge political impact on the country with the minimal investment or "the effectiveness of the acts of terrorism". The behaviors of the terrorists in the southern border provinces in making rational decision within a limited cost consist of seven steps of actions as follows; Step 1: creating fear and anxiety to the public, Step 2: attacking government officials, Step 3: creating distrust between the Buddhist Thais and the Muslim Thais, Step 4 to 7: employing the falling leaves tactics, for example bombing including car bombs, killing teachers and monks. These actions were intended to create shock and terror to the local communities and made them leave the region without using any other forces. When the seven steps had completed, the cycle could be repeated. When a new factor emerged, actions could be adjusted to achieve the goal.

From the above hypothesis, it can be said that the behaviors of the terrorists depended on a rational decision in an attempt to integrate the resources available as a step to achieve the goal. When analyzing the conflict between the state and the terrorists in the southern border provinces and applying the game theory to the current problems in the region, it shows that those acts of terrorism which seemed to be outrageous and irrational were actually rational and justifiable under the conditions of the terrorists themselves. From the view of the game theory, the benefit of their actions could compensate the costs they invested. This game consisted of a few players, namely, 1. the terrorists, 2. the members of the public who supported the terrorist group, 3. the state, 4. the members of the public who had been affected by the acts. Each player was assumed to have an incomplete different set of information. This seemed to be a common practice in the society. In public policy-making, the state tended to make decisions according to the information they acquired and might have disregarded useful information from different sources. As a result, the state could make a mistake in conflict management policy-making. (Anusorn Thamjai, 2004).

The game theory, therefore, can be used to make sense of the unrest in the south of Thailand and the participation between the state and other players. The members of the public made a decision based on the information they had which was different from the information the state withheld. As a result, the interaction between the state and other players was a "not knowing the enemy and not knowing themselves" interaction. This created a new strategic relationship in the economic interaction or a game (Anusorn Thamjai, 2004).

3. Studies on Game Theory

What is game theory? Game theory is a study of strategic decision-making which uses mathematical models of conflicts and cooperation between intelligent rational decision-makers. Game theory has been used in economics, social sciences, political science, and psychology. It is also used in the study of behavioral relations (Myerson, 1991). Game theory was derived from James Waldegrave's idea in 1713 regarding a belief that one person's behavior results from others' behaviors. Game theory was first used in zero sum (Note 2) games. It was then developed into other games, for example Battle of the sexes, Blotto games, cake cutting, chicken. Game theory is also used to describe social behavior and political interest groups.

Nowadays, game theory has extensively been used by many scholars. More than eight scientists who employed game theory in their works received Nobel Memorial Prize in Economic Sciences. The key concept of game theory is equilibrium concepts. In social sciences, it is believed that if equilibrium occurs, it will reflect human behaviors and reactions to the event which is a crucial factor of game theory. However, game theory has been widely criticised as the theory was created based on a radical rational decision and may be opposed to the morality of the society. For example, the assumption that the game players will do everything to win the game or gain the most profits or Homo economicus model seems to be an extreme capitalist idea and it may not be rational from a psychological point of view. Nonetheless, game theory may be used to examine human nature. Human beings are selfish and will make a decision primarily based on their own benefits. Therefore, it can be said that game theory is actually based on a practical assumption of human behaviors.

4. Confrontation Game between the State, Its People, and the Terrorists

The game between the state and the terrorists is based on the interests of different groups of people under the structure of blinding agreement. The interaction of the terrorist acts does not show an explicit demand or have a specific pattern. The state, therefore, needs to be prepared at all time and come up with different strategies to tackle the problem. The state's confrontation strategies can be seen in forms of 1. The state increases the costs in dealing with terrorism. 2. The state reduces the incentives of the acts of terrorism. 3. The state increases the incentives in not committing a terrorist act. These confrontation strategies are conducted with the innocent people standing in the middle and being affected by the confrontation from both parties. To choose the right strategy is, therefore, very subtle, complicated, and difficult (Frey, 2003).

In Thailand, the government has been employing different confrontation strategies in dealing with terrorism in the southern border provinces, for example, increasing the government budget in dealing with terrorism and engaging the government officials from different agencies, soldiers, and police officers in the operations in the southern border provinces by setting up a new agency working directly to the central command center. Regarding to an increase in the incentives in not committing terrorist acts, SBPAC (Note 3) was set up to monitor the work of government agencies in the five southern border provinces and to coordinate with security forces. The center reports to the Prime Minister Office directly. One of the center's missions is for improvements in the education of young people in the southern border provinces.

However, the confrontation strategies in the southern border provinces did not manage to eradicate terrorism in the area. It could only alleviate the suffering of the people to some extent. This is because the unrest in the south of Thailand is a very sensitive and fragile issue. It stemmed from an ethnic and religious separatist insurgency in the past. The ideology has passed on from generation to generation by a group of people who are skilled public speakers with psychological tactics. Therefore, the government had to employ a very subtle measure in dealing with those accused of committing a terrorist act. For example, when an individual was arrested and charged with terrorism-related offenses. The government preferred using an ideology adjustment measure to an aggressive punishment. An eradication strategy to get rid of the terrorist group might have a ripple effect on the whole community and create distrust in the government. Therefore, it was difficult for the government to keep the balance of giving sentences to the crimes they committed and to readjust their ideology, retrain, and resocialize them to get back into the community.

5. The Government's Solutions Measures

An alternative solution for the government is providing a different set of information to the public. This set of information may not be the same as the official information being used by the government agencies. For example, when a violent incident occurs, an attention should be diverted from a terrorist act and the incident should be treated as a crime so that the general public is not seen as a target of the incident and creates a panic. By employing the game theory to explain the situation, it can be explained that this is a game which is played by the state, the terrorists, and the public. Another player who should be added into this game is the media. The media plays a very important role in this game because the information they give can worsen the situation. Although the media has low cost utility in the game, its impact to the sense of security of the public is immense. It could be used as an effective tool by the insurgency.

Although the supporters of terrorism and the terrorists may not have the same goal, they can benefit from using the same method in committing the violent acts. This is seen as an external cost of terrorism. The result of such acts costs the government greatly. For example, when the terrorist acts were committed, the people in the community lost a sense of security and fled from the area. This allowed drug dealers to have an opportunity as a free rider to trade in the area freely as the community was too scared to report for fear of their own safety while the authority's priority was to deal with terrorism and other crimes committed in the area were put on hold. In the meantime, it allowed the terrorist group to seize control of the community and use it as their base or a training camp of the separatist insurgency. Therefore, without having enough information and understanding the motives of such acts, the public can be manipulated by the terrorists to achieve their goals. As a result, if the government is keen on seeking for an appropriate solution to this matter, the government must find a measure to prevent the supporters of terrorism from receiving external benefits from the terrorist acts. The incentive the supporters receive from the situation encourages further undesirable acts (Brook, 2002). The government must tighten the measures in dealing with those free riders.

Sandler and Arce proposed two types of counterterrorism measures; pro-active measures and defensive measures. Pro-active measures include destroying terrorists' resources (e.g. training camps), capturing their members and supporters, and curbing their finances. Defensive measures aim to make their attacks more costly or to reduce the

ood of their success, such as, the installation of metal detectors or issuing a regulation against arms trade. Some defensive measures may affect the public's security. For example, the right to bear arms allows people to defend themselves in an emergency situation. Therefore, to tighten the arms trade regulation may result in the people having a problem accessing firearms if needed. In Thailand, several defensive measures have been used to tackle terrorism. In using defensive measures, the state must provide enough information to the public and the same enforcement of the measures is required in all areas. Double standards of enforcement can increase tension and conflicts in the community. The members of the public must be informed to have an understanding that the limited rights they have is compensated by the safety and security they will receive. This can also decrease distrust between the public and the government agencies. In other words, it is a free rider for the government.

The final measure which has been used by the Thai government is to increase incentives in not committing a terrorist act. The measure encourages those who committed a terrorist offense or were involved in the terrorist group to work with the government agencies. In return, they are offered with better incentives or opportunities in life and finally give up in taking part in the group. The government is aware of the close connection of the terrorists and the community and by working with former members of the terrorist group the government can also benefit from the information about the group from their cooperation as well as using them to distribute the state measurement in suppressing undesirable acts to the terrorist group (Bueno de Mesquita, 2005).

6. Game Theory, Situations, and Community Adaptation

According to the game theory, the interaction between the players of the unrest in the southern border provinces can be seen as follows. Firstly, the government tended to use defensive measures in dealing with terrorism. Secondly, defensive measures could cause anxiety in the local community and distrust in the government if the community did not receive appropriate information or the information was distorted by the media. Thirdly, the pro-active measures would be effective only when the terrorists had a political motivation. This measure could be complicated and sensitive if the government did not receive enough information or received wrong information which led to an inappropriate operation such as arresting a scapegoat. This could create more conflicts between the government and the public.

The government, therefore, can achieve better results by using defensive measures which, according to the game theory, will be able to predict the behaviors of the players provided that all the players are rational. Although the game theory may be able to explain the strategies of the players, it is not able to explain the motives of the players in taking part in the game. Concerning the unrest in the south of Thailand, the game theory provides an explanation of the players' behaviors and that the confrontation strategy was done with rational decisions. The external factors including the information provided to the public also affected the community behaviors. The community compared the cost of continuing living in the area to the benefits they received and the benefits they expected to receive by using the information provided by other players in the game such as the media, the government, and the terrorists. It is obvious that the media was one of the primary players in the incident in 2004. The intensity and the violence of the incident portrayed in the media and the distortion of the information from the media had created a tremendous fear among the local community. People in the local area had considered the payoff would be worth more than continuing living in the area. As a result, they decided to sell their land and properties and move out of the area which was considered as having high risk of terrorist attacks. At the same time, people from other communities and tourists were too afraid to come to the area.

The rest of the people in the area whose cost in relocating was too high to move continued to live in the area with fear and anxiety creating a separation between the Buddhist Thais and the Muslim Thais. The media who projected themselves as a perfect information source played a role in guiding the community actions and creating motivations of other players in the game. At the same time, the players formed a subgroup of other players who were from the same social status, political ideology, and religious background. This created a more complex game with different groups of players having different interactions between each other with different motives and goals.

After the incident occurred, the initial response to the situation of the people in the area was to move out. This was an expected reaction anticipated by the terrorist group according to their seven steps strategy. The terrorist group also used a strategy to create distrust among the people in the community. They accused the Buddhists in attacking the Muslims and vice versa in an attempt to create a division between the two ethnic groups. However, after people reconsidered the gains and losses of relocation as well as an opportunity to receive more information from other sources, the needs to earn a living outweighed the costs of moving out. The people then decided to move back and adapted to the changes in the community. To compensate the costs of living in an area with high

risk of terrorist attacks, the local people learnt to negotiate from the government for more benefits. They also started to protect their own community by setting up the village security unit and neighborhood watch volunteers. They also applied for the government funding for career development, improving education for young people, and scholarships for medical students as they realized that more doctors were needed in the local community. The support from the government was seen as a double-edged sword. While the budget was needed in community development and allowed positive activities to meet the community's needs, the lack of supervision and efficient tracking and evaluation system from the government agencies that were responsible for those projects resulted in ineffective outcomes. The projects were not sustainable. There was no plan for the future of the projects. The community only relied on the funding from the government and without further funding the community was not able to be self-sustained. The support from the government made the community feel accustomed to being spoon-fed. When the funding stopped, the community felt they were abandoned by the government. It could provoke outrage and conflicts between the community and the government.

7. Future of the Southern Border Provinces

The southern border provinces have been restored and the suffering of the community from the terrorist attacks has been alleviated. The communities have adapted to the changes while the terrorist group do not have long-termed financial support and a lot of the members are tired of a life of a fugitive and decided to quit being the members of the group. Less and less incidents have occurred in the past few years. Moreover, as the ASEAN Economic Community aims to establish a common market by the end of 2015, the government planned to use the three border provinces as a free trade zone. It is expected to boost the economy of the region, especially the trade between Thailand and Malaysia. People living in the southern border provinces have an advantage of using Thai and Malay language in their everyday conversation and in business transactions. At the same time, the government has encouraged young people to learn English and Chinese to cope with visitors from further fields.

In terms of an education strategy, Islamic University was founded in Yala and Pattani to encourage more young people to attend further education. International students from China, Japan, Brunei, and Qatar also attended the university. The Islamic University is attractive to international students because of the demographic diversity of the region and several languages have been used for communication. There has been a discussion whether Pattani province could be allowed to have a status of an independent state of Patani Darussalam. The consultation with the public will need to be done before any policy can be made about the issue. Although becoming an independent state may contribute to the local economy, plans and preventive measures must be sought in case the state cannot sustain its autonomy.

Most people in the southern border provinces said they wanted to see an increase in local economic growth and free trade in the community. It is hoped that a lucrative market will reduce the incentives of the terrorist group. The vibrancy of the local community will increase the security measures from the government and from the outside world. Moreover, the southern border provinces are rich with natural resources which are suitable for both agricultural trading and tourism industry. Nonetheless, religious issues are still the key factor to the community.

Any future government policies will need to consider religious backgrounds of the community. The consultation with the community is crucial in policy planning. The government needs to make the community understand the objectives of the policies and to gain trust from the locals. Although the economy growth strategy may help reduce the incentives of terrorism, the current transnational terrorism may encourage the terrorist group to evolve and come up with different strategies. The government needs to be prepared and be ahead of the game.

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Notes

Note 1. The head covering that Muslim women wear.

Note 2. Zero-sum game is a situation in which one participant's gains or losses of utility is balanced by the losses or gains of the utility of the other participant or, in other words, a participant will win over the losses of others. Zero-sum game focuses on winning and losing only no matter how many players are involved. The winner gains the all profits from the game and the losers do not gain any profits.

Note 3. Southern Border Provinces Administrative Centre.

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