ISSN 1913-9004 (Print)
ISSN 1913-9012 (Online)

International Business Research

Vol. 5, No. 3 March 2012

CANADIAN CENTER OF SCIENCE AND EDUCATION

Editorial Board

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The Effect of Peer Communication Influence on the Development of Materialistic Values among Young Urban Adult Consumers

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Received: December 15, 2011 Accepted: January 17, 2012 Published: March 1, 2012
doi:10.5539/ibr.v5n3p2 URL: http://dx.doi.org/10.5539/ibr.v5n3p2

Abstract

The study attempts to uncover the characteristics of materialism groups in Malaysia among young adult consumers. It assesses the differences between materialism groups, i.e., low and high materialistic groups, using demographic and peer communication dimensions. The data was collected through self-administered questionnaires. The sample consisted of 956 respondents. The majority of the respondents were Malays followed by Chinese and Indians. The proportion of female respondents was higher than the male respondents. Most of the respondents were single and in the age group of between 19-29 years old. Independent sample t-tests were used to compare mean scores for the study variables between 'high' materialism and 'low' materialism groups and significant mean differences were found between 'high' and 'low' materialism groups in terms of peer communication construct. Specifically, it was found that the 'high' materialism group has considerably greater ratings on the construct. Internal consistency reliability assessment using Cronbach coefficient alpha revealed that the two dimensions had high reliability. A stepwise discriminant analysis performed on peer communication variable found that peer communication variable was significant in differentiating the two materialism groups. The implications, significance and limitations of the study are discussed.

Keywords: Materialism group, Demographic profile, Peer communication, Discriminant analysis

1. Introduction

Studies on consumer socialization have identified eight major socialization agents in most modern societies (Reimer & Rosengren, 1990). Previous studies on consumer socialization identified traditional socialization agents as family, peer group, work group, church, law and school; they can be found in most societies (Bindah & Othman, 2011; Reimer & Rosengren, 1990). People often interact with socialization agents and then take in consciously and unconsciously social norms, values, beliefs, attitudes and behaviors endorsed by these agents (Croteau & Hoynes, 2000). As postmodern society grows more and more atomistic, individualistic and alienated, socialization agent becomes more and more powerful (Croteau & Hoynes, 2000). Ward (1974) offered a classical definition of consumer socialization: "the processes by which young people acquire skills, knowledge and attitudes relevant to their functioning as consumers in the marketplace," (p. 2). The skills, knowledge and attitudes directly relevant to consumption behavior are "those which are necessary for enactment of the consumer role-for example, skills at budgeting, pricing, knowledge of brand attitudes and shopping outlets, and attitudes toward products, brands, and sales people,"(Ward, 1974, pp. 2-3). Materialism among today's youth has also received strong interest among educators, parents, consumer activist and government regulators for many reasons (Korten, 1999). For instance, many studies on materialism among college and high school students show dramatic increases in materialistic values (Korten, 1999). Furthermore, the popular press has also characterized youth as "hyper-consumers." Social scientists have responded with a burst of recent books that decry materialism among young consumers and criticize marketing's role in the development of materialistic values (Kasser, 2002; Schor, 1999).

Although materialism has long been of interest to consumer researchers, surprisingly however, with such a growing concern about adolescent becoming too materialistic, research into this area has paid little attention to young adult consumers and their endorsement of materialistic values. Kau et al. (2000) for instance, have examined if the level of materialistic inclination differs among respondents with different demographic characteristic. Using a sample of undergraduate students in the age group of 15 to 54 years old, the findings revealed that people in different age group were observed to differ in their degree of materialistic inclination. In their study, teenagers in the age group of between 15 to 19 years old were less materialistic; their older counterparts in the age group of 20 to 29 years old were more materialistic. A major limitation of previous studies into the effects of socialization agents has been the limited scope of the analyses, confined to a given developmental stage (for example, childhood, adolescents). Cross sectional data analyzed at a specific development stage in a person's life tell us little about the possible casual influences of socialization agents, living room for criticisms about the nature and direction of influence between materialism and measures of the person's interaction with socialization agents (Moschis, 1985). Furthermore, it is not clear whether specific socialization agents in general, and communication environment in particular, can instill materialistic values in people.

There exist several definitions of young adults. Theorists often define young adults as those who have reached sexual maturity, but are not married (Schindler, 2001). Custom in the United States distinguishes young adults as those newly eligible to vote, at age eighteen. Erikson (1968) devoted his research to defining the eight stages of life. Young adulthood, according to his model, falls in the sixth stage, "intimacy vs. isolation." The developing person grows up until the time he/she forms his/her identity. Then is the test to see if the individual can fuse his/her identity with that of others, and if the person is ready for intimacy, and the capacity to commit himself or herself to concrete affiliations and partnerships (Erikson, 1968). This stage can only occur after the person has successfully completed the other stages. Often, chronology of age is not the most important consideration. Studies analyzing consumer behaviour have fundamentally focused on adolescents, and their findings have generally not been transferable to young adults (Ganassali et al. 2006). The reason to study young consumer is due to young behaviour represents a collective subject holding a common culture (Fabris, 2003): this common culture is based on some shared values, on a shared tendency to feel as citizens of the world, on a common propensity to experience new things and to support new ideas. From this point of view, young consumer behaviour is a relevant issue for managers and policy makers too, because they are recognized as a significant market segment (Moschis & Moore, 1979) and they frequently represent the pioneers of new social and consumption trends. The study of young people behaviour is consequently of great interest, given the significant spending of this segment of the population and the importance of their purchases (McNeal, 1999).

Most research conducted in the area of consumer socialization and its effect on the development of materialistic values, have placed their emphasis on the key relationships between variables in their model, with very few exceptions of studies addressing distinct materialism groups among socialization agents (e.g., Goldberg et al., 2003). Research addressing specific distinct materialism group differences across peer communication has not been explored extensively. Hence, there is a need to examine the differences of peer communication factors across distinct materialism subgroups and to identify the important factor in discriminating between these materialism groups. The purpose of this paper is to adopt a theoretical framework to explain the mechanism responsible for the development of materialistic values among young adult consumers. This paper emphasized on the role of peer communication influences on the development of materialistic values among young adult consumers. Based on theoretical and research perspectives, two hypotheses are developed.

1.1 Objectives of Study

a. To examine the differences between low and high materialism groups among young urban adults consumers in Malaysia using demographics dimension.

b. To examine the differences between low and high materialism groups among young urban adults consumers using peer communication dimension.

2. Literature Review

When it comes to consumer socialization, attitudes, aside from values (e.g., materialism), behaviours and norms are important elements in the study of the consumer socialization process as defined by Ward (Ward, 1974). Among the major sources of socialization influence, include parents, peers, media and school. Prior research identify parents are the main agents in children and adolescents' primary socialization process, in which implicitly and explicitly they teach and transmit consumer-related orientations to their child (e.g., John, 1999; Ward, 1974). According to Moschis

(1985), in the secondary socialization process, peers, school and media tend to gain influence (Moschis, 1985). Marketing and advertising scholars have found that at the perceptual stage (2 to 7 years old) (Piaget, 1953), young children's consumer learning mainly comes from their modeling on parents and peers while the influence of mass media is low (Ward & Wackman, 1971).

Researchers have also found that children in the critical period (7 to 11 years old) (Piaget, 1953) can recognize the functional differences between program and commercials and they can distinguish program from commercials based on persuasive intent (Blosser & Roberts, 1985; Robertson & Rossiter, 1974). Children in the critical period can recall both visual and verbal details of television commercials, and they can recall more brand names (John, 1999). They begin to perceive some bias and deception in advertising messages and accordingly foster a more negative attitude toward advertising (John, 1999). They can categorize products and discriminate brands according to their underlying functional attributes (John & Lakshmi-Ratan, 1992).

For teenagers in the reflective period (11-17) (Piaget, 1953), observational learning has become the most important device of their consumer socialization. They turn away from parents to peers and seek consumer information from various mass media. They learn consumer knowledge and skills through direct experiences (trial), observation (imitation), and vicarious experiences.

Previous research suggests that, as socializing agents, television and peers are more important than family for adolescents while young teenagers are more sensitive to the social meaning of consumption because of their strong self-expressive orientation (Churchill & Moschis, 1979; Moschis & Churchill, 1978; Moschis & Moore, 1979; Moschis & Mitchell, 1986). Social structural restraints including social class, gender and race, have also been examined by many scholars as antecedent variables of adolescents' consumer socialization and they are found to be interesting mediators, facilitators or limiting factors, but family, peers and mass media have always been identified as dominant influences (Churchill & Moschis, 1979; Moschis & Churchill, 1978; Moschis & Mitchell, 1986). Thus, aside from television and family influences, previous research indicates that peer as a socialization agent plays a significant role in influencing adolescent in many aspects of their consumption behaviour, norms and values. Given the importance of the role peers exert on adolescents as they grow up into adulthood, it is interesting for marketers and scholars to understand just how much or to what extent peers play a significant role in influencing young adults' development of values, such as materialism. The present study attempt to explore peer influence, particularly the communication and interaction patterns that takes place between young adults and their peers to determine if there is any implication on the endorsement of materialistic values. Churchill and Moschis (1979) have offered a general conceptual framework that is useful in organizing and conceptualizing variables for the study of consumer socialization, and has applied the general theoretical and conceptual notions of socialization to the specific context of consumer socialization.

Although no single set of socialization concepts, assumptions, and hypotheses has been agreed upon to guide research efforts in the area of consumer socialization, a rough blueprint does exist outlining what data should be included and what a socialization theory of consumer behaviour might look like and is adapted for the present study. McLeod and O'Keefe (1972), for example, maintained that a complete socialization theory must deal with five types of variable: (1) content or criterion behaviour; (2) agent or source of the influence; (3) learning processes involved in socialization; (4) social structural constraints affecting learning; and (5) age or life cycle position of the person being influenced (Churchill & Moschis, 1979). The following provides a brief explanation on the five different types of variables.

2.1 Content or Criterion Behavior

Socialization research focuses on the study of the development of learning properties (cognitions and behaviours) necessary for the performance of a given social role (Churchill & Moschis, 1979). Learning properties can be divided into: (1) properties that help a person function in any given social system and (2) properties related to a person's individual behaviour regardless of the standards set by any larger system (McLeod & O'Keefe, 1972; Churchill & Moschis, 1979). The criteria relevant to the functioning in any given social system are prescribed by that society. They are based on normative theories of human behaviour and, are efforts on the part of some members of that society to regulate the behaviour of other members so that certain "desirable" consequences follow (Churchill & Moschis, 1979). Criteria relevant to individual behaviour, on the other hand include cognitions and behaviours that enable the person to enact a given social role, regardless of whether the behaviours are functional or dysfunctional in any larger system.

2.2 Agent or Source of Influence

Socialization is often viewed as a social process by which norms, attitudes, motivations, and behaviours are transmitted from specific sources, commonly known as "socialization agents" to the learner (Churchill & Moschis, 1979). "Socialization takes place through interaction of the person and various agents in specific social settings" (McLeod & O'Keefe, 1972, p. 135). A socialization agent may be a person or an organization directly involved in socialization because of frequency of contact with the individual, primacy over the individual, and control over rewards and punishments given to the individual (Churchill & Moschis, 1979). These agents are of high salience to the learner and continue to influence the development of his/her character, even as new agents are added and older ones are displaced. The result of these interactions is the development of a series of "self-other systems" in which the individual is oriented toward the evaluations of significant others and the role prescriptions (Churchill & Moschis, 1979).

The main implication of including specific-influence agents in the socialization model is that the unit of analysis becomes the agent-learner relationship (McLeod & O'Keefe, 1972). Talmon (1963) classifies these agent-to-learner relationships into four categories on the basis of the formality of the type of agent and the role of the learner: (1) formal organization (agent), role of learner specified (e.g., school); (2) formal organization, role of learner not specified (e.g., mass media); (3) informal organization, role of learner specified (e.g., family): (4) informal organization, role of learner not specified (e.g., peers).

2.3 Learning Processes

The processes by which the learner acquires specific values and behaviours from the socialization agents, while interacting with them, can be divided into three categories: modeling, reinforcement, and social interaction (McLeod & O'Keefe, 1972).

2.3.1 Modeling

Modeling explanations involve imitation either through a conscious attempt to emulate the socialization agent or because the agent's behaviour is the most salient alternative open to the person (McLeod & O'Keefe, 1972; Churchill & Moschis, 1979). For example, adolescents do the same things as their peers do in an effort to be like them. This type of learning process has also been referred to as observational and imitation learning (Churchill & Moschis, 1979).

2.3.2 Reinforcement

These explanations of learning involve either reward (positive reinforcement) or punishment (negative reinforcement) mechanisms.

2.4 Social Interaction

The social interaction mechanism is less specific as to the exact type of learning involved. It may involve a combination of modeling and reinforcement (McLeod & O'Keefe, 1972; Churchill & Moschis, 1979). This explanation holds that the characteristic social norms involved in the person's interactions with other significant persons shape the individual's attitudes, values, and behaviour. Thus, what is learned is a series of interpersonal relationships relating to a given social role (Thorton & Nardi, 1975). The social interaction process may have content and structure. Content often refers to expectations (norms) held by agents as to what the prescribed role should be; these may be attitudinal, behavioural, or cognitive (Thorton & Nardi, 1975). The structure of the social interaction mechanism, on the other hand, usually refers to agent-child relations concerning power and communication.

2.5 Social Structural Constraints

Social structural explanations of socialization emphasize the person's social environment within which learning takes place. Social variables such as social class, sex, and birth order can have a direct as well as indirect effect in socialization, by influencing learning processes (McLeod & O'Keefe, 1972; Churchill & Moschis, 1979).

2.6 Age or Life Cycle Position

Although the study of socialization was once restricted to learning that takes place during childhood, it has been extended in recent years to include the study of learning that occurs throughout a person's lifetime (Churchill & Moschis, 1979). Because people learn continuously and because they learn different things at different times in their lives from different agents, the emphasis is on changes in a person''s cognitions and behaviours as the individual moves through the life cycle, specifically in the post-adolescent period when the person gets married, takes a job, and so forth, at different ages (Churchill & Moschis, 1979). Theory and research also suggest that people at different age or life cycle levels may be influenced differently by environmental factors, e.g., socialization agents (Churchill & Moschis, 1979). Thus, all generalizations are dependent upon a particular phase in the developmental process or life cycle, and a different cluster of variables tends to dominate each stage.

Typical research on development of consumer patterns of thinking and behaving has been based on two models of human learning: the cognitive developmental model and the social learning model. Studies utilizing the cognitive developmental approach attempt to explain socialization as a function of qualitative changes (stages) in cognitive organization occurring between infancy and adulthood. Stages are defined in terms of cognitive structures the child can use in perceiving and dealing with the environment at different ages. As the child "moves" from one stage to another, s/he is assumed to be developing and integrating various learning properties. The social learning model, on the other hand, seeks explanations for the formation of cognitions and behaviours from the sources of influence (socialization agents) transmitting attitudes, motivations, and values to the person. Learning is assumed to be taking place during the person's interaction with these socialization agents in various social settings (McLeod & O'Keefe, 1972; Churchill & Moschis, 1979).

2.7 Materialism

In the relevant literature, materialism is defined from various social, cultural, psychological, and economic perspectives: a way of life, a value orientation, a cultural system, a personality trait, a second-order value, an aspiration (e.g., Daun, 1983; Fox & Lears, 1983; Ward & Wackman, 1971; Inglehart, 1981; Mukerji, 1983; Belk, 1984; Richins & Dawson, 1990; Bindah & Othman, 2011). Daun (1983) described materialism as a lifestyle in which a high level of material consumption functioned as a goal and served as a set of plans. Materialism lends meaning to life and provides an aim for everyday work. Fox and Lears (1983) regarded materialism as the ceaseless pursuit of the "good life" through consumption. Ward and Wackman (1971) defined materialism as "an orientation which views material goods and money as important for personal happiness and social progress" (p. 422). And Inglehart (1981) considered materialism as an economic orientation to life, a cultural or structural variable, giving precedence to economic values over other values such as freedom, civil power, aesthetics, and friendship. He argued that materialism was a value situated within the constellation of a value system. Similarly, Mukerji (1983) regarded materialism as a cultural system in which material interests are not made subservient to other social goals and material self-interests are prominent. Belk (1984) observed, "Materialism reflects the importance a consumer attaches to worldly possessions. At the highest levels of materialism, such possessions assume a central place in a person's life and are believed to provide the greatest sources of satisfaction and dissatisfaction," (p. 291).

More relevant to this paper, Richins and Dawson (1990) considered materialism as a value orientation with at least three components: a status component, which reflects the intended and actual use of material objects as a means of social recognition and to symbolize one's personal success; the expectation or aspirational component of materialism concerns the extent to which an individual believes that acquisitions of material objects will lead to personal happiness and enjoyment of life; and an affective component represented by the degree to which an individual actually does find possessions to be a source of satisfaction. Materialism is an organizing or second-order value that incorporates both the importance placed on certain end states (achievement and enjoyment values) and beliefs that possessions are appropriate means to achieve these states (Richins & Dawson, 1990).

Richins and Dawson's (1992) concept of materialism rests on the two processes of acquisition and possession. They believe that these processes organize and guide the materialist's plans and behaviours under the expectation of certain favourable end states. There are three themes in their concept of materialism. First, acquisition is central to the lives of materialists. It not only serves as a focal point, but also organizes behavioural patterns. Acquisition serves as a set of plans and goals that directs and guides daily endeavours. Second, acquisition is a means of achieving happiness and well-being in life. To materialists, both acquisition and possession of goods are essential to satisfaction and well-being in life. Finally, materialists use possessions to display success or status. They judge their own and others' success by the number and quality of possessions accumulated. They view themselves as successful to the extent they can possess products that project the desired self-image. Materialism represents a mind-set or constellation of attitudes regarding the relative importance of acquisition and possession of objects in one's life. For materialists, possessions and their acquisition are at the forefront of personal goals that dictate their "way of life." They value possessions and their acquisition more highly than most other matters and activities in life. For Richins and Dawson (1992), materialism is a value that guides people's choices and conduct in a variety of situations, including, but not limited to consumption areas. It should be able to influence not only the type of products purchased, but also the quantity.

This paper follows that of Richins and Dawson (1992) to define materialism as a value of at least three components: acquisition centrality, acquisition as the pursuit of happiness, and possession-defined success. It is an organizing central value that guides people's choices and behaviour in everyday life. It is an enduring belief that acquisition and possessions are essential to happiness and success in one's life. Broadly defined, materialism is any excessive reliance on consumer goods to achieve the end states of pleasure, self-esteem, good interpersonal relationship or high social status, any consumption-based orientation to happiness-seeking and a high importance of material issues in life (Ger & Belk, 1999).

2.8 The Relationship between Peer Communication Influence and Materialism

In the consumer context, many aspects of socialization, including an understanding of materialism, arise from peer communication. It has been recommended that research along these lines be furthered by breaking down peer relationships into factors such as frequency of interaction and communication. In this study, peer communication is investigated to capture its effect on the development of materialism among young adult consumers.

There are very few and well established researches conducted in the area of peer communication and influences and its relationship with materialism (e.g., Moschis & Churchill, 1978; Churchill & Moschis, 1979). Most previous researchers either focused on children or adolescents, and practically no research has examined the effect of peer communication and influences of young adults and its relationship with materialism. Moschis and Churchill (1978) have examined the influence of family communication, on youth's development of specific consumer related motives and values in the context of consumer socialization among adolescents within the age group of (12 to 18 years old). It was reported that adolescent peer groups were particularly significant sources of influence. Children learned from peers "expressive elements of consumption" or "affective consumption" ("styles and moods of consumption"). In the study, the researchers hypothesized that the more frequently an adolescent communicated with their peers about consumption matters, the more positive the individual's materialistic attitudes would be. The result of the study indicated that the correlation between peer communication about consumption and materialistic values was positive and statistically significant and thus suggesting that youths may learn the expressive aspects of consumption from their peers. Adolescents appeared to acquire several cognitive skills by interacting with their peers. Peer communication about consumption variable was related positively to the adolescent's and materialism. Churchill and Moschis (1979) conducted another research with adolescents from both urban and rural areas with respect to peer communication about consumption, in which the researchers hypothesized a positive relationship between the adolescent's frequency of communication with his/her peers about consumption matters and the strength of his/her materialistic attitudes. Their findings indicated that materialistic values increase with the extent of peer communication. Their research findings also indicated that peer influence may be of significance in situations involving conspicuous consumption. These speculations and findings supported a hypothesized positive relationship between the adolescent's frequency of communication with his/her peers about consumption matters and the strength of his/her materialistic attitudes.

Moore and Moschis (1981) have studied the influence of peers as socialization agents and the effects of demographics variables on adolescents' consumer learning within the context of a conceptual model of consumer socialization. In their study, materialism was included as part of the consumer learning properties. The researchers hypothesized that the more frequently an adolescent communicated with peers about consumption matters, the more positive the individual's materialistic attitudes would be. The result was significant. It was found that the frequency of peer communication seems to lead to the development of materialistic orientations. The researchers concluded that the expressive aspects of consumption may be acquired from peer. Later, Achenreiner (1997) conducted a study to examine the materialistic attitudes of children across a wide age span, using a large sample, and a multi-item materialism scale, and examined the relationship between materialistic attitudes in children and susceptibility to peer group influence. The materialistic attitudes of children, ranging in age of 8 to 16 year old were examined using a multi-item materialism scale for children. The findings indicated that materialism was a relatively stable trait, varying only marginally with age, despite the numerous developmental changes taking place as a child gets older. The study also examined the relationship between materialism and susceptibility to peer influence and found a significant correlation. The findings supported the hypothesis that materialism and susceptibility to influence were positively related. The research was critical for a better understanding how materialistic attitudes develop and the role peer influence had on these attitudes. Regardless of age, children who were higher in susceptibility to influence also tended to be more materialistic. Flouri (1999) have examined the extent to which family environment mediate the relationship between family structure, religious attendance susceptibility to interpersonal influence communication with peer about consumption and materialism among mothers with children from college students aged between 16 to 23 years old. The results indicated that materialism was positively related to communication with peers about consumption issues. Materialism was independently predicted by the extent of peer influence. Materialism in adolescents was positively related to communication with peers about consumption issues and susceptibility to interpersonal influence. However within a maternal sample, adolescents' materialism correlated with peer influence. The results also showed that materialism in adolescents was independently predicted by the extent of peer influence. In another study, Chan and Prendergast (2007) surveyed adolescents aged 11 to 20 to ascertain whether adolescents in Hong Kong endorsed materialistic values, and to examine the influences of interpersonal communication on adolescents' tendency to engage in social comparison and endorse materialistic values. They found that peer communications were positive predictors of social comparison with friends, and that peer influence had a positive correlation with materialism. The findings also indicated that normative peer influence was related to social comparison with friends while informative peer influence was not.

On the other hand, Chan and Zhang (2007) have examined the influence of peers and media celebrities on young people's endorsement of materialistic values in China. As the Chinese culture is said to be collective, it was expected that social relations, both personal and celebrity-mediated, played an important role in the establishment of consumption values. The respondents for the study were university students aged 18 to 24 years old in Beijing. The results indicated that peer communication and susceptibility to peer influence were positively related to social comparison. Motivation for viewing advertisements was positively related to imitation of celebrity models. In turn, both social comparison and imitation of celebrity models were positive predictors of materialism. The results of their study revealed that peer communication was positively correlated with social comparison. The level of peer communication reflected the frequency of peer interaction. Respondents who frequently communicated about advertisements and consumption with friends were more likely to engage in social comparison, because much of their communication is about possessions and brands. Social comparison in turn had a positive correlation with materialism. Respondents who compared their possessions with the possessions of friends and media celebrities came to believe that possessions were related to success and happiness, and that possessions occupy a central position in life. The findings of the study was also interpreted as showing that those who placed a high importance on material possessions were keen to engage in social comparison and peer interaction. The study has shown that when youth have higher levels of communication with peers, and were more vulnerable to their influence, they tended to engage in social comparison more often. And, this in turn predicted their level of materialism.

La Ferle and Chan (2008) have examined the influence of marketing communication factors, specifically social influences factors, peers on adolescents' endorsement of materialistic values in Singapore, with adolescents age 13 to 18 years old. They found that respondent would seek advice from peers when they buy products. In the study peer influence explained 40 % of the variance in materialistic values, and was found to be significant predictors of materialistic values among adolescents. Multiple regression analysis indicated that peer influence were positive predictors of materialistic values. Respondents who perceivedhigher level of peer influence were more materialistic. The study indicated that social influences played an important role in predicting levels of materialism among adolescents in Singapore. Furthermore, Roberts, Manolis and Tanner (2008) have investigated adolescents susceptibility to parental and peer influences, and how this susceptibility impact materialistic values and compulsive buying, using a sample of adolescents from grade 7 through 12 whose ranged aged were from 11 to 19 years old. The results of their study indicated that normative peer influence was shown to increase the level of materialism. Based on the background study, the following hypotheses are developed to identify factors that distinguished 'high materialism' and 'low materialism' groups, and to determine the relative importance of these factors in predicting group membership.

Ho1. Young adults who score 'high' on materialism tend to have a higher score on peer communication.

Ho2. Young adults who score 'low' on materialism tend to have a lower score on peer communication.

3. Methodology

The following section mainly provides a discussion on the sample procedures and measurement and reports the inter-item reliability of the main constructs.

3.1 Sample and Procedures

Materialism and peer communication amongst young adults were examined through a survey conducted in the Klang Valley in Malaysia from January to March 2011. The target population were college students in public universities and private colleges of higher learning across the Klang Valley region in Malaysia as most institutions of higher learning in the country are concentrated in this area. College students were chosen for the study because generally they represent the future of a country because, with a good education, most of them will become middle-class professionals. On the other hand, most well-educated college students in the future will become relatively high-income professionals and spend much more money on products or services. Understanding their values and inclinations is useful for predicting the purchase patterns of young Malaysian working professionals. In total, 956 completed the survey questionnaires and were usable for the data analyses.

3.2 Measures

Allthe constructs were measured by multiple items. Generally, the respondents were asked to indicate on a five-point scale the extent to which they agreed with the statements (1=Somewhat disagree, 5=Strongly agree).

Demographics variables were also collected and included gender, age, ethnicity, religion, marital status, and gross personal monthly income.

3.2.1 Materialism

Our key constructs were assessed using previously published, multi-item measures using a five-point Likert format adapted from Richins and Dawson (1992). As a means of testing the Material Value Scale (MVS) cross-cultural applicability using an alternative format, we followed the recommendations of Wong et al. (2003) by replacing the MVS's mixed-worded Likert format with a 15-items interrogative question format. Thus, rather than forcing respondents to agree or disagree with statements (e.g., I admire people who own expensive cars, homes, and clothes), we asked respondents to react to questions (e.g., How do you feel about people who own expensive cars, homes, and clothes?) using a set of specific response options (e.g., do not admire vs. greatly admire). We altered the direction (i.e., left or right side) of these anchors to mirror the original direction of the Likert-style MVS (MVS-Likert). The inter-item reliability (Cronbach's alpha) was 0.69. The mean formed the measure of materialism, with higher scores indicating stronger endorsement of materialistic values.

3.2.2 Peer Communication

Peer communication was operationally defined as the overt peer-young adults' interactions about goods and services. Peer communication was measured with three items in which respondents were asked about the extent to which they interacted with their peers with regards to their buying habit and indicated the extent to which they agree or disagree with the statements. The items were adapted from Moschis and Moore (1979) which originally consisted of three items and were then modified for the study. The original scale response were recorded on a 5-point Likert scale ranging from 1 'Very' to 5 'Never,' whereas we have modified the scale and responses are recorded on a 5-point Likert scale ranging from 1 'Strongly disagree' to 5 'Strongly agree.' The reason for modification was to standardize the scale for the various sections of the questionnaire and to encourage consistency in responses. The statements were: "My friend and I talk about buying things," "My friend and I learn from each other about buying things," "My friend and I trust each other about buying things." The inter-item reliability (Cronbach's alpha) was 0.69.

4. Results

4.1 'High' Materialism and 'Low' Materialism Groups: A Demographic Comparison

The subjects of this study were classified into two materialism groups. That is, respondents who tend to agree more with the materialism statements were classified as 'high' materialism; those respondents who did not agree much with the statements were categorised as 'low' materialism. The classification of high and low materialistic values among young adults, is based on previous study conducted by Goldberg et al. (2003) on materialism among young adults, where their analyses were conducted by dividing the sample into quartiles and focusing on youths who were the most and least materialistic-those in the highest quartile and lowest quartile. The analysis in the study conducted by Goldberg et al. (2003) follows that of Richins (1994) who used the bottom and top quartiles of scores on her Adult Materialism Scale to classify respondents so as "to achieve a clear separation" (p. 524). Similarly, Richins and Dawson (1992) compared the top and bottom terciles. This approach is akin to the "known groups" approach (Wiggins, 1973). Because it is known with relative clarity what to expect of those who fall at either end of the scale, we focus on a comparison between them. In contrast, it is not so clear what to expect for those closer to the middle of the scale and so it is harder to predict how they will score on the various criterion measures.

Chi-square tests of independence were used to examine the demographic differences between 'high' materialism group and 'low' materialism group. Among the demographic variables, however, no significant differences were found between 'high' materialism and 'low' materialism groups. Table 1 presents the Chi-square results for the present study.

Insert Table 1 Here

4.2 'High' and 'Low' Materialism Groups: Comparing the Peer Communication Factor

Independent sample t-tests were used to compare mean scores for the study variables between 'high' materialism and 'low' materialism groups. As shown in Table 2, the present findings are encouraging whereby significant mean differences were found between 'high' and 'low' materialism groups in terms of peer communication factor. Specifically, it was found that the 'high' materialism group has considerably greater ratings on all constructs.

Insert Table 2 Here

From the independent sample t-tests analysis, a profile of 'high' and 'low' materialism groups can be drawn up. Specifically, young adults who tend to communicate with their peers with regards to consumption matters tend to be more inclined towards 'high' materialistic values in comparison to 'low' materialistic values. This result converge with the findings of Churchill and Moschis (1979), which found in their study that materialistic values did increase with the extent of peer communication. The researchers tested the hypothesis that young people may pay attention to television commercials and discuss them with their peers. They found that materialistic values did increase with extent of peer communication. Another study also converged with our present findings, where Moore and Moschis (1981) surveyed 784 respondents from sixth through twelve grade students. Their findings indicated that the frequency of peer seems to lead to the development of materialistic orientations. Thus, concluding that the expressive aspects of consumption may be acquired from peers. Flouri (1999) who surveyed 246 adolescents aged 16 to 23 years old have found that materialism was positively related to communication with peers about consumption issues. Materialism wasindependently predicted by the extent of peer influence. Materialism in adolescents was positively related to communication with peers about consumption issues. Their results showed that materialism in adolescents was independently predicted by the extent of peer influence. In China, Chan and Zhang (2007) surveyed 305 university students (undergraduate and graduate students) aged 18 to 24 and found that peer communication and susceptibility to peer influence were positively related to social comparison. Motivation for viewing advertisements was positively related to imitation of celebrity models. In turn, both social comparison and imitation of celebrity models were positive predictors of materialism. Respondents who compare their possessions with the possessions of friends and media celebrities believe that possessions were related to success and happiness, and that possessions occupy a central position in life. Those who place a high importance on material possessions were keen to engage in peer interaction.

4.3 Predicting Group Membership: A Discriminant Analysis

While the significant mean difference tests as discussed above provided a preliminary insight into the differences between the two materialism groups, the use of independent sample t-tests was not able to determine the relative importance of each factor that best discriminates between ‘high’ materialism and ‘low’ materialism. Therefore, a discriminant analysis was needed to provide an exploration into the discriminating power of these factors. A total of two variables have been included in the discriminant analysis. These variables include: peer communication and materialism.

4.4 Analysing Group Differences

The mean differences between two different groups, namely ‘high’ materialism and ‘low’ materialism groups, with respect to peer communication were examined. The results revealed that the group who tended to be less materialistic was significantly different from the group who tended to be more materialistic in terms of the study construct. As expected, the groups mean differences were consistent with the findings reported in the independent sample t-tests analysis (see Table 3). When compared to ‘high’ materialism, young adults who are less materialistic communicated less about consumption matter with their peers.

Insert Table 3 Here

Statistically, the higher the F-value of a particular variable, the more important the variable is (Hair et al. 2006). It was found that peer communication is an important predicting variable, with the F-value recorded at 24.337. Wilks’ Lambda is another measure of group differences based on individual variable, ascertaining the within group variance with the total variance (Hair et al. 2006). In contrast to F-value, the smaller value of Wilks’ λ (i.e., near 0) indicates that the group means seem to be different, and thus the null hypothesis should be rejected (Hair et al. 2006). It was shown that the Wilks’ λ values for peer communication were low, reported at 0.975, leading to significant p-value of 0.0000. The results have thus far indicated that peer communication is an important significant factor in discriminating the two materialism groups.

4.5 Discriminant Function

Table 4 presents a summary of the discriminant function. There was no discriminant function with the eigenvalue of more than one produced for the two materialism groups. The canonical correlation was 0.196, when squared value implied that this model could explain 44.2 % of the variance in the dependent variable (i.e., materialism). The standardised function coefficients and the structure matrix measures aid in the interpretation of the relative importance of the variables to the function. The higher the standardised function coefficients for a given variable, the more important the variable is (Hair et al. 2006). It was reported that peer communication (0.738) made a great contribution to the function. Next, when the structure matrix correlation was examined, peer communication was again shown to have high correlation with the function (0.800).

Insert Table 4 Here

The classification results of the discriminant analysis are presented in Table 5. Approximately 56.5 % of the respondents in 'low materialism' group were correctly classified, while 58.3 % of the respondents in 'high materialism' group were correctly classified.

Insert Table 5 Here

Overall, 57.3 % of the respondents were correctly classified based on the discriminant function. The classified matrix showed that predictive accuracy of the function was 57 % between the 'high' materialism and 'low' materialism groups. Both hypotheses developed for the study regarding materialism group membership was supported with the use of discriminant analysis. The current findings reported peer communication to be an important factor in discriminating the two materialism groups.

5. Discussion and Direction for Future Research

The information presented in this article suggests adequate evidence that peer communication appears to play an important role in consumer socialization, particularly among young urban adult consumers in Malaysia. Generally, young adult consumers appear to acquire a variety of consumption-related orientations skills, and values (particularly, materialistic values) from their peers interaction. The purpose of this paper was to provide a theoretical framework to explain the mechanism responsible for the development of materialistic values among young adult consumers. The role of peer communication influences on the development of materialistic values among young adult consumers was assessed using a sample of young urban adult consumers in Malaysia. First, this study has attempted to examine if there were any differences between low and high materialism groups among young urban adults consumers, using demographics dimension. Second, the study attempted to examine the differences between low and high materialism groups among young urban adult consumers using peer communication dimension. Subjects were classified into two materialism groups. That is, respondents who tend to agree more with the materialism statements were classified as 'high' materialism; those respondents who did not agree much with the statements were categorised as 'low' materialism. Chi-square tests of independence were used to examine the demographic differences between 'high' materialism group and 'low' materialism group. Among the demographic variables, however, no significant differences were found between 'high' materialism and 'low' materialism groups.

Independent sample t-tests were used to compare mean scores for the study variables between 'high' materialism and 'low' materialism groups, and significant mean differences were found between 'high' and 'low' materialism groups in terms of peer communication factor. Specifically, it was found that the 'high' materialism group has considerably greater ratings on all constructs. The two hypotheses tested regarding materialism group membership using discriminant analysis were supported, indicating significant differences between 'high materialism' and 'low materialism' groups based on peer communication construct studied. The findings of the present study suggest that, young adults who communicated and interacted more frequently with their peers about consumption matters are likely to develop more materialistic values. In contrast, young adults who communicated and interacted less frequently with their peers about consumption matters are likely to develop less materialistic values. Most studies conducted in the area of consumer socialization and materialism have employed well established measures developed and tested mostly in Western cultures. The key construct for this study (materialism) was assessed using previously published, multi-item measures using a five-point Likert format adapted from Richins and Dawson (1992) in South East Asia (Malaysia). The cross-cultural applicability of the Material Value Scale adapted for this study, as a mean of testing the scale using alternative format has proved to be reliable.

Given that peer communication and interaction plays an important role in influencing the development of materialistic values among young urban adult consumers, it is possible that other socialization agent influencers (e.g., family influence and their different forms of communication patterns with their child) may contribute to the development of materialistic values among young adults. This is because one parent's style of communication with the child (FCP) is quite different from that of the other parents. Thus, several avenues for future research are possible. We need to understand the communication processes involved in the transmission and acquisition of certain values (such as materialism) and behaviors from parent to child and how these vary by socio-demographic characteristics. The sample employed for this study has been tested in a specific cultural context alone. Given that the transmission and acquisition of values vary by socio-demographic characteristics, future studies using similar measures could be employed and tested in different cultures to better understand the impact of peer communication influences on materialism, especially among young adult consumers which has not extensively been explored in previous research related to the study of consumer socialization and values.

This study is an attempt to provide information which could be useful to help marketers to get a better understanding of their target consumers. On the other hand, this study will evoke the attention of consumer educators that young people's materialistic values are likely to get them into financial troubles. From a theoretical perspective, this study is an attempt to inform our ideas about consumer learning, development, and change. No other area of consumer behaviour research is so focused on the process and outcomes of consumer learning that evolve over time.

From a managerial perspective, consumer socialization research provides unique insight into the beliefs and behaviour of an important consumer segment that is young adults. Finally, from a public policy and societal perspective, there is probably no other topic in consumer research that holds more interest than socialization and the study of materialism. Government agencies and consumer groups have had an uneven history of aggressively pursuing consumer in these areas.

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Table 1. High Materialism and Low Materialism: A Demographic Comparison

Characteristics	'Low' Materialism (N = 527)		'High' Materialism (N = 429)	
	Frequency	Percentage	Frequency	Percentage
Gender (X^2 = 0.000, p-value = 0.997)				
Male	210	39.8	171	39.9
Female	317	60.2	258	60.1
Age (X^2 = 0.332, p-value = 0.954)				
18 & below	27	5.1	25	5.8
19-29	443	84.1	356	83.0
30-39	48	9.3	42	9.8
40-48	9	1.5	6	1.4
Ethnicity(X^2 = 2.553, p-value = 0.466)				
Malay	262	49.7	233	54.3
Chinese	159	30.2	111	25.9
Indians	56	10.6	46	10.7
Others	50	9.5	39	9.1
Religion(X^2 = 4.706, p-value = 0.319)				
Islam	302	57.3	254	59.2
Buddhism	114	21.6	81	18.9
Hinduism	49	9.3	41	9.6
Christianity	48	9.1	48	11.2
Others	14	2.7	5	1.2
Marital Status (X^2 = 2.548, p-value = 0.467)				
Single	467	88.8	373	86.9
Married without children	22	4.0	21	4.9
Married with children	36	6.8	30	7.0
Widow/Widower/Divorcee	2	0.4	5	1.2
Education[a] (X^2 = 5.399, p-value = 0.249)				
Primary School or Less	0	0.0	1	0.2
PMR/SRP/LCE	1	0.2	2	0.5
SPM/SPVM/MCE	61	11.6	40	9.3
College Diploma	157	29.8	150	35.0
Professionalqualification/University degree	308	58.4	236	55.0
Monthly Gross Personal Income (X^2 = 6.600, p-value = 0.252)				
Less than RM1,000	348	66.0	281	65.5
RM1,000 to RM1,999	73	13.9	56	13.1
RM2,000 to RM3,999	78	14.8	57	13.3
RM4,000 to RM5,999	20	3.8	30	7.0
RM6,000 to RM7,999	7	1.3	3	0.7
RM8,000 to RM9,999	1	0.2	2	0.5

Note: [a] PMR/SRP/LCE is equivalent to nine years of formal elementary and middle school education.

Table 2. Comparing the Mean Scores of the Peer Communication Factors

Main Constructs	Mean[a]		t-value	Significance[b]
	'Low materialism'	'High materialism'		
Peer communication	3.52	3.78	-4.933	0.000

Note: [a] Higher scores represent greater agreement with the attributes; [b] Level of significance using t-tests.

Table 3. Materialism Group Differences

Variables	'Low Materialism'		'High Materialism'		Wilks' Lambda	F	Sig
	Mean	Std. Dev	Mean	Std. Dev			
Peer communication	3.52	2.411	3.78	2.399	.975	24.337	0.000

Table 4. Discriminant Analysis of the Two Materialism Groups

Variables	Unstandardized Coefficient	Standardized Coefficient	Pooled within groups Coefficients
Peer communication	.333	.738**	.800

Note: Eigenvalue = 0.040; Canonical Correlation = 0.196; Wilks' Lambda = 0.962; Chi-square = 37.202.
**p<.0000

Table 5. Classification Results of Discriminant Analysis

Actual Group	Group Centroids	Number of Cases	Predicted Group Membership	
			'Low materialism'	'High materialism'
'Low Materialism'	-.180	527	298 (56.5 %)	229 (43.5 %)
'High Materialism'	.221	429	179 (41.7 %)	250 (58.3 %)

Note: 57.3 % of the grouped cases were correctly classified.

Towards the Business Federation in Top Management Consulting in Europe: The Role of Co-creation

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Received: December 12, 2011 Accepted: December 28, 2011 Published: March 1, 2012
doi:10.5539/ibr.v5n3p16 URL: http://dx.doi.org/10.5539/ibr.v5n3p16

Abstract

We present the business federation as a new organizational form. We illustrate how management consulting firms can achieve economic growth through operating locally within an international network. We use management consulting firms operating in Western Europe as our empirical setting. Within the business federation local offices gain access to resources through an extreme form of delegation as it is not top management that delegates to local offices but rather local units that give top management the permission to handle certain tasks because it is most efficient to do so. Using questionnaire as instrument, the article illustrates how the business federation is supposed to function through the use of five organizational design parameters. The research shows a support for the claim that firms that operate close to principles of the business federation achieve a stronger economic growth than other firms operating further away from the federation, using profits per partner as the criteria. Firms that started out from strategy consulting achieve a higher growth rate than other firms. The research contradicts claims found in the academic literature as alternatives to the partnership model supports economic growth.

Keywords: New organizational forms, The business federation, Co-creation, Management consulting firms, Europe

1. Towards Co-creation in New Organizational Forms in Europe

The first couple of decades after 1945 were the golden years of economic growth where companies where rewarded for introducing, developing and sustaining strong organizational hierarchies and strict work roles. Today the situation has changed dramatically. Markets have become highly competitive and turbulent, and are constantly changing. Markets conditions move from being simple to complex, from stable to dynamic, and from being tame to being hostile (Neu & Brown, 2005). Economic turbulence linked to accelerating internationalization, continuous improvements of technologies and deregulation of markets have profound impacts on firm's competition. As new business regimes emerge, managers are realizing that the basis of competitive advantage is found in the customer base. Value and meaning are created together with customers and other stakeholders, through a process called co-creation among business managers and academics.

Economists and environmental analysts ascribe these changes to transformations of the economic infrastructure. A metamorphosis leads to a replacement of manufacturing resources with knowledge as a driving force of economic growth. Capital, labor and property, in other words the economist's traditional factors of production, are still important, but become less crucial as sources of value creation (Leonard-Barton, 1995; Nonaka & Takeuchi, 1995; Grant, 1996a; Grant, 1996b). Knowledge can be regarded as operant resources that often are dynamic, invisible and intangible (i.e. Constantin & Lusch, 1994; Vargo & Lusch, 2004). Increasingly, both practitioners and academics are shifting toward viewing customers as co-creators. Among academics, Normann and Ramirez (1993, p. 69) state that "the key to creating value is to coproduce offerings that mobilize resources". Prahalad and Ramaswamy (2000) argue for co-creating customer involvement as markets have become a venue of proactive customer involvement. Lusch et al. (1992) provide a general model to explain how much the customer will contribute to the co-creation process. Oliver et al. (1998) extend the idea of co-creation by introducing the concept "real-time" marketing, which integrates mass customization and relationship marketing in order to meet customers changing needs.

Closely linked to the coproduction process is the service-centered view of marketing, which can be regarded as both customer-centric (Steth et al., 2000) and market-driven (Day, 1999; Day, 1994). This means more than simply being consumer-oriented; it means being adaptive to customers' individual and dynamic needs. A service-centered dominant logic implies that value is defined by and be co-created with the customer rather than embedded in outputs.

Haeckel (1999) observes successful firms moving from practicing a “make-and-sell” strategy to a “sense-and-respond” strategy using the market place as a learning arena. Thus, a market-oriented and a learning organization are compatible with the service-centered model (Slater & Narver, 1995).

The emerging service-centered dominant logic is also compatible with emerging theories of the firm (Teece et al., 1997) stressing that economic uncertainty calls for a more dynamic approaches in analyzing, formulating and implementing strategic possibilities. For this reason we use an approach derived from evolutionary economics illustrating that the use of dynamic competences is dependent on routines (Nelson & Winter, 1982).

2. Towards the Business Federation in Management Consulting Firms

Increased turbulence, increased change and knowledge requirements have led to increased complexity, both internally and externally in organizations. As a consequence, co-creation becomes more important. By using co creation as a tool it is possible for firms to identify and explore business opportunities by taking an entrepreneurial strategic posture, building on strong performance incentives. Being entrepreneurial allows a firm to be responsive to lucrative market opportunities. An entrepreneurial strategic posture can also give advantages by responding quickly to business opportunities at the same time as firms can be able to repress business threats. Being agile evolves staying nimble and flexible, open to new evidence, ready to reassess past choices and change direction as business opportunities are explored and exploited.

Handy (1992, 1994) extends the nature of contradictions that managers face to issues related to power and control. He adds that a major challenge for modern businesses is to try to achieve the advantages of large firms as well as small ones. Handy is of the opinion that the federalist concept, applied to the business context, is particularly appropriate to deal with managerial contradictions. A company that seeks growth can emphasize an organizational model that tries to solve the dilemma of operating locally within an international network. This dilemma should be in accordance with the times we live in. We wish to be a part of a strong entity at the same time as we prefer a high degree of autonomy in our professional lives. Within the business federation it is not the top management that delegates to local units but rather local units that give top management the permission to handle certain tasks because they are handled more efficient at the top, for example when introducing corporate support services. The center does not direct or control, but rather advices, coordinates and influences, being well aware that initiatives generally come from local levels (Handy, 1992; Handy, 1994).

3. Introduction of a Building Block Systemin Order to Describe the Business Federation

A number of management thinkers and researchers advocate a process of renewal of corporations which inevitably will lead them to behave more in accordance with federalist principles (Simon et al., 1950; Drucker, 1954; March & Simon, 1958; Provan, 1983; Bartlett & Ghoshal, 1988; Bartlett & Ghoshal, 1995; Handy 1992; Handy, 1994). However, these authors only provide a partial understanding of the importance of federalist behavior. We describe federalist behavior though the use of a building block system consisting of autonomy at local levels, the extent to which local offices share resources, ownership of resources at local levels, lack of hierarchical control of local units, and how corporate services can be used. The building block system represents a guide for how to hold international management consulting firms together, and illustrates how co-creation can be used in the sampled firms.

3.1 Autonomy

It is often assumed that autonomy can promote entrepreneurial activities. This argument can also be used in studies of the business federation since autonomy can influence entrepreneurial processes. The relationship between autonomy and performance is assumed to be positive since local levels may serve clients in a better way than the corporate level can. Our findings support this argument.

3.2 Resource Sharing / Interdependence

Management consulting firms face challenges in providing local offices with access to limited resources without duplicating costs. This requires specialization and coordinated efforts among local offices, in accordance with marketing thinking as individuals and companies are constantly moving toward more specific specialties (Shugan, 1994). A positive relationship between resource sharing and economic performance can be expected. Our research supports this argument.

3.3 “Ownership”

Within management consulting firms it is generally assumed that partnership models, with the use of up-or-out promotion policies, can make sense since a firm’s reputation among clients and other market intermediates are closely related to the perceived quality of the partners. Our findings do not support such an argument as the partnership model might not function as expected since it may involve a loss of considerable firm-specific knowledge.

3.4 Control Mechanisms

Social means of control, consisting of ideology, culture and sanctions, can regulate behaviors at local levels within the business federation. By ideology we mean integrated set of beliefs that unite a firm so that members are ensured basic knowledge on how a firm is supposed to work. Culture can be regarded as cognitive mindsets, manifested through behaviors and language. Sanctions can involve that group members punish colleagues who violate goals, norms and values, ranging from gossips and rumors to ostracism and sabotage (Ferlie and Pettigrew, 1996). Social means of control are supposed to have a positive effect on performance. Our findings support this argument.

3.5 Corporate Services / Boosting Units

Through the use of corporate services management consulting firms can leverage cumulative experiences found in the client base. Local offices can concentrate on promoting entrepreneurial processes. Our findings are in accordance with this argument.

4. Top Management Consulting Firms Used as the Empirical Setting

The top management consulting industry represents the empirical setting of the research. Given the nature of the consulting industry, it maybe expected that consulting services provide an adequate setting for the adoption of changes in design parameters which can move firms towards the business federation. The business federation can balance the need for coordination and local autonomy. Therefore, insights derived from the business federation can be used to explain phenomenon of specific configuration choices in strategy consulting firms.

The sample is drawn from a population of local offices within strategic practices being located in eleven West European countries. All leading international consulting firms decided to participate in the research. The research is restricted to internal configurations of consulting firms, with an interest in the relationship between local offices and the head quarter. Only management consulting firms with offices in several countries are included in the sample.

The unit of analysis is local offices within management consulting firms with international operations. Within the local offices we limit the analysis to top management consulting. Such consulting is conceived to include formulation and implementation advice, as well as related areas such as restructuring, and mergers and acquisitions. The research focuses on a relatively homogeneous group of services enhancing the likelihood of correct interpretation of common categories. Differences in office attributes have been allowed for, such as the diversity of consulting services offered, founding year of the firm, size of offices and the ownership structure.

The target population is made up of European management consulting firms, specializing in strategy. A database of local managing directors was compiled, including the information provided by the firms and field directories. The population consists of 185 national offices. A total of 65 local offices responded to the survey, which represents a 35 % response rate. Eight top consulting firms provided three or more responses from different countries. Four responses were dropped from the analysis because they could not be correctly defined as strategy consulting practices.

Data collection posed major challenges given the small population size, the nature of information requested, and the industry's norms regarding secrecy. In order to maximize the response rate the questionnaire was extensively pre-tested. A preliminary questionnaire was returned from nineteen local offices in Norway and Spain at the end of 1997. Meetings with senior consultants in Spain helped to refine the questionnaire before being used in a larger European survey.

A survey, directed towards the selected 185 local offices, generated 38 responses in March 1998. A duplicate copy of the survey was sent by fax in November 1998 providing 27 additional responses. We report the results received until the middle of December 1998. The questionnaire made it explicitly clear that the relevant situation was the one prevailing in January 1998. All firms were international in their scope of activities, yet with different degrees. All firms offered various services in addition to top management advice. Eight firms had top management services as their primary area of activity.

The questionnaire is divided into 14 parts. Three sections are devoted to the measurement of autonomy of local offices, two to control of the office by the head-office, one to the existence and rules governing the use of support services, one to ownership of local resources, and four to interdependence and resource sharing between local offices. All explanatory variables were coded so that higher values imply closeness to the federation and lower values correspond to deviation from federalist behavior. Two sections measure performance at the office level, another one tries to capture the strategy focus, and a final section, contains basic demographics of a given local office.

4.1 Performance Measures

Given the exploratory nature of this study, it was decided not to use the full set of performance indicators included in the questionnaire. "Profits per partner" was selected in favor of ranks on "total revenues" and "revenues per consultant" since the former is a more comprehensive measure of performance capturing the aspects of the relationship between the partners and the firm (for example, the institutional configuration of power and ownership of the firm), which the other indexes would not cover.

4.2 Control Variables

We measured the focus of the strategy practice within in its attempt to add value to customers. We also asked about demographics of the strategy practice, covering aspects such as age and size. As explanatory variables the following was chosen in order to describe federalist behavior: autonomy of local offices, control mechanisms over local offices, supply services, ownership over local resource, and resource sharing/independence between local offices.

4.3 Autonomy of the Local Office

We presented three types of questions, one related to the degree of flexibility in customizing services to specific clients, one to the nature of authority of the local office, and one to the possibilities to decide on issues, for example when entering into an alliance at local levels. We ran an exploratory factor analysis as a variable reduction technique. Four meaningful factors explained 73.1 % of the variance, based on 56 observations. The factors, which emerged after rotation, can be described as:

Factor 1 (22.98 %). Autonomy in setting the institutional configuration of the company in the country of the local office; entering into an alliance (0.859), merging at a national level (0.868) and promotion to a partnership position (0.779).

Factor 2 (12.60 %). Autonomy in defining the business strategy of the office; expanding into new segments (0.854) and changing business strategy (0.633).

Factor 3 (13.36 %). Autonomy in decisions involving the use of local resources; local skills used by foreign offices (0.708) and following a client abroad (0.821).

Factor 4 (24.15 %). Autonomy in serving customers (operational autonomy); standard client fees (0.875), customizing services (0.712) and how to serve clients (0.779).

4.4 Resource Sharing / Independence

Four sections were devoted to focus on resource sharing and independence. In the first section we tried to measure the extent to which local offices use formal means (systems, procedures and politics) designed to share resources with other offices. In addition, we used informal means as guidelines for sharing resources. We also asked for the percentage of time consultants used in other local offices in order to analyze interdependence between local offices more closely.

Factor analysis generated three common factors, with all twelve original variables included explaining 68.93 % of the variance. Higher degrees of independence and more use of formal means of resource sharing are consistent with closeness to the business federation. A priori, we associated more intense use of informal means of resource sharing to be in accordance with federalist principles, however without a theoretical argument supporting this link.

Factor 1 (25.28 %). We focus at formal means of resource sharing, mainly sharing of information; formal means/serving clients (0.876), informal means of serving clients (0.683) and formal means of managing a local office (0.761).

Factor 2 (21.82 %). Use of informal means of resource sharing; informal means/industry experience (0.86), informal/functional experience (0.780) and informal information on clients (0.745).

Factor 3 (21.93 %). Interdependence and use of formal means of sharing expertise; working days devoted to other offices (0.812), working days used at other offices (0.774), formal means/industry experience (0.725) and formal means/functional expertise (0.745).

4.5 Ownership over Local Asset

A main characteristic of the business federation is that power belongs to the lowest level in the hierarchy, in accordance with principles of the co-creation literature (i.e. Day, 1994). We associated higher values with local ownership would imply closeness to the federation. Two factors explained 80 % of the variance, based on 55 observations.

Factor 1 (40.84 %). Local ownership of economic resources generated at the local level; cash flow (0.880 %) and cash available (0.895).

Factor 2 (39.54 %). Local ownership of intangible assets located at the local levels; professional skills (0.857) and the relationship with clients (0.890).

4.6 Control over Local Units

The measurement of control of local units was used in order to focus on the extent to which local units can deviate from standards set by head office. We also measured the extent to which head office regulate activities of the strategy practice within local offices. Factor analysis generated three common factors, with the inclusion of ten of the original fourteen items, explaining 74 % of the variance. On the first and the third factors 56 observations were used, while 57 observations were used on factor two.

Factor 1 (32.7 %). The use of cultural control; shared values (0.876), goal accomplishments (0.824), management by objectives (0.751), collective decision making (0.802) and internalized norms of conduct (0.706).

Factor 2 (20.2 %)[*]. Lack of operational control, that is, the extent to which local offices are free to deviate from standards set by head quarter; clients to serve (0.867), setting client fees (0.704), and composition of project teams (0.765).

Factor 3 (21.0 %)[**]. Lack of bureaucratic control; job description on functions and activities (0.976), and written rules and standard procedures (0.982).

[*] The original scale was reversed in such a way that higher values indicate more freedom to deviate from standards.

[**] The original scale was also reversed so that higher values would indicate the non-existence of bureaucratic control since this was presumed to be associated with federated principles.

4.7 Supply Services / Boosting Units

Eight types of possible support services were listed. The respondents were asked to mark on items inquiring about whether the service is available, and, in the case the service was provided, whether the office was free to decide how to use it, and whether the office had to pay for such services. We counted the number of occasions each event occurred. These measures serve as a proxy to capture to what extent supply services existed and the rules governing their use.

Even though the computer suggested using one factor, we decided to use two since we anticipated two different components associated with the use of supply services. Two meaningful factors explained 90 % of the variance, based on 54 observations. We measured both the number of services and the freedom for how to use them. The factors weighted equally. We decided to include the variables in the composition of each factor, with corresponding factor loadings.

Factor 1 (45.19 %). The existence of shared services operating with market rules/freedom to decide how to use and subject to an internal market for services; number of services to pay for (0.957 %) and number of services/freedom to use shared services (0.645).

Factor 2 (44.68 %). The existence of support services not compulsory for local units; number of supply services available (0.958) and number of services/freedom to use them (0.633).

5. Factor Analysis and Regression Analysis

In accordance with the exploratory purpose of the research, we used a number of simple techniques in order to learn from data collected. We first ran an exploratory factor analysis (with Varimax rotation) to gain insights on the underlying interrelationships among original variables included in each design dimension.

5.1 Rotated Factor Analysis as Inputs in a Regression Analysis

To explain the effect of design choices associated with the business federation on performance we estimated a series of OLS regression models, using the results of rotated factor analysis, described in the former section, as inputs in the regression.

We compared and contrasted the results of regression under two different schemes of factor composition: first, when variables are included in the factor model with their respective factor loading, and on the other, when the principal components include only the factors giving meaning to the factors. The initial results were not very different, yet some regression coefficients were not stable across models due to interaction effects, not initially included in these comparison analysis. We chose to use the case where factors were formed including only the original variables which provided meaning to each factor.

5.2 Findings and Interpretations

BOOSTING F1 captures the existence of shared services where local offices are free to decide how to use such services. Market conditions regulate the relationships between local offices and support service units found centrally. On the other hand, the mere availability of more support services is not associated with performance, as the negative sign of BOOSTING F2 suggests. "Local ownership of economic resources generated" has not a clear effect on performance, with alternate signs and not significant slopes. On the contrary, "local ownership of intangible assets located at the local level" (OWNERSH F2) shows a negative main effect if we do not take into account interaction effects, yet it turns out to be high, positive and significant if we are able to remove some of the interrelationships with other factors. "The use of formal means of sharing information" has a positive effect on performance. However the level of significance is low. "The use of informal means of resource sharing across offices" has a consistent negative effect on performance.

The estimation of the models presented clearly suggests the existence of interaction effects and moderated causal relationships in addition to direct effects. The parameter of AutoF3*ControlF3 (2.07) implies that for every unit that "lack of bureaucratic control" increases, the slope of "autonomy over the use of local resources" on performance increases with two units. The coefficient 1.93 of AutoF3*ExpShINTP suggests that the slope of "autonomy over the use of local resources" on performance increases almost two units, giving a one unit increase in "interdependence and formal means of sharing knowledge". However, we would have expected that the lack of operational control coupled with benefiting from operational autonomy would permit an office to tailor-make products to specific needs of national markets, and therefore be positively related to performance. Consistent with the theoretical framework is the positive and consistent effect of internal use of corporate services/boosting units could be expected.

Insert Table 1 Here

"Local ownership of resources generated" has not a clear effect on performance, with alternate signs and non-significant slopes. "Local ownership of intangible assets located at the local level" (OWNERSH F2) shows a negative main effect if we do not take into account interaction effects, yet it turns out to be high, positive and significant if we are able to remove some of the interrelationships with other factors. "The use of formal means of sharing information" has a positive effect, but does not reach a level of significance. "The use of informal means of resource sharing across offices" has a consistent negative effect on performance.

We present the interpretation of certain interaction terms. We suggest that these interaction terms are significant. The parameter of AutoF3*ControlF3 (2.07) implies that for every unit that "lack of bureaucratic control" increases, the scope of "autonomy over the use of local resources" on performance increases with two units. In similar terms, the coefficient 1.93 of AUTOF3*ExpShlNTP suggests that the scope of autonomy over the use of local resources on performance increases with almost two units, given a one unit increase in "independence and formal means of sharing expertise". However, we would have expected that the lack of operational control coupled with benefiting from operational autonomy would permit an office to tailor-make offerings of the firm to specific needs of local markets, and therefore be positively related to performance. Thus, the negative effect of AutoF4*Control F2 is counterintuitive.

6. Cluster Analysis and Regression Analysis

A cluster analysis was conducted in order to test which effect closeness to the business federation can have on performance. Our reasoning is that the more firms where involved in co-creation of services with clients, the more federated it would be. If it so that firms operating closer to principles of the federation achieve higher economic growth than firms operating further away from principles of the business federation, the organizational form can make sense for companies in our sample.

We attempted to control for other factors that can explain performance. We included origin (strategy practice or not), ownership structure (partnership or other organizational arrangements), the year the firm was founded, number of European consultants, number of strategy consultants at the local office, the age of the local offices, ownership structure, and the number of European consultants, as factors.

Since research on management consulting firms has not reached a very advanced level, it makes sense to conduct an inductive analysis. Through the use of K-means clustering we attempted to maximize within-cluster homogeneity relative to between-cluster heterogeneity. After initial cluster centroids are selected, each observation is assigned to the group with the nearest centroid. As each new observation is allocated, the cluster centroids were recomputed. To arrive at a reasonably good solution, passes were made through the dataset until no observations change clusters, leading us to conclude that the final solution optimizes within-cluster homogeneity and between-cluster heterogeneity. In order to meet these requirements the numbers of clusters were specified a priori.

The computer recommended four clusters, which is in accordance with our reasoning. The solution gives a strong degree of significance of the attributes for explaining federalist behavior. The value for operational autonomy was (0.059), autonomy in the relationship with other local offices was (0.077), cultural control scored 0.020 and the values for the rest of the attributes were 0.000.

One cluster (cluster two) seems to operate close to federalist principles while another one seems to operate far removed from such principles (cluster four). The two other clusters can be described as behaving between these two clusters. In order to give the reader a better idea of the values of different clusters, see figure two where C1, C2, C3 and C4 represents the values of cluster one, two, three and four, respectively.

Insert Table 2 Here

6.1 Performance within the Four Clusters

We use profits per partner as the criteria to measure performance, using cluster two as the dummy variable. We suggest that cluster two operates closest to federalist principles. If this is the case, negative values of cluster one, three and four should be expected at significant statistical levels, making it possible to indicate that closeness to principles of the business federation has a positive effect on performance. When running a regression analysis we included the same demographic variables as we used in the factor analysis. Running a cluster analysis a R2 value of 0.87 and an adjusted R-square of 0.56 were achieved.

We also ran an analysis excluding control variables in order to get an indication of the importance of cluster membership. An R square of 0.438 was achieved, with an adjusted R square of 0.122. This means that of an adjusted R square of 0.56 only 0.122 was explained by cluster membership.

Cluster two performs better than cluster four. However, since the levels of significance for cluster one and cluster three is low, it is not possible to conclude that cluster two performs better than cluster one and cluster three.

The findings support the argument that firms staring out from strategy achieve a stronger performance than other types of firms. Number of strategy consultants at the local level has a strong positive effect on performance. The research finds support for the argument that firms with a long experience score higher than firms with a shorter experience in the management consulting field.

7. Discussion and Conclusion

New patterns of competition threaten firm survival in virtually all industries. At the same time well-established management tools are no longer as relevant as they once were. We introduce the business federation as a new organizational form suited for firms facing dynamic and turbulent business environments. However, the conclusions provided can only be partial and preliminary as a result of a relatively small sample size.

A service-centered view identifies operant resources, especially higher-order core competences, as the key to obtaining competitive advantage (Vargo and Lusch, 2004). Ultimately, the most federated firms might be those whose core competence is marketing and all its related market-sensing processes (Day, 1999; Haeckel, 1999).

Historically, most communication with the market can be characterized as one-way, mass communication that flow from the offering firm to the market or to segments of markets. A service-centered view of exchange suggests that individual customers increasingly specialize and turn to their domesticated market relationships for services outside their own competences. The focus is shifting away from tangibles toward intangibles such as skills, information and knowledge, and toward ongoing relationships. Science has moved from a focus on mechanics on one on dynamic evolutionary development. Dialogue with customers becomes more important, where the objective is to ask and answer questions. Prahalad and Ramaswamy (2000) argue that customer rather than corporations are increasingly initiating and controlling this dialogue.

Using a bottom up perspective in order to tailor-make services, we argue that the days of mass-marketing are numbered. Today, firms are turning back to the competitive value of craftwork as an end in itself, where co creation becomes an important part of the service delivery process. Increasingly, companies succeed by offering tailored make services to carefully targeted market segments using crating as a method. Bottom-up organizations typically have an incredible appetite for experimentation with new ideas. Business renewal is at the center of the firm's attention as such a focus can lead to breakthrough performance.

Management consulting firms operate in dynamic and turbulent business environments. Change is driven by a myriad of socio-economic and technological factors that have influence on market trends and methods of satisfying customer needs. Management consulting firms need to achieve the benefits of adaptability and efficiency. Such firms seem to go further along the avenue to decentralization leading us to believe that certain companies can become federated. Our research suggests that large and older companies operating in multiple geographical locations within multiple businesses seem to be ahead of this emerging evolution. The business federation is not the only path. Some companies are retaining high degrees of centralization as they expand internationally, but we suggest that the trend is moving in the direction proposed in this study.

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Table 1. Regression Analysis (Factor Analysis)/Profit per Partner

	Model
Control Variables	
1 Cust. Intimacy Relations	0.051**
2 Service Diversification	0.264*
3 Year Strategy Started	0.034*
4 Year Firm Found	0.035***
5 OwnershipStatus	0.974*
6 EuroConsultant	0.444*
Explanatory variables	
7 AUTO F1	1.195***
8 AUTO F2	0.604*
9 AUTO F3	-7.231
10 AUTO F4	15.081***
11 CONTROL F1	0.213
12 CONTROL F2	6.369*
13 CONTROL F3	4.090**
14 BOOSTING F1	0.347*
15 BOOSTING F2	-0.397
16 OWNERSH F1	-0.303
17 OWNERSH F2	7.036***
18 ResSharFormal F1	0.116
19 ResSharInformal F2	-2.635***
20 ExpShr-INTPD F3**	-6.073**
Interaction terms	
21 AutoF3*ControlF2	-1.345
22 AutoF3*ControlF3	2.073***
23 AutoF3*ExpShINTP	1.930***
24 AutoF4*Ownership2	-3.447***
25 AutoF4*ControlF2	-1.405*
26 AutoF4*ControlF3	-1.232**
27 Auto4*Ownsh2*Contr2	0.377***
Intercept 5.035	
R2 0.901	
F= 5.421	
Degrees of freedom 16	

Note: * $p<0.10$; ** $p<0.05$; *** $p<0.01$. Based on 44 complete observations.

Table 2. Results from a Cluster Analysis-Mean and Standard Deviations (C=cluster, SD=standard deviation)

	C1 Mean (SD)	C2 Mean (SD)	C3 Mean (SD)	C4 Mean (SD)
Operational autonomy	4.58 (0.78)	4.48 (0.58)	4.42 (0.49)	4.07 (0.85)
Autonomy-other local offices	4.25 (0.54)	4.77 (0.41)	4.94 (1.40)	4.18 (0.67)
Cultural control	5.48 (0.60)	5.90 (0.87)	1.43 (0.48)	5.50 (0.73)
Lack of operational control	4.19 (0.71)	4.64 (0.55)	5.00 (0.00)	4.14 (0.69)
Payment and freedom to use support services	4.13 (1.54)	6.18 (1.21)	4.83 (0.41)	3.32 (1.22)
Ownership over skills	1.75 (0.72)	4.64 (0.65)	2.58 (1.29)	4.57 (0.81)
Formal means of interdependence	4.08 (0.51)	3.88 (0.62)	3.75 (1.37)	3.86 (0.62)

For-Profit College Entry and Cost Efficiency: Stochastic Frontier Estimates vs Two-Year Public and Non-Profit Colleges

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Received: January 01, 2012 Accepted: January 20, 2012 Published: March 1, 2012

doi:10.5539/ibr.v5n3p26 URL: http://dx.doi.org/10.5539/ibr.v5n3p26

Abstract

This paper provides stochastic frontier cost and (in)efficiency estimates for private for-profit colleges with comparisons to public and private non-private colleges. The focus is on the two-year U.S. higher education sector where there exists the largest and fastest growing entry of for-profit colleges. Unbalanced panel data is employed for four academic years, 2005-2009. Translog cost frontiers are estimated with an inefficiency component that depends upon environmental factors defined by college specific characteristics. More experienced public and private non-profit colleges are found to be more cost efficient relative to the newer entrants. In addition, the newer for-profits exhibit greater efficiency variability but also show some evidence of efficiency gains over the academic years. There is some cursory evidence that for-profit entry is positively correlated, albeit weakly, with greater public college sector inefficiency.

Keywords: For-profit colleges, Cost efficiency, Stochastic frontier

1. Introduction

Greater international competitiveness accompanied by continuous declines in the tax supported funding of public colleges and universities have created a proliferation of interest in a more market based delivery of higher education. For-profit institutions have increasingly responded. In the U.S., that response is evident in the growth of two-year degree granting for-profit colleges. Over the past two decades, the percentage of for-profit colleges comprising the two-year college sector increased from 12 % to 32 %. For-profit entry has also been witnessed in the baccalaureate and graduate degree granting markets, but it has not approached anything near the two-year volume. The overall for-profit market share of has more than tripled over the past two decades. Those who generally praise such growth and argue for more of it contend that it offers increased efficiency encouraged by the for-profit motive of private enterprise. Yet, it is somewhat surprising that there is not substance of empirical evidence existing in support of that contention. Based on operating efficiencies, can for-profit higher education be preferred in substitute to education traditionally provided through publicly owned and controlled colleges?

Therein lies the purpose of this paper. The primary thrust is to investigate possible differences in cost efficiencies of public relative to private for-profit colleges. The focus is on U.S. two-year colleges where there actually exist three institutional sectors, viz., public, private non-profit, and private for-profit colleges. Stochastic cost frontier analysis is applied to estimate the cost structures and inefficiencies pertaining to each sector. The analysis employs unbalanced panel data in each sector over four academic years, 2005-06 through 2008-09.

2. Applied Background and Methodology

The inquiry relies on the stochastic frontier methodology rooted in the pioneering work of Aigner, et al. (1977) and Meeusen and van den Broech (1977). Other advances and applications centered on production frontiers are of critical interest, including Kumbhakar, et al., (1991), the Battese and Coelli (1992 and 1995) contributions, and Coelli, et al. (1999). Kumbhakar and Lovell (2003), Coelli, et al. (2005), and Fried, et al. (2008) provide extensive overviews of the literature. Applied studies specific to cost frontiers have examined the U.S. airlines industry (Kumbhakar, 1991), insurance industry (Cummins and Weiss, 1993), hospital care (Fujii and Ohta, 2001; Bradford, et al., 2001; Fujii, 2001), banking (Huang & Wang, 2001), electricity (Knittel, 2002), nursing homes (Farsi & Filippini, 2004), crime prevention (Barros & Alves, 2005), and English football (Barros & Leach, 2007). Only since 2002 has higher education come into the fold of frontier analysis. The applications include English and Welsh universities (Izadi, et al., 2002; Stevens, 2005; Johnes & Johnes, 2009), Canadian universities (McMillan & Chan, 2006), and Australian and New Zealand universities (Abbott & Doucouliagos, 2009). Based on a fairly exhasutive literature review, it is believed that this paper is the first to apply stochastic cost frontier analysis to an inquiry of possible cost inefficiency differences between non-profit and for-profit colleges.

To capture the multiproduct nature of colleges, the stochastic cost frontier is empirically modeled with the approximation flexibility of the translog specification. The more restricted Cobb-Douglas being nested therein is easily testable. Thus, total cost (*C*) can be defined as

$$C = \alpha_0 + \sum_j \alpha_j Y_j + \sum_k \beta_k w_k + \tfrac{1}{2}\sum_j \sum_l \alpha_{jl} Y_j Y_l + \tfrac{1}{2}\sum_k \sum_m \beta_{km} w_k w_m + \sum_k \sum_j \xi_{kj} w_k Y_j + (v+u) \quad (1)$$

where, *C*, *Y*, and *w* are in natural logs and vary by college *i* over time *t*. University production is represented by the outputs *Y* and the prices pertaining to the factor of production are denoted by *w*. The standard coefficient $a_{ij}=a_{ji}$ equalities apply. For the Cobb-Douglas specification, the cross product terms vanish. As is usual, the component error is comprised of the random v_{it}, independently and identically distributed $N\ (0,\sigma_v^{2,})$, and the nonnegative inefficiency effect, u_{it}.That is, while college operating costs are subject to random shocks, it is likely that there are other factors affecting the degree to which colleges operate above their minimum "best practice" cost frontier. Such cost inefficiencies can be due to managerial decision-making, as well as, student and labor force characteristics.

Following the Battese and Coelli (1995) specification, the effect of these environmental factors, *z*, on cost inefficiency can be determined as

$$u_{it} = \delta_0 + \sum_r \delta_r z_{r,it} + w_{it} \quad (2)$$

where, w_{it} is the truncation of the normal distribution with zero mean and variance σ_u^2 truncated at $\delta_0+\sum\delta_r z_{it}$. In this formulation, it is only acceptable to proceed with simultaneous estimation of (1) and (2). The log-likelihood function along with the formulated technical efficiency predictions are presented in Coelli, et al. (2005). Under the Battese and Corra (1977) reparameterization of $\sigma^2=\sigma_v^2+\sigma_u^2$, the estimation of $\gamma=\sigma_u^2/(\sigma^2)$, $0\leq\gamma\leq1$, serves to measure the relevancy of inefficiency effects in college costs whereas the $u_{it}\geq1$ measures the extent to which a college operates above its minimum cost frontier.

In the present empirical implementation, (1) includes two college outputs and two input prices, while (2) is based on four factors along with time specific control variables. The full model is applied to unbalanced panel data spanning four academic years, 2005-06 through 2008-09, of observations on public, private non-profit, and private for-profit colleges defined as postsecondary institutions offering at least an associate degree but less than a bachelor's degree.

3. Data

Data are drawn from the most recent releases of the Integrated Postsecondary Education Data System (IPEDS) managed by the U.S. National Center for Education Statistics. The total cost (*COST*) for each college is the reported annual education and general expenditure. Here, it arises from the annual production of teaching credit hours (*TEACHING*) generated from student enrollments and institutionally wide research output (*RESEARCH*). At these two year colleges, research is generally different, but not completely absent, from the scholarly output of universities. It does include occupational and vocational or community service oriented activities and, as such, is an output. In this sense, the receipt of government and private research grants, gifts, and contracts act as a proxy for the college aggregate research output; noting that this measure has been the widely accepted proxy since the seminal multiproduct higher education work of Cohn, et al. (1989).

Two wage variables enter the cost frontier as input prices; average salaries of faculty employed under nine month (*SALARY-9MO*) and under twelve month (*SALARY-12MO*) contracts. Among public colleges that division is usually referencing teaching faculty compared to administrative faculty, respectively. Differences could impact cost frontiers. However, in the private sector, the distinction tends to be more of an accounting convention, thereby warranting necessary caution when employed therein.

The inefficiency term includes student and labor force variables. College operating efficiencies are assumed to be affected by academically underprepared students. That can correlate with student income and, in turn, college enrollments that are supported by federal government low income grants. Also, such grants impose additional federally mandated administrative requirements upon colleges. Thus, low income grant revenues (FEDGRANTS) can affect both academic and administrative efficiencies. In addition, institutional efficiencies can be affected by students' academic tenacity. A reasonable IPEDS measure is the graduation rate (*GRAD-RATE*) defined as the percentage of students graduating within 150 % of the normal time to degree completion. There are also labor force productivity effects. And although it is not possible to include measures associated with support staff, the inefficiency term includes the number employed of nine (*FACULTY-9MO*) and twelve (*FACULTY-12MO*) month faculty.

Colleges that did not report any cost, credit hour production, or faculty employment were omitted from the sample for that academic year. Table 1 presents the descriptive statistics for the primary variables.

4. Empirical Estimates

Maximum likelihood estimates for each of the three sectors are provided in Table 1. Based on likelihood ratios, the full models are statistically favored over the OLS regressions without inefficiency effects (δ_i's=γ=0). The ratios also reject the restricted Cobb-Douglas in favor of the translog's flexibility. With all the t-ratios well above two, the coefficients are highly significant in the public college sector. As experienced in other research (e.g., Cohn et al., 1989; Koshal & Koshal, 1999; Sav, 2004; Lenton, 2008), it is not surprising that the same models do not perform as well in capturing the underlying cost structure of private institutions. Also, in the for-profit sector, 96 % of the institutions did not employ nine month faculty; hence the variable is dropped from that sector. In the public sector, the output and wage coefficients carry the expected positive signs. For both private sectors, the wage coefficients come in negative, perhaps indicating that higher wage payments can be accompanied by cost saving productivity gains. On the matter of scale effects, although not the focus of this inquiry, we note that both the public and private for-profit colleges realize increasing returns while the private non-profit colleges experience decreasing returns.

Examining the inefficiency effects, at the margin, additional faculty employment contributes to greater inefficiency. That is true across sectors and for both nine and twelve month faculty. However, the public sector nine month faculty effect is more than twice that of twelve month faculty employment, whereas in the private non-profit sector, the coefficients are nearly equal with only a somewhat larger inefficiency effect on the twelve as opposed to the nine month faculty side. The effects could certainly arise from the present inability to account for inter-sector differences in teaching loads, faculty governance work, or other work assignments. Also mixed across sectors are the inefficiency effects created by the provision of low income federal grants and the graduation rate of students. There is a positive inefficiency associated with low income federal grants among public and private for-profit colleges. The negative effect among private non-profit colleges suggests they are more efficient in handling the educational and administrative grant issues. With respect to graduation rates, one could expect faster graduation rates via better academic students to improve college operating efficiencies. On the other hand, if improved graduation rates require greater teaching and administrative resources, then inefficiencies could surface. The results support both notions; increased inefficiency among public colleges and increased (although statistically insignificant) efficiency in both private sectors.

Overall, the significance of the gamma estimates is supportive of the non-randomness of the inefficiency effects in the public and private for-profit sectors. However, it represents a greater share of the composed variance among the latter colleges (45 %) relative to public colleges (26 %). Interestingly, in both private sectors, the time specific effects indicate a mix of efficiency improvements and degradation, although individually they are insignificant. In contrast, the public sector has experienced significant inefficiency increases in each time period. A more informative analysis comes from the estimated cost inefficiency scores. These are measured against the minimum cost frontiers and are presented in Table 2.

The score results indicate that on average and by all other statistical measures, public sector colleges are more efficient, or at least less inefficient, than any of their private counterparts. However, as one might expect, there is much greater inefficiency variability among the newer industry entrants, viz., the for-profit colleges. But, the extremely large maximum and median scores in that sector do lend some added concern to the ability of capturing the fundamental cost structure of for-profit colleges, i.e., relative to the public sector. The mean annual inefficiency scores mirror the mixed time effects noted above and reveal the spike occurring in the 2007-08 academic year for public and private colleges. That, of course, is simultaneous with the global financial meltdown, increased unemployment, and the resulting bulge in higher education enrollments and corresponding credit hour production. The large efficiency gain in the for-profit sector can presumably be attributed to the fact that those colleges were already experiencing high levels of operating inefficiencies which then declined with the enrollment driven increased production.

All the colleges under this study are subject to state mandated education and fiscal regulations. Those regulations vary by state throughout the U.S. That raises interest in the possibility of (1) variations in state-by-state inefficiencies and (2) the potential entry responsiveness of for-profit competition to that variability. However, in the present study we have not included measures of state regulatory environments, nor could any such data be located for two-year colleges. Hence with the data at hand, Table 3 makes an attempt at providing some constrained insights on such matters. There, an average public sector inefficiency score is calculated for each state (including outlying areas) and compared with the for-profit presence in that state. Two relationships emerge. First, for-profits have located in states where public colleges tend to operate at greater inefficiencies. Whether or not for-profits react to public inefficiencies there is the finding that the average inefficiency is 1.61 in the 32 states where for-profits have entered vs. 1.56 in states without for-profit entrants. Second, among the for-profit college states, greater public college inefficiency begets greater for-profit college competition. For those states, the correlation coefficient between the for-profit sector size and the public college inefficiency is 0.35. While that is not overwhelming statistical evidence, it suggests that for-profit colleges could possibly be using some more readily obtainable entry decision-making variables that could be correlated with the public college inefficiencies estimated here but masked under data that are unavailable for this study.

5. Conclusions

The major purpose of this paper has been to investigate the extent to which there exists operating cost inefficiency differences in non-profit relative to for-profit colleges. To do so, stochastic cost frontiers were estimated for three ownership structures in the U.S. two-year college sector: public, private non-profit, and private for-profit colleges. The frontiers were estimated using unbalanced panel data spanning the four academic years 2005-09. The estimated inefficiency scores indicate that the relatively new for-profit entrants experience significantly higher operating inefficiencies relative to both of the long standing and well experienced public and private non-profit colleges. The time-variation in inefficiencies reveal a continuous efficiency decay among public colleges but some annual efficiency improvements among for-profit, as well as non-profit, colleges. The inefficiency results are of greater variability in the for-profit compared to either the public or non-profit sectors. The results also indicate that public sector inefficiencies exhibit inter-state variations that can possibly be attributed to differences in state-by-state regulatory and fiscal constraints. In the final analysis of the paper there is the finding of some positive correlation between public sector inefficiencies and for-profit entry. That relationship could not be rigorously investigated given the data available for the present study. But with a growing concern over the funding of publicly provided higher education and interest in more market based education, exploring that relationship could prove to be a fruitful avenue for future research.

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Table 1. College Means and Standard Deviations for Primary Variables, 2005-09

Variables	Public		Private Non-Profit		Private For-Profit	
COST, $	4.61E+07	(4.17E+07)	6469798	(5191221)	7368998	(8617988)
TEACHING, CH	137201	(131657)	12746.54	(10173.48)	26449.02	(27156.64)
RESEARCH, $	3.03E+07	(3.01E+07)	1209133	(1282150)	995809	(2574832)
SALARY-9M, $	55181	(15112)v	24642	(23614)	-	-
SALARY-12MO,$	34782	(34120)	38050	(26498)	41055	(11185.48)
FEDGRANTS, $	4763299	(4651712)	592497	(6280247)	1624427	(2020199)
GRAD-RATE, %	22.354	(12.29585)	46.73634	(25.90499)	50.80	(21.74657)
FACULTY-9MO, #	106.07	(91.09)	11.14	(16.404)	-	-
FACULTY-12MO, #	12.59	(31.27)	8.15	(10.36)	16.47	(16.79)
N	3490		232		831	

Notes: Standard deviations in parentheses. CH=credit hour.

Table 2. Translog Cost Frontier Estimates by Sector

Variables	Public		Private Non-Profit		Private For-Profit	
α_0	2.478	(2.95)	-0.356	(-0.34)	10.288	(7.46)
TEACHING	0.273	(4.12)	2.019	(2.80)	0.111	(2.14)
RESEARCH	0.408	(6.14)	0.051	(0.31)	-0.043	(-1.19)
SALARY-9MO	0.525	(7.28)	-0.014	(-0.03)		
SALARY-12MO	0.077	(2.86)	-0.043	(-0.09)	-0.439	(-3.31)
TEACHING ^2	0.027	(5.63)	-0.052	(-1.16)	0.044	(4.19)
RESEARCH^2	0.025	(38.23)	0.008	(2.04)	-0.001	(-0.81)
SALARY-9MO ^2	0.011	(3.97)	0.005	(0.27)		
SALARY-12MO^2	0.004	(2.09)	0.038	(1.83)	0.083	(10.97)
TEACH x *RES*	-0.036	(-8.64)	-0.028	(-1.74)	-0.002	(-0.57)
TEACH x *SAL-9*	0.009	(3.85)	0.007	(0.60)		
TEACH x *SAL-12*	-0.008	(-7.85)	-0.034	(-2.89)	-0.061	(-4.16)
RES x *SAL-9*	-0.040	(-9.62)	0.012	(1.36)		
RES x *SAL-12*	0.004	(4.43)	0.013	(1.57)	0.008	(2.98)
SAL-9 x *SAL-12*	-0.010	(-3.28)	-0.028	(-1.33)		
δ_0	-0.836	(-11.03)	0.251	(0.49)	-2.494	(-13.72)
FEDGRANTS	0.037	(6.59)	-0.084	(-2.40)	0.269	(28.42)
GRAD-RATE	0.013	(2.18)	-0.012	(-0.24)	-0.038	(-1.47)
FACULTY-9MO	0.138	(18.48)	0.410	(6.64)		
FACULTY-12MO	0.034	(7.64)	0.501	(7.83)	0.014	(9.89)
2006-07	0.025	(2.89)	-0.032	(-0.24)	0.073	(1.51)
2007-08	0.091	(10.42)	0.032	(0.28)	-0.017	(-0.34)
2008-09	0.118	12.57)	-0.013	(-0.10)	-0.025	(-0.49)
σ^2	0.029	(38.73)	0.142	(5.92)	0.222	(20.03)
γ	0.262	(5.09)	0.053	(0.22)	0.435	(13.09)
Log Likelihood (LL)	1234.41		-106.86		-527.76	
Likelihood Ratio	735.31		99.88		264.49	
LL Cobb-Douglas	1266.10		325.00		1340.38	
N	3490		232		831	

Note: Parentheses contain t-ratios.

Table 3. Efficiency Estimates by Year and Sector

Measure	Public		Private Non-Profit		Private For-Profit	
Mean	1.600		1.996		4.371	
Median	1.579		1.618		3.797	
Minimum	1.011		1.011		1.043	
Maximum	2.889		6.322		19.643	
SD	0.267		1.098		2.552	
Skewness	0.445		1.886		2.258	
Annual Means		Change		Change		Change
2005-06	1.497		2.003		4.376	
2006-07	1.537	2.70 %	1.919	-4.18 %	4.443	1.54 %
2007-08	1.652	7.44 %	2.059	7.28 %	4.149	-6.61 %
2008-09	1.714	3.77 %	2.007	-2.54 %	4.509	8.66 %

Table 4. For-Profit Entry vs Public Inefficiency

State	For-Profit Colleges (N)	Public College Inefficiency (IE)
PA	181	1.765
OH	115	1.556
NY	73	1.728
CA	69	1.734
TX	41	1.716
CO	38	1.597
KY	35	1.628
MO	29	1.569
TN	28	1.750
IN	26	1.490
FL	23	1.778
IL	20	1.574
LA	19	1.586
AZ	17	1.575
WV	16	1.419
PR	11	-
CT	8	1.453
GA	8	1.336
MA	8	1.594
ME	8	1.364
MN	7	1.527
SC	7	1.508
NV	6	1.724
OR	6	1.685
UT	6	1.824
AL	4	1.466
KS	4	1.492
MI	4	1.524
WY	4	1.552
NH	3	1.416
NJ	3	1.596
Mean of 32 for-profit states		1.614
Mean of 23 other states		1.561
Correlation bet N and IE		0.350

Note: “States” also include territories or outlying areas.

Inflation Targeting and the Role of the Exchange Rate: The Case of the Czech Republic

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Received: January 8, 2012 Accepted: January 19, 2012 Published: March 1, 2012

doi:10.5539/ibr.v5n3p33 URL: http://dx.doi.org/10.5539/ibr.v5n3p33

I gratefully acknowledge the valuable comments and suggestions of an anonymous referee on this paper.

This study is supported by Japanese KAKEN (Ministry of Education,Culture,Sports,Science&Technology).

Abstract

This article analyzes the recent conduct of monetary and exchange rate policies in the Czech Republic. The Czech Republic entered 1993 as a newly independent country. It has introduced inflation targeting and floating exchange rate regime. The multidimensional nature of the inflationtargeting definition explains why there is no consensus about whether or not it should be employed. However, the Czech Republic experience with inflation targeting seems to have been satisfactory. The authority has succeeded in maintaining a stable and moderate rate of inflation while enjoying economic growth. The exchange rate also has been stable. Using the Taylor rule, this article shows that the monetary authority has managed financial policy adequately and that the central bank looks forward rather than backward when it formulates monetary policy. Moreover, the exchange rate system, regardless of free-floating rhetoric, does not heavily influence the conduct of monetary policy in the Czech Republic because the central bank need not manipulate the exchange rate strongly and knows that exchange rate policy does not have a strong effect on the exchange rate itself under the global economy and financial deregulation.

Keywords: Czech Republic, Exchange rate, Inflation targeting, Monetary policy, Taylor rule

1. Introduction

Inflation targeting entails an institutional commitment to price stability as the prime goal of monetary policy, which gives the central bank accountability relative to the attainment of monetary policy goals, public announcement of targets for inflation, and a policy of communicating to the markets the rationale for the decisions made by the central banks. The independence of central banks is needed to give the monetary authorities the leeway necessary to commit to price stability. On the other hand, central banks are responsible for the conduct of monetary policy and its outcomes. Also, sound, stable fiscal policy and a stable banking system is needed to avoid problems that may prevent the central bank from subordinating other goals to the objective of price stability or undermining the independence of the central banks (Kurihara, 2010). Central banks sometimes need to avoid government intervention.

Although the effectiveness of inflation targets in lowering inflation levels and volatility remains controversial, this framework has been durable (Mihov & Rose, 2008). However, the multidimensional nature of inflation targeting explains why there is no consensus about whether or not it should be used.

In the past, the move to the inflation targeting and the emphasis on reducing inflation was accompanied by a weak economic performance in reality (Hayo & Neuenkirch, 2011). Many obstacles to inflation targeting have raised questions regarding its use in emerging markets. The difficulty of forecasting inflation is an obstacle to inflation targeting. It is not realistic to hope to forecast inflation with the requisite reliability if the country is still in the process of bringing down inflation from high levels, reforming taxation and public spending systems, and restructuring the private or banking sector. Credibility problems sometimes make inflation targeting less attractive. They mean more volatility and less flexible policy conduct.

Moreover, changes in import prices due to movements in the exchange rate are quickly passed to domestic market prices in emerging markets (Calvo & Reinhart, 2000). With this type of high pass-through, a change in the exchange rate has a large short-run impact on inflation and a small short-run impact on output in both emerging and developed markets. The exchange rate should be adjusted to offset the effects so as not to harm domestic markets. Recent deflation in many developed countries will also induce inflationtargeting central banks to expand the money supply and allow the currency to depreciate, whereas an inflationary shock will induce the opposite reaction. (Note 1)

This article focuses on the Czech Republic, which introduced inflation targeting in 1998, just after the world financial crisis in 1997. Early in the 1990s, the Czech Republic had experienced bad economic conditions and high inflation until the flexible exchange rate regime replaced the fixed one in 1997. Such economic circumstance is one reason for the introduction of inflation targeting.

Kotán & Navrátil (2003) suggested that although inflation targets have been missed more often than met with actual inflation rates, the conduct of inflation targeting has contributed to the stabilization of the Czech economy. Hurník, Kameník, & Vlcek (2008) showed that monetary policy of the Czech Republic was more restrictive than implied by the observed ones (1998Q2-1999Q1, 2001Q3-2003Q2, and 2004Q3-2005Q4), on the contrary, the period from 2003Q3 to 2004Q2 had a relatively loose monetary policy.

Geršl & Holub (2008) showed that the intervention in the foreign exchange market in the Czech has a statistically significant but short-lived and economically not very important impact on the koruna's exchange rate. Holub & HurnĂk (2008) indicated that dealing with exchange rate volatility had been a key challenge for inflation targeting, and despite the missed inflation targeting, the regime was successful in stabilizing the inflation expectations. In general, the evaluation of the world inflation targeting has been high; however, it is necessary to analyze this country's inflation targeting and monetary policy. I employ the Taylor rule to examine empirically whether or not the monetary authority has adequately conducted financial policy.

This article is structured as follows. Section 2 reviews the monetary policy of the Czech Republic. Section 3 presents one theoretical model for empirical analysis. Section 4 shows the results and analyzes them. Section 5 analyzes the role of exchange rate in the conduct of monetary policy in this country. Finally, this paper ends with a summary.

2. Inflation Targeting in the Czech Republic

The Czech Republic is one of two successor states of Czechoslovakia, the other being Slovakia. The Czech Republic entered 1993 as a newly independent country that still shared a monetary union with Slovakia. This arrangement rapidly proved to be unsustainable, and the union was dissolved in 1993. Since then, the Czech Republic has conducted its own independent economic and monetary policies.

Table 1 shows the development of basic macroeconomic variables in the Czech Republic, and Table 2 shows the conducted inflation targeting.

Insert Table 1 Here

Insert Table 2 Here

The heritage of Czechoslovakia was overall macroeconomic stability. The country had been a bulwark of monetary and fiscal prudence during communism and the early transition policies confirmed this trend (Drabek, Janacek & Tuma, 1994). Restrictive monetary and fiscal policies accompanied the start of reforms in January 1991, ensuring that inflation fell after the initial jump caused by price liberalization. After falling to approximately 10 % in 1992, inflation rose to about 20 % in 1993 as a result of the introduction of the value-added tax (VAT) in the Czech Republic in January 1993.

The years 1993 to 1997 are generally regarded as a period of prosperity. The economy recovered greatly and growth rates were quite high. Growth was accompanied by high employment rates without parallel in other countries. Inflation stabilized at around 10 %. In the second half of 1995, the Czech Republic liberalized the current account of the balance of payments. As a result of relatively high interest rates, a stable nominal exchange rate, and low perceived political risk, the economy of the Czech Republic began to attract large amounts of capital from foreign countries in 1994 and 1995. However, reflecting sluggish export growth and strong increases in imports, economic growth began to slow in 1995 to 1996. Prompted by a combination of a major currency crisis in Asia and some European countries and a recession, in 1997, the government passed an austerity package that contained expenditure cuts, other measures to dampen domestic demand, and medium-term institutional and structural measures to stimulate the supply side of the Czech economy.

From 1998 to early 2000, the economy emerged from the recession. Along with the central bank, the new government conducted a massive clean-up and privatization of major banks, which led to a revival in lending activity. Fiscal policy was largely relaxed to pay the costs of bank restructuring and to stimulate demand by investment in infrastructure and significant increases in pay for public employees. Unemployment was stabilized and inflation remained low and stable (Beblavy, 2007).

The monetary policy irrelevance of inflation targeting in the environment of high and unstable capital inflows was one of the reasons that the Czech central bank switched to direct inflation targeting after the exchange rate crisis of 1997. The central bank had argued that inflation targeting had a problem caused by a lack of predictable relationship between monetary aggregates and inflation. However, at the beginning of 1998, the Czech National Bank (CNB) finally set a target for net inflation as the final target.

At the beginning of this transition, Czech Republic policymakers had to institute a monetary policy framework that would take advantage of sound economic fundamentals along with the inflation targeting. The policy response was a fixed exchange rate as the intermediate target of monetary policy complemented by inflation targeting. The central bank announced inflation targeting in terms of the so-called headline consumer price index; however, the exchange rate peg remained the nominal anchor.

A partial improvement in economic growth was followed by a repeated slow-down, with an excessive appreciation of the koruna with low foreign direct investment. However, since 2003, foreign direct investment and accession to the European Union accelerated economic growth (Antal, Hlavácek & Holub, 2008).

Considering these past situations, it seems important to analyze the Czech Republic’s monetary policy. The Czech government has succeeded in stabilizing inflation and has experienced economic growth while some countries, especially European countries, have suffered much economic damage.

3. Theoretical Analysis

One way to infer the importance of inflation, the real economy, and the exchange rate in the policy decisions of the CNB is to estimate an extended Taylor rule, a formula created by John Taylor to provide guidance for central banks to set short-term interest rates to attain both their goals for stabilization of inflation and the economy. The rule states that theshort-term interest rate (usually adjusted for inflation) is determined according to three factors: (1) where actual inflation is above or below the targeted level, (2) how far economic activity is above or below the full-employment level, and (3) what the level of the short-term interest rate would be consistent with full employment level. (Note 2) Moreover, Holub (2008), which focused on the Czech economy, indicated that movement of the real exchange rate gap takes over as the most important factor for deviations of inflation from the target. Other studies have followed this approach. Along with the reason explained in the previous section, this article takes into account the exchange rate in the Czech Republic.

Assume that the call rate partially adjusts to the target according to the function:

$$r_t = (1-\rho)r_t^* + \rho r_{t-1} + v_t \quad (1)$$

where, r is the call rate, r_t^* is the target rate for it, and v is a random shock. The coefficient ρ captures the degree of interest rate smoothing practiced by the central bank. t means time.

r_t^* is assumed as follows:

$$r_t^* = r_t^{**} + \beta(E[\pi_{t+n}|\Omega_t - \pi^*] + \gamma E[\text{output gap}_t|\Omega_t] + \zeta[z_t|\Omega_t] \quad (2)$$

where, r_t^{**} is the long-run equilibrium nominal interest rates, π_{t+n} is inflation between period t + n and period t, π^* is targeting inflation rate, and z is another variable that may influence the reaction of the central bank. Combining (1) and (2) results in the following:

$$r_t = (1 - \rho)[\alpha+\beta\pi_{t+n} + \gamma \text{outputgap}_t + \eta z_t] + \rho r_{t-1} + \varepsilon_t \quad (3)$$

where, $\alpha = (r_t^{**} - \beta\pi^*)$, and $\varepsilon_t = (1 - \rho)[\beta(\pi_{t+n} - E[\text{output gap}_t|\Omega_t]) + (z_t - E[z_t|\Omega_t]) + v_t$.

Let u_t be a vector of variables included in the central bank’s information set at the time it sets the interest rate that are orthogonal to ε.

$$E[\varepsilon_t| u_t] = 0 \quad (4)$$

Finally, z is assumed to be a real exchange rate considering this country’s monetary policy. Exchange rate may have influenced the central bank’s monetary policy. The next section provides an empirical analysis based on this theoretical analysis.

4. Empirical Analysis

Equation (4) entails the orthogonality conditions that we exploit to estimate the unknown parameters via GMM (generalized method of moments). GMM is a robust estimator in that, unlike maximum likelihood estimation, does not require information about the exact distribution of the disturbances. Hansen's J statistics is also performed. This test checks whether the models moment contains match the data or not. In a GMM context, when there are more moment conditions than parameters to be estimated, this chi-square test can be used to test the over-identifying restrictions.

Dependent variable is overnight call rate. I used a one-time lag of the overnight call rate based on Eichengreen (2008), real GDP growth rate, the inflation rate (Note 3), and the lagged rate of real exchange rate depreciation as the explanation variables of the central bank's information set. Including (a one-time lag of) the interest rate and real exchange rate as explanation variables is a difference from pure Taylor model. The sample period is 1998 to 2010. (Note 4) In 1998, the central bank introduced inflation targeting. The data are quarterly. All of the data have no unit root at least at the 10 % level by the ADF test. All of data are from International Financial Statistics (IMF).

An important step is to estimate the output gap. Various methods may be employed for this purpose. The time series for GDP is transformed into an output gap series in two ways following Eichengreen (2008). One is to use the two-sided linear Hodrick-Prescott filter and the other is to use a linear trend. First, I examine the forward-looking case for the inflation rate. The results of the estimation are shown in Table 3.

Insert Table 3 Here

The results indicate a good fit for actual movements in the call rate in general. The equations show that the call rate rises along with inflation. It also rises as actual output increases relative to capacity. The lagged dependent variable of interest rate ρ is significant and very large. Although the presence of the lagged dependent variable explains the success of these equations in following trends in the call rate, the other variables, inflation and output gap, still appear to have a role in determining call rate as expected. All of the variables are significant at the 1 % level.

The key finding is that the rate of change in the real exchange rate does not influence the setting of the policy instrument in equations (3) and (4). (Note 5) When the real exchange rate depreciates, there should be a tendency for the CNB to raise the call rate; however, ζ are in the opposite direction, counter to expectations; however, they are not significant. The addition of the rate of currency depreciation reduces the magnitude of the other coefficients but does not change the results.

Finally, the method for the calculation of output gap does not produce a large difference in results as shown in the equations for the case of (1) (3) and (2) (4). (Note 6)

In Table 4, it is interesting to note that the substitution of backward-looking for forward-looking behavior produces a negative coefficient for the excess of actual output over capacity output in some cases [equations (5), (7), and (8)]. Estimates of monetary policy reaction functions that are framed in terms of backward-looking price movements can be seriously misleading. (Note 7)

Insert Table 4 Here

Compared to the results of Table 3, the results are not satisfactory. The CNB looks forward rather than backward when it formulates monetary policy.

5. The Role of the Exchange Rate

Introduction of inflation targeting as an economy's monetary policy framework does not guarantee interest rate stability. The literature on the effects of inflation targeting on exchange rate volatility is not conclusive. Edwards (2007) suggested that volatility increases with inflation targeting as a result of the flexible exchange rate regime. Rose (2007) indicated that inflation targeting delivers the best outcomes in terms of lower exchange rate volatility. Some advocates of inflation targeting have taken the position that the exchange rate regime that is fully compatible with an inflationtargeting framework for the conduct of monetary policy is essentially free-floating. At the most basic level, the choice of exchange rate regime, or the weight placed on changes in the exchange rate in the central bank's reaction function, should be a function of a country's economic development strategy.

The Czech Republic has been committed to a strategy of export-led growth, which can keep the exchange rate stable at a competitive level. Czech policymakers may be reluctant to move to greater exchange rate fluctuation because of the worry that exchange rate stability is important for economic growth. A strategy of keeping the exchange rate from appreciating and keeping interest rates low to confer additional resources into the production of exports-or, more generally, into the production of those goods for which the scope for productivity improvement is greatest-does not work as well in the Czech Republic.

However, few studies have analyzed the relationship between inflation targeting and exchange rate. The main reason may be that many emerging countries that had adopted inflation targeting have changed their exchange rate regime from fixed to floating and their nominal anchor from exchange rate to inflation targeting. Since the introduction of the floating exchange rate regime, some emerging countries have had to intervene in the foreign exchange markets more than advanced economies. Domaç & Mendoza (2004) suggested that foreign exchange market interventions reduce exchange rate volatility, whereas Guimarães & Karacadag (2004) found that interventions had a limited effect on volatility. Using panel data for 37 countries, Berganza & Broto (2011) showed that inflation targeting leads to higher exchange rate volatility. As these, it seems that the results are inconclusive.

In this present study, the case of the Czech Republic, the reason why the real exchange rate does not influence interest rates is difficult to understand. It can be understood that (1) the central bank need not manipulate the exchange rate strongly, (2) the central bank knows that exchange rate policy does not have a strong effect on exchange rates themselves under the global economy and financial deregulation, (3) the central bank has tried to manipulate the exchange rate; however, it has not had strong positive effects. The reason for (3) may not be able to be adopted as it would be unnecessary and impossible to manipulate exchange rate strongly by interventions. The CNB does not seem to have taken such stances (3). So (1) and (2) should be the reason that the equations excluding real exchange rate would be adequate.

6. Conclusions

The Czech experience with inflation targeting has been satisfactory. The authority has succeeded in maintaining a stable and moderate rate of inflation while enjoying economic growth when it conducts monetary policies. The technical problems suggested by skeptics of the application of inflation targeting have not interfered with the operation of this regime. This article suggested that the CNB did not look backward but forward for inflation rate. Also, The CNB does not care about the real exchange rate when it manipulates interest rates. The reason may be (1) the central bank need not manipulate the exchange rate strongly and (2) the central bank knows that exchange rate policy does not have a strong effect on exchange rates under the global economy and financial deregulation.

The Czech Republic has conducted an overall package of reforms that has promoted and sustained economic growth and modernization. Inflation targeting seems to be a useful strategy for the conduct of monetary policy; however, there is no relationship between the real exchange rate and interest rates under inflation targeting. On this point, further research is needed.

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Notes

Note 1. Empirical evidence suggests that this is the case for Brazil and Mexico. See Mishkin&Savastano (2000).

Note 2. There are many opinions about this rule. See, for example, Taylor &Davradakis (2006), which suggested that the very predictability of this policy rule, set out in a nonlinear framework, may be one reason that the United Kingdom has enjoyed price stability combined with strong growth. I followed the approach of Clarida, Gali, & Gertler (1998).

Note 3. Fackler & McMillin (2011) suggested a dynamic stochastic simulation of the average inflation rate using the moving average representation of a vector autoregressive (VAR) model.

Note 4. Another reason why the sample period is short is a result of the lack of data.

Note 5. The result is similar to de Gregorio et al. (2005).

Note 6. Horváth (2008) suggested that the sign of exchange rate was significantly opposite and the sign of output gap was minus; however, it is not significant. Erdem & Kayhan (2011) indicated that the Czech central bank did not take into account output gap and exchange rate when considering the short-term interest rate.

Note 7. Eichengreen (2008) showed similar results.

Table 1. Macro-Economic Variables in the Czech Republic (%)

	97	98	99	00	01	02	03	04	05	06	07	08	09	10
CPI	10.0	6.8	2.5	4.0	4.1	0.6	1.0	2.6	2.2	1.7	5.4	2.9	1.0	1.6
Growth rate	-0.7	-0.8	1.3	3.6	2.5	1.9	3.6	4.5	6.4	6.4	6.5	3.2	-3.5	0.1
Unemployment rate	5.4	7.3	9.0	8.3	7.8	7.3	8.1	8.2	7.8	6.5	4.8	4.2	5.5	5.7

Table 2. Inflation Targets

Year	Target Level	Set in
1998	5.5-6.5	December 1997
1999	4.0-5.0	November 1998
2000	3.5-5.5	December 1997
2001	2.0-4.0	April 2000
2005	1.0-3.0	April 1999

Table 3. GMM Estimates: Forward-Looking Inflation

Eq.	α	β	γ	ρ	ζ	Adj.R^2	D.W.	J-test	Output gap
(1)	3.49***	216.41***	24.86**	0.93***		0.58	1.80	4.12	Hodrick=Prescott
	(4.73)	(5.15)	(2.58)	(20.82)					
(2)	3.14***	229.63***	26.52***	0.91***		0.63	1.92	4.34	Linear trend
	(4.41)	(5.71)	(2.89)	(21.15)					
(3)	3.60***	212.72***	23.29**	0.92***	-20.28	0.61	1.60	4.40	Hodrick=Prescott
	(4.82)	(4.25)	(2.42)	(20.56)	(-0.99)				
(4)	3.25***	217.25***	26.14***	0.94***	-18.85	0.66	1.62	4.45	Linear trend
	(4.50)	(4.79)	(2.80)	(21.06)	(-0.96)				

Note: Data in parentheses are t value. *** means significant at 1 %; ** means significant at 5 % level respectively.

Table 4. GMM Estimates: Backward-Looking Inflation

Eq.	α	β	γ	ρ	ζ	Adj.R^2	D.W.	J-test	Output gap
(5)	3.13***	223.10***	-24.39**	0.94***		0.62	0.91	4.52	Hodrick=Prescott
	(4.41)	(24.39)	(-2.64)	(25.43)					
(6)	2.83***	131.38***	11.23**	0.93***		0.38	0.40	3.98	Linear trend
	(4.41)	(2.98)	(2.29)	(24.18)					
(7)	3.26***	231.85***	-25.18***	0.910***	-17.56	0.62	0.92	4.55	Hodrick=Prescott
	(4.54)	(5.66)	(-2.72)	(18.89)	(-0.90)				
(8)	3.29***	128.86***	-24.70**	0.908***	-20.14	0.64	0.45	4.03	Linear trend
	(4.50)	(5.51)	(-2.65)	(18.72)	(-1.02)				

Note: Data in parentheses are t value. *** means significant at 1 %; ** means significant at 5 % level respectively.

Factors Affecting the Disposition Effect in Tehran Stock Market

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Received: December 25, 2011 Accepted: January 18, 2012 Published: March 1, 2012

doi:10.5539/ibr.v5n3p40 URL: http://dx.doi.org/10.5539/ibr.v5n3p40

Abstract

Given the significance and perceived inevitability of disposition effect and its impact on investment decisions, we investigate factors affecting the disposition effect in the Tehran Stock Exchange. Four hypotheses were developed and the data used in the study were collected through availability sampling. One-sample t-test, two-sample t-test and one-way ANOVA were run to analyze the data while Pearson correlation test and multiple regressions were used to assess relationships among variables in question. The results of the analyses indicate that overconfidence and mental accounting were not significantly correlated with disposition effect. Regret aversion had a positive relationship with disposition effect while self control was negatively associated. It was also observed that there was a negative relationship between participants' level of education and their disposition effect indicating that the higher the level of education, the less the rate of disposition effect. Furthermore, the results of the study show that males enjoy a higher level of overconfidence than females, and 20 to 30 year-old age groups displayed much overconfidence than other age groups.

Keywords: Behavioral finance, Disposition effect, Overconfidence, Mental accounting, Regret aversion, Self control, Tehran stock exchange

1. Introduction

Recent research findings by a variety of researchers indicate that the impact of psychology on investors' decision-making cannot be ignored, and the mere reliance on Efficient Market Hypothesis (EMH), Capital Assets valuation model (CAPM), and the notion of "Homo economicus" to study these decisions may not be sufficient. The axiom that human beings act totally rationally when making economic decisions by taking into consideration all information available runs counter to some observations. In particular, when observing investors' behavior in the stock market, we come across behaviors which are inconsistent with those of an economic man. Hence, in recent years, scientists and researchers have increasingly paid attention to the science of behavioral finance, which by combining economics and psychology tries to account for investors' behaviors which are not often quite reasonable and formalizes biases affecting investment decisions taken by investors. Of these biases, one is "loss aversion" which, in practice, represents itself in the form of "disposition effect". Disposition effect accounts for investors' behaviors through an s-shaped value function.

Disposition effect forces investors to sell winner shares too early but hold loser shares in excess resulting in a decrease in the investors' gains. It also takes investors' portfolio away from their desired portfolio. In contrast, classical financial theories anticipate that an economic person would sell those loser shares with no expectation of a rise in their price, and, in turn, invest on those shares with a promising prospect and keep the winner shares as long as the company shows good performance. This requires making informed decisions to solve problems and uncertainties faced by investors. These problems may include economic factors such as less profitability, a rise in risk and the lack of balance in the desired portfolio.

Given the diametrically opposed explanations of rational decision making and observed disposition effect, empirical research on predicting investors' behavior in order to determine possible influential variables has attracted increasing attention. Scientists in the field of behavioral finance have demonstrated that individuals' personalities and their psychological dimensions may influence the economic decisions taken by them. These psychological dimensions are embodied in the form of a set of biases that control investors' behavior, the most noticeable of which are overconfidence, mental accounting, regret aversion, and self control. In this research, we contribute to the body of literature in behavioral finance by reporting the results of an empirical study conducted at the Tehran Stock Exchange to see if there is a possible relationship among these biases, and if so, what the nature of the relationship is.

2. Theoretical Framework of the Study and a Review of Previous Empirical Studies

Disposition effect was first introduced by Shefrin and Statman (1985) to describe the dominant tendency of investors to keep loser stocks for a long term but to sell winner stocks too early. They employed a model to explain why investors tend to sell winner stocks too early and to hold loser stocks for a long time. Investors may expect that the prices will return, sooner or later, to their previous status, that is to say, existing loser stocks may change into winner stocks and vice versa. To decide to keep the stocks or to sell them, investors can examine the value function. This implies that risk aversion concerns profit. In other words, investors are willing to identify profit. As a result, they sell profitable stock quickly. Barber and Odean (2002) use prospect theory to explain disposition effect (Glick, 1957). They believe that investors typically consider the purchase price as a reference point, upon which they decide whether to keep their stocks or to sell them. For instance, if they expect that the price of certain stocks is going to rise they will buy it and make the price as a reference point. Given the desirability of prospect theory, in the case that the stock prices increases the investor identify the profit through selling the stocks. If, on the other hand, the stocks are dropping off, the investor tries to convince himself that the price will raise and, therefore, he keeps the loser stocks. Odean (1998) has investigated disposition effect by analyzing the information related existing transaction accounts in a brokerage (Pempin, 2009). He found that stockholders, on the whole, prefer loser stocks over the winner stocks which are confirmed by other studies (Shefrin & Statman, 1985; Odean, 1998; Weber & Camerer, 1998; Locke & Mann, 2000; Grinblatt & Keloharju, 2001; Ranguelova, 2001) that come across similar findings.

The prevailing model for studying the disposition effect and the theoretical framework for this study is depicted in Figure 1. In the following section, we expand on each of the variables and present the hypotheses used for this study.

2.1 Overconfidence

Kahneman and Turesky (1982) suggested that people often misjudge how likely it is for an event to happen and they overestimate incidence possibility of the event than the actual number of incidence in reality (Odean, 1998). Pempin (2009) in a book titled "Behavioral finance and capital management" points out that overconfidence as a concept has been investigated in a wide range of psychological experiments and studies done on typology, suggesting that people overestimate their ability both in perdition and the accuracy of the information provided to them (Barber & Odean, 2002). He also noted that individuals have a poor performance in estimating probabilities and the events they regard as inevitable are much less than 100 percent likely to happen. He states that people often consider themselves more intelligent than they are in actuality. WineStein (1980) and Kunda (1980) observed that people anticipate that good things happen more to themselves than to others. Vin Stein (1980) argues that people overrate their ability to do things very well than what actually they afford and this overrate increases when things are under their control (Weber & Camerer, 1998). Odean (1998) suggested that overconfidence may arise due to overestimation of the accuracy of secret codes and investors' knowledge about securities (Pempin, 2009). Individuals always remember their successes, while easily forgetting their failures. On the other hand, stockholders are more likely to overrate the accuracy of their personal estimations about securities' value than estimations made by other people. Overconfidence often leads to taking wrong decisions. As a result, stockholders miss the chance of correcting their mistakes, so they cannot make a right decision. Consequently, reliance on overconfidence may result in wrong decisions by stockholders and, thus, influencing disposition effect. Based on this assumption, the first research hypothesis is formulated as follows:

H1: There is a significant relationship between overconfidence and disposition effect.

2.2 Mental Accounting

Dr. Richard Thaler (1980) first defined mental accounting as "people's tendency to encode, classify, and evaluate economic outcomes by ranking their scores in the form of a set of mental accounts" (Thaler, 1980). Mental accounting has been used to account for economical phenomena. Mental accounting as a bias plays an important role in decisions made about household budget (Thaler, 1985), transactions in stock exchanges (Shefrin & Statman, 1985) and consumption life cycle (Shefrin & Statman, 1985). Kahneman and Turesky (1981), Thaler (1985), Kahneman and Lovallo (1993) stated that stockholders divide all revenues into several small parts; each called a mental account while the whole process is called mental accounting. They treat each mental account differently. As a result, disposition effect may originate from mental accounting. Furthermore, mental accounting may lead investors to select a reference point for each stock in order to determine whether the stock under question is winner or loser. Therefore, the second hypothesis of the study is raised as:

H2: There is a significant relationship between mental accounting and disposition effect.

2.3 Regret Aversion

Shefrin and Statman (1985) have demonstrated that regret is an emotional state by which the effected individual imagines that if he had taken another decision in the past other than what he really took, he may have been got better results (Shefrin & Statman, 1985) and this is another factor which may lead to disposition effect. Regret aversion is a vital factor which accounts for why it is difficult for investors to indentify profit and loss. Identification of loss is a signal of the investor's misjudgment. Shefrin and Statman (1985) also believe that a sense of regret resulting from loss is stronger than a feeling of pride due to gaining a profit. According to Thaler (1980) regret theory is a motivational decision making theory with the main assumption that people are concerned about the feeling they experience due to outcomes of the decisions they have made (Thaler, 1980). Since stockholders are responsible for their decisions, sometimes they feel regretful for their previous decisions. The desirability function is steeper for those stockholders who consider themselves responsible for their decisions. The marginal value of profit and loss decreases when the number of profits or losses increases meaning that the earlier profits or losses worth more than subsequent profits or losses. Therefore, stockholders tend to maintain loser stocks as they are less sensitive about the next losses. Similarly, they are more willing to sell winner stocks because they are not sensitive about subsequent earnings.

H3: There is a significant relationship between regret aversion and disposition effect.

2.4 Self Control

Self control, as the name suggests, means controlling the individuals' feelings. Investors who show a high level of self control avoid identification of their losses but are more willing to recognize their profits. However, to prevent much loss they are capable of indentifying them. According to Glick (1957) the investor's unwillingness to recognize losses leads to a self control problem (Grinblatt & Keloharju, 2001). He states that in spite of principles of rationality, investors have a strong desire to maintain the loser stocks. Whenever profit is reachable, investors frequently say they and their colleagues send their stocks very quickly and gaining a profit they leave the market. "Little profits and high losses" is a phrase used by investors describing on of the problems they encounter in their business. To illustrate how disposition effect can be regarded as a self control problem, Thaler and Shefrin (1981) suggest that self control is an internal conflict between the rational part (planner or manager) and the primary, emotional, and short-sighted parts (subject or agent) (Tversky & Kahneman ,1981). Since the agent part has the power of influencing a person's actions, the planner part react to it by presenting determination or uses a commitment making instrument. In order to adapt agent-planner model with disposition effect analysis, the desirability of the agent will be regarded a function of conditions dominating different mental accounts. According to Thaler and Shefrin (1981), investors tend to maintain the loser stocks to postpone the feeling of regret, while they sell winner stocks very quickly in order to experience the sense of pride resulting from making the right choice as soon as possible. The planner (rational) part may not be so strong to prevent the agent part interfering in decision making process. Shefrin and Statman (1985) suggest that investors may employ different techniques of commitment or obligation predetermination to control they resistance against recognizing the loss (Shefrin and Statman 1985). For example, professional stockholders set aside a percentage of the initial purchase price of stocks for themselves (e.g. 10 % of the purchase price) to sell the stocks when the resultant loss amounts to that percentage (e.g. 10 %). This is considered as a solid rule for stockholders never ever breaching it. Stop-loss orders are another instance of the techniques used by stockholders. These orders are applied to reduce the risk associated with loss but their main advantage is that they allow stockholders to recognize the losses in their favor at a predetermined point.

H4: There is a significant relationship between self control and disposition effect.

3. Research Method and Findings

The aim of the present study is to examine the relationships between four behavioral biases and disposition effect and to take some efforts to reduce these biases among stockholders in Tehran Stock Exchange. Regarding the aim of the study it is a practical research which uses a descriptive survey method.

The population under study included all actual stockholders in Tehran Stock exchange Hall among which 196 samples were selected through availability sampling method based on infinite population sampling formula. The instruments used for data collection was a questionnaire containing 34 items conceptualized clearly and intelligibly for all investors' groups involved in the stock exchange. However, two terms, winner stocks and loser stocks were explained in order to be assured of comprehensibility of the items.

In order to measure reliability of the instrument, behavioral finance experts were consulted with their suggestions were applied to all items of the questionnaire if necessary. Besides, Cronbach Alpha was used to determine validity of the questionnaire which was measured as 0.868.

After collecting the required data, mean and frequency of respondents' demographic factors were determined by descriptive statistics. In order to test research hypotheses, different statistical tests such as Pearson correlation analysis, sample t-test, two-sample t-test, one-way ANOVA, and multiple regression analysis were employed. In addition, to examine present situation regression analysis was run and a linear equation was presented for prediction. Table 1 summarizes Pearson correlation for the biases and disposition effect.

3.1 Findings of the Study

Rotated matrix using varimax rotation method was employed for exploratory factor analysis of the questionnaires as a method of identification and analysis of factors. The results showed four main factors influencing disposition effect which can explain 56.985 % of the variance. The results for the factor analysis indicate that the existing data are appropriate for factor analysis and the instruments used in the study provide an accurate measurement of the variables under question.

Based on mean test of the population, the amount of disposition effect, t-value, is 7.726 which is higher than 1.96, so it can be concluded that there is a high level of disposition effect in Tehran Stock Exchange. T-value for overconfidence is 7.398 which is greater than 1.96 and, thus, we can conclude that there is a high level of overconfidence in Tehran Stock Exchange. T-value for mental accounting is 12.288 which is greater than 1.96 and, as a result, it is concluded that there is a high level of mental accounting in Tehran Stock Exchange. The related t-value for regret aversion amounts to 10.258 which is higher than 1.96. Therefore, it can be concluded that a high level of regret aversion can be observed in Tehran Stock Exchange. Finally, t-value for self control is -7.006 which is much less than 1.96. So we come to conclusion that there is no self control in Tehran Stock Exchange.

Pearson correlation coefficient for overconfidence and disposition effect is equal to 0.050 at the level of significance of 0.050 which is higher than 0.05. As a result, it can be said that there is no significant relationship between overconfidence and disposition effect in Tehran Stock Exchange.

The value of Pearson correlation coefficient for mental accounting and disposition effect is equal to 0.098 at the level of significance of 0.166 which is higher than 0.05. As a result, there is no significant relationship between mental accounting and disposition effect in Tehran Stock Exchange.

The value of Pearson correlation coefficient for regret aversion and disposition effect is equal to 0.433 at the level of significance of 0.00 which is less than 0.05. As a result, there is a significant relationship between regret aversion and disposition effect and since the value of the correlation coefficient is positive, then it can be said that this relationship is positive indicating that the more regret aversion, the more disposition effect.

The value of Pearson correlation coefficient for self control and disposition effect is equal to -0.702 at the level of significance of 0.00 which is less than 0.05 so there is a significant relationship between self control and disposition effect. Since the coefficient is negative, therefore, it can be concluded that this relationship is negative which means that an increase in the level of self control will result in a decrease in the level of disposition effect and visa versa. The following equation was obtained based on multiple regression analysis:

$$Y= 3.099+ 0/230(RA) - 0/611(SC) \tag{1}$$

As a result, one unit of change in regret aversion will lead to 0.230 unit of change in disposition effect. In addition, a unit of change in self control will result in 0.611 unit of change in the opposite direction in disposition effect.

Furthermore, of moderating variables-gender, age, level of education and work experience in the Tehran Stock Exchange-only the level of education is significantly related to disposition effect. Level of significance in the results obtained for ANOVA is 0.032 which is less than 0.05 indicating that H_0 is rejected, while H_1 is confirmed. Besides, the results of Tukey test indicate that stockholders with a diploma degree or under diploma showed the highest level of disposition effect while those with a master degree or Ph.D demonstrated the lowest level of disposition effect. It should be mentioned that participants' level of has no relationship with other variables.

The results of two sample independent t-tests indicate that participants' gender has a significant relationship with disposition effect at level of significance of 0.003 which is much less than 0.05, showing that H_0 is rejected but H_1 is confirmed. The mean score for females' self confidence is 2.9565 while that of males is 3.4096. Therefore, it can be concluded that men are more confident than women. The test statistic is equal to -3.053.

The level of significance for the testing the relationship between age and overconfidence is 0.024 (i.e. less than 0.05). As a result H_0 is rejected but H_1 is confirmed. The results of Tukey test suggest that stockholders whose age is 20 to 30 show the highest level of overconfidence, while those who are over 60 have the least amount of self confidence. However, other variables had no significant relationship with age.

The results of ANOVA test show that “disposition effect” and “experience” are not significantly related at level of significance of 0.192 and, thus, H_0 is confirmed. The relationship between “mental accounting” and “regret aversion” is not also significant at level of significance of 0.800 and, as a result, H_0 is confirmed. Finally, the relationship between “self control” and “experience” is not also significant at level of significance of 0.372 and, therefore, H_0 is confirmed.

4. Discussion and Conclusions

Based on the findings of the study, in general, it can be concluded that biases have a considerable influence on decisions made by stockholders in Tehran Stock Exchange. Of the four hypotheses proposed in the study, two hypotheses were confirmed but the other two were rejected.

The results obtained for the first hypothesis indicate that there is a significant relationship between stockholders’ overconfidence and their disposition effect in Tehran Stock Exchange.

The results of the second hypothesis suggest that there is a significant relationship between mental accounting and disposition effect in Tehran Stock Exchange.

Based on the statistical results obtained for the third hypothesis it was found that there is a significant relationship between regret aversion and disposition effect. Besides, this relationship is positive. Therefore, it is recommended that by holding different workshops and informing stockholders through mass media to raise their awareness about these biases and help them to control and reduce these biases as much as possible.

The results of the fourth hypothesis are indicative of the existence of a significant relationship between self control and disposition effect in Tehran Stock Exchange. But as the relationship is negative it is suggested that by training stockholders in using techniques associated with increasing their self control help them to improve the quality of decision making process.

In addition, the results of the study suggest that men and younger stockholders show more overconfidence than women and older stockholders. It was also that higher levels of education lead to a decrease in the level of disposition effect. Therefore, it is recommended that to increase investors’ level of education by holding training classes and providing them with learning materials.

Finally, given the impotence of disposition effect for investors’ transaction decisions, following topics are suggested for future research:

1. Conducting similar studies focusing on other psychological factors.
2. Conducting similar studies in other investment markets such as capital market transactions.
3. Investigating the effects of interaction among psychological factors considered in the present study i.e. overconfidence, mental accounting, regret aversion, and self control.
4. Conducting more research considering macro-level factors such as recession and boom and industrial environments.

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Table 1. Pearson Correlation Matrix for the Biases and Disposition Effect

		Disposition effect	Overconfidence	Mental accounting	Regret aversion	Self control
Disposition effect	Pearson correlation	1	0.050	0.098	0.433	-0.702
	Level of sig.		0.486	0.166	.000	.000
	Total	200	200	200	200	200
Overconfidence	Pearson correlation	0.050	1	0.157	-0.108	-0.002
	Level of sig.	0.486		0.027	0.128	0.974
	Total	200	200	200	200	200
Mental accounting	Pearson correlation	0.098	0.157	1	0.076	-0.044
	Level of sig.	0.166	0.027		0.284	0.534
	Total	200	200	200	200	200
Regret aversion	Pearson correlation	0.433	-0.108	0.076	1	-0.326
	Level of sig.	.000	0.128	0.284		.000
	Total	200	200	200	200	200
Self control	Pearson correlation	-0.702	-0.002	-0.044	-0.326	1
	Level of sig.	.000	0.974	0.534	.000	
	Total	200	200	200	200	200

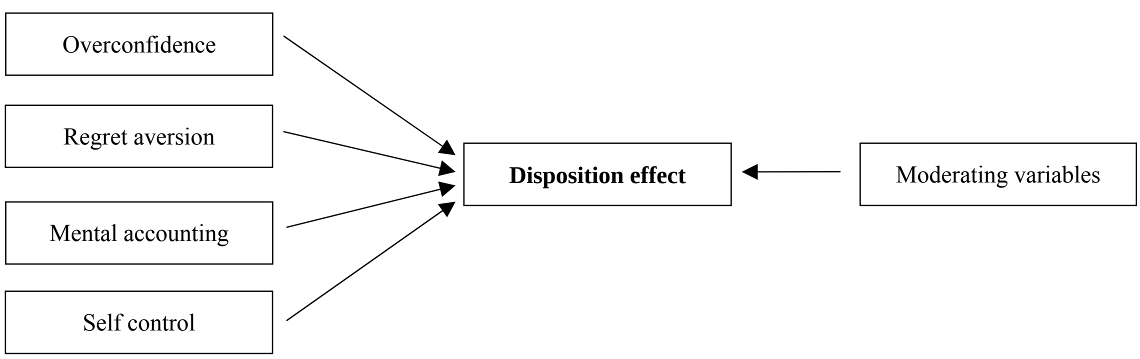

Figure 1. Theoretical Framework of the Study

The Effect of Investment Promotion on Foreign Direct Investment Inflow into Ghana

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Received: January 10, 2012 Accepted: February 15, 2012 Published: March 1, 2012

doi:10.5539/ibr.v5n3p46 URL: http://dx.doi.org/10.5539/ibr.v5n3p46

Abstract

The paper investigated the effect of investment promotion (IP) on foreign direct investment flow (FDI) into Ghana. Cointegration among the variables was established using auto regressive distributed lag (ARDL) models in the presence of a mix of I (0) and I (1) variables. The control variables, inflation and trade openness were statistically significant in the short run. Whilst inflation exerted a negative effect on FDI inflow; trade openness positively induced FDI inflow. GDP per capita and exchange rate did not statistically significantly influence FDI inflow in the short run. In respect of the key variable GIPC, in the short run, there was a positive but statistically insignificant effect on FDI inflow. The estimated long-run ARDL model showed that macroeconomic variables such as inflation, GDP and trade openness determined FDI inflow into Ghana. Notwithstanding the positive relationship between establishment of IP agency (GIPC) and FDI inflow, this relationship was statistically insignificant. Greater efforts at macroeconomic management specifically, promotion of external trade, increasing GDP and reducing inflation holds more promise to attracting FDI into Ghana. GIPC should be maintained to provide a supportive role when the foreign investors arrive in Ghana.

Keywords: Foreign direct investment, Investment promotion, Trade openness, Inflation, Gross domestic product

1. Introduction

1.1 Background

In recent years debate on the role of external resource inflows, including foreign direct investment (FDI) and their potential contribution to accelerating growth and progress towards reaching development goals in Africa has taken centre stage (UNECA, 2006). In line with the general trend of private capital flows in developing regions, FDI to Africa has been on the rise in recent years especially since the 1990s (Ndikumana, 2003; UNECA, 2006). FDI which refers to an investment made to acquire lasting interest in an enterprise operating outside of the economy of the investor (UNCTAD, 2002) is noted for the following benefits (de Mello Jr., 1997); Firstly, inward FDI can stimulate local investment by increasing domestic investment through links in the production chain when foreign firms buy locally made inputs or when foreign firms supply intermediate inputs to local firms. Secondly, the foreign capital inflow augments the supply of funds for investment thus promoting capital formation in the host country. Thirdly, inward FDI can increase the host country's export capacity causing the developing country to increase its foreign exchange earnings. Fourthly, FDI is also associated with new job opportunities and enhancement of technology transfer, and boosts overall economic growth in host countries.

A portfolio of activities through which governments aim to attract foreign direct investment (FDI) inflows constitutes investment promotion (Wells & Wint, 2000). These portfolio of activities include: advertising, investment seminars and missions, participation in trade shows and exhibitions, distribution of literature, one-to-one direct marketing efforts, facilitating visits of prospective investors, matching prospective investors with local partners, help with obtaining permits and approvals, preparing project proposals, conducting feasibility studies and servicing investors whose projects have already become operational. Some Investment Promotion Agencies (IPAs) do engage in granting incentives to foreign investors, screening potential investment projects and negotiations with foreign investors, yet Wells and Wint (2000) excludes these from there operationalisation of investment promotion. Harding and Javorcik (2011) categorised investment activities into four: 1. national image building, 2. investment generation, 3. investor servicing, and 4. policy advocacy. Image building activities gear towards building a perception of the country as an attractive location for foreign direct investment. Identifying potential investors who may be interested in establishing a presence in the country, developing a strategy to contact them and starting a dialogue with the purpose of having them commit to an investment project constitutes investment generation. The third group, investor servicing encompasses assisting committed investors in analysing business opportunities, establishing a business and maintaining it. Policy advocacy involves initiatives leading to improving the quality of the investment climate and identifying the views of private sector in this area.

Two broad strategies are identifiable in investment promotion: targeting (focusing on priority arrears) and attracting all kinds of investment (mass approach). The latter strategy will require IPAs staff to participate in many different types of fairs and promote the country as a good place to do business. On the contrary, targeting, which investment promotion practitioners believe to be a better strategy (Harding & Javorcik, 2011) requires participation in fairs that are specific to the industries it targeted. Additionally, the IPA emphasises why its country is an ideal location for investors operating in the targeted areas. The idea behind targeting is that a more focused message tailored and delivered to a narrow audience is more effective than general investment promotion activities.

1.2 Profile of Ghana Investment Promotion Centre

Ghana's investment promotion agency is Ghana Investment Promotion Centre (GIPC). Established in 1994, under legal instrument Act 478, aims at reducing obstacles to and creating incentives to FDI (Cotton & Ramachandran, 2001; Aryeetey, *et al*, undated). The incentives accompanying the law included: depreciation of the capital allowance of 75 % of capital expenditure incurred in the year of investment and in subsequent years, the free transferability of profits and dividends and foreign exchange retention accounts through which all foreign payments including dividends can be made. Others were exemption from payment of customs duties on machinery and plant for the establishment of mines and further relief for selected items for on-going mining projects, and the establishment of well-defined rules for dispute settlement.

The Act 478 (1994) which was hailed as the best in Africa (UNCTAD, 2003) resulted in the following specific objectives and functions of the Centre (GIPC, 2011):

- Initiating and supporting measures that will enhance the investment climate in the country for both Ghanaian and non-Ghanaian companies.
- Promoting investments in and outside Ghana through effective promotion.
- Collecting, collating, analysing and disseminating information about investment opportunities and sources of investment capital, and advising on the availability, choice or suitability of partners in joint-venture projects.
- Registering and keeping records of all enterprises to which this Act is applicable.
- Identifying specific projects and inviting interested investors for participation in those projects initiating, organising and participating in promotional activities such as exhibitions, conferences and seminars for the stimulation of investments.
- Maintaining a liaison between investors and ministries, government departments and agencies, institutional lenders and other authorities concerned with investments.
- Providing and disseminating up-to-date information on incentives available to investors.
- Assisting investors by providing support services including assistance with permits required for the establishment and operation of enterprises.
- Evaluating the impact of the Centre on investments in the country and recommending appropriate changes where necessary.
- Registering and keeping records of all technology-transfer agreements relating to investments under this Act.
- Performing such other functions as are incidental to the attainment of the objectives of this Act.

In furtherance of these objectives and functions, GIPC offers the following services: investment facilitation, monitoring and evaluation, handling investment procedures, assessing cost of doing business in Ghana, examining the investment environment and facilitating infrastructure for investment in Ghana. Prior to the 1994 enactment to establish the GIPC, various legal instruments were activated ostensibly to promote both domestic and foreign investment. These were Investment Act (Act 172) of 1963, Investment Decree of 1973 (NRCD 141), Investment Policy Decree of 1975 (NRCD 329), Investment Code of 1981 (Act 437) and Investment Code 1985 (PNDCL 116). These though had promotion objectives were more regulatory in nature. Indeed, these fell short of expectation as investment promotion instruments (Aryeetey & Baah-Boateng, 2007).

1.3 Problem Statement

Harding and Javorcik (2011) studying information asymmetries between host countries and potential foreign investors found some interesting results: 1. that investment promotion efforts lead to higher FDI inflows. 2. Investment promotion efforts seemed more effective in countries where a lower share of the population speaks English, in countries which are more culturally distant from the US and in countries where obtaining construction permits takes longer. 3. Splitting the sample into developed and developing economies, they found that investment promotion had a positive impact on FDI inflows in the developing economies but not in developed economies. 4. Within the subsample of developing countries, investment promotion is more effective in host countries where English is not widely spoken, the cultural distance to the US is larger and obtaining construction permits is more burdensome. Ghana has regulated investment until 1994 when a law was passed to transform the investment regulating agency (Ghana Investment Centre) into an investment promotion agency (Ghana Investment Promotion Centre, GIPC). Secondly, Ghana, a former colony of the UK, uses English as an official language but has focused largely on English speaking countries to attract FDI. Indeed, it has a smaller cultural distance with US and many European countries. Thirdly, Ghana is not included in the set of developed economies. Therefore, what is the effect investment promotion on FDI inflow into Ghana?

1.4 Objectives

The objective of the paper is to assess the effect of investment promotion on FDI inflows into Ghana.

1.5 Relevance

Governments have recognised the need to be innovative and efficient in responding to the concerns and expectations of investors, while striving contemporaneously to optimise the benefits of FDI for their national economies (Ögütçü, 2002). Thus linking the promotion of FDI to local economies has become a matter of great importance to governments all over the world. Also, Morisset (2003) notes very little is known about what IPAs have been really doing, notably in emerging economies, and whether they have been effective in influencing investors' decisions. Thus an assessment of their effect especially for Ghana, a developing economy is in the right direction.

1.6 Organisation

The rest of the paper is organised into 5 sections. Section 2 presents the review of literature pertinent to the subject. Section 3 presents the model and data fitted to it. The results are presented and discussed in section 4 with conclusions and distilled recommendations captured in section 5.

2. Literature Review

2.1 Theoretical Review

Dunning (1977) and Dunning (1988) theorise about FDI and provided bases for what is known as *Dunning's Eclectic paradigm.* The paradigm states that, the extent, geography, and industrial composition of foreign production undertaken by Multinational Enterprise (MNE) is determined by the interaction of three sets of interdependent variables which, themselves, comprise the components of three sub-units (Dunning, 2001). The mathematical function is:

$$FDI = f(O, L, I) \tag{1}$$

where, O is ownership, L is location and I is internalisation.

Ownership, location, and internationalisation are key competitive advantages in this paradigm. The ownership competitive advantage posits that, all other factors unchanged, the greater the competitive advantages of the investing firms, relative to those of other firms the more they are likely to be able to engage in, or increase, their foreign production (Dunning, 2001). The locational attractions, avers that the more the immobile, natural or created endowments, needed by the firms to use jointly with their own competitive advantages, favour a presence in a foreign, rather than a domestic, location, the more firms will choose to supplement or take advantage of their ownership specific advantages by engaging in FDI. For this reason, the MNEs would undertake activities so as to add value to their operations. The final competitive advantage which is internalisation, which offers a framework for evaluating alternative ways in which firms may organise the creation and exploitation of their core competencies, given the locational attractions of different countries or regions. Such modalities range from buying and selling goods and services in the open market, through a variety of inter-firm non-equity agreements, to the integration of intermediate product markets and an outright purchase of a foreign corporation. In summary, the eclectic paradigm, like its near relative, internalisation theory, asserts that the greater the net benefits of internalising cross-border intermediate product markets, the more likely a firm will prefer to engage in foreign production itself, rather than license the right to do so, for example by a technical service or franchise agreement, to a foreign firm (Dunning, 1993).

2.2 Empirical Review

In recent times the role of Investment Promotion Agencies (IPAs) has been highlighted and undergirded with empirical evidence. Establishing an IPA became a central part of most countries' development strategies with over 160 investment promotion agencies worldwide (UNCTAD, 2001). Morisset (2003) investigated the relationship between FDI inflow in the presence of country's investment climate and market size. Using data from a survey on 58 countries, it was found that greater investment promotion was associated with higher cross-country FDI flows. These findings were conditioned on three caveats: 1. the effectiveness of the IPA depended on the country's environment in which it operates. 2. The scope of activities that an IPA undertook influenced its performance. 3. Certain internal characteristics of the IPA were associated with greater effectiveness.

Harding and Javorcikr (2007) made similar findings using a more recent and larger dataset of 109. Specifically, they found that investment promotion efforts appeared to increase foreign direct investment inflows to developing countries. Additionally, IPA characteristics, such as its legal status and reporting structure, influenced the effectiveness of investment promotion. There was also evidence of diversion of foreign direct investment due to investment incentives offered by other countries in the same geographic region. These findings did not diverge when they compared results of two analytical approaches; firstly, testing whether economic sectors explicitly targeted by IPAs received more FDI in the post-targeting period relative to the pre-targeting period and non-targeted economic sectors; secondly, testing whether the existence of an IPA was correlated with higher foreign direct investment inflows.

Aside of the mere effect of the presence of an IPA on FDI inflow, some investigators have examined the effect of promotion expenditures on FDI inflow. One such study was presented by Kim *et al* (2003). Their study which was localised in the US unlike other cross-country studies, examined the effect of a state's financial incentives and state characteristics on FDI attraction. Applying a conditional logit model with FDI (new plants) as dependent variable to data from 1987-1994, they found that both promotion expenditures and agglomeration economies were important in attracting foreign plants. Promotion expenditures by states with small economies could partially offset location disadvantages of agglomeration (urbanisation and/or localisation) economies.

In an earlier study also on the US, Head *et al* (1999) using data from 1980-1992, assessed the effectiveness of US states promotion efforts in light of strong agglomeration effects in Japanese investment. The provision of foreign trade zones, lower taxes, and job-creation subsidies had statistically significant effects on the location of investment. Simulations showed that unilateral withdrawal of promotion would have caused individual states to lose substantial amounts of Japanese investment. However, because state promotional policies tended to offset each other, such actions on the geographic distribution of Japanese investment would have had miniscule effect.

There is some evidence in the literature on Ghana specific studies. Tsikata, *et al* (2000) studied the determinants of FDI in Ghana and categorised FDI flows to Ghana since 1983 into three phases namely; the period 1983-88, 1989-92 and 1993-96. The first period witnessed sluggish inflows, averaging about $4 million per annum, and the highest and lowest inflows during the period being $6 million in 1985 and $2 million in 1984 respectively. The second, 1989-92 recorded moderate inflows averaging about $18 million per annum the highest and lowest being $22 million in 1992 and $14.8 million in 1990 respectively. The third, 1993-96 was a period of significant, but oscillatory inflows, which peaked in 1994 at $233 million, but fell by more than 50 % the following year to $107million. Tsikata *et al* (2000) described a three-way nexus of economic growth, investment and political stability, which had emerged since the *coup d'etat* of 1972. In that year, a growth rate of 2.3 % was recorded, accompanied by a more than 60 % drop in FDI (from $30.6 million in 1971 to $11.5 million in 1972). In 1979 when Rawlings took power and was perceived as anti-business, growth fell to as low as -3.2 %; there was also an outflow of $2.8 million of FDI. The state of the economy worsened further in his second advent that is from a negative growth rate of 3.5 % in 1981 to -6.9 % in 1982; however, inflow of FDI remained constant at $16.3 million. The relationship emerged again when a parliamentary democracy replaced the military junta in 1992. The rate of growth of 5.3 % in 1991 fell to 3.9 % in 1992. This had been previously attributed to deficit financing undertaken in the democratisation process. The FDI flow however, increased from $20 million in 1991 to $22.5 million in 1992.

Barthel *et al* (2008) identified access to land, property registration, labour market (regulations, availability of skilled labour, labour productivity) and political instability as factors inhibiting FDI flows into Ghana. Following these findings, they recommended the following: speeding up of reforms in land administration and property registration; GIPC liaising with labour unions and the labour commission to make labour unions more business friendly;

Government focusing on few subsectors in manufacturing such as agro-processing and food and beverages; and making education more functional.

In investigating the short-run and long-run relationship between external merchandise agricultural trade and FDI inflows into agricultural sector of Ghana, using Toda-Yamamoto augmented Granger Causality test, Djokoto (2012) arrived at the following conclusions: 1. In the short-run, the coefficient for FDI inflows and imports were statistically significant. The negative sign pointed to a substitution or replacing relationship between the two variables. 2. The coefficients between exports and FDI though negative, were not statistically significant. 3. In the long-run, there was a feedback between imports and FDI. Exports caused FDI but not the reverse.

Dah and Khadijah (2010) established a positive relationship between FDI and locational attraction. Of the two components within the locational attraction, natural resource attracted more FDI than market size in the case of Africa. It was noted that through a case study of Angola, oil attracted FDI because oil was location attraction, which attracted foreign firms. These investments on the other hand contributed to the productive capacity of the receiving country thus stimulating economic development. They however noted that the availability of natural resources (oil) and its ability to attract foreign investment did not guarantee economic development. The establishment of appropriate institutions, mechanisms and policies would ensure efficient use of oil revenue for sustained economic growth.

Exchange rate had no discernible effect on Ghana's FDI (Nyarko, *et al*, 2011). This was possible by modelling the causal relationship between FDI inflows and exchange rate regimes over a 39 year period (1970-2008). Employing Ordinary Least Squares and the cointegration techniques, democracy was found to have the expected positive sign and to be a robust determinant of FDI in Ghana.

3. Methodology

3.1 Model

From the above review of the literature, the effect of IPAs on FDI inflow has been examined within the environment of a single equation. In some cases, the presence of the IPA was captured as a dummy (Harding & Javorcikr, 2007) whilst in others the expenditure outlays on the IPAs were used (Kim *et al*, 2003). For want of rigour, demand for FDI is explicitly derived through constrained optimisation with the inclusion of other variables including a dummy for Ghana's IPA, GIPC.

Assuming, a cost function faced by a firm with both domestic and foreign production plants. A growth strategy would require the firm to decide whether to expand production domestically and export to a foreign market or invest directly in a foreign market. The option to locate in a foreign country may be viewed within the framework of horizontal integration. Faced with this choice, the firm would seek to minimise cost of production for the plants at home and abroad.

Considering the following relation,

$$C = \omega_d(Q_d)Q_d + \omega_f(Q_f)Q_f \tag{2}$$

where, C denotes total cost, ω_d and ω_f are unit costs in domestic plants and foreign plants, respectively, and Q_d and Q_f are respective quantities produced in each plant. Unit costs in both plants are a function of the quantity produced. There is a limitation on the production of the firm made of domestic and foreign output, given by:

$$\overline{D} = Q_d + Q_f \tag{3}$$

Consider an invitation to minimise cost of production in both plants subject to equation (3). The Lagrangean will be set up as in equation (4).

$$La = \omega_d(Q_d)Q_d + \omega_f(Q_f)Q_f + \lambda(\overline{D} - Q_d - Q_f) \tag{4}$$

Taking partial derivative of 3 with respect to Q_d, Q_f and λ then setting each equation to zero, yields equations (5), (6) and (7).

$$\frac{\partial La}{\partial Q_d} = \frac{d\omega_d}{dQ_d}Q_d + \frac{d\omega_d}{dQ_d}(Q_d) - \lambda = 0 \tag{5}$$

$$\frac{\partial La}{\partial Q_f} = \frac{d\omega_f}{dQ_f}Q_f + \frac{d\omega_f}{dQ_f}(Q_f) - \lambda = 0 \tag{6}$$

$$\frac{\partial La}{\partial \lambda} = \overline{D} - Q_d - Q_f = 0 \tag{7}$$

Since the firm's decision is to locate the foreign plant, equation (8) is derived for Q_f.

$$Q_f = \left(\frac{\frac{d\omega_d}{dQ_d}}{\frac{d\omega_d}{dQ_d} + \frac{d\omega_f}{dQ_f}} \right) \overline{D} + \left(\frac{1}{\frac{d\omega_d}{dQ_d} + \frac{d\omega_f}{dQ_f}} \right) \left(\omega_d - \omega_f \right) \tag{8}$$

where:

$\left(\frac{\frac{d\omega_d}{dQ_d}}{\frac{d\omega_d}{dQ_d} + \frac{d\omega_f}{dQ_f}} \right)$ and $\left(\frac{1}{\frac{d\omega_d}{dQ_d} + \frac{d\omega_f}{dQ_f}} \right)$ are assumed to be positive.

The positive coefficients in equation (8) suggest that the output churned out in the foreign firm has a positive relationship with total demand $\overline{D}$ and differences in unit costs. Consequently, if $\omega_d > \omega_f$, the foreign plant increases its production in foreign firm. On the other hand if $\omega_d < \omega_f$, then, the firm will expand production in its domestic plant, resulting in a reduction in the output produced in its foreign plant. Having determined the desired output, the firm must decide quantities of inputs to be used for the production in the foreign firm. Admittedly, several inputs go into production processes. However, for brevity, two inputs are assumed; labour, L and capital, K. Thus the cost of producing the Q_f, denoted as C_f is shown in equation (9).

$$C_f = wL + kK \tag{9}$$

Where, *w* and *k* are wage rate and cost of capital respectively. The subscript for foreign firm $_f$ is dropped subsequently. Assuming a Cobb-Douglas production function;

$$Q = L^a K^b \tag{10}$$

the Lagrangean is set up as in equation (11). Unlike in equation (4), the constraint is the production function.

$$La = wL - kK + \lambda(Q - L^\alpha K^\beta) \tag{11}$$

Taking first order partial derivatives with respect to *w*, *k* and λ, and equating to zero results in equation (12), (13) and (14) respectively.

$$\frac{\partial La}{\partial L} = w - \lambda\alpha\left(\frac{Q}{L}\right) = 0 \tag{12}$$

$$\frac{\partial La}{\partial K} = k - \lambda\beta\left(\frac{Q}{K}\right) = 0 \tag{13}$$

$$\frac{\partial La}{\partial \lambda} = Q - L^\alpha K^\beta = 0 \tag{14}$$

Solving for K and substituting Q from equation (8) results in equation (15).

$$K = \left[\left(\frac{\beta}{\alpha}\right)\left(\frac{w}{k}\right)\right]^{\alpha/(\alpha+\beta)} \left[\left(\frac{\frac{d\omega_d}{dQ_d}}{\frac{d\omega_d}{dQ_d} + \frac{d\omega_f}{dQ_f}} \right) \overline{D} + \left(\frac{1}{\frac{d\omega_d}{dQ_d} + \frac{d\omega_f}{dQ_f}} \right) \left(\omega_d - \omega_f \right) \right]^{1/(\alpha+\beta)} \tag{15}$$

Therefore, the capital stock K possesses a positive relationship with total demand (sum of domestic and foreign demand) and a negative relationship with the unit costs of foreign costs relative to domestic costs. Marchant *et al*

(2002) following Bajo-Rubio and Sosvilla-Rivero (1994) took two important steps; firstly, substituted K with FDI and assumed demand to be GDP, and secondly, augmented the right hand side of equation (16) with the following variables: compensation (C), interest rates (IR), trade barriers (TB), exchange rates (ER), and exports (X). However, for the purposes of this paper, the variables will be replaced by determinants of FDI. The resulting model is given by 16.

$$FDI = f(GDP, ER, TOP) \tag{16}$$

Expressing equation (16) mathematically and taking the natural logarithms results in equation (17).

$$\ln FDI_t = \gamma_0 + \gamma_1 \ln GDP_t + \gamma_2 \ln ER_t + \gamma_3 \ln TOP + \varepsilon_t \tag{17}$$

Harding and Javorcikr (2007) found the following country control variables significant in both the total sample (world) and developing country sub-sample: GDP per capita, GDP growth, population and inflation. These explained country size. Restrictions on civil liberties were statistically indistinguishable from zero. Morisset (2003) used only GDP per capita to capture country size and found strong linear pairwise correlation among GDP per capita, GDP growth and population. Earlier, he identified GDP growth rate and trade openness as important in explaining FDI inflow to African countries. Morisset (2000) found that GDP per capita, inflation and trade openness were significant explainers of FDI flow into Africa. From the above evidence, equation (17) is augmented with inflation (INF), and GDP per capita (GPC) and a dummy variable to capture the effect of investment promotion, IPA. Additionally, trade openness may be construed as the internationalisation variable in Dunning's *OLI* model stated in equation (2).

$$\ln FDI_t = \gamma_0 + \gamma_1 \ln GPC_t + \gamma_2 \ln ER_t + \gamma_3 \ln TOP + \gamma_4 \ln INF_t + \gamma_5 IPA + \varepsilon_t \tag{18}$$

A priori expectations with FDI: GDP per capita is positively related to FDI ($\gamma_1 > 0$); exchange rate positively influences FDI ($\gamma_5 > 0$); and trade openness could negatively or positively influence FDI ($0 < \gamma_3 < 0$). INF is negatively related to FDI ($\gamma_4 < 0$) and IPA could be positively or negatively related to FDI ($0 < \gamma_5 < 0$). The IPA has a semblance of O in the OLI as Act 478 provides for 100 % ownership if the investor s desires.

3.2 Data

All data were obtained from UNCTADSTAT database except otherwise specified. FDI was captured as FDI to GDP ratio. Some of the values were negative and posed problems during analysis. Following Frenkel (1976) the figure 2 was added to the series enabling the possibility of generating logarithms in the estimation procedure. GPC is USD per person; exchange rate is expressed in purchasing power parity exchange rate (2005 prices). Trade openness is computed as exports and imports in current US dollars divided by the GDP in current US dollars. Inflation is the rate of growth of the consumer price index obtained from WDI of the World Bank. From the review it was observed that GIPC effectively began operation in September, 1994. However, since the study involves annual data, 1995 was considered as the beginning of foreign investment promotion. Therefore GIPC was recognised as 1 from 1995 to 2009 and 0 before 1995.

4. Results and Discussion

4.1 Plot of FDI over Time

From a level of 5 in 1970, FDI-to-GDP ratio dropped till 1974 (Figure 1). The ratio was generally flat between 1978 and 1993. The ratio began to tick significantly from 1993. This year marked the return to multi-party democracy. For most part of 1993 to 2009, the ratio was between 3 and 6. The exceptions were 1994 and 2006-2009. These highs are appreciable as the denominator of the ratio was rising as well. Thus growths in the ratio point to rates of increase of FDI greater than GDP growth rate. These periods of high ratios also correspond to the period during which the investment regulation agency was transformed into an investment promotion organisation.

4.2 Unit Roots Tests and Cointegration Test

As is the case with time series data, there is a high likelihood of unit roots in the data series. Following Augmented Dickey-Fuller test with intercept, and Phillips-Perron tests, the series were subjected to test of unit roots. Table 1 shows the results. Except logarithm of INF, all other variables were stationery after first differencing. Earlier, exchange rate was captured as local currency unit to USD. The unit root test showed the series was integrated of order 2. This would create problems with cointegration even with Autoregressive Distributed Lag (ARDL) model. Therefore, another rendition of exchange rate, purchasing power parity exchange rate was used which turned out to be I (1).

The presence of I (0) series among the variables precludes the effective use of Johansen's method of cointegration. The absence of I (2) series among the variables then favoured the use of ARDL approach to assess the presence of cointegration among the variables. The results of the ARDL model estimation is presented in table 2. The ARDL bounds test showed that the calculated *F*-statistic of 14.8208 exceeded the upper bounds of the critical values for both 5 % and 1 % probability levels. The null hypothesis of no cointegration of the variables is rejected in favour of the alternative that there is cointegration. The selected ARDL model based on Schwarz Bayesian Criteria (SBC) is presented in Table 3. The diagnostic test in table 4 shows that there is no serial correlation of error terms, no heteroscedasticity and the appropriate functional form was specified. The LM version of the normality test however showed non-normality. Since non-normality is principally required for forecasting which is not aimed at in the study, the statistically significant non-noramilty is ignored.

4.3 Short Run Empirical Model

With fairly good model statistics; R squared and adjusted R squared greater than 50 %, and statistically significant *F* statistic of 7.99, the model is fit for inferences to be drawn from it. In the short run model (Table 2) inflation and trade openness are statistically significantly different from zero 5 % and 10 % respectively. In the short run, 1 % increase in trade openness will induce 1.5 % increase in FDI inflow into Ghana's economy. Similarly, a 1 % decrease in inflation will induce a 2.11 % increase in FDI inflow. This concurs with the findings of Morisset (2000, 2003), Dah & Khadijah (2010) and Djokoto (2012). The key variable, GIPC is not statistically distinguishable from zero. The statistical insignificance is in disagreement with the findings of Harding and Javorcikr (2007) and Harding and Javorcik (2011).

4.4 Long Run Empirical Model

Following the existence of cointegration among the variables, the long-run coefficients of equation (18) were estimated (Table 5). The coefficients of inflation and exchange rate conformed to *a priori* expectations, so did those of GIPC, trade openness and GPC. In respect of statistical significance, those of exchange rate and GIPC were not significant whilst the coefficients of trade openness, inflation and GDP per capita were statistically distinguishable from zero. Therefore, trade openness and GDP per capita exerts a significant positive effect on FDI inflow into Ghana's economy. This result is in line with the findings of Morisset (2000, 2003), Dah & Khadijah (2010) and Djokoto (2012). The natural logarithm expression of the model implies that the coefficients are elasticities. A 1 % increase in trade openness will lead to a 3.67 % increase in FDI inflow. Also, a 1 % increase in GDP per capita will induce a 3.04 % increase in FDI inflow to Ghana. The high elasticity figures show the relative importance of these variables in determination of FDI inflow to Ghana. Ghana has traditionally been involved in trade especially exports of cocoa. Imports have grown since import substitution policies were relaxed in the mid-1980s. Thus, increase in trade openness in the presence of increasing FDI inflow confirms this result. In respect of GDP per capita, a study growth of the country's economy has been witnessed over the period and in the presence of increases in FDI inflow, this result is to be expected.

Inflation is significantly, negatively related to FDI inflow. A 1 % decrease in inflation will exert a 2.11 % increase in FDI inflow. Decreased inflation implies price stabilisation. This creates conducive environment for planning. Decreased inflation also shows that the local currency value of investment will not diminish. The exchange rate variable is negative but statistically indistinguishable from zero. The non-discernible effect of exchange rate on FDI inflow into Ghana concurs with the conclusions of Nyarko *et al* (2011).

In respect of the focus variable of the study, though positive, it is statistically insignificant. This means the transformation of the investment institution into GIPC has not had a significant singular contribution to FDI inflow into Ghana. This is contrary to the findings of Morisset (2003), Harding and Javorcikr (2007) and Harding and Javorcik (2011). The disagreement may be due to the coverage of data, whilst Morisset (2003) used data on survey for only 2001 across 58 countries, the current paper examined a time series model for a country, Ghana. A better comparative study would have been a time series study for other countries or panel of countries spanning 1970 to 2008. Also, the period of existence of GIPC barely exceeds a quarter of the study period.

5. Conclusions and Recommendations

The paper set out to investigate the effect of the establishment of GIPC on FDI inflow into Ghana. The control variables, inflation and trade openness were statistically significant in the short run. Whilst inflation exerted a negative effect on FDI inflow, trade openness positively induced FDI inflow. GDP per capita and exchange rate did not statistically significantly influence FDI inflow in the short run. In respect of the key variable GIPC, in the short run, there was a positive but statistically insignificant effect in FDI inflow. In the long run, the results show that in spite of a positive relationship between GIPC and FDI inflow, this relationship was statistically insignificant as in the short run. Exchange rate also did not impact on FDI inflow into Ghana. Other macroeconomic variables, GDP per capita, trade openness and inflation were significant in explaining FDI inflow into Ghana with inflation exerting a negative effect in the long run whilst the other statistically significant variables exerting a positive effect in the long run.

The above results show that macroeconomic management is more important in inducing FDI inflow into Ghana than investment promotion agency *per se*. Greater effort must be made at macroeconomic management, namely, reducing inflation, increasing trade and growing the size of the economy. Given the insignificant but positive relationship of GIPC with FDI inflow, GIPC may play complementary or secondary roles to macroeconomic management. Specifically, the macroeconomic variables will attract FDI whilst GIPC provides the needed support services to the investors.

More specific country studies within a time series environment as well as developing country studies within a panel environment will be important in elucidating on the impact of investment promotion on FDI inflows.

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Table 1. Stationarity Test

	Augmented Dickey-Fuller Test		Phillips-Perron Test	
Variable	I (0)	I(1)	I (0)	I(1)
LnFDI	2.562194	9.453605***	2.580648	10.87723***
GIPC	0.716350	6.082763***	0.716350	6.082766***
LnGPC	0.192309	4.814159***	0.192309	4.768079***
LnINF	4.034856***	5.656673***	4.014591***	9.084867***
LnTOP	2.337252	7.574162***	2.183984	7.616907***
LnPPPER	0.571499	3.545112**	0.490893	3.425210**

Note: ** means significance at 5 %; and *** means significance at 1 %.

Table 2. Error Correction Representation for the Selected ARDL Model: ARDL (0,1,0,0,0,1) Selected Based on Schwarz Bayesian Criterion

Dependent variable is dLFDI, 37 observations used for estimation from 1972 to 2008				
Regressor	Coefficient	Standard Error	T-Ratio	
dLnTOP	.35850	0.20302	1.7658*	
dLnPPPER	-.010840	0.031992	-0.33885	
dLnINF	-.16885	0.079982	-2.1111**	
dGIPC	.10402	0.20866	0.49852	
dLnGPC	-.55699	0.40337	-1.3808	
d γ_0	-2.7427	1.7422	-1.5743	
ecm(-1)	-1.0000	0.00	*NONE*	
R-Squared		0.62336		
R-Bar-Squared		0.53245		
S.E. of Regression		0.26654		
F-stat. F(6, 30)		7.9994***		
Mean of Dependent Variable		0.02899		
S.D. of Dependent Variable		0.38980		
Residual Sum of Squares		2.0602		
Equation Log-likelihood		0.92949		
Akaike Info. Criterion		-7.0705		
Schwarz Bayesian Criterion		-13.5142		
DW-statistic		2.2975		
Testing for existence of a level relationship among the variables in the ARDL model				
F-statistic	95 % Lower Bound	95 % Upper Bound	90 % Lower Bound	90 % Upper Bound
14.8208	2.4189	3.8105	1.9818	3.2181
W-statistic	95 % Lower Bound	95 % Upper Bound	90 % Lower Bound	90 % Upper Bound
88.9250	14.5133	22.8627	11.8906	19.3089

Note: * means significance at 10 %; ** means significance at 5 %; and *** means significance at 1 %.

Table 3. Estimated Autoregressive Distributed Lag Estimates: ARDL (0,1,0,0,0,1) Selected Based on Schwarz Bayesian Criterion

Dependent variable is LFDI, 37 observations used for estimation from 1972 to 2008			
Regressors	Coefficient	Standard Error	T-Ratio
LnTOP	0.35850	0.20302	1.7658*
LnTOP(-1)	0.41128	0.22513	1.8269*
LnPPPER	-0.010840	0.031992	-0.33885
LnINF	-0.16885	0.079982	-2.1111**
GIPC	0.10402	0.20866	.49852
LnGPC	-0.55699	0.40337	-1.3808
LnGPC(-1)	1.3806	0.45904	3.0076***
γ_0	-2.7427	1.7422	-1.5743
R-Squared		0.71379	
R-Bar-Squared		0.64471	
S.E. of Regression		0.26654	
F-stat. F(7, 29)		10.3323***	
Mean of Dependent Variable		1.1329	
S.D. of Dependent Variable		0.44716	
Residual Sum of Squares		2.0602	
Equation Log-likelihood		0.92949	
Akaike Info. Criterion		-7.0705	
Schwarz Bayesian Criterion		-13.5142	
DW-statistic		2.2975	

Note: * means significance at 10 %; **means significance at 5 %; and *** means significance at 1 %.

Table 4. Diagnostic Tests of Autoregressive Distributed Lag Model

Test Statistic	LM Version	F Version
Lagrange multiplier test of residual serial correlation	CHSQ (1) = 0.98049	F (1, 28) = 0.76219
Ramsey's RESET test using the square of the fitted values testing for functional Form	CHSQ (1) = 0.25535	F (1, 28) = 0.19458
Normality test based on a test of skewness and kurtosis of residuals	CHSQ (2) = 5.4023*	Not applicable
Heteroscedasticity test based on the regression of squared residuals on squared fitted values	CHSQ (1) = 0.11958	F (1, 35) = 0.11348

Note: * means significance at 10 %.

Table 5. Estimated Long Run Coefficients Using the ARDL Approach: ARDL (0,1,0,0,0,1) Selected Based on Schwarz Bayesian Criterion

Dependent variable is LFDI, 37 observations used for estimation from 1972 to 2008			
Regressor	Coefficient	Standard Error	T-statistic
LnTOP	0.76978	0.20952	3.6740***
LnPPPER	-0.010840	0.031992	-0.33885
LnINF	-0.16885	0.079982	-2.1111**
GIPC	0.10402	0.20866	0.49852
LnGPC	0.82363	0.27056	3.0441***
γ_0	-2.7427	1.7422	-1.5743***

Note: ** means significance at 5 %; and *** means significance at 1 %.

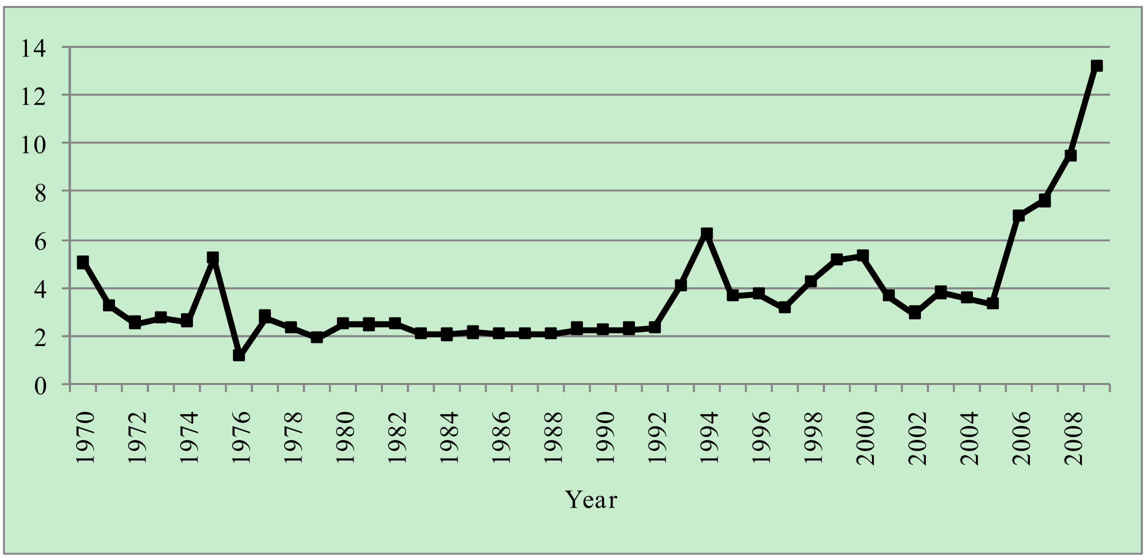

Figure 1. FDI to GDP Ratio for Ghana, 1970-2009

Costs, Prices and Results' Management: A Study Conducted in Fruit Canning Companies Located in Rio Grande do Sul State, Brazil

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Received: December 28, 2011 Accepted: February 1, 2012 Published: March 1, 2012
doi:10.5539/ibr.v5n3p58 URL: http://dx.doi.org/10.5539/ibr.v5n3p58

Abstract

This study aims to examine issues related to the management of inventory, working capital, pricing process and costs in companies operating in the fruit canning segment in the Brazilian state of Rio Grande do Sul. The researched management practices have often been addressed in literature as instruments for achieving greater business efficiency and effectiveness. This empirical study was carried out in 2009 with the eight largest fruit canning companies domiciled in Rio Grande do Sul, those having annual revenues of more than R$12 million. Structured interviews were conducted with the financial managers of the studied companies. Data analysis involved the use of descriptive statistical and correlation techniques between variables. The principal results suggest that: (a) most companies form the stocks of inputs for short-term periods, given the limitations of working capital and debt; (b) most of them use cost system or some form of cost structure, employing traditional techniques for measuring and managing production costs; (c) *mark-up,* applied to total production cost, is the preferred method for calculating sale prices; (d) the most significant and relevant correlations were observed between the costing methods used and the adoption of the marginal contribution concept, as well as between costing methods and the break-even point technique; (e) many conceptual inconsistencies were identified in the responses, suggesting weaknesses in the professional preparation of those interviewed.

Keywords: Cost management, Price formation, Financial management

1. Introduction

In an economic background of fierce competition, companies increasingly have to seek new ways to run their activities and manage their resources, aiming to reduce costs, increase productivity and meet the requirements of customers at the same time. In this case, the term cost is treated broadly, ie, beyond the traditional production operating costs, those expenditures classified as operating and financial expenses are also considered. As a result, the maintenance of operational assets, including stocks, reflects the use of resources and the generation of financial costs.

In this context, an example is given by Gomez-Bezares (1999). It is the inventory management, given that by optimizing the use of this investment, it rationalizes the use of available resources in the company. On this same issue, Dias (1987) says that the company must minimize the capital invested in stocks, because it is a major cost generator, ie, its steady increase raises the incidence of financial costs at the same proportion. However, it is impossible for a company to act without stocks at the right time, because the lack of stocks compromises to achieving sales. Dias (1987) adds that it is this complexity that requires the adoption of appropriate management techniques and activities.

According to Martins (2003), the activity of controlling is inserted in this issue, since it enables the planning of resources, the knowledge on costs, verification whether costs are consistent with the plan and, based on the analysis of possible deviations, the direction of course correction actions. Martins (2003) also highlights that, even being the most complete and sophisticated, no cost control system is able to achieve its goals if it cannot count on the full commitment of the company, starting with its top leaders.

Another relevant aspect refers to the results' formation and management. For Perez Jr., Oliveira and Costa (2008), the prices need to consider factors outside the company, but cannot ignore the internal costs, because this comparison allows appropriate decisions about the appropriateness or not of practicing market prices, and direct actions that leverage to achieve greater internal efficiency. In fact, ignoring these aspects of management can undermine the profitability and, consequently, the continuity of business.

The brief background presented till here, applied to companies in general, applies especially to the reality of group of companies selected for this study, ie, the canning industry based in the canning center, of the region of Pelotas, in Rio Grande do Sul State, Brazil.

The study of Madail and Raseira (2008) clarifies that this industry segment emerged at the end of the nineteenth century and was consolidated in the 1970s, when there was the installation of large corporations. In the 1980s, it was possible to witness the closure of many industries in the sector, according to the so-called systemic crisis that hit it. However, as Madail and Raseira (2008) add, yet in the following decade, the companies that remained were consolidated in the market, and from the 40 industries from previous decade only 12, in 2007, reached an important milestone in the business productivity and are now responsible for 98 % of the production of peach compote in Brazil.

Some companies in the industry restructured, increased its industrial park and adopted organizational changes in a similar move to that seen in different branches of production, while others have combined old and new processes. The closure of companies in the industry at the time of crisis, caused a severe unemployment in the region of Pelotas, Rio Grande do Sul, but also served as a challenge to managers for the restructuring and modernization of management practices (Badejo & Callegaro, 2001).

This is as relevant as the constant threat posed by the entry of foreign products, particularly in Argentina. In this regard, Santos (2009, p.18, *our translation*) points out that "The imported box with 24 cans sells for $ 15, which represents R$1.12 a unit, considering the dollar at R$ 1.80. But, in Brazil, the industries need to sell the can at least R$ 2.00 to cover the cost of production".

Considering the presented context and the industry chosen for this research, the objective is to identify and analyze how the candy canning industries are managing their costs, their inventories and their selling prices. As noted earlier in this introduction, cost is treated broadly, including the ones resulting from practices of working capital management, especially inventories.

Besides this introduction, the study presents a brief theoretical framework on the subject, followed by the presentation of the methodological aspects of research. Then, there is the presentation and analysis of data, followed by conclusions and references.

2. Theoretical Framework

2.1 Sale Pricing Formation

According to Sardinha (1995) the price can be defined as the amount of money the customer pays to purchase a product, and that the company receives in exchange for the same assignment. From this definition, one can say that price is the monetary value paid by the consumer in order to satisfy their needs, while the supplier receives it with the expected profit from the transaction.

Horngren, Foster and Datar (2000) address another aspect in this regard, arguing that the price of a product or service depends on the supply and demand. They add that there are three major influences that affect pricing decisions: customers, competitors and costs. Customers influence on price formation, as they analyze the amount charged for the goods or service and the benefits that may have got from it, compared to alternative acquisition market. The competitors have reactions to prices charged by other companies and may force them to reduce them in an attempt to remain competitive. The prices are fixed hoping to recover costs and generate profit; this way, the study of costs' behavior provides an understanding of their influence on prices and the resulting impacts from the combinations of product prices and volume of sales.

Kotler and Armstrong (1993), in a context of market analysis, emphasize that it is the consumer who will decide if the price of a product is correct after all. In any case, the best is not to charge lower prices, but differentiate the product offered, so it is worth a higher price. Bruni and Famá (2002) present four elements classified as the main objectives in the pricing: (1) provide the highest possible profit in long term, (2) allow the profitable maximization of market share, (3) maximize the productive capacities, avoiding idleness and operating waste, (4) maximize the capital employed to perpetuate the business in a self-sustained way. It is in this approach of maximizing the capital employed that is inserted the focus of this study regarding the working capital and financial costs management.

In an understanding that seeks to combine the strength of the market with business objectives, Sardinha (1995) says that in short term, the price charged for the sale of goods or provision of a service can be influenced by the market, but the survival of a company in the long term, depends on its decisions on consistent policies of pricing and cost management. Thus, prices should consider the company's production capacity, because low prices tend to increase sales, which may cause problems regarding the quality of assistance and delivery. On the other hand, high prices may reduce sales, leading to idleness of productive and personnel structure, ie, in the operational idleness and waste.

Bruni and Famá (2002) emphasize that the capital return is given by profits derived over time. Thus, only through the capacity of cost management and fixed pricing of sale, which is accepted by the market and will generate profits, it is possible to ensure an adequate return on the investment made.

According to Santos (2005), the methods of pricing are: cost-based method, competition-based method; market-based method, and the mixed method.

The cost-based method is the most traditional and most common in the business world. This method usually employs the following elements: total cost, processing cost, marginal cost, required rate of return on capital employed and standard cost. If the used basis is the total cost, it must be applied a desired profit margin on total costs of products. If using variable costs and expenses, the added margin should be sufficient to cover fixed costs and expenses, besides desired profits. This process of considering a fixed margin to a based cost is known as mark-up.

The second pricing methodology uses the competition analysis. On this methodology, Bruni and Famá (2002) state that companies pay little attention to its costs or its demand-competition is what determines the prices to be charged. There may be offer prices-when the company charges more or less than the competition, or proposal-when the firm sets its price, according to its trial, on how competitors will set their price.

For the third method, the price based on market characteristics, the price is established based on the product's perceived value by the market. As stressed by Zuccoloto and Colodeti Filho (2008), this method requires deep knowledge of the market by the company, because it will drive the adoption of correct market actions and ideals for the company facing the battle imposed by competitors. Therefore, knowledge of the market can decide whether the product will be sold at a higher price, attracting higher economic classes, or a popular price, given the layers of lower purchasing power.

The fourth and final approach, the mixed method, is a combination of the three factors discussed in the earlier presented methods: cost, competition and market. Bruni and Famá (2002) point out that this pricing method should be able to consider the quality of the product in relation to consumer needs, the existence of substitute products at more competitive prices, the expected demand of the product, the product market area, price controls imposed by the government, the levels of production and sales that are intended or can be operated, and the costs and expenses to produce, manage and sell the product.

2.2 Inventory Management

According to Assaf Neto (2003), the stocks can be divided into four types: (1) goods and finished products, (2) work in process, (3) raw materials and packaging, (4) materials for consumption and warehouses.

Each of these types of stocks has its own importance for companies to invest in its maintenance. Scherr (1989, p.281-282) lists the main reasons for the first three types of stocks above:

a) The maintenance of stocks of goods and finished products means to provide immediate service to customers of the company, seeking to meet a higher level of customer satisfaction by making products available for immediate delivery

b) The maintenance of work in process is motivated by providing a flexible reserve for companies, reducing the dependence of the phases of the production flow.

c) The maintenance of stocks of raw materials and packaging makes it easy to schedule production, prevents the acquisition of items in times of high prices and represents a protection against the deficiencies of the offer.

In relation to inventory maintenance of consumables and warehouses, Assaf Neto (2003) mentions that the volume of investment in such stock varies depending on the basic characteristics and operational and administrative peculiarities of each company. On the other hand, according to Rogers, Ribeiro and Rogers (2004), the financial manager should not consider these approaches of maintenance of stocks as the only possible ones to solve the listed problems. For instance, the authors suggest alternative strategies that aim to avoid the risk of price fluctuation of raw materials, in which the company may carry out long-term contracts with suppliers, which will specify the prices to be paid and the quantities to be delivered or, in order to stabilize the demand, the company may grant discounts.

It must be highlighted that the management of inventories in the canning sector has special contours given the perishability and seasonality of the main raw material, ie, the fruits. In fact, the non-availability of fruit production throughout the year and useful short-term for its use give rise to the need for more accurate planning and techniques, as well as investment in special storage structure.

2.3 Concepts and Practices Related to Cost Management

According to Horngreen (1978), the terminology of costs should be thought as measure in the conventional accounting sense, ie, the amount paid for goods and/or services. In management accounting, different measurement bases can be used as a unit. In addition, the unit is not necessarily always related to a physical product. The figure of the cost object, as emphasized by Hansen and Mowen (2001) makes it easily definable that there are funding entities that best fit due to the need and purpose of the funding.

As Kaplan and Cooper (1998) affirm, for the manufacture of any product, the company is required to make a number of expenses related to items such as raw materials, workmanship, electricity, rental of warehouses for the company's installation and others. These expenses are denominated production costs or just costs.

According to Souza and Diehl (2009, p.10, *our translation*) cost "is the part of the expense that goes along with product. It is the portion of the productive effort that is transferred to the product." Therefore, cost is the volunteer expenditure made by a company for the development of its products. There are other volunteer expenditures in the company that do not relate directly to the preparation of products: these are expenses, and can be classified according to their nature, in administrative, business or financial expenses. Besides the costs, expenses, there are volunteer expenditures for the purchase of properties or for investments, which are registered in the fixed assets.

Costs can also be considered according to several other classifications. For Martins (2003), direct costs are likely to direct appropriation to the costing objects, by simply having a measure of consumption (kilogram of direct materials consumed, hours of manpower used), so that they can be easily identified and measured with the costing object. As for the indirect costs, on the other hand, are those that are not easily identified with the costing object. Sometimes, because of its non-relevance, some costs are allocated to cost objects through apportionment.

Costs can also be classified as fixed or variable. This traditional classification is approached by Cashin and Polimeni (1982). For them, fixed costs are those that remain unchanged in the total for a period, despite the volume fluctuations or production activity conducted, considered an installed capacity. Variable costs are those that vary directly and proportionally to the volume of activities.

Besides these categories of costs and expenses, within the productive activities of operations and management, there are also those charges arising from the use of active resources in the operations development. They are the financial costs of turnover and permanent investments.

With respect to costing methods, variable costing arose from the need to solve the problems posed by the difficulty of appropriating the indirect fixed costs to products and of great use of the isolated measurement of variable cost.

The variable costing considers the appropriation of all variable costs, direct and indirect, and only variables, to products, given that fixed costs are fully considered to the results of the period-that is, they are structure costs, not products'. In the opinion of Leone (2000), the variable costing is related to the use of costs as supporting factors for making short-term decisions, when the variable costs became relevant, such as the application of the analysis based on the contribution margin and the break-even point. Its rise was due to the recognition of the limitations of absorption costing for management purposes.

Regarding the absorption costing method, Martins (2003) emphasizes that it is the ownership of all production costs for processed goods, ie, all expenses related to the effort of manufacturing are distributed to all produced products.

According to Machado and Souza (2006), some costing methods are more suitable as management tools, others for external reporting, others are more conservative, others more comprehensive, with short or long-term sight. It should be taken in mind that there is no method considered the best one to be used indiscriminately, and for all purposes by companies. In fact, depending on the purpose and use of information wanted, there must be chosen one or more than one method concomitantly. So is that other methods, such as activity-based-ABC, or unit production effort UEP (Souza & Diehl, 2009) and full, among others, may be privileged in relation to the objectives of costing and usefulness of information to be generated.

Within the bias of the cost planning, the methodology of the target costing, or goal-cost, according to Sakurai (1997), is a strategic process of cost management to reduce total costs in the planning and product design stages. It is useful in the stages of product development, and encourages innovation, focusing the efforts of all sectors of the organization seeking profit set to be achieved through products that meet standards of quality, delivery time and price demanded by the market. The logic behind this method is that the cost is determined by two other variables, ie, the market selling price and the expectation of profit implicit in the planning.

In addition to the established planning target costing there is the standard cost method, aimed at controlling the efficiency of the planned resource consumption in the measurement of the target costing (Sakurai, 1997). Kraemer (1995) presents a historical overview, emphasizing that the standard cost method is of America, which aims to establish measures of comparison (standard) determined from the average or theoretical production history, or even through pilot production. Patterns are established in the production process from a normal work situation to be achieved within efficient operating conditions. A more contemporary view on the planning and cost control brings an understanding of integration between the target costing and standard costing, the latter being prepared based on the goals established by the first. The comparison between the actual cost and standard cost reflects the occurred cost variations, which must be analyzed in order to correct the causes that originated them, being such variations favorable, are unfavorable.

2.4 Management of Working Capital

The term working capital is concerned to short-term assets of the company, such as inventory, receivable accounts, as well as their short-term liabilities, debts to suppliers representative, taxes and miscellaneous charges etc. The management of working capital is a daily activity that aims to ensure that the company has sufficient resources to continue operations and avoid expensive disruptions.

Teló (2001) mentions that close examining each of the items of working capital on an ongoing basis is a priority for the administrator. The most commonly used instrument within organizations to manage the working capital is cash flow, both strategically, when it supports decision-making, and tactically, when connected to restricted horizon.

It must be noted, in the context of working capital, the relevance of the management of loans given to customers on credit sales, of the stocks in its many forms and of purchasing policies adopted in relationships with suppliers. On these issues, there is vast literature dealing with the management practices of these key elements of working capital, such as Assaf Neto (2003), Gitman (2001), Brigham, Gapenski and Ehrhardt (2001), Jaffe, Westerfield and Ross (2002). In all of these elements, which has currently been a challenge for managers is to adopt practices that have in the proper temporal sizing a relevant aspect.

So, getting the value of sales in the shortest possible time, making purchases with longer and equalized period with the sales, and maintaining the lowest inventory level, optimizing its rotation without affecting the production flow. The practice of just-in-time is an example of these practices. The search for the balance of these operating terms is, within the financial management, as its more transparent result the balance, or imbalance, of cash flow, impacting in greater or lesser dimension of financial costs of fundraising. In theory, the lower the efficiency of the management of working capital, the greater the need for additional resources and its financial costs.

Thus, given that investments are made to sustain the implementation of activities in the company, it is logical to conclude that inefficiencies in the process of resource consumption (cost of production beyond the planned, unnecessary inventory maintenance, loss of sale due to the market with unrealistic prices, incorrect decisions on acceptance or not of special requests etc.) lead to the need to resort to sources of working capital (of its own or from others), resulting in additional financial costs, whether as interest or dividends.

3. Methodological Procedures

Based on the definitions established by Gil (1999), this research has exploratory and descriptive characteristics. The exploratory aspects are present in order that the study aims to increase knowledge about the pricing and costs in the companies surveyed. The descriptive characteristics are revealed in the description of the degree of awareness of company managers about the use made of the practices surveyed.

Also according to Gil (1999), as to the means, it is a field research whose data were collected in places where the events occur, ie, in the small and medium industries, located in the city of Pelotas and surrounded ares, in the state of Rio Grande do Sul.

Finally, as to the approach and data analysis, and based on Raupp and Beuren (2003), the study presents qualitative and quantitative characteristics. By performing a preliminary analysis of responses to the questions formulated, we use the qualitative approach. Further, by assigning numerical values to answers and trying to identify statistically significant correlations between them, we use a quantitative approach of analysis.

The research consists of 13 canning industries, small and medium ones, based in Rio Grande do Sul, registered in Sindicato das Indústrias de Conservas de Pelotas e Região, according to registers published in 2009. These companies primarily develop activities of peach, fig, plum and pineapple in syrup industrialization.

The criterion for defining the sample was the declared value of annual revenues, informed by Sindicato das Indústrias de Conservas de Pelotas e Região. It was established a limit of R$ 12 million in 2009; it was found that from the ninth company, in order of billing, this indicator is markedly reduced, showing companies far smaller than others, which characterizes lack of homogeneities in the sample, hindering comparative analysis. Thus we adopted the intentional criterion because it was surveyed a sample of eight companies belonging to the identified sector. The eight participating companies represent approximately 82 % of total revenues in the sector in the surveyed area.

Data collection was due to the use of structured interviews, conducted with managers of financial firms.

For data analysis, first we present the answers to the questions made. The responses were interpreted, allowing a qualitative analysis of this information with the managers of the surveyed companies.

Then, in order to enable more significant results, it was measured the degree of correlation between selected variables, to identify, from the definition of Stevenson (1981), the extent to which responses are related to each other, which allows to infer whether there is consistency in them.

To carry out this analysis, qualitative variables (responses) were transformed into quantitative variables, using for this purpose, the feature of creating dummy variables. The dummy variables are binary ones that can assume only 0 or 1 values, and thus can be correlated or be included in models. The software used in the correlation analysis was MS Excel.

4. Data Analysis and Presentation

4.1 Interpretation and Qualitative Analysis of Responses

This section presents the answers to the questions, followed by a brief analysis and interpretation. To provide better understanding for the reader, it presents the asked question, and then the respective analysis.

4.1.1 If the Company is an Exporter or Recently Performed Exportation (within Three Years)

Although the survey sought to identify the purchasing, cost and price management, it was considered necessary to identify the companies transactions with the foreign market, as this enables better identification of the competitive environment that the company is exposed to. It was identified by the responses, that 50 % of firms are exporters or made exports in the last three years, but those with non-representative values.

4.1.2 Managers' Level of Instruction

On this issue, we sought to identify the area of knowledge in which managers had their training. It was found that from the eight respondents, five have graduate in the economics field (economics / accounting / management). The others did not have higher education or their graduation had not happened so far.

From the responses, it is clear that most managers are trained in the area of economics, although it was desirable that all managers have instruction in this area. It is appropriate in the course of this study to check for any influence of graduation in management and control ways adopted in the companies.

4.1.3 Experience of the Manager in His/Her Actual Position

Seeking to identify the experience of the manager in his function, it was observed that, except for one respondent, all others reported having more than ten years of experience in the management position, which shows good knowledge to perform their activities. Experience, coupled with a good academic background are important factors for successful management.

4.1.4 Strategy Adopted for the Purchasing Moment

Five of the eight respondents indicated that the purchases are made when there is immediate need of supplies, the other three respondents stated that carry purchases when the price is at lower levels, regardless the existence or not of immediate need.

Interpreting the answers, we find that approximately 63 % of respondents make purchases when there is immediate need for inputs. This behavior is in accordance with the best practice management of working capital invested in inventory. However, it is necessary to examine whether this behavior is related to the level of capitalization of companies, situation to be assessed in the following section.

4.1.5 Policies for Maintaining Stocks

This question aimed to assess the medium-term storage practiced. The findings revealed that managers in five companies hold stocks only to meet the demands of short-term (up to one year/season). Other responses indicate that the volume of maintained inventories aims to meet the demands of short and medium term (1-2 years/season).

The obtained responses seem consistent with those obtained in the previous question, because the same 63 % of respondents indicated that inventories are maintained to meet short term demands. This response is consistent with the percentage number of companies that declared to buy their inputs only when there is need for them.

4.1.6 Costing Method Adopted for Decision Making

This question sought to identify the costing method used by companies. It was found that from the eight surveyed companies, five use absorption costing to make their decisions, while the other three respondents make use of variable costing.

It can be observed that most companies make decisions based on the total costs absorbed by the products in the production process. This reveals that these firms prioritize the vision of all the costs absorbed by the products at the time of decision making. Here it can be noticed an inconsistency in relation to the literature in the area, which emphasizes the limitations of the information generated by the absorption costing method when used for management purposes.

4.1.7 Criteria for Sale Price Formation

Managers were asked about the criteria used for the formation of sale prices. It was observed that six companies make use of the mark-up on total production costs to calculate the selling price; other two companies form the sale price according to the market average.

Interpreting the answers, we find consistency with the previous answers, because companies tend to use as a basis for formulating their sales prices, the total costs of production, which is related to costing by absorption. Still, it must be checked if correlation between these issues exists-that will occur in the next section.

4.1.8 Using the Contribution Margin Concept

In order to identify the use of the concept of contribution margin in management, it was observed that three companies accounted for using the concept of decision making, while five companies responded not to use this technique.

By analyzing the responses, there is a minority of companies (37 %) that use the concept of contribution margin. The answers are consistent with the costing method adopted by companies, because as the answer to question 7, three companies revealed using variable costing, which best fits to the concept of contribution margin.

4.1.9 Calculation of the Break-Even Point (by Product, Product Line or Total)

This question wanted to get information on the calculation of the break-even point in companies. The findings revealed that all managers calculate the total break-even point in the company and not by product. It is noticed that the surveyed companies seek to strike the global break-even point, even if it means smaller gains or losses in some sectors or products.

4.1.10 Method of Calculating the Break-Even Point

This issue served as a validation of the previous question, obtaining two different types of responses. Three companies responded to calculate the sum of fixed costs and expenses, to divide this sum by the weighted average of contribution margin. The other five companies calculate it by subtracting the total disembeddings of total revenues, in a given period of time.

Analyzing the answers to this question, and comparing them with of previous ones, there is a conceptual mistake in most companies (63 %) because subtracting the total disembeddings of total revenues is more like a flow of resources in cash basis than the proper break-even point.

This is corroborated by evidence arising from the question eight, at which time three companies responded using the concept of contribution margin for decision making, and five companies responded did not use the contribution margin.

4.1.11 Calculation of Profitability (by Product or Product Family)

The purpose here was to see whether companies calculate their individual profitability by product or product family. It was observed that the number of companies that calculate profitability by product is equal to the number of those who calculate it by product family.

When answering this question, there is a contradictory aspect. It is consistent that companies choose to calculate their profitability by product or segment, but these responses do not support what was said in the 9th question, as for those respondents who showed how to calculate the total break-even point of the company.

4.1.12 Use of Standard Cost and Target / Goal Cost

This question sought information on the use of standard cost or target cost. Five companies responded to use standards for monitoring and testing of production (product launches) and cost range goals when the actual process of production. The other three participant companies answered to use only the standard cost for monitoring.

By the answers, we find again some conceptual inconsistency, particularly with regard to the term used by respondents, that is, patterns of costs and not standard cost. So even if managers have mostly revealed having academic instructions in the field of economics, one cannot affirm that they understand the differences of the concepts in the standard cost and target cost.

4.1.13 Proportion of Companies' Own Capital and Third-Party's Used (Leverage)

To this question, different answers were obtained, summarized in Table 2, identifying the proportion of companies' own capital used. As requested by companies, their identities were hidden.

Analyzing data in Table 2, we find that the majority of respondents (five) reported that the company has a significantly financial structure leveraged by third-party resources, since their own resources represent between 30 % and 50 % of their capital sources.

4.1.14 Implementation of Partnerships with Customers, Suppliers and Competitors

The goal was to identify whether the company has partnerships with customers, suppliers or competitors. It is observed by all given answers that companies develop some kind of partnership with customers and suppliers, but no kind of partnership with their competitors.

Since these responses were not included in the framework of correlation analysis, it was considered advisable to analyze the responses obtained in this part of the research. By the answers, all companies reported having some kind of partnership with customers and suppliers, and no partnership with competitors, which may be evidence of the fierce competition in the sector and lack of benefits of a joint action between them.

Chiamulera (2002, p.2, *our translation*) comments that "since we started in business we are prepared to 'hate' our competitors, wanting to see them defeated". The corporate world today seems to be awakening to a management practice which, although not new, it is still rarely practiced. It is known as operating agreements, among other names, partnerships, cooperation networks or agreements for technology transfer, and is conducted between companies that have always been fierce competitors. A practice that is becoming common in the market are cooperation agreements of non-competitors, but that have common needs. It is common, as referred Olave and Amato Neto (2007), that companies join together to launch shopping portals on the Internet and thereby reduce the acquisition costs of raw materials for their operations.

This can be a factor to be fostered in the surveyed companies, which could seek to implement this practice in the industry for mutual benefit of growth.

4.2 Analysis of Significant Correlations in the Responses of Managers

To evaluate possible relationships between the responses obtained in the research (or the lack of them), we prepared Table 2, shown bellow.

Before interpreting data in Table 2, it is noteworthy that the correlation coefficients considered statistically significant were those above 70 %, a level which is commonly adopted in terms of statistical significance. The analysis of the coefficients is held on topics.

4.2.1 Exporting Company

The responses showed that 50 % of firms are exporters. This revealed no significant correlation with the other answers. The highest correlation coefficient (0.5774) is related to the criterion of sale price formation, which does not keep great consistency because considering that export prices are also calculated from the total cost does not reflect the competitiveness of the international market. Furthermore, the degree of correlation cannot be considered very relevant.

4.2.2 Instruction of Managers in the Area of Economics

The findings revealed that most managers (five of eight) have academic instruction in the economics field. The answers to this question revealed correlation of 100 % (coefficient of 1.0000) with the purchasing strategy, ie, managers with training in the area declared to buy when necessary while those without higher education or training in other areas revealed purchasing when prices are lower. This degree of correlation is consistent and shows the practical adoption of the formative concepts in purchasing management, emphasized by literature.

It is also noticeable significant correlation (0.7746 or 77.46 %) between the managers' instruction and the inventory maintenance strategy, which indicates that managers from the area of economics tend to hold stocks according to short-term demands, which is consistent with the concepts domain of short-term financial management that emphasizes maintaining the lowest possible inventory.

Another significant correlation, but a negative sign, ie, -0.7746, can be observed between instruction and use of companies' own resources to finance the enterprise turnover. Thus, managers with study in economics revealed to work with greater leverage, ie, the lowest percentage of own resources. The consistency or not of this degree of correlation depends on another factor not analyzed in this study-the interest rate. Literature has shown that the smaller it is, the greater the potential benefits of using third party resources.

To conclude, it is noteworthy that there is no significant correlation between the instruction of managers and issues related to criteria of the sale price formation, calculation of profitability and use of standard cost and target cost. This lack of correlation confirms what has already been reviewed in the analysis of questions 10, 11 and 12 of section 4.1, revealing a conceptual inconsistency between the instruction of managers and the adoption of management tools in practice. It is shown here an opportunity to conduct researches in greater depth to clarify these issues.

4.2.3 Manager Experience in the Present Function

It was found that except for one, all other managers held significant experience in their functions. This situation did not reveal very significant correlation with the other responses, although there are correlation coefficients of 0.6000 (60 %) with the method of costing for decision making, use of contribution margin and break-even calculation method. It should be noted that these coefficients do not hold great significance in terms of conceptual relationship, because there is no significant correlation between managers' instruction and experience. Apparently, the managers' instruction has not led them to the use of useful management practices recognized in the literature.

4.2.4 Strategy Adopted for the Moment of Purchasing

When answering to this question, five managers revealed that the purchases are made when there is immediate need of inputs, while the other three respondents said they carry out purchases when the price is at lower levels.

The answers to this question revealed a correlation of 77.46 % (coefficient of 0.7746) with the inventory management strategy, which means that most managers who buy stocks when necessary, tend to maintain these levels according to the short-term demands, which is consistent with the domain concepts of short-term financial management and the analysis already carried out in section 4.1. However, it was expected that this correlation was higher, even near 100 %, which reveals inconsistency in the obtained responses, subject to other researches in greater depth.

Also, from Table 2, the answers to this question reveal a negative coefficient of correlation of 77.46 % (-0.7746), with the proportion of companies' own capital used. This correlation is consistent, because the less capitalized companies tend to make their purchases only when necessary.

4.2.5 Policies for Inventory Management

On this issue, five managers revealed that companies maintain inventories to meet short-term demands. This situation did not reveal very significant correlation with the other answers. Even so, we must highlight the negative correlation of 50 % (-0.5000) with the proportion of companies' own capital used by firms. In this case, it should be expected a degree of negative correlation of 100 %, because according to Campos, et al (2002), increasing stock reflects in the increase of the NWC (Need for Working Capital), and therefore, in the debt, if there are no own sources of resources.

Therefore the most leveraged companies in their capital tend to fill their inventories of inputs only when needed, in order not to extrapolate its debt; on the other hand, most capitalized companies may be able to buy when in the most propitious moment in terms of costs, obtaining competitive advantage compared to the others.

An inconsistency between the answers and the degree of calculated correlation is noticed, which may prove an inappropriate situation in the inventory levels management of the companies or even a conceptual inconsistency in the managers' perception.

4.2.6 Costing Method Used for Decision Making

Five managers responded using costing by absorption to make decisions while the remaining three make use of variable costing. These responses correlated 100 % (1.0000) using the concept of contribution margin and the criterion used to calculate the break-even point. Thus, all managers that revealed using the absorption costing method, reported that calculate the break-even point improperly, ie, the total revenue minus total disembeddings, while they have proven not to use the concept of margin contribution.

Based on this coefficient, we conclude that the three managers who responded using variable costing, reported that calculate the break-even point by the sum of fixed costs and fixed expenses, to divide this sum by the weighted average contribution margin, while reporting using the concept of contribution margin.

There is consistency with correlation coefficients, although the answers coming from this issue seem conceptually contradictory.

These responses also showed significant correlation (77.46 %) with the adoption of the concepts of standard costing and target costing. Thus, the majority of managers who responded using costing by absorption to make their decisions, revealed that adopt standard costs for monitoring and testing production (product launches) and goals of achieving cost, in the actual process of production. As stated in section 4.1, we find conceptual inconsistency, particularly with regard to the term used by respondents, that is, patterns of costs and not standard cost.

4.2.7 Criteria for Sale Price Formation

On this issue, six companies responded to the use mark-up on total production costs to calculate the selling price, while the others said to form the sale price according to the market average. This did not reveal very significant correlation with the other answers. Still, it is necessary to highlight the negative correlation of 57.74 % (-0.5774) with the method of calculating the profitability and the adoption of the concepts of standard costing and target costing.

The low significance of these correlations indicates a conceptual problem, because although it is recognized that the formation of prices through mark-up first aim to price the product internally so that it can be compared with the market, calculating the price is also required and the manager cannot do it by the average market price, without knowing the net margin, evidenced by the pricing process with the mark-up. Using only the market average, the manager can deduce that costs are also market averaged, which may not represent reality, ie, a competitor may be profiting from the sale, at a certain price, and the company having losses to match the sale price.

4.2.8 Using the Contribution Margin

It was observed that three managers use the technique of margin contribution to decision making, while five said they did not. These responses correlated 100 % (1.0000) with the criterion adopted to calculate the break-even point and 77.46 % (0.7746) with the adoption of the concepts of standard costing and target costing. Thus, for these three managers, the correlations show conceptual consistency with the cost criteria adopted by them.

4.2.9 Method of Calculating the Break-Even Point

The answers revealed that all companies calculate the total break-even point of the company, which shows a correlation of 77.46 % (0.7746) with the adoption of the concepts of standard costing and target costing, ie , most managers revealed adopting these cost concepts.

It should be noted that the method of calculating the break-even point also showed 100 % correlation with the cost method for making decisions and with the usage of the contribution margin, as already discussed in these two items.

Completing the analysis of correlations, as the data shown in Table 2, it is worth noting that the criteria for calculation of profitability is not significantly correlated with any of the other discussed issues. The other significant correlations have been considered in previous sections.

5. Conclusions and Recommendation

5.1 Conclusions

This study aimed to analyze the cost management process and the pricing of canning industries of Rio Grande do Sul. First, it was observed that most companies have a cost system or some form of cost structure and analysis of the break-even point. It was found that the main criterion used in the sale price process is the mark-up, applying it on the cost of production, and that small proportion of companies use only the criterion of the market to set prices.

The results, in spite of these limitations, show that managers adopt practices that may be considered appropriate, regarding the management of inventory, costs and prices. On the other hand, development in these aspects and resolving pointed out inconsistencies, as to the standard cost systematic and break-even point calculation, can lead canning industries to move into a management that use appropriate tools and techniques, as presented in the theoretical framework. That is, the procedures adopted by current businesses are distant from the best practices recommended by the literature.

As emphasized in the literature in the theoretical framework, the current stage of marketing competition requires companies to use, more and more, new ways to manage their resources so they can reduce their costs, increase productivity and still meet customers' demands. The historical evolution of the canning segment, with the closure of several companies, indicates that in the past some companies may not have given the proper attention to more appropriate management practices. Such signs of the past can serve as an impetus to change the current reality. The current picture of the threat of Argentine products, presented by Santos (2009), as discussed in the introduction of this study is a reality that cannot be neglected.

5.2 Recommendations for Further Study

The inventory management practices, as well as the methods and systems of planning and cost control and the formation of partnerships with competitors are inserted in this context, which indicates a significant potential for further studies. Then, deep studies, perhaps along the lines of single case study, can enable new discoveries on the management of companies in the sector, including addressing the reason for not using best practices addressed in literature. Moreover, it is recommended to proceed even in the historical and cultural aspects that, over time, have directed the formatting of the management model adopted by companies.

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Table 1. Proportion of Companies' Own Capital Used in Relation to the Total Turnover

Company	Proportion of companies' own capital	Company	Proportion of companies' own capital
1	30 %	5	30 %
2	35 %	6	80 %
3	100 %	7	40 %
4	50 %	8	90 %

Table 2. Correlations between Managers Answers

Item	1	2	3	4	5	6	7	8	9	10	11	12
1	1											
2	0.2582	1										
3	-0.2582	0.4667	1									
4	0.2582	**1.0000**	0.4667	1								
5	0.0000	**0.7746**	0.2582	**0.7746**	1							
6	0.2582	0.6000	0.6000	0.6000	0.2582	1						
7	0.5774	0.1491	0.1491	0.1491	0.0000	0.4472	1					
8	0.2582	0.6000	0.6000	0.6000	0.2582	**1.0000**	0.4472	1				
9	0.2582	0.6000	0.6000	0.6000	0.2582	**1.0000**	0.4472	**1.0000**	1			
10	0.0000	-0.2582	0.2582	-0.2582	-0.5000	0.2582	0.5774	0.2582	0.2582	1		
11	0.5000	0.2582	0.2582	0.2582	0.0000	**0.7746**	0.5774	**0.7746**	**0.7746**	0.5000	1	
12	-0.5000	**-0.7746**	-0.2582	**-0.7746**	-0.5000	-0.2582	0.0000	-0.2582	-0.2582	0.5000	0.0000	1

Item	Description	Item	Description
1	Exporting Company	7	Criteria for Selling Price Formation
2	Managers' Instruction	8	Usage of Contribution Margin Concept
3	Manager's Experience in Present Function	9	Break-even Point - Method
4	Purchasing Strategy	10	Calculation of Profitability (product or family)
5	Inventory Maintenance	11	Use of Standard Cost / Target Cost
6	Costing Method for Decision Making	12	Proportion of Company's Own Capital

Empirical Study of the Causes of Valuation Variance and Inaccuracy in Nigeria

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Received: December 13, 2011 Accepted: February 15, 2012 Published: March 1, 2012
doi:10.5539/ibr.v5n3p71 URL: http://dx.doi.org/10.5539/ibr.v5n3p71

Abstract

The question about accuracy and consistency in valuation practice has been subject of interest to the academicians, professionals and users of valuations not only in Nigeria or developing countries alone but also in the developed countries of the world such as UK, USA, Canada and Australia. Property valuation is the core of Estate Surveying and Valuation profession. Thus its accuracy and/or reliability is critical to the valuers, their clients and the stakeholders of valuation in general. Earlier studies have confirmed the existence of inaccuracy and inconsistency of valuations in these countries including Nigeria. However, there has not been much study into the factors contributing into inaccuracy and variance in the valuation estimates by the Nigerian valuers. Hence, this study aims at examining the causes of inaccuracy and variance in the country's valuation practice. To achieve the objective of the study, the use of survey method in conjunction with personal interviews with some members of the Nigerian Institution of Estate Surveyors and Valuers in practice and academic institutions in some universities and polytechnics Lagos metropolis were used for the purpose gathering data for the study. The data collected were analyzed with the aid of simple statistical tools. The findings revealed divergent causes of valuation inaccuracy and variance ranging from dearth of market data to lack of adequate training and experience on the part of the valuers and many more. The paper concluded by recommending the establishment of functional property data bank and promotion of the use of valuation standards by the Nigerian Institution of Estate Surveyors and Valuers and Estate Surveyors and Valuers Registration Board of Nigeria the bodies responsible for the regulation of valuation practice in Nigeria.

Keywords: Valuation accuracy, Valuation variance, Reliability, Consistency, Lagos metropolis, Nigeria

1. Introduction

Valuers and the valuation process have recently been the focus of debate and controversy in many areas of the world including Nigeria. This study concentrates on one part of the debate, investigation of the causes of valuation variance and inaccuracy.

Much of the country's wealth lies in real estate property. Thus the Estate Surveyors and Valuers who are saddled with the responsibility of contributing their professional expertise to effective and efficiently utilizing this scarce and vital resources (Udoetuk, 2009). Property valuation is the core of Estate Surveying and Valuation profession. Property valuation performs an essential role in property transactions. It provides advice on prospective purchases and sales in addition to supplying material information to underpin property lending decisions. Moreover, since early 1960s, property valuations have been used to proxy the exchange price of property investments for performance measurement purposes.

Valuation has been described as the "estimate or prediction of the most likely selling price" according to Baum and Crosby (1988). Implicit in the definition is the reason for valuation, which is that of acting as a proxy for market price or as a substitute for having to sell an asset. The need for valuation arises from the peculiar nature of real estate and real property markets which are heterogeneous and imperfect in nature and character. If the property market were to be perfect and real property homogenous in nature, there would be no need for valuation (Aluko, 1998). Unfortunately, the property market is anything but perfect. Unlike investment performance measurement of equities and bonds that are based on actual transaction prices that are readily available; there are little or no transaction-based prices for real property. As such, valuations are required to serve as proxy for actual selling prices in the measurement of investment performance of real property assets.

It was in 1987, in the wake of some well publicized research works by actuaries Hager and Lord that Drivers Jonas first sponsored Investment Property Databank (IPD) to carry out detailed research into valuation accuracy in the United Kingdom. Royal Institute of Chartered Surveyors (RICS), as the valuers' professional body, later took over the role as sponsor. In doing so, they were adopting one of the principal recommendations of Sir Bryan Carlsberg's Working Party on valuation practices.

In 1985, Udo-Akagha, one of the leading estate surveyors and valuers in Nigeria, while writing a foreword to "Guidance Notes on Property Valuation" noted that "there ought to be no reason why two or more valuers valuing the same interest in a property for the same purpose and at the same time should not arrive at the same or similar results if they make use of the same data and follow the same valuation approach".

In the same vein, in 1998, an editorial on page 2 on "property valuation and the credibility problems" in The Estate Surveyor and Valuer, the professional Journal of the Nigerian Institution of Estate Surveyors and Valuers stated *inter alia* that "the valuation process has been the focus of recent debate and controversy both within and outside the profession as cases of two or more valuers giving different capital values with wide margins of variation for the same property abound".

Comments of this nature have led many to wonder whether estate surveyors and valuers are interpreters or creators of values. From the forgoing commentaries, it is evident that the twin problems of inaccuracy and inconsistency (variance) in the valuation practice exist in Nigeria just as is the case in developed countries such as Britain, Australia, Canada and USA, Parker (1993), Baum et al (2000), where the valuers' estimates, methods and processes have been subject of intense criticisms over the past decades from clients seeking advice in increasingly sophisticated investment markets (Baum & Macgregor, 1992).

There has been serious focus on the seeming inability of valuation estimates emanating from professional valuers to accurately represent/interpret market prices or serving as a reliable security instruments/documents for bank loans. Bretten and Wyatt (2002) observed that valuers do not operate with perfect market knowledge while valuers in many instances follow clients' instructions, analyze available information, make judgments and respond to different pressures from stakeholders when preparing a valuation in a market atmosphere of heterogeneity.

The essence of the study is to address the above issues and problems by focusing mainly on the questions of reliability/consistency benchmarks and the nature and causes of reliability and consistency of the professionally prepared investment valuations in the Lagos metropolitan property market. This is with a view to improving on the accuracy and consistency level of the investment valuations prepared by the estate surveyors and valuers in Nigeria.

2. Review of Relevant Literature

Valuation accuracy literature was actually triggered by the paper authored by Hager and Lord (1985) and which was submitted to the Institute and Faculty of Actuaries in reaction to Investment Property Databank's (IPD) use of valuation as a performance measure for investment properties in the UK. They requested ten valuers to carry out the valuation of two properties consisting of a rack rented office property and a reversionary retail unit property. They expected that the range of valuations for a particular property would bew about 5 % either side of the control valuation, carried out by an expert valuer. The resulting valuation estimates from the respondent valuers when compared with the valuation estimates by the expert valuer revealed that for the office property, four of the ten valuations produced figures within 5 % of the control valuation. Five out of the remaining six valuations were within 10 %. With regard to the retail unit, half of the valuations were within 5 % of the control valuation, while two of the remaining five were within 10 %. None of the valuations produced a variation of greater than 13.2 %. The authors' conclusion was that valuations were not reliable for the purpose of performance measurement in Britain. Clearly, however, no meaningful conclusions could be reached with just two properties. Nonetheless, the paper had a significant adverse influence on the views of fund and investment managers on the property market. Since then, this topic has received much attention from both investment and academic community.

Brown (1985) conducted a larger and much more rigorous study on a sample of 29 properties for which there were transaction prices and recent prior valuation figures. In the study, independent valuation firms were made to carry out the valuations of the subject properties. Both valuations and sale transactions took place between 1975 and 1980. In addition, both the valuations and the sale transactions were based on the RICS definition of Open Market value, which excludes special purchases, forced sales etc. The author used regression analysis to compare valuation estimates and sale prices on the 29 sampled properties. However, the number of properties sampled for the study is considered too small to be able to draw unbiased conclusions.

IPD/Drivers Jonas (1988) also adopted a regression based procedure, but made use of a much larger sample size of 1,442 properties, all of which were sold between January 1982 and March 1988. Each of these properties had at least two (2) open market valuations prepared in respect of them in the two consecutive years preceding their sales, with all the valuations undertaken between January 1980 and December 1987. They analyzed these samples with the inverse of the IPD/Drivers Jonas procedure (the least square model regressed price on value). This study also found a high correlation of 93.4 % between valuation estimates and transaction prices ($R^2 = 93$) suggesting a high level of valuation accuracy.

In 1990, IPD/DJ updated their study with a larger analysis of 2,400 properties for which there were transaction sales figures and valuation estimates. The study still observed high correlations between valuation estimates and sale prices as earlier found in their 1988 study, thus further supporting an UK (IPD/DJ, 1990) study. However, Lizieri and Vienmore-Rowland (1991) questioned the regression based statistical methodology adopted by IPD/Drivers Jonas and Brown for their studies drawing attention to its inherent flaws (a problem known as heteroascidity). Despite this criticism, IPD and Driver Jonas continuously updated their regression based studies in 1992, 1994, 1996, and lately 2004 with increased sample sizes, analysis period and range of statistical analyses employed. Results obtained consistently maintained the same basic findings concerning high levels of valuation accuracy. The Lizieri and Venmore-Rowland (1991) criticism exposed the statistical validity of studies of the IPD/DJ which employed simple regression analysis to find high levels of valuation accuracy (see, for example, Brown, 1992). In the same way, the potential role of behavioural research in the determination of valuation accuracy debate has been suggested to questioning too (Waldy, 1997).

Matysiak and Wang (1995) employed standard deviations in their analysis of 317 sets of valuation estimates and transaction prices data covering the period of 1973 to 1991. Following the extensive statistical discussions and manipulations, the authors found that the probability of achieving a selling price within +/-10 % of the valuation estimate was only 30 %, rising to a probability of 55 % within +/-15 % of the valuation and 70 % within +/-20 % of the valuation estimates. The authors also went on to examine the propensity of valuers to overvalue in falling markets and undervalue in rising markets. The study noted that "given the indicative evidence for the significant impact of the bull/bear market environments in conditioning the valuation figures, more analysis is required in eliciting the relationship between valuer's behaviour and changing market conditions" (Matysiak & Wang, 1995). However, whilst the Matysiak and Wang (1995) findings would appear to undermine those of other studies concerning high levels of valuation accuracy relative to transaction sales, the complexity of the statistical analyses adopted renders a full appreciation of the findings challenging as not too many people can handle some of the statistical tools employed in their study.

Hutchison et al (1995) surveyed five national valuers and five local valuers for each of 14 centres in UK, seeking valuations at no fee for a range of hypothetical retail, office and industrial buildings with particular characteristics in actual locations and with standard leases. Valuation variation (consistency) rather than accuracy (reliability) was examined. They found differences in the variance of valuation between national and local valuation firms (8.63 % and 11.86 % respectively for national and local firms). The authors discovered that over 80 % of all the valuations produced a variation from the mean of less than 20 %, which is a wider valuation variation than that suggested by Brown's (1991) earlier study. The results of the study are however open to question as the valuers were paid no fee and moreover, the properties considered were hypothetical.

Mokrane (2002) addressed the twin issues of valuation accuracy and consistency in five European countries (UK, France, Sweden, Netherlands and Germany). In these countries, he considered time periods of 1990 to 2000 in UK; 2,000 properties over the period of 1999 to 2000 in France; 1,800 properties over the period of 1997 to 2000 of

Sweden; 5,700 properties over the period of 1999 to 2000 in Netherlands; and 400 properties over the period of 1997 to 2000 in Germany. The accuracy tests made provision for the adjustment of previous valuation for market movements and capital expenditures and receipts that may have taken place between the valuation date and transaction date. With regards to accuracy, he came up with conclusions that there exists only a short “distance” between transaction sales and adjusted valuations in the respective countries, though valuation estimates differed from sale prices. With regards to consistency, he found that in most of these countries, the degree of variation was low and the change-in-valuer effect was statistically significant.

Bretten and Wyatt (2002) investigated the extent and possible causes of variance in property investment valuation for commercial lending purposes within UK using questionnaire survey circulated to 220 lenders, finance brokers, valuers, property companies and institutional investors involved in commercial property valuation process in order to gauge professional opinion. They observed that the main cause of variance was the individual valuer’s “behavioral influences” and that parties to a valuation instruction widely accept “the margin of error” principle. Their study concluded that variance can enter the valuation process at any stage, from the issuing of instruction letters and negotiation of fees through to external pressure being exerted on the valuer when finalizing the valuation figure. Although the study circulated to 220 individuals involved in the commercial property valuation process, they however did not involve the court officials. This study considered this very necessary and involved 6 court officials (5 judges and one court registrar) in addition to other individuals involved in the commercial property valuation process. In addition, their survey failed to recognize the need for the use of real life valuation and sale figures and for this reason, this study made use of valuation and sale figures of 131 real lives recently valued and sold properties in addition to the valuation of 12 selected properties valued by 45 valuers.

Crosby, Devaney, Key and Matysiak (2003) identified whether the 2002 sales in the IPD Monthly index threw any light on whether the sale price was known before the completion date or if in their study of timing of the valuation and sale data in UK uses valuations and sales data from the sale was agreed before completion date. The study concluded that timing issues had been identified as one of the technical difficulties in producing definitive results on differences between prices and valuations.

Generally, the UK review shows that there have been contradictory findings over the years. Researchers such as Hager and Lord (1985), Matysiak and Wang (1995) and Hutchison et al (1995) seem to suggest that valuations are inaccurate and inconsistent (especially if one adopts a maximum margin of error of +/-10 %), while authors such as Brown (1985), IPD (1988, 1990, 1992, 1994, 1996, 2004), and Mokrane (2002) felt otherwise. The difference appears dependent on the statistical methodology employed. Whilst the high accuracy/variation advocates employed regression based procedures, the low accuracy/variation advocates employed mean/standard deviations. Even then, general conclusions are difficult to make because of the heteroascidity problems with the regression based procedure and the problem of an acceptable maximum bracket of error with the standard deviation approach.

From the 1980s, literary (albeit non empirical) comments began to be made on the accuracy of valuations in Nigeria. A past President of the Nigerian Institution of Estate Surveyors and Valuers, Udo-Akagha (1985) as noted earlier in his foreword to the first edition of the Guidance Notes on Property Valuation posited that “*there can be no reason why two or more valuers, valuing the same interest in a property for the same purpose and at the same time should not arrive at the same or insignificantly different results if they make use of the same data and follow the same valuation approach. But very often this is not usually the case and in some of these unfortunate cases, the profession is thrown into considerable embarrassment*”.

The above quotation captures the growing concern among valuers and their clients at the time. Estate Surveyors and Valuers were faced with increasing allegations of wide variations in the valuation estimates supplied by them. Similar comment was made by Igboko (1992) who while researching into the investment method of valuation in Nigeria, at the instance of the Nigerian Institution of Estate Surveyors and Valuers (NIESV), observed what he described as a “weak grasp of valuation” amongst the valuation practitioners. He came to a conclusion that many of the investment valuations conducted were actually “mis-valuations” and “guesstimates”. He did not however provide any credible empirical statistical basis to justify his conclusions.

Ogunba (1997) undertook an empirical step at addressing the question of accuracy and variance in investment valuations in Nigeria using Lagos metropolis as the study area. In the absence of a database of property valuations and sales, he resorted to the approach of requesting thirty Lagos based practicing estate surveying and valuation firms to carry out valuations of two residential properties earlier sold located at Victoria Island and Ikoyi respectively. The valuation estimates subsequently arrived at by the valuers was subjected to a number of statistical tests such as range, inter-quartile range, mean deviation and regression/correlation analysis. The result of the statistical tests showed that valuations were not good proxy for market prices, for three reasons. First, the average variance between valuations and prices was far in excess of his adopted margin of error of +/-5 %; the intercept in the regression equation was statistically distinguishable from zero and the slope statistically distinguishable from 1; and third, the range and inter-quartile ranges were unacceptably wide. Based on these observations, the results of the study must be interpreted with caution because only two (2) properties were considered (as in the Hager and Lord, 1985 study) and the sample of valuers (thirty firms) was small. In addition, the properties were never inspected nor were the valuers paid for their services.

Aluko (2000) carried out an accuracy study on a larger scale with a focus on mortgage valuations and subsequent sale prices of such mortgaged properties used as collateral securities. In his study, Bank records of mortgage valuations conducted by fifty nine (59) estate firms in Lagos metropolis were examined. The sale prices of the properties were compared with their earlier valuation estimates and analyzed by means of regression/ANOVA. He came to a conclusion that valuations in Nigeria are a good proxy for price and that despite the anecdotal evidence to the contrary the mortgage valuers are doing a very good job of price prediction.

Ogunba (2003) expanded the coverage area of accuracy studies to a consideration of property valuation estimates and sale prices in the six States of Southwestern Nigeria. The approach adopted in the study was similar to the one adopted in his earlier work. Statistical tests such as range, inter-quartile range, mean deviation, regression analysis, and analysis of variance employed by the author confirmed his earlier work that valuation estimates were not good proxy for sale prices and also that valuation estimates of one firm were not good proxy of other firms.

Adegoke (2008) investigated valuers' behavior in Nigeria when valuing properties in localities that they lack substantial prior experience in Nigeria. He sampled 122 estate surveying and valuation firms in Lagos metropolis. He used quasi-experimental and survey methods for the study. The researcher employed simulated valuation method in carrying out valuation of a single commercial office property located in a city that the participants/respondents were not familiar with. The study revealed a wide variance of valuation outcomes from the mean which showed that the valuation outcomes were not reliable. While the study used only a single property for valuation experiment and only supplied the participants with description of the property, this study made use of participant valuers who were requested to value 12 recently sold properties with a view to comparing their valuation outcomes with the sale figures of the properties and at the same ascertain the various valuation inputs comprising of outgoings, rental values and yield rates adopted by each of the valuers involved.

3. Study Area

Lagos State covers an area of about 3,577 square kilometers, representing 0.4 % of Nigeria's territorial landmass according to Esubiyi (1994). The State shown in Figure 1 below shares boundary in the North with Ogun State, West with the Republic of Benin, and stretches for over 180 kilometers North of the Guinea Coast of the Atlantic Ocean. Politically, Lagos State according to Ogunba (1997) had expanded as a result of rural-urban drift and had become a metropolis enclosing settlements such as Mushin, Oshodi, Ikeja, Agege, Shomolu and Bariga. The 2006 National census put the population of the State at 9,013,534.

Lagos metropolis has been chosen as the study area because it is the most important commercial city in Nigeria thus providing a sufficiently vibrant economic base and valuation activity which the researcher hopes to provide a vigorous and robust study base. Lagos metropolis, apart from being Nigeria's former capital, is the largest metropolitan city in Africa. The metropolis is located within the coastal frontage of Lagos State and is bounded in the West, by the Republic of Benin, in the East by Ondo State and Atlantic Ocean in the South and in the North by Ogun State. The metropolis covers an approximate land area of 2,350 square kilometers spreading over four main islands of Lagos, Iddo, Ikoyi and Victoria islands.

In the economic scene, Lagos metropolis has grown from a small farming and fishing settlement to become an important centre of commerce, finance and maritime in Nigeria, housing the headquarters of several banks, industries and commercial enterprises. According to the NIESV Directory (2009), most Estate Surveyors and Valuers aggregate around major business districts of the metropolis such as Lagos Island, Ikeja, Apapa/Ijora, and Lagos Mainland where there is the expectation of a very active property market.

4. Research Methodology

The research study population comprises of the estate surveying and valuation firms in Lagos metropolis, which constitutes about fifty percent of practicing firms in Nigeria according to the Dirctory of the Nigerian Institution of Estate Surveyors and Valuers (2009). A total of 120 registered estate surveyors and valuers out of 268 firms with either their head or branch offices in Lagos State were randomly selected for the study and out of this number 82 responded by returning the questionnaire administered on them duly filled found useful for the study. The data so collected were analyzed with the aid of simple statistical techniques. In addition, personal interviews were conducted with some key officials of the Nigerian Institution of Estate Surveyors and Valuers (NIESV) and Estate

Surveyors and Valuers Registration Board of Nigeria (ESVARBON), the two bodies responsible for regulation of estate surveying and valuation practice in the country.

5. Findings and Discussion

The data collected with the aid of questionnaire administered on the respondents are analyzed as presented in tables 1 to 5. Table 1 and 2 are about the characteristics of the respondent estate surveyors and valuers. Majority of the estate firm (63 %) have experiences ranging between 1 and 10 years as can be seen from table 1. This is clear indication that majority of practicing surveyors are not well experienced in the art and science of valuation and as it known that experience is the best teacher. The fact that majority of them are lacking relevant experience will ultimately affect their performances especially in regard to accuracy and consistency in valuation. Educationally, majority of practicing valuers were found to possess Higher National Diploma and Bachelor of Science degrees only which ordinarily should be enough for them. But in view of growing awareness and sophistication of majority clients and complexity of some valuation assignments, there is need for further study with a view to be above the happenings in the valuation industry and meet up with global valuation demands.

With regard to the number of conferences, workshops and seminars attended by the respondent estate surveyors and valuers between 2002 and 2007, it was discovered that 62 % of the respondents attended average of 1 to 5 conferences/workshops/seminars within the 6 year period, 20 % attended 6-10 conferences while 15 % of the respondents did not attend any. This suggests that valuers are taking time out to improve their knowledge, though the majority attendance of 1-5 conferences/workshops/seminars cannot be seen as very sufficient.

Table 2 clearly shows that the Nigerian valuers are yet to imbibe the culture of specialization. A cursory look at the table shows that the majority (89 %) of respondent firms engage in general practice, as a means of survival, therefore giving no room for specialization. If we accept the argument that specialization gives rise to efficiency, then this result may suggest that most firms of estate surveyors and valuers might not be operating at the highest level of efficiency and this have the tendency of affecting their accuracy and consistency performances as only four (4 %) percent of estate surveying and valuation firms specializes in valuation. Dearth/paucity of market evidence/data and use of outdated valuation approach and techniques ranked first and second by the respondents as the factors responsible for inaccurate valuations as can be seen from Table 3. Data/market evidence is very germane to valuation accuracy and where such information is lacking, the result is inaccurate valuation figure emanating from such situation.

Table 4 ranked experience, educational background and available market information at disposal of individual valuers first, second and third respectively as the factors responsible for variance or inconsistency in valuation amongst the valuers when occasion arise for two or more valuers to carry out the valuation of the same property at about the same time. The above findings are in consonance with earlier studies such as Wyatts, (2003); Millington, (1985) in UK; Levy et al (1999) in Australia and that of Ogunba and Ajayi (1998) in Nigeria.

Table 5 shows the respondents ranking of possible solution for valuation variance/inaccuracy in the country. Creation of valuation data bank was ranked first in the hierarchy of factors required to solve the twin problems of valuation variance and inaccuracy in Nigeria while attendance of refreshers courses by the valuers; provision of up to date valuation manual and improved school curriculum/syllabus were ranked second, third and fourth respectively.

6. Conclusion and Recommendation

The findings from this study has revealed that the challenge for eliminating the factors responsible for valuation inaccuracy and variance in Nigeria falls across the academia, practitioners and the regulatory bodies comprising of Nigerian Institution of Estate Surveyors and Valuers and Estate Surveyors and Valuers Registration Board of Nigeria since it has been established that valuation accuracy and consistency are at the heart of clients' confidence and the profession needs to keep its house in order.

Accordingly, it is recommended that the academic steering committee of the regulatory bodies-the Nigerian Institution of Estate Surveyors and Valuers and the Estate Surveyors and Valuers Registration Board of Nigeria should join hands to fund research programmes as is the case of Drivers Jonas/IPD in United Kingdom. With such research efforts, Nigerian valuers would be able to access the global world of property valuation in this technological age.

There is the need for University administrators working in close association with the Nigerian Institution of Estate Surveyors and Valuers on one hand and the Estate Surveyors and Valuers Registration Board of Nigeria on the other enjoin University lecturers on sabbatical leave to interact closely with their colleagues in practice and vice versa.

There is the urgent need to have a cross fertilization of ideas and experiences among lecturers and estate surveyors in public and private practices in the hope of producing graduates who can go into the business world and survive.

Property Valuation Guidance Notes was published by the Nigerian Institution of Estate Surveyors and Valuers in 1985 with a forward written by a seasoned valuer. There is the need for continuity. Updating rules and guidance notes would ginger estate surveyors and valuers to achieve enhanced accuracy, rationality and standardization if the rules and regulations are strictly enforced by the Institution without bias or favourism.

Each State Chapter of NIESV should be encouraged to establish a property data bank and forward same on agreed periods to be reviewed periodically to make such data relevant. Such information so collated could serve as a reference point for comparison between states and among States for Nigerians who may which to invest in any State within the country. Such property databank would assist researchers in producing property market indices for performance measurement and accuracy test especially in the application of the investment method of valuation. The Estate Surveyors and Valuers Registration Board of Nigeria in conjunction with the Nigerian Institution of Estate Surveyors and Valuers should define and spell out the maximum acceptable margin of error in valuations as is done in developed countries.

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Table 1. General Characteristics of Respondent Estate Surveyors and Valuers

Parameter	Sub-Division	Frequency	Percentage (%)
Years of Professional Experience	1-10 yrs	52	63
	11-20 yrs	13	16
	21-30 yrs	6	7
	31-40 yrs	7	9
	Above 40 yrs	4	5
Highest Academic Qualification	OND	5	6
	HND	27	33
	B.Sc	32	40
	M.Sc	17	21
	PhD	1	1
No. Conferences/Workshops/ Seminar attended Between 2002 & 2007	None	12	15
	1-5	51	62
	6-10	16	20
	11-15	2	2
	16-20	1	1
Age/experience of the Firm	1-5	30	36
	6-10	22	27
	11-15	13	16
	16-20	9	11
	21-25	4	5
	26-30	2	2
	31 & Above	2	2

Table 2. Respondent's Firm's Area of Specialization

Area of Specialization	Frequency	Percentage
Valuation	3	4
Property Financing and Development	1	1
Estate Agency	3	4
Property Management	2	2
General Practice	73	89
Total	82	100

Table 3. Respondents Perceived Reasons for Valuation Inaccuracy

S/N	Suggested Reasons	Respondents Responses					Weighted Mean Score	Ranking
		SA	A	N	D	SD		
1	Dearth/paucity of market data/evidence	33	26	9	6	5	3.82	1st
2	Use of outdated valuation approach and techniques	20	25	10	17	20	3.46	2nd
3	Use of outdated valuation data	25	23	10	11	13	3.44	3rd
4	Lack of valuation regulation and control framework	23	25	8	9	17	3.34	4th
5	Lack of valuation standard/manual	19	25	12	15	11	3.32	5th
6	Inadequate training	18	20	15	16	13	3.2	6th
7	Failure to hold valuers responsible for professional negligence	18	12	8	25	19	3.12	7th
8	Imperfection of the property market	15	18	8	19	22	2.82	8th
9	Problem of influence from unscrupulous clients using financial, material and other forms of inducement	11	10	22	23	20	2.80	9th
10	Lack of experience on the part of the valuers	12	10	10	18	32	2.41	10th

Table 4. Respondents Perceived Reasons for Inconsistency in Valuers Valuation

S/N	Suggested Reasons	Respondents Responses					Weighted Mean Score	Ranking
		SA	A	N	D	SD		
1	Experience of individual valuer	35	25	7	6	11	3.90	1st
2	Educational background of individual valuer	25	31	10	10	6	3.72	2nd
3	Available market information to each valuer	33	20	5	9	15	3.60	3rd
4	Accessibility to valuation manual/standard	18	22	11	14	17	3.12	4th
5	Time period devoted to the valuation assignment	14	10	15	13	30	2.60	5th
6	Sources of market data/evidence use for the valuation	10	15	12	18	27	2.55	6th
7	Quality of information supplied by the client	8	10	14	20	30	2.34	7th

Table 5. Respondents Suggested / Possible Solution to Valuation Inaccuracy/Inconsistency

S/N	Suggested Reasons	Respondents Responses					Weighted Mean Score	Ranking
		SA	A	N	D	SD		
1	Creation of valuation data bank	40	36	6	-	-	4.41	1st
2	Attendance of refresher courses	38	40	3	1	-	4.40	2nd
3	Provision of valuation manual/standard	30	32	12	4	4	4.0	3rd
4	Improved school curriculum/syllabus	30	25	15	10	2	3.86	4th
5	Review of entrance requirements for studying estate management	28	28	8	8	10	3.70	5th
6	Improve standard of educating/training of the potential valuers	30	18	10	14	10	3.54	6th
7	Review the qualifying requirement by regulating bodies for the intending valuers	20	18	17	10	17	3.20	7th
8	Compulsory CPD attendance for practicing valuers	10	20	13	20	19	2.80	8th
9	Encouragement of specialization amongst practicing valuers in the country	12	13	20	17	20	2.76	9th
10	Need for strengthening of the valuation institutional framework	8	14	20	24	18	2.70	10th

Note: SA = Strongly Agree; A = Agree; N = Neutral; D = Disagree; SD = Strongly Disagree.

Figure1. Map of Metropolitan Lagos

Source: Lagos State Ministry of Information.

A Qualitative Study on Individual Factors Affecting Iranian Women Entrepreneurs' Growth Orientation

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Received: December 26, 2011 Accepted: January 11, 2012 Published: March 1, 2012

doi:10.5539/ibr.v5n3p81 URL: http://dx.doi.org/10.5539/ibr.v5n3p81

Abstract

Despite the impressive growth in the number of firms run by women entrepreneurs, most of these businesses continue to remain small and women-owned firms have not grown as fast as male entrepreneurs. There are many reasons that may help explain the growth limitations in women-owned firms. Amongall, growth orientation is an important factor. A common finding in entrepreneurship literature shows that ventures owned by women tend to be smaller than those by men are. This difference can be due toindividual, organizational and environmental factors.Since half of Iran's population iswomen who are more willing to have higher education and contribution in the society, they deal with more challenges rather than their male counterparts. So attention to the factors affecting growth orientation of their ventures is the same as deliberate economic development and nationalincome. This is a qualitative study to identify individual factors affecting growth orientation in women's businesses. Data analysis of 11 semi-structured interviews on a sample of women entrepreneurs indicated individual factors in four groups of "goals and aspirations", "motives", "female identity" and "personal characteristics".

Keywords: Business growth, Growth orientation, Women entrepreneurs, Individual factors, Qualitative study, Iran

1. Introduction

Natural resources, human resources, capital, management and technology are agents of development and there is no doubt that human resource is crucial for sustainable development and women play an important role. Recent decades' significant transitions in the world have led to a considerable decrease in gender discrimination. In this new approach, women also help to produce goodsand contribute to the entrepreneurship and participate in the development of their countries.In the last decades, increasing presence of women in the society and of course in business as entrepreneurs or business owners has changed the demographic characteristics of entrepreneurs. Women-owned businesses are playing a more active role in the society and the economy.

In recent years, the number of women-owned businesses has expanded at three times the rate of all firms. But women remain underrepresented in terms of high-growth firms. Researches imply that women-owned businesseshave significantly smaller annual sales, employment growth and return on assets (Buttner, 1993; Cliff, 1998; Brush, 2008). Despite the impressive growth in the number of firms run by women entrepreneurs, most of these businesses continue to remain small and women-owned firms have not grown as fast as male entrepreneurs. Women-owned businesses tend to be smaller, with less capital, have lower revenues and fewer employees, and reside in lower-profit industries (Buttner, 1993; Reshmi, 2002; Morris et al., 2006; Brush & Gatewood, 2008; Roomi, 2009).

Gender-based research on entrepreneurs indicates that the common points between the two genders outweigh the conflicting ones (Brush, 1992). According to Morris et al. (2006), one might imply from such findings that commonalities between male and female entrepreneurs would result in similar performance outcomes for their ventures, while others have suggested a lower propensity towards growth among female entrepreneurs.

This difference in business growth has affected by various factors.But among all factors, growth orientation, as an important factor, should not be ignored. It is noted that researchers suggest a lower willingness toward growth between female compared to male entrepreneurs (Morris et al., 2006).

On the other hand, according to estimates made by statistical center of Iran, women constitute 49.5 % of 73.5 million people in 2009 and they are capable of playing a vital role in economic profit. Nowadays Iranian women are skilled and highly educated. Their presence in universities is more than 65 % that outweigh men students, while there is no supportive public organization especial for women entrepreneurs but just there are limited supports for self-employment and they are the same for men and women (Arasti & Akbarijokar, 2009).

Considering the role of women in economy, studying the factors affecting growth orientation in women's businesses in individual aspects results a deeper attitude towards growth in women-owned businesses and may increase the development process in developing countries. Current study is supposed to identify the individual factors which affect growth orientation of women entrepreneurs.

In this paper, first we focus on the literature review and the theoretical base of research. Then in two next sections, we will present the methodology of research and the result of qualitative study as effective individual factors on growth orientation of women entrepreneurs. Finally, paper will end with discussion and conclusion.

2. Literature Review

In this section, we review the literature on women's entrepreneurship studies about business growth and growth orientation.

2.1 Women Entrepreneurs and Business Growth

Different experts categorized the establishment and development process of SME's in five steps that "growth" is one of them (Hodgetts & Kuratko, 2001). Normally, women-owned businesses will not experience a lot in business growth (Brush et al., 2006; Buttner, 1993; Cliff, 1998; Morris e al., 2006). Researchers point out underlying patterns that may help explain growth limitations in women-owned ventures (Brush et al., 2008). They suggest that women were less probable to have education in engineering and computing, and did not take classes on "how to start or expand a business". In contrast, men tended to take on partners who were not family members, and were more eager to start high-tech businesses. This willingness may result in ventures of greater scale and higher risk at the time of start-up, improving their growth visions (Morris et al., 2006). In other words to perform well, women entrepreneurs should gain related industry experience, develop business skills, and seek to achieve success (Lerner et al., 1997).

On the other hand, the entrepreneurs definegrowth differentlyand this attitude influences the goals and ambitions concerning growth (Cliff, 1998; Verheul et al., 2005; Morris et al., 2006; Majumdar, 2008).

For some researchers, major parameters of growth are employment, profit, added value, turnover, total assets and market share (Majumdar, 2008). For others growth isdefined by increase in number of employees and sales turnover rates (Morrison et al., 2003). According to Lerner et al (1997), business performance parameters are somehow the same as growth parameters like growth in revenues/sales, income, profitability and the number of employees.

Valencia and Lamolla (2005) found two background variables in business growth: education, and professional experience. Educational background has been identified as a positive impact factor on initial entry and future business performance; and there is a strong causal link between experiences. According to their research, there were no significant differences between male and female entrepreneurs regarding educational level, psychological characteristics, in form of ownership of ventures, in the use of banking facilities, but there are some differences like:

- Women are more empathetic than men; therefore, they are much stronger in social skills. Women are socialized to be nurturing and relational.
- Women have a better relationship with their employees, clients and others, which are vital for business success and growth.

- Men frequently form associations with four or more other owners, while women form associations with just one other owner (most likely a domestic partner).
- The growth of women-owned businesses is slower than men-owned businesses, because they do not engage in risks associated with fast-paced growth strategies.
- Women entrepreneurs' business plan have lesser domain, a larger need for external capital, hire feweremployees and take more time between initiations of activities on average.

Education and professional experience turned out to play an important role in venture creation success and survival (Dolinsky et al., 1993). In other researches, it has been stressed that women need to be aware that the nature of the business they initiate will influence the ease of attracting venture capital. This difference in ability of financing between women and men can affect business growth (Buttner, 1993). Childcare responsibilities, and their family commitments, lack of some parameters such as information on business development, skilled labor, effective networking abilities, and business training opportunities were also indicated as important barriers in growth of their businesses (Roomi et al., 2009).

2.2 Women Entrepreneurs and Growth Orientation

One of the most important reasons for the difference between women and men businesses growth is their growth orientation. In other words, female entrepreneurs voluntarily decide not to have a high rate of growth in their businesses (Morris et al., 2006).

Researchers often use several concepts as synonyms, which may make inferences vague and comparison between studies more difficult. Several terms, such as growth aspiration, growth intention, willingness to grow, are commonly used interchangeably with growth orientation (Ylitalo, 2010). Overall, growth orientation is defined as "the manager's propensity towards growth in their businesses" (Ylitalo, 2010) or "seeking growth by the business owner" (Morris et al., 2006) and finally "having growth as top priority and accepting risk to achieve growth" (Yli-Renko et al., 2002).

There are varieties of individual, organizational and environmental factors affectinggrowth orientation of women entrepreneurs (Morris et al, 2006). One of the most important is the individual factors which is the focus of this paper.

Individual factors of growth orientation have been discussed by Roomi et al. (2009) in terms of motives (push and pull factors) and personal goals. They found that entrepreneurs' motivations, intentions and aspirations play a vital role in the performance of their businesses. Motives for starting theventure would seem an important elementof growth aspirations, as thosewho are motivated by the desire to getrich or to meet a challenge would seemmore interested in growth than thosemotivated by discrimination (Morris et al., 2006). Majumdar (2008) believes that there is a variation in growth motivation and "Needrelated factors" are more important than ability and opportunity (Majumdar, 2008). In addition, other researchers believe that manager motives (push and pull factors) and personal goal ambitions, intentions, and competencies will affect an individual's small business orientation towards growth (Morrison et al., 2003; Brush & Carter, 2006; Roomi et al., 2009; Brush & Gatewood, 2008).

Also it is noted that women business owners tend to make a balance between economic goals, such as profit and growth, and noneconomic goals, such as product quality, personal enjoyment, and helping others. This leads to theories of gender differences, where, female entrepreneurs give less value to growth and success in business than male entrepreneurs do, and this difference will result in weaker growth intentions of female entrepreneurs (Cliff, 1998). Growth orientation is affected also by the convergence of owner-manager skills and competencies (Morrison et al., 2003). McGregor and Tweed (2002) have mentioned that the values placed on growth are different between men and women. Tendency of taking credit for success by entrepreneurs is an important element in the growth of small entrepreneurial organizations (Majumdar, 2008). Researchers believe that men tend to place greater emphasis on economic and quantitative values; unambiguous measures of achievement and success, such as wealth and status E.g. financial status, occupational status; women tend to assign more importance to social and qualitative values; and ambiguous measures of achievement and success, such as personal fulfillment and strong interpersonal relations. In other words, women pay more attention to internal factors than external ones, (e.g. internal stability and peace than profitability) (Cliff, 1998; Verheul et al., 2005; Morris et al., 2006; Majumdar, 2008).

Also, growthorientation would be stronger amongyounger and more educated women (Morris et al., 2006). Men tend to have stronger business backgrounds and experience, whereas women typically are more highly educated, but their education is less related to business management (Clifford 1996). Women were less likely to have educational backgrounds in engineering and computing, and tended not to take classes on how to start a business. These tendencies may result in ventures of lower scale and low risk at the time of start-up, decreasing their growth prospects (Morris et al, 2006).

On the other hand, it is hypothesized that growthorientation would be weaker among those women entrepreneurs who their female identity is higher. “Female identity” is a variable intended to capture therelative emphasis of the entrepreneur onfemale target audiences, suppliers, andinvestors, and the extent to which thebusiness is promoted or positioned aswoman-owned (Morris et al., 2006).

Also, previous researchesnoted that the strategies which have been taken during the lifecycle of the business (e.g. the methods and paths through which the firm was founded, previous experience of the founder/owner, and the ability of the entrepreneur to set realistic, measurable goals, and to effectively manage conflict) have been identified as individual factors that increase or decrease the willingness of the entrepreneur to grow their business (Gundry & Welsch, 2001). Shelton (2005) found that high-growth female entrepreneurs choose more appropriate strategies for reducing work–family conflict than their less successful counterparts (Shelton, 2005). In addition, Gundry and Welsch (2001) found that the group of high-growth-oriented entrepreneurs, are ambitious, are more eager to sacrifice on behalf of the business, and are good in team-based projects.

Some personal characteristics of the owner illustrate the low rate of growth orientation in women-owned businesses (Brush & Gatewood, 2008). Research on gender and management indicates that women are simply more modest in describing their achievements. In other words, they do not take credit for success, which of course affects the ability to obtain loans for investment. In addition, they underrate their own skills or performance in comparison with men (Verheul et al., 2005). Women often communicate differently than male entrepreneurs, by using language that downplays certainty and overplays doubts. Therefore, they come across as less confident and less ambitious, which is a hurdle in attracting investors by itself (Brush & Carter, 2006). Some researchers showed that females did score significantly lower on fields related to energy level and risk-taking. These scores declare that female entrepreneurs are less oriented than male entrepreneurs in becoming involved in situations with uncertain outcomes (risk-taking) and have less of the endurance needed to maintain a growth-oriented business (Sexton & Bowman, 1990).

Growth orientation, especially in small businesses represents a complex matter and is considered multidimensional, in scope and character. The aim of this study is identifying individual factors which affect growth orientation of women entrepreneurs.

3. Research Methodology

In order to answer the research question and identify the individual factors affecting women entrepreneurs’ growth orientation, a quantitative study was done in a sample of women entrepreneurs, academic experts and decision makers in Tehran the capital city of Iran. The selection process was based on the following criterion:

- Academic experts in entrepreneurship especially in women’s entrepreneurship
- Practitioners (women entrepreneurs in high-growthventures)
- Active decision makers in the field of women’s businesses

In total 11 semi-structured interviews with 2 decision makers, 1 academic and 8 women entrepreneur were conducted betweenspring and summer 2011. Each interview takes in average 80 minutes. Those decision makers who participated in interview were experienced in strategy making in fields of women. One of them was 39 years old with PhD degree and the other one with 47 years old had a master degree. The academic expert who attended in interview was 35 years old and had P.H.D degree and her research field was about women entrepreneurs.Between women entrepreneurs who participated in interview, 6 peoplewere active in service sector. Most of them (5people) were over the age of 45. The majority (5 people) had a master degree or higher. 4 people were in business for an average of 20 to 30 and 3 people were less than 10 years.

All Interviews were recorded and then transcribed for content analysis and conclusions. Content analysis is a research technique for making replicable and valid inferences from text or other meaningful matters, to the contexts of their use. As a research technique, content analysis provides new insights, increases the researcher’s understanding of particular phenomena’s, or informs practical actions (Krippendorff, 2004).

4. Findings

To conduct a content analysis on any such text, the text is coded or broken down into manageable categories on a variety of levels-word, word sense, phrase, sentence, or theme-and then examined using one of content analysis basic methods, either conceptual analysis, or relational analysis. All levels of content analysis have been presented in this section. First, the analysis of one interview as a sample is given in Table 1. In this interview, six individual factors affecting growth orientation of women entrepreneurs have been identified.

Insert Table 1 Here

In the first step, all factors identified from each interview are coded and have been presented in Table 2.

Insert Table 2 Here

There are many repetitive factors in 11 interviews. In the second step, all repetitionswere omitted and the results are given in Table 3.

Insert Table 3 Here

In the last step, thefactors presented in Table 4 have been categorized in four groups based on their nature. The results are shown in Table 4.

Insert Table 4 Here

After content analysis on 11 interviews, all individual factors affecting growth orientation of women entrepreneurs identified in four groups of factors including motives, goals, female identity and personal characteristics. The final research model was presented in Figure 1.

Insert Figure 1 Here

5. Discussion

Results of this qualitative study pointed out that growth orientation is a complex phenomenon. With regard to the finding, we can conclude that growth orientation is affected by goals (economical and non-economical), motives (push and pull factors), female identity (internal and external stakeholders), and personal characteristics (personality and demographic characteristics, personal attitude and skills).

Figure 1 resulted from our qualitative study show all individual factors affecting growth orientation of women entrepreneurs in three levels. For example one of individual factors is goals of entrepreneur which could be economic or non-economic. Economic goals which were extracted by content analysis include sales growth, employee growth, growth in multiplicity and variety of products and services. The detailed results for other individual factors were presented (see Figure 1).

This study is the first to identify those elements in detail. Previous researches focused ondifferent factors affecting growth orientation, so they didn't go through details.

The study conducted by Morris et al., (2006) is the only one focused on growth orientation of women entrepreneurs. However, our study focuses only on individual factors in detail and completes the results of previous studies in this field.

5.1 Motivation and Goals

Goals and motives of women entrepreneurs have been identified as affecting factors of growth orientation by other studies (Brush & Carter, 2008; Roomi et al., 2009; Morris et al., 2006; Gundy & Welsch, 2001; Morrison et al., 2003), but mentioned in our research in detail and divided by push and pull motives as well as economic and non-economic goals. As it is shown in table 3, non-economic goals have been mentioned more than economical goals by interviewees. In most of interviews, women entrepreneurs have discussed about quality, credit, and employee satisfaction and creating social-environmental values more than other goals. Also, pull factors were more motivating for women entrepreneurs than pull ones. Self-expression, independency, becoming rich, flexibility, progress in life, job creation for relatives and gaining internal stability have been more importantfor women entrepreneurs than other motives.

5.2 Female Identity

Female identity has been mentioned only in Morris et al., (2006) as affecting factor of growth orientation of women entrepreneurs. Our study confirms it and presents the female identity in two sub factors of internal and external stakeholders.

5.3 Personal Characteristics

Based on results, the most important individual factors of growth orientation are personal characteristics of women entrepreneur. This factor mentioned in all interviews and much more than other individual factors. This means that growth orientation of women entrepreneurs is affected by personal characteristics more than goals, motives and female identity. Among personal characteristics, both management and technical skills were mentioned by interviewees more than other ones.

In no researches have personal characteristics been identified in such detail. Gundy (2001) and Sexton and Bowman (1990) referred to high growth oriented women entrepreneurs' characteristics. These characteristics were confirmed in our research too. But "commitment to ethical principles" and "opportunism" is two personality characteristics that have been derived from the interviews, and are new to theliterature of growth orientation.

The value which women entrepreneurs assigned to growth and success in their businesses have been referred to by other researchersas "attitude to growth" (Majumdar, 2008; Morris et al., 2006; Cliff, 1998; Verheul et al., 2005), and confirmed in our research. In addition, "attitude to obstacles" was discussed by Morris et al., (2006) and confirmed by our research.

Age, education, previous entrepreneurial experience and previous related work experience have been suggested as affecting factors of growth orientation by other researchers (cliff, 1998; Dolinsky et al., 1993; Valencia & Lamolla, 2005; Morris et al., 2006; Lerner et al, 1997; Clifford, 1996; Morris et al., 2006). These demographic factors confirmed in our study too.

Referring to management skills as an affecting factor of growth orientation was only done by Morrison et al. (2003). In our study, management skills and technical skills have been identified as personal skills affecting growth orientation of women entrepreneurs.

6. Conclusion

This study attempted to identify the individual factors affecting growth orientation of women entrepreneurs. The finding of qualitative study found that growth orientation of women entrepreneurs is affected by goals, motives, female identity and personal characteristic. It makes clear that modest and high growth entrepreneurs differ in how they view themselves, their families, and their ventures. In addition, they utilized strategies that helped them to moderate the work-family conflict. They are devoted to their businesses and see their firm as the most important thing in their life. Comparing to other women entrepreneurs they are more ambitious and higher in risk taking and energy level. They do not take obstacles as limitation, and if possible, they will convert them to opportunities.

The implications of this study expose the areas of women entrepreneurs as well as policy makers. Although this study is not expected to be generalized; nonetheless, the findings reveal the need for more attention to the results. It raises attention togrowth orientation as one of the most important factor of business growth. The implications for policy makers are thereforeas follows: the Iranian government needs to focus on motives and goals of women entrepreneurs in order to present the appropriate policy support for different types of women entrepreneurs. In addition, by identifying personal characteristics, the government can encourage those women who have these kinds of characteristics to establish or grow their businesses.

This is a first study on growth orientation of women entrepreneurs that focus on individual factors in detail by a qualitative research method. Accordingly, this qualitative data contributes to existing literature on growth orientation, but the limitations of largely interpretive, qualitative research make it problematic to generalize the results. This limitation will be tackled in a subsequent research phase of this project which is based on a large survey of women entrepreneurs. The items identified could also be incorporated to enhance a quantitative research in different contexts.

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Table 1.Verbal Statement and Derived Components from a Sample Interview

Interview No.	Verbal statement	Components
1	Every year, I set a new sales goal for myself, to have more than last year's sales.	1. Goal of sales growth
	My staff satisfaction can help me spiritually	2. Goal of employee satisfaction growth
	I was not satisfied with my previous job	3. Motive for job non-satisfaction
	I have never encountered any problem with my female customers, during my business growth; I feel more convenient with my female customers.	4. Female customer
	I do not sleep more than 5-6 hours a day	5. Being energetic
	Obstacles have never been important to me	6. Attitude to obstacles

Table 2. Extracted Concepts for Each Interview

Interview No.	Concept
1	1.Set a goal to grow in sale
	2.Set a goal to grow in employee satisfaction
	3.Job non-satisfaction
	4. tendency to attract female customers
	5.Being Energetic
	6.Attitude to obstacles
2	7.Set a goal to grow in business credit
	8.Want to become rich
	9.Want to have flexibility
	10.A tendency to attract female Investors
	11.Being ambitious
	12.Risk taking
	13.Age
	14.Related experience
	15.Management skills
	16.Technical skills
	17.Want to create job for relative
3	18.Want to become rich
	19.Age
	20. Set a goal to grow in multiplicity and variety of products and services.
	21.Want to express myself
	22.Want to have progress in life
	23.Attitude to growth
	24.Management skills
	25.Technical skills
4	26.A tendency to attract female customers
	27.Set a goal to grow in business credit
	28.Want to have flexibility
	29.Being ambitious
	30.Attitude to growth
	31.Set a goal to grow in quality
	32.Want to have independency
	33.Opportunism
	34.Education
5	35.Attitude to obstacles
	36.Risk taking
	37.Related experience
	38.Attitude to growth
	39.Management skills
	40.Want to have independency
	41. Set a goal to grow in employee number.
	42.Set a goal to create social & environmental values
	43.Want to gain internal stability
	44.A tendency to attract female employee
	45.Being devoted to business
	46.Previous entrepreneurial experience
6	47.Being Energetic
	48.Being ambitious
	49.Risk taking
	50.Related experience
	51.Want to express myself
	52.Want to have progress in life

Interview No.	Concept
	53.Attitude to growth
	54.Management skills
	55.Opportunism
	56.Education
	57.Being devoted to business
	58.Previous entrepreneurial experience
	59.Death/divorce
	60.A tendency to attract female partners
	61.Commitment to ethical principles
	62.Being jobless
	63.Technical skills
7	64.Risk taking
	65.Age
	66.Management skills
	67.Want to gain internal stability
	68.A tendency to attract female suppliers
	69.Technical skills
8	70.Management skills
	71.Set a goal to create social & environmental values
	72.A tendency to attract female employee
9	73.Risk taking
	74.Management skills
	75.Technical skills
	76.Firing form work
10	77.Technical skills
11	78.Management skills
	79.Technical skills

Table 3. Extracted Components

No.	Extracted component	Coding
1	Economical Goals	1, 20, 41
2	Non-Economic Goals	2, 7, 27, 31, 42, 71
3	Push Factors	3, 59, 62, 76
4	Pull Factors	8, 9, 17, 18, 21, 22, 28, 32, 40, 43, 51, 52, 67
5	Internal stakeholders	44, 60, 72
6	External stakeholders	4, 10, 26, 68
7	Personality Characteristics	5, 11, 12, 29, 33, 36, 45, 47, 48, 49, 55, 57, 61, 64, 73
8	Demographic Characteristics	13, 14, 19, 34, 37, 46, 50, 56, 58, 65
9	Attitude	6, 23, 30, 35, 38, 53
10	Skills	15, 16, 24, 25, 39, 54, 63, 66, 69, 70, 74, 75, 77, 78, 79

Table 4. Extracted Dimensions

No.	Extracted dimension	Coding
1	Goals	1, 2, 7, 20, 27, 31, 41, 42, 71
2	Motives	3, 8, 9, 17, 18, 21, 22, 28, 32, 40, 43, 51, 52, 59, 62, 67, 76
3	Female identity	4, 10, 26, 44, 60, 68, 72
4	Personal characteristics	5, 6, 11, 12, 13, 14, 15, 16, 19, 23, 24, 25, 29, 30, 33, 34, 35, 36, 37, 38, 39, 45, 46, 47, 48, 49, 50, 53, 54, 55, 56, 57, 58, 61, 63, 64, 65, 66, 69, 70, 73 74, 75, 77, 78, 79

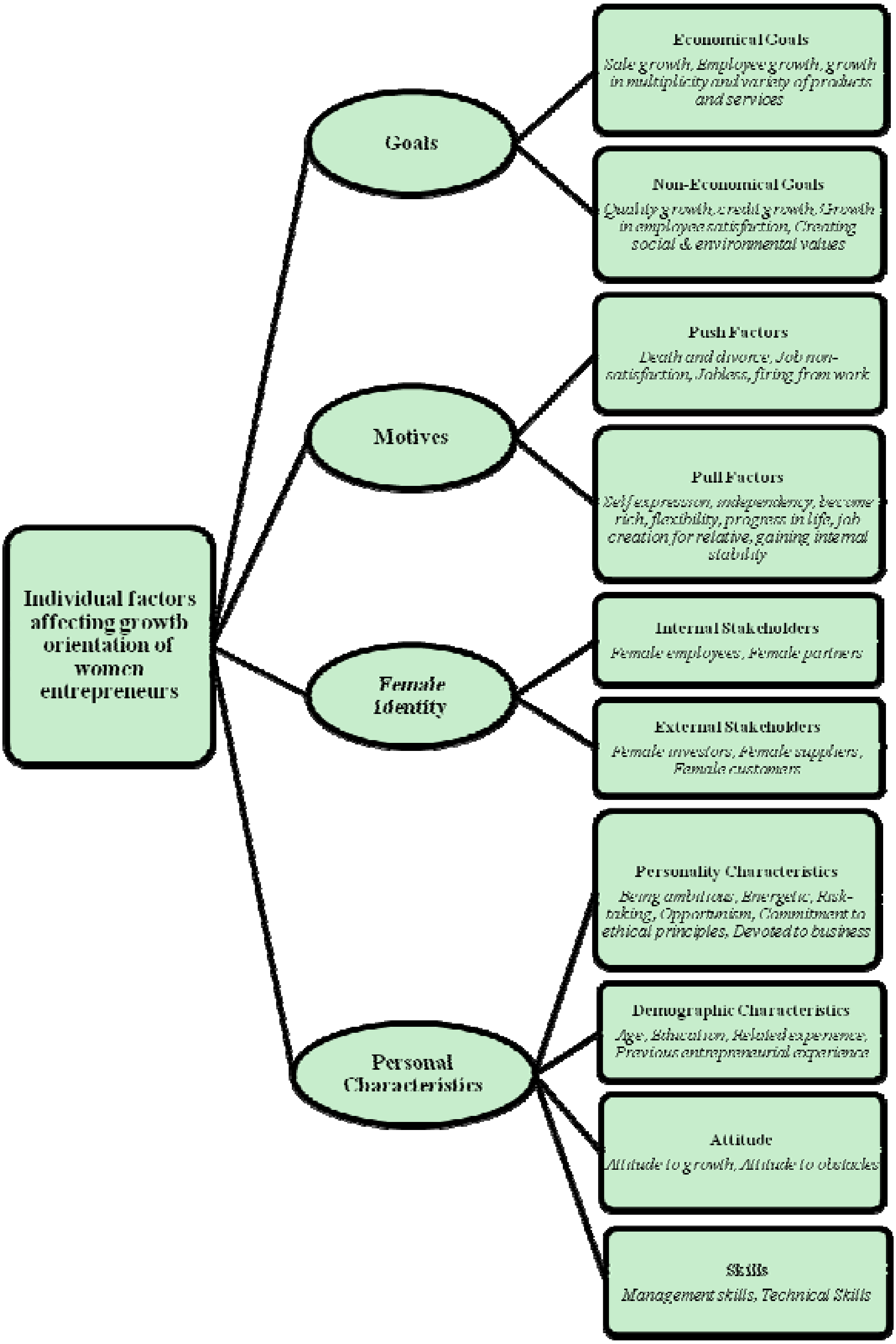

Figure 1. Individual Factors Affecting Growth Orientation of Women Entrepreneurs

 ISSN 1913-9004 E-ISSN 1913-9012

Cross-Border Cooperation in Europe: The Case of Bihor-Hajdu Bihar Euroregion

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Received: December 5, 2011 Accepted: January 11, 2012 Published: March 1, 2012

doi:10.5539/ibr.v5n3p91 URL: http://dx.doi.org/10.5539/ibr.v5n3p91

Abstract

Cross-border cooperation has become, in the recent years, one of the basic pillars of the elimination process of development disparities between regions. The available economic and social datas suggests an important development of the area border especially after 2002, when Hajdu-Bihar and Bihor founded the Bihor-Hajdu Bihar Euroregion. Regional policy has also contributed through several cross-border projects, financed from European funds and for the future there are premises to obtain a dynamic of regional economies in the two areas with increased investments in priority areas (infrastructure, environment business, tourism, education, health, etc.).

Keywords: Cross-border cooperation, Euroregion, Territorial cooperation, County, Regional policy

1. Introduction

Since cross-border cooperation is a priority objective of EU regional policy for the current financial programming exercise, in the first section of the research is allocated a space meant to define this European policy. In plus, its role has increased in the last years, with the European Union's enlargement to 27 states.

The fact that there are inequalities in economic development between countries or even within the same country is a reality of all time, more or less tolerated, but never fully accepted and always subject of explanations, polemics and disputes. At the European level, in present time, reducing the development disparities between countries and regions, the so-called *regional disparities* represent the regional policy's assumed objective through which it promotes economic convergence within the European Union.

It is also necessary to know the involvement of the policy in question in the nearby territories situated in neighbor states. Besides this, in the context of the growing importance of cross-border cooperation at a European level, the present paper proposes itself to bring forward a short analysis of the concepts of territorial and cross-border cooperation (one of the three forms of territorial cooperation) in its second section.

The investigation methodology used combines analysis and synthesis, the regulatory and explorative approach, quantitative analysis and qualitative assessments. In other words, in the present research we have used modern methods of investigation (Internet documentation, international databases access, direct documentation from specialized papers, etc.); we added statistical methods for data interpretation (schedules) and the method used for calculating certain socio-economical indicators from Bihor and Hajdu-Bihar counties.

Therefore the research methods were based on the study of theoretical elements as a result of reading important articles from the regional development area and the analysis of several case studies. In this way, we could interpret the information obtained.

2. What is the Regional Policy?

The reality in today's Europe shows that differences in development between Member States of the European

Community are quite obvious. Moreover, imbalances are large also within countries, living standards of citizens being different from one area to another. In this context, regional policy has played, plays and will play an important role to mitigate and even to eliminate these gaps. Therefore, this first section provides some clarification on the definition of this type of European policy. Thus, in the paper entitled "Regional policy and the coordination of structural instruments", it is estimated that regional policy represents "in the first place the solidarity between Member States; it is designed to help the most disadvantaged regions. Regional policy is tangible; its results are visible for EU citizens, who benefit directly from assistance in a job search and adapting to labor market changes, especially through training courses."(Pascal et al, 2004)

The same authors state that regional policy does nothing but lead to improving the lives of people living in less developed regions, by increasing the funds that local authorities benefit of in order to create new infrastructure and help companies become more competitive (eg. highways, airports, railway networks, all were built with structural funds, SMEs have been established and helped to operate in decline areas or the information society has penetrated the most remote rural areas) (Pascal et al, 2004).

Another definition is given by Dorin Dolghi in his paper entitled *Region and Regionalization in the EU* in which he considers that regional policy is "a set of measures adopted at Community level to support the less developed regions, aiming to create or to restore a relative balance in the economic activities, living standards, population distribution" (Dolghi, 2004). Petre Prisecaru in his paper entitled "Common EU Policies", quoting Michel Barnier, says: *common regional policy is the only tool designed expressly for disparities, while in the same time being a very specific tool, which involves a transfer of resources among member countries through the EU budget* (Prisecaru, 2004).

The European Commission, the European Union's executive body, tried to give a definition to the term of *regional policy*, concluding that regional development policy seeks to reduce the visible effects on the gap between the development levels of different regions. Also, this type of policy plays an important role in the financial support of projects aimed to the development of regions, cities and increasing living standard of their inhabitants. Therefore, the main goal is to create a potential for regions so that they contribute to the growth and development of economic competitiveness. (Note 2)

Based on the above statements, *regional policy can be defined as a set of means (tools) needed to eliminate the national and regional development disparities. This will be achieved by stimulating cooperation between regions and interregional, competitive environment creation and development, financial support (through European funds) of less developed regions, stimulating the investments in problematic areas through an appropriate fiscal policy, increasing skilled human resources and so on.*

Thus, in addition to the above definition, we can say that EU regional development policy gives an impulse in the recovery of regional differences within the European Community, especially that from the signing of the Single European Act and the Maastricht Treaty, the European Union has set itself the task to reduce regional development disparities and also to prevent in a certain extent the backwardness of the less developed areas.

3. Territorial Cohesion and Cross-Border Cooperation in the View of EU

As the authoress Alice Engl states, the development of an even greater number of cross-border projects, as well as the occurrence of cross-border territories, were based on three *products* created by the European Union: the euro currency, the unique internal market and the Schengen agreement (Engl, 2009).

Thereby, the areas within borders turned into areas of collaboration between economical, social and political systems belonging to different countries, in which human, natural and financial resources can be used in common by the inhabitants of those settlements (Engl, 2009).

An aspect worth being mentioned is that an ever-growing interest in territorial cooperation on the part of national, regional, local and international actors had been observed in the recent years.

This idea is enhanced by the fact that, as EU has to economically deal with the challenges of the world economy, the continent cannot remain isolated in relation to what happens outside its borders (Gambert & Jann, 2011).

An extremely important remark is made by Jirka Zapletal, who noticed that integration brought into discussion another aspect, namely territorial cooperation within European areals, this becoming one of the Union's objectives according to the Treaty of Lisbon signed in 2000 (Zapletal, 2010).

Thus, territorial cooperation supports the achievement of national cohesion, the infrastructure and communications, cultural changes, as well as collaborations in the sphere of tourism between: territories situated on both sides of the borders, regions and nations (Engl, 2009).

In order to encourage territorial cooperation, the European Grouping of Territorial Cooperation (EGTC) had been created at the European level, having the purpose of surpassing the difficulties regarding territorial cooperation by organizing an instrument of cooperation at a community level (INTERREG) (Sykes, 2006).

Territorial cooperation is encountered under different forms (that is, cross-border, interregional, transnational). This classification is made according to the needs of regional and local authorities involved and the competences these authorities have in proportion to the national ones (Engl, 2009).

Because territorial cohesion as objective pursued by the regional policy is also achieved by cross-border cooperation, this form of cooperation is emphasized in the following lines, thus making an affinity with the title of the present paper.

The Old Continent, apart from its expansive culture and the common history of nations also comprises a wide range of frontiers (borders). Most states which originated many years ago still exist today, passing through an ample process of transformations during the 19th and 20th centuries, each of them coming to benefit by a certain level of development nowadays. Yet, a few of them can stand on a long age, as the case of the Portuguese-Spanish frontier is (the most ancient territorial frontier in Europe) (Sykes, 2006).

At present, cooperation between territories with natural frontiers, directly adjacent, has an old tradition on the European continent. Even so, in the case of states like Spain, Portugal and Greece, cross-border cooperation began only in the ’80s, due to political changes, switching over to democratic systems and obtaining the quality of member of the European Union by these countries. For countries of Central and Eastern Europe, this process started after 1989 (Gambert & Jann, 2011).

Even from the ’50s, at a short interval after the Second World War, the experts of a significant number of European regions disputed on eliminating the frontiers and the possibilities of cross-border cooperation.

What was at the basis of this meeting was the need to increase the standard of living, to allow the existence of a durable peace on the Continent, and to delete the frontier obstacles, the restrictions and other elements that caused the separation of people and authorities from regions with neighboring boundaries (Ghid 2000 Politici Regionale).

At the end of the Second World War, the inhabitants from different borderlands noticed that, in order to have a standard of living equal to the one from the central part of the country, it is necessary to diminish or even to eliminate the negative effects the border had. But they realized this was not possible especially due to the lack of a law-marking framework. Consequently, they laid the foundation of some communal and regional associations situated on both sides of the frontier, which aimed at streamlining cooperation across the borders (Ghid 2000 Politici Regionale).

Starting with the ’70s, cross-border regions set up the Association of European Border Regions (AEBR), in 1971. This organism maintained a tight relationship of collaboration with the Council of Europe, the European Parliament and the European Commission. In this way, the network of border and cross-border areas turned into a determinant force for streamlining cross-border cooperation in all these territories on the Continent, contributing to both the activation of European integration and the implementation and development of European programs of assistance for border areals in the entire Europe (Ghid 2000 Politici Regionale).

For this part of Central and Eastern Europe, this form of territorial (cross-border) cooperation began to manifest itself only after 1990 with not a little moderation on the part of the states involved, as these boundaries had been impervious in the past. In this context, collaboration had been carefully prepared, and people had to be made aware of the fact that they still belonged to a common history and they had to look towards a common future in the continental space (Ghid 2000 Politici Regionale).

The bonds existing between two or more local and regional adjacent entities which are in different but neighboring countries represent *cross-border cooperation*. Collaborations of this kind can be short-dated (for example, for a single project) or on a permanent term-indeterminate (in order to solve some complex problems) (Engl, 2011).

We encounter the euroregion as form of permanent cross-border cooperation, it being an institution implying private or public participants, which establishes cross-border affinities between national, local, and regional organisms. Eurodistricts and working communities can be enumerated as forms of cross-border cooperation as well.

Territorial cooperation between areas placed on both sides of the border give the frontier regions the possibility to develop much more rapidly and to achieve territorial cohesion by capitalizing on the EU support of the Council of Europe (Engl, 2011).

4. The History of the Euroregion

The first association between the two neighboring border counties took place in 1997 within other structure of cross-border cooperation, of much greater dimensions: the *Carpatica* Euroregion, which includes administrative-territorial units from five countries.

In order for the cooperation to activate much better between the counties and because the Carpatica euroregion used to have a population which outnumbered the inhabitants of some associated states (Hungary, Slovakia), the formation of some smaller euroregions took place, subsequent to its foundation, as the case of *Bihor-Hajdu Bihar* euroregion is (Suli Zakar, 2007).

The existing premise in 2002, along with the foundation proper of the euroregion, when the border between Romania and Hungary symbolically disappeared once the two countries joined the EU, which already happened in 2007, and respectively in 2004, represented an important factor that underlay the accomplishment of this euroregion. Thereby, the starting point for the decision of associating the two counties, Bihor and Hajdu-Bihar, into an organization of cross-border cooperation, was the importance the local authorities granted to the economical affinities which started to develop between entities situated on both sides of the boundary. Apart from this aspect, they wanted the two county seats, Oradea and Debrecen, to collaborate within a common program which pointed the development of the border area (Suli Zakar, 2007).

5. A Comparative Analysis of Bihor and Hajdu-Bihar Counties from an Economical Point of View

5.1 A Short Presentation of the Two Counties

Bihor County lies at the North-West border of Romania, having a surface of 7544 km^2, while Hajdu-Bihar lies at the North-East border of Hungary, with a surface of 6211 km^2. The two counties do not have a homogenous structure, neither regarding their forms of relief, nor from the viewpoint of the other natural resources (lands, distributed in categories of use and fertility, deposits of raw materials etc.). Nevertheless, they somehow find themselves propelled to establish new ways of cooperation due to the challenges experienced by the inhabitants living on both the Romanian and Hungarian border. Moreover, the differences of resources make it possible and somehow necessary for a certain economical cooperation between Bihor and Hajdu-Bihar.

5.2 Resources of Employment

Resources of employment are one of the fundamental resources necessary for a good economical evolution in conditions of efficiency, alongside technical facilities, sometimes in certain situations the latter being even more important than the former.

Analyzing the data related to the *stable population*, as seen in Table 1 one notices that Bihor County occupies an adequate place, but is confronted, even if with a slighter intensity than Hajdu-Bihar, with the phenomenon of depopulation, a consequence of the demographic crisis happening in all the European area. (Note1, Note2)

The most derogatory value of this variable was registered in 2006 in Hajdu-Bihar County, and the most favorable one in 2001 in Bihor County, the tendencies in the two counties being inimical.

As for the *number of unemployed persons*, as seen in Table 2, a certain increase of them can be noticed, after a relative decrease, the tendency of increment occurring in 2007 in Hajdu-Bihar and from 2008 in Bihor County. The most derogatory value of this variable is registered in 2010 in Hajdu-Bihar County and the most favourable one in Bihor County in 2001. Analyzing the available data regarding the *number of employees*, one can notice the most derogatory situation in 2001 in Hajdu Bihar County, and the most favourable value of this variable is registered in 2008 in Bihor County. (Note1, Note2)

5.3 The Business Environment

In order to characterize the state and the dynamics of the business environment, only the indicator of registered companies could be used, mentioning the fact that the business environment is a reality and a much too complex concept to be expressable by a single indicator. Nevertheless, the analysis entails the need of simplification, and the data likely to be obtained under structured and comparable forms are very few.

Analyzing the data referring to the *number of companies registered*, as seen in Table 3, it appears that the most derogatory situation is in 2005 in Bihor County, and the most favourable value of this variable is registered in Hajdu-Bihar County in 2010. The basic tendency is of increase in both counties.

At the same time, in order to appreciate the economical life, the indicator GDP, as seen in Table 4, was used, expressed in millions of USA dollars.

Thus, if the values of the indicator previously mentioned are interpreted, it can be noticed that the most derogatory situation is at the level of 2004 in Bihor County, and the most favourable one is at the level of 2008 within Hajdu-Bihar County. It is interesting that, witnessing the evolution of these values, the differences tend to shade away through the time, the values of the indicators heading for an equalization at the level of 2008, which denotes a refreshing, a certain progress of the economical activity in Bihor County, in a more increased rhythm than in Hajdu-Bihar County, phenomenon that leads to the reduction of these dissimilarities.

5.4 The Educational Environment and Health

If the data referring to the *number of kindergartens and schools of all degrees*, as seen in Table 5 in pre-university are interpreted, then the most derogatory situation registered is noticed in 2008 in Bihor County, and the most favorable value of this variable is still recorded in Hajdu-Bihar County in 2000.

If the evolution of this indicator in Hajdu-Bihar County is relatively normal, without too great variations, the data suggest a *real catastrophy* in what concerns Bihor County.

The disastrous situation Bihor County got up to at this chapter has as a consequence the amalgamation of more educational institutions, especially in the rural area and concurrently the significant decrease of the number of children after 1990, fact which can be found in the national demographic reduction.

By analyzing the data which refer to the *number of hospital beds available within the public sanitary units*, as seen in Table 6, the most derogatory situation is detected in 2009 in Bihor County, and the most favorable value of this variable is recorded in Hajdu-Bihar County in 2002. The salient differences between the two counties can be noticed.

Interpretation of data referring to the *number of beds used in the public sanitary units,* as seen in Table 7, leads us to the conclusion that the most derogatory situation is in 2008 in Hajdu-Bihar County, and the most favorable value of this variable is obtained in 2000 at the level of Bihor County. Still, the favorable or derogatory value of this variable is not certain, it might have as cause either a better health condition of the population in Hajdu-Bihar County in what concerns the diseases which need warding or another facility or vision of the specialized authorities.

5.5 Tourism

Analyzing the values of data referring to the *total number of tourists arriving in units of public accommodation*, as seen in Table 8 it is noticed that the most derogatory situation can be encountered at the level of 2009 in Bihor County, and the most favorable at the level of 2007 in Hajdu-Bihar County. The differences are pointedly favorable to the neighboring county.

In what concerns the number of foreign tourists' arrivals, the dissimilarities between the two counties are even more pronounced, the number of sojourns/passing the nights of the foreign tourists are considerably favorable to Hajdu-Bihar County.

Analyzing the values of data referring to the *total number of tourists nights spent in units of public accommodation*, as seen in Table 9, it results that the most derogatory situation is encountered at the level of 2009 in Bihor County, and the most favorable situation is at the level of 2007 in Hajdu-Bihar County. The differences are again pointedly favorable to the neighboring county, in some cases even three times better. Classifying the tourists from the two counties according to the provenient countries is again advantageous for Hajdu-Bihar County.

Analyzing the data related to the *total number of foreign tourists' passing the nights in units of public accommodation*, as seen in Table 10, one can notice that the most derogatory situation is at the level of 2009 in Bihor county, and the most favorable one at the level of 2007 in Hajdu-Bihar county. The differences are again pointedly favorable to the Hungarian county, but without being so great in the case of the former situation presented in this subchapter, the greater number of tourists' passing the nights somehow compensating the dissimilarities in the number of arrivals.

In all the cases previously presented and interpreted, the statistical bonitierung method was used, the results obtained being after the estimations done by the authors.

The analysis of a single table or of a single chart can suggest certain punctual conclusions to us, consistent in the case of the respective indicator.

Therefore, in order to actually have an overall image, the statistical bonitierung method can be applied, in which the value of each indicator of performance (those having the meaning of *the more, the better*) is assigned a draft obtained by dividing it to the minimum value from the table, the result being multiplied by 100.

For the indicators having a reversed variation (those with the meaning of *the less, the better*), as is the indicator of the *number of unemployed*, the process is the same, with the discrepancy that instead of the minimum value, the maximum one is used, and for the estimation of the compound indicator, the values of the factors/coefficients obtained do not add up to the total but are substracted.

Finally, the values of the drafts add up or are substracted according to the case, and are divided to the total number of indicators per years.

A set of individual values issues from it, offering a clearer and a more rapid image both over the economical potential and the level of the development of the two counties than the individual analysis of the tabular data or those represented under the form of charts.

The weak point of the method is that it assigns the same importance to each indicator, but the strong points are on the one hand, the simplicity of the method, and then, on the other hand, it allows characterizing the state of the two counties according to all the indicators both individually and simultaneously.

As the interpretation of data presented under a tabular and graphic form is encountered and acknowledged with more ease by the users already accustomed to these presentations, one insisted upon the description of the data statistically retrieved both at the level of tables containing individual indicators and as analysis of the compound indicator.

One can notice the somehow contradictory influence of the factors taken into account upon the compound indicator. The cause of the apparent equalization in the level of the development of the two counties consists in repeating the figure 100 of the bonitierung draft where there were no initial available data for the respective years, which affects the general volume of corresponding indicators and their apparent dynamics. More exactly, in the first variant of bonitierung method, in which there are missing data for the indicators analyzed, the neuter value of 100 was employed, hence the results seeming much too identical.

Thereby, in the final variant, the value of 100 had been eliminated and the existing values of the indicators had been taken into consideration. Thus, the general table of bonitierung method was refigured by leaving the columns without data blank. Even if the final tendency of equalization is present, the dynamics in the final form of bonitierung method is closer to reality.

6. The Situation of Cross-Border Cooperation in Bihor-Hajdu Bihar Euroregion

The data referring to cross-border cooperation at the level of Bihor-Hajdu Bihar euroregion had been made available by the Regional Office of Cross-border Cooperation Oradea (BRECO).

Within the Phare Program CBC 2004 Romania-Hungary, as seen in Table (11), a number of ten projects had been effectuated and finished, having a total value of 1.807.523,1 euros, out of which the Phare part was of 1.355.642,3 euros, the national financing share of Romanian authorities being of 451.880,8 euros, and the co-financing of the beneficiary was of 263.982,9 euros.

Within the Phare Program CBC Romania-Hungary, a number of 39 projects had been completed during 2004-2006, having a total value of 6.538.844 euros, out of which the Phare part was of 4.515.114 euros, the Romanian national share of financing being of 1.423.513 euros, and the co-financing of the beneficiary was of 815.480 euros.

7. The Analysis of the Effects of the Completed Cross-Border Projects

It is difficult to quantify the influence of cross-border projects upon economical life, because on the one hand the effects are not many times immediate. Their results are likely to be felt after a certain period of time and to manifest themselves on long time frames, possibly decades (for example, the achievement of a purification station).

On the other hand, there are two categories of possible effects; first, it is the local one, where the project is carried out, and which begins to assert from the very time of effectuating the investment. More exactly, it is about the work force employed locally, the respective employees have higher salaries, thus the consumption will increase both in volume and structure, and they can pay their taxes and local impositions. Thereby, the local city halls have higher incomes, being able to function at better parameters. The second category of effects includes those belonging to the level of the county and implicit of the euroregion, as both the welfare and the misery propagate around.

In the present case, that is the euroregion *Bihor-Hajdu Bihar*, due to the insufficiency of the data gathered and their minimalist character, it is very difficult to analyze the effects of the regional cross-border projects.

All the more so as to make such a study, it would be ideal to follow the effects upon the localities where the respective projects are accomplished and not only the economical ones.

Of course, any completed project has an economical component, but this is not the only one. Sometimes the administrative part, of environmental protection or strictly regarding the specificity of the local community, the preservation of certain traditional crafts, become much more important than the economical aspect strictly. All these elements previously mentioned need both great time resources and people. But, in spite of them, it can represent a research topic for the future, which can extend the actual stage of the present research.

Precisely from the reasons presented above, even if the establishment of a compound indicator was initially expected by which to eventually measure the effect of these cross-border projects upon the economy of the euroregion, it was concluded that it was difficult to achieve. The bonitierung method could not be applied because of the very few available data from the statistical organizations, data which are prospected for under different forms, structure and unity of measurement. This makes it difficult to find a set of common data to be pursued and available on common periods within intervals as long as possible

8. Conclusions

It can be said that, regarding the socio-economical level of the two counties composing the euroregion Bihor-Hajdu Bihar, in the recent years the Hungarian county has had an advantage. If the entire analyzed period (2000-2010) is being prospected for, one can notice that, in the first interval, this county has succeeded into gaining on the inequality unto Bihor County, and, on the whole, it can be said that the euroregion in question is characterized by a certain uniformity of the economical-social life.

Cross-border cooperation plays an important role in the development of Bihor-Hajdu Bihar euroregion, the local authorities from the two counties intending to significantly enhance the number of bilateral projects. At the same time, the economical potential of the area is an increased one, and the key to a balanced development of the border territory will be to attract important sums of European money by means of structural funds.

This result (catching up the differences) can be achieved by investing significant amounts of money in sectors of regional economy capable of producing plus value.

Also, it should be noted that there isn't a general indicator by which to judge the effect of European money in the territory, specifically in the national and regional economies. In other words, the European Union directs the money to member states, but then it doesn't have a record of their impact on the economic development of those countries. Therefore, for the future it would require a careful analysis of this issue at the European level in order to identify the result of using the European funds.

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Notes

Note 1. http://portal.ksh.hu/pls/ksh/docs/eng/xstadat/xstadat_annual/i_qlf022.htm.

Note 2. http://ec.europa.eu/regional_policy.

Table 1. Stable Population (in Thousands)

Year	2001	2002	2003	2004	2005	2006
Hajdu Bihar County	553.264	552.478	551.837	550.265	549.372	547.357
Bihor County	619.529	603.743	602.206	598.381	596.670	595.448

Source: The online data base TEMPO ONLINE, Romania's National Institute of Statistics.
http://portal.ksh.hu/pls/ksh/docs/eng/xstadat/xstadat_annual/i_qlf022.html, accessed in 15.05.2011

Table 2. Number of Unemployed Persons (in Thousands)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Hajdu Bihar	14.5	13.1	13.4	12.5	11.9	17.6	20.0	16.3	18.4	22.7	27.9
Bihor	16.5	10.1	14.9	10.5	9.3	12.3	12.8	11.5	13.9	23.3	23.3

Source:The online data base TEMPO ONLINE, Romania's National Institute of Statistics.
http://portal.ksh.hu/pls/ksh/docs/eng/xstadat/xstadat_annual/i_qlf022.htm, accessed in 15.05.2011

Table 3. Number of Companies Registered (in Thousands)

Year	2005	2006	2007	2008	2009	2010
Hajdu Bihar	18301	18775	19340	20422	21290	22130
Bihor	15168	16118	17750	18850	18850	18850

Source: The online data base TEMPO ONLINE, Romania's National Institute of Statistics.
http://portal.ksh.hu/pls/ksh/docs/eng/xstadat/xstadat_annual/i_qlf022.htm, accessed in 15.05.2011

Table 4. GDP (Millions US Dollars)

Year	2004	2005	2006	2007	2008	Average
Hajdu Bihar	4218.48	4416.21	4390.93	5295.36	5966.13	4047.9
Bihor	2255.37	2751.68	3372.03	4708.57	5456.94	3090.8

Table 5. Number of Kindergartens and Schools of All Degrees

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Hajdu Bihar	509	521	515	517	517	526	520	520	521	518
Bihor	1014	1005	1001	349	348	345	221	225	219	228

Source: The online data base TEMPO ONLINE, Romania's National Institute of Statistics.
http://portal.ksh.hu/pls/ksh/docs/eng/xstadat/xstadat_annual/i_qlf022.htm, consultat la 15.05.2011

Table 6. Number of Hospital Beds Available within the Public Sanitary Units

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Hajdu Bihar	15521	14940	17969	16556	16076	17330	15573	16268	16580	15750
Bihor	10472	10442	10442	10475	10591	10455	10552	10126	9984	9746

Source: The online data base TEMPO ONLINE, Romania's National Institute of Statistics.
http://portal.ksh.hu/pls/ksh/docs/eng/xstadat/xstadat_annual/i_qlf022.htm, consultat la 15.05.2011

Table 7. Number of Beds Used in the Public Sanitary Units

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Hajdu Bihar	4292	4340	4281	4379	4290	4285	4290	3738	3713	3738
Bihor	5659	5609	5556	4528	4613	4566	4274	4250	4272	4253

Source: The online data base TEMPO ONLINE, Romania's National Institute of Statistics.
http://portal.ksh.hu/pls/ksh/docs/eng/xstadat/xstadat_annual/i_qlf022.htm, consultat la 15.05.2011

Table 8. Total Number of Tourists Arrival in Units of Public Accommodation

Year	2005	2006	2007	2008	2009
Hajdu Bihar	299730	369451	402291	395006	359138
Bihor	216019	212194	227334	228235	201234

Source: The online data base TEMPO ONLINE, Romania's National Institute of Statistics.
http://portal.ksh.hu/pls/ksh/docs/eng/xstadat/xstadat_annual/i_qlf022.htm, consultat la 15.05.2011

Table 9. Total Number of Tourists Nights Spent in Units of Public Accommodation

Year	2005	2006	2007	2008	2009
Hajdu Bihar	1073564	1304289	1333334	1260285	1128619
Bihor	1131164	1145183	1139245	1128159	998638

Source: The online data base TEMPO ONLINE, Romania's National Institute of Statistics.
http://portal.ksh.hu/pls/ksh/docs/eng/xstadat/xstadat_annual/i_qlf022.htm, consultat la 15.05.2011

Table 10. Total Number of Foreign Tourists' Passing the Nights in Units of Public Accommodation

Year	2005	2006	2007	2008	2009
Hajdu Bihar	407915	431100	452935	435308	373784
Bihor	82150	82150	100679	78368	73958

Source: The online data base TEMPO ONLINE, Romania's National Institute of Statistics.
http://portal.ksh.hu/pls/ksh/docs/eng/xstadat/xstadat_annual/i_qlf022.htm, consultat la 15.05.2011

Table 11. The Finance of Phare CBC Program 2004 Romania-Hungary

Total EURO	Phare EURO	Naţional EURO	Co-finance Beneficiary EURO	Field	Total number of projects
32.070	24.052,5	8.017,5	4.140	Administration	2
841.550	631.162,5	210.387,5	97.950	Infrastructure	2
410.047	307.535,25	102.511,75	46.744	Education	2
491.412	368.559	122.853	111.544	Business Environment	3
324.44,105	243.33,075	8.111,03	3.604,9	Environment	1
1.807.523,105	1.355.642,325	451.880,78	263.982,9	Grand Total	10

Source: BRECO Oradea.

Can Country Image Change after Likable Incident? The Case of Chile Miners' Rescue Operation and the Middle East Consumers

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Received: December 8, 2011 Accepted: December 24, 2011 Published: March 1, 2012

doi:10.5539/ibr.v5n3p100 URL: http://dx.doi.org/10.5539/ibr.v5n3p100

Abstract

Country image plays a key role in influencing consumers' perceptions towards products originating from foreign countries. Economic and commercial relations between countries in the Middle East region and South America have improved strongly in the last decade. However, there is a dearth of studies conducted in the Middle East countries regarding products sourced from South American countries. This study aims to explore how Chile miners' rescue operation has been perceived by Jordanians and how it has influenced the country image of Chile. The study examines the influence of demographic variables and openness to other cultures on the attitudes of Jordanian consumers towards Chile miners' rescue operation. A survey was conducted in the spring of 2011 to collect data from Jordanian consumers. Data were collected from 154 Jordanian customers. The results showed that Chile miners rescue operation has been admired most by Jordanian consumers who live in the capital of the country and by Jordanians who are more opened to other cultures.

Keywords: Country-of-image, Country-of-origin, Chile, Miners' rescue operation, Jordan

1. Introduction

The extraordinary technical and communication developments over the past decade have compelled firms to increasingly engage in global marketing activities (Chung, Pysarchik & Hwang, 2009). Globalization has forced companies and organizations in developed countries to reengineer their activities to compete low cost products which originating from developing countries (Ryan, 2008). Moreover, it has motivated marketers from both developed and developing countries to find new markets for their products.

For over 5 decades Country-of-Origin (COO) can be considered the most studied topic in international business and marketing. COO refers to consumers' perception towards the products made in a particular country or region. COO concept has been developed based the idea that consumers have stereotypes concerning foreign countries which influence their evaluations of products originating from such countries (Giraldi & Ikeda, 2009). Recently, the influence of COO information becomes less influential for consumers in a globalized world as it is not simple for them to consider the multiplicity of country information (manufacture, design, assembly and head office) (Chung et al., 2009; Tigli, Pirtini & Erdem, 2010). In this context, it is important to indicate that consumers have become aware of current complex manufacturing processes, however, they do form perceptions of foreign products based on available information (Chandrasen, Cordon Bleu Dusit & Paliwoda, 2009). Overall, findings in COO research are so strong that COO does affect global consumers (Giraldi & Ikeda, 2009). Therefore, a number of countries employ COO effect to market and reinforce positive perceptions towards their products (Ryan, 2008; Tigli et al., 2010). This influence could be negative in some cases. COO could work to a product's disadvantage (Hoyer & MacInnis, 2001). For example, consumers in developing countries were found to prefer products sourced from developed countries to products originating from developing countries (i.e Kaynak, Kara & Nakip, 1995; Bhuian, 1997; Okechuku & Onyemah, 1999; Kaynak & Kara, 2002; Ryan, 2008; Al Ganideh, 2008). Based on the country's image, international marketers can accentuate COO information if a country's image is favorable and downplay COO information if its image is unfavorable (Ahmed et al, 2004). International business COO literature has ignored examining the impact of globalization on consumers' perceptions and attitudes (Suh & Smith, 2008). Developing countries in general and particularly Arab countries have been ignored in most of international business research (Al Ganideh, 2010). Alternatively, international business literature has focused on developed countries and China and has paid less attention on emerging marketing in Latin America (Bianchi & Garcia, 2007). Moreover, there is a great need in international business to explore the influence of demographic variables on consumers' preferences purchase decisions of foreign products (Khan & Bamber, 2008). In their reviewing to COO international literature, Giraldi and Ikeda (2009) argued that demographic variables such as age and gender and socio-physiological variables such as openness to other cultures may influence the COO effect. World-mindedness refers "to interest in or knowledge about international affairs; factual and topical statements frequently serve as items in scales that measure international-mindedness" (Sampson & Smith, 1957, p.99). Kosterman and Feshbash (1989) argued that internationalism refers to attitude towards other nations. Internationalism refers to emotional support for international sharing and welfare (Lee, Hong & Lee, 2003).

2. Literature Review

Country image refers to the picture and the reputation that individuals attach to products of a specific country (Nagashima, 1970; Zhang, 1997; Ryan, 2008). Country images are shaped through consumers' knowledge of a particular country or their knowledge of products sourced from that country (Ryan, 2008; Chung et al., 2009). Consumers are influenced by a country image when they evaluate products sourced from that country (Giraldi & Ikeda, 2009). They purchase products of a particular country as a result of feelings of affinity for that country (Oberecker & Diamantopoulos, 2011). Overall, country image influences consumer purchase preferences of foreign products (Yamoah, 2005).

Individuals do employ information they know about a particular country to evaluate products sourced from that country without considering information regarding products' attributes (Zhang, 1997). Favorable perceptions towards a specific country results in favorable perceptions towards products sourced from that country (Paswan & Sharma, 2004). Overall, a connection between a country's economic development and the superiority of its products was approved in COO literature. International business literature has concluded that consumers prefer products sourced from highly industrialized countries (Chandrasen et al., 2009). Products sourced from developed countries are perceived as being superior to products originating from developing countries. Consumers consider the country's economic development when evaluating products sourced from foreign (Schooler, 1971; Bilkey & Nes, 1982; Han & Terpstra, 1988; Zain & Yasin, 1997).

The importance of the concept of country of image has increased recently with the rapid globalization of markets (Stock, 2009). Many countries have acknowledged the value of a country's positive image on marketing success of their products abroad (Ryan, 2008). A number of countries have built up a country specific image with particular products such as Switzerland and watches, Japan and electronics and Germany and automobiles (Tigli et al., 2010; Josiassen, 2011). Overall, international business researchers should give more attention to understanding of the nature of the phenomenon of country image (Auruskeviciene et al, 2010). The country image influences the global competition position of a country and its products (Zeng, Go & Kolmer, 2011). Global companies with manufacturing outlets in different countries of the world should employ the concept of country of image to market their products more efficiently (Stock, 2009; Tigli et al., 2010).

The dramatic increase of the Internet, television satellite channels and other new communication tools into consumers' daily life has increased globalization of the world. Country image can be changed as result of media exposure (Chung & Woo, 2011). Thus, exploring the role of media in shaping country image is important (Stock, 2009). Cable news network (CNN) has been the pioneer in establishing a 24-h news network with good global reach and the channel success in covering the first Gulf conflict stimulated other broadcasting organizations, such as BBC World Television, NBC and Sky (Gilboa, 2005). International broadcasting networks such as BBC World Television, CNN, Fox news, France 24 and CCTV have helped individuals to be more opened to different cultures. Moreover, in the Arab world Arab broadcasting networks such as Al-Jazeera and Al-Arabia since their establishments last decade have used to provide Arab viewers with more global news than their local television stations used to show. Al-Jazeera News channel has become a credible source for world news for the Arabs (Al-Jenaibi, 2010). It is clear that global world news channels and extensive media converge of major sport events have helped individuals all over the world to be more opened to global culture. Global television converge plays key role in shaping and changing national images around the world (Zeng et al., 2011). Individuals all around the world have become more educated and more opened to other cultures (Paswan & Sharma, 2004). However, consumers do differ in terms of their interaction with foreign cultures (Sharma, Shimp & Shin, 1995). Overall, extensive global media coverage of a particular event influences the image of the country in which the event is taking place (Chung & Woo, 2011).

Governments should give high concern to their countries' images and should follow changes related to such images with time or events (Tigli et al., 2010). For example, a positive change of country image may occur as a result of hosting global major sport events such as hosting the FIFA World Cup or the Olympics (Auruskeviciene et al., 2010). In this context, Chung and Woo (2011) concluded that hosting major sport events can improve country image. The researchers indicated that China's hosting of the 2008 summer Olympics has significantly improved the country image, however, China's image improvement has not reflected on the image of it products. Alternatively, Auruskeviciene et al. (2010) explored the effects of the Torino 2006 Winter Olympics on the image of Italy amongst young consumers from Lithuania and found that country image of Italy has not improved among young Lithuanians. It is important to examine how global mega events can reflect the county image (Zeng et al., 2011).

2.1 Chile Miners' Rescue Operation

Chile has been ignored in international business literature despite the country is considered as one of largest exporters in the world of natural resources such as copper, timber, salmon, and fruit (Bianchi & Garcia, 2007). However, the extensive media coverage of trapped miners' rescue operation offered the Chillan Government officials a great opportunity to improve the image of their country. The successful rescue operation of the Chilean miners who were trapped at a depth of more than 2,000 feet for more than 60 days was an operation of human ingenuity which made the whole world happy (New Oxford Review, 2010). Miners' rescue operation inspired the Chilean Government as well as Chilean marketers to promote a new image for the country. Rescue operation for Chilean miners has gained extreme global interest particularly with the extensive media coverage. World global and local news channels have interrupted their normal programs and focused on the happy end humanitarian rescue operation. Television coverage has made the dramatic operation watchable all over the World.

The Chilean Government has started soon after the successful rescue operation to build on the fascinating rescue operation to improve the country image all around the world. For example, the Chilean president visit to Jordan was one of Chile trials to maximize the benefits of its success in miners' rescue operation in the Arab region. King Abdullah II of Jordan and Chile's President Sebastián Piñera have stressed the importance of strengthening Jordanian-Chilean ties and increasing cooperation between the two countries particularly in the fields of economy and commerce (Jordan Times, 2011). Earlier, King Abdullah II has visited Chile in 2008 and made a speech at the National Congress of Chile Santiago, Chile. In his speech the king of Jordan called for partnership between Jordan and Chile especially the two countries share trade, diplomatic and cultural strong relationships (Jordan Times, 2008). Studying the image of Chile globally and addressing how consumers worldwide perceive Chile and its image is important (Bianchi & Garcia, 2007). The current study examines the influence of the Chile miners' rescue operation on the image of Chile amongst Jordanian consumers. More specifically, it aims to examine the influence of demographic variables and openness to other cultures on the attitudes of Jordanian consumers towards Chilean miners' rescue operation.

3. Methodology

Data was collected from Jordanian consumers from Amman city, the capital in Jordan and from Irbid city, the capital of Irbid Governorate during the spring of 2011 in a six week period. A total of 154 usable questionnaires were collected from Jordanian consumers. The respondents were advised to provide demographic information regarding their gender, marital status, geographical location and age. Table 1 presents demographic characteristics for the pooled sample.

Insert Table 1 Here

To measure Jordanian consumers' openness to foreign cultures they were asked to answer two items borrowed from Ruyter, Birgelen, and Wetzels (1998) (I would like to have opportunities to meet people from different countries and I am open-minded towards foreigners and their habits). Unfortunately, due to the surprise nature of Chilean miners' rescue operation, the current study could not be able to measure the influence of the rescue operation of the trapped miners on Chile image before and after the incident. Chung and Woo (2011) measured the impact of the 2008 summer Olympics on country of image pre and post the games. Also, Auruskeviciene et al. (2010) explored the effects of the Torino 2006 Winter Olympics on the image of Italy among young Lithuanians before and after games. Generally, international business researchers did not agree on how a country image can be measured (Auruskeviciene et al., 2010). Recently, Lala, Allred, and Chakraborty (2009) developed a scale to measure country image. The developed scale main dimensions are related to economic conditions, conflict, political structure, vocational training, work culture, environment, and labour.

To measure the influence that miners' rescue operation might have on the country image of Chile among Jordanians five items were developed. The notion of the five developed items have been employed form Gripsrud and Nes (1996) and from Lala et al. (2009). Gripsrud and Nes (1996) developed a scale to measure people and societal country image. The scale has been used recently in international business literature (i.e Auruskeviciene et al., 2010). However, Lala et al.'s (2009) developed scale measures country image regarding to economic conditions, conflict, political structure, vocational training, work culture, environment, and labour.

The five developed items were (Miners' rescue operation in Chile was fascinating; I have watched the rescue operation on T.V screen for long hours with extreme happiness; Miners' rescue operation showed that Chile is a technologically developed country; My knowledge about Chile has increased dramatically as a result of the rescue operation; Miners' rescue operation showed that the Chilean workers are very hard workers). Cronbach's alpha was used to assess the employed measures internal consistently. The results of Cronbach's alpha proved the reliability of the used measures. Both measures have exceeded the recommended minimum acceptable level of reliability for Cronbach's alpha which is 0.60.

4. Data Analysis and Concluding Remarks

Table 2 presents frequency results which show that more than 40 per cent of Arab Jordanians do believe that Chilean miners' rescue operation was fascinating. Approximately, 55 per cent of Jordanians have spent long hours watching the operation gleefully. Roughly half of the Jordanians believed that Chilean miners' rescue operation has presented Chile as a technologically developed country and has showed that Chilean workers are hard workers. Knowledge about Chile has increased dramatically for more than 38 per cent of Jordanians as a result of tapped miners' rescue operation.

Insert Table 2 Here

To explore the influence of openness to foreign culture over and above the impact caused by demographic variables hierarchal regression was conducted. The hierarchical regression procedure was conducted in a way that demographic variables were entered as one block to provide a baseline model and then openness to foreign culture was entered separately as a second block.

Insert Table 3 Here

Table 3 shows that the first block (demographic variables) proved to statistically significant ($F=2.651$, $df=[4,140]$, $p\leq 0.01$). Demographic variables namely, age; gender, marital status and geographical location explained 7 per cent of the total variance in Jordanians' perceptions towards Chilean miners' rescue operation and its influence on the Chile image. The addition of openness to foreign cultures separately as a second block to the demographic variables (the first block) was also statistically significant ($F=3.503$, $df=[5,139]$, $p\leq 0.01$). The addition of openness to foreign cultures brought 4.2 per cent increase to the model.

Insert Table 4 Here

Regarding the individual influence of each variable on Jordanians' perceptions towards Chilean miners' rescue operation the results showed that geographical location and openness to foreign cultures have statistical significant influences on Jordanians' perceptions towards the rescue operation (Table 4). On the other hand, Jordanians' perceptions towards Chilean miners' rescue operation did not vary based on their age, gender and marital status. Jordanians who do live in Amman city, the capital of Jordan have more positive views towards Chilean miners' rescue operation. Moreover, consumers who are more opened to other cultures showed more positive attitudes to the rescue operation and its influence on Chile's image than consumers who are less opened to other cultures.

The findings of this study have revealed a number of implications that could be valuable for Chilean and Jordanian marketing managers as well as for Chilean officials who attempt to target Arab consumers. Overall, the rescue operation unquestionably has created positive global publicity for Chile. The results of this study proved that consumers from Jordan do have positive perceptions towards Chile as a result of trapped miners' rescue operation. Chilean Government is strongly recommended to build on miners' rescue operation to improve the country global image. Moreover, Chilean marketers should employ the rescue operation within their advertising campaigns. For Chilean global marketers who are targeting the Jordanian market targeting consumes from Amman city is well suggested. It is important for Chilean global marketers to conduct marketing communications that focus on miners' rescue operation which might encourage Jordanians and Arabs to buy products originating from Chile. Local Jordanian manufacturers and marketers are well recommended to consider licensing arrangements and cooperation agreements with Chilean manufacturers to improve their reputation and their sales within Jordan and the Arab region. The results of the current study can be generalized on other Arab countries in the Middle East and North Africa.

5. Research Limitations and Direction for Further Research

The sample size can be considered as a limitation for the current study. Moreover, the fact that the data have been collected from only two main cities in Jordan is another limitation for this study. In terms of measuring Jordanians' perceptions towards Chile and its miners' rescue operation the current study has built on previous literature, however, international business literature is strongly recommended to develop scales to measure the influence of global events on countries' images. The current study has examined the influence of demographic variables namely, age, gender, marital status and geographical location on Jordanians' perception towards Chile and its famous miners' rescue operation, future research should examine other demographic variables such as educational level and income. Moreover, the impact of socio-psychological variables such as xenophobia and foreign travel should be addressed in future research.

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Table 1. Sample Profile

Variable	Group	Percentage (%)
Gender	Male	70.1
	Female	29.9
Marital Status	Single	72.7
	Married	26.6
Geographical Location	Amman (Central part of Jordan)	73.9
	Irbid (North of Jordan)	26.2
Age	18-25	57.7
	26-36	29.9
	37-47	10.4
	Over 48	1.9

Table 2. Descriptive Statistics (the Image of Chile among Jordanians)

	Item	Agree	Neither agree nor disagree	Disagree
1	Miners' rescue operation in Chile was fascinating.	64 41.8 %	39 25.5 %	50 32.7 %
2	I have watched the rescue operation on T.V screen for long hours with extreme happiness.	84 54.6 %	46 29.9 %	22 14.2 %
3	Miners' rescue operation showed that Chile is a technologically developed country.	70 45.4 %	60 39.0 %	22 14.2 %
4	My knowledge about Chile has increased dramatically as a result of the rescue operation.	59 38.3 %	50 32.5 %	41 26.6 %
5	Miners' rescue operation showed that the Chilean workers are very hard workers.	59 44.0 %	50 33.1 %	41 13.3 %

Table 3. ANOVA Results

Model		Sum of Squares	Degree of Freedom	Mean Square	F Value	Significant
1	Regression	262.344	4	65.586	2.651	0.036*
	Residual	3463.283	140	24.738		
	Total	3725.628	144			
2	Regression	416.950	5	83.390	3.503	0.005**
	Residual	3308.678	139	23.803		
	Total	3725.628	144			

* $P \leq 0.05$, ** $P \leq 0.01$; Model 1 (R=0.265, R Square=0.07), Model 2 (R=0.335 R Square=0.112).

Predictors (1): (Constant), age, gender, marital status, geographical location.

Predictors (2): (Constant), age, gender, marital status, geographical location, openness to foreign cultures. Dependent variable (Chile's country image).

Table 4. Regression Results

Model		Unstandardised Coefficients		Standardised Coefficients	t	Significant
		B	Std. Error	Beta		
2	(Constant)	8.456	3.258		2.596	.010**
	Age	-.499-	.655	-.072-	-.762-	.447
	Gender	-1.324-	.902	-.121-	-1.468-	.144
	Marital status	1.038	1.127	.096	.921	.359
	Geographical location	2.562	1.040	.224	2.463	.015*
	Openness to foreign cultures	.496	.195	.211	2.549	.012*

* $P \leq 0.05$, ** $P \leq 0.01$.

Investigating Service Quality Initiatives of Pakistani Commercial Banks

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Received: September 19, 2011 Accepted: January 27, 2012 Published: March 1, 2012

doi:10.5539/ibr.v5n3p107 URL: http://dx.doi.org/10.5539/ibr.v5n3p107

Abstract

The study investigated the service quality initiatives taken by Pakistani commercial banks in Lahore based on the perceptions of 447 respondents, selected by using multistage random sampling technique, through SERVQUAL scale which was found reliable at 0.866 Cronbach's alpha. Mean scores, alphas, and correlations were calculated. One-Sample *t*-test, Independent Samples *t*-test, and One-way ANOVA were employed for significance and variance analysis. The study concluded that customers, employees, and managers respectively were not satisfied with the overall service quality provided by the Pakistani banks in terms of five sub-scales of service quality. However, tangibles were relatively at top whereas assurance was at the lowest position. Reliability and empathy were at almost similar level and banks failed in their responsiveness. Pakistani banks need to revisit their quality initiatives and focus on responsiveness, assurance, reliability, empathy, and tangibles in order of priority to ensure the set standards of service quality.

Keywords: Service quality, Tangibles, Reliability, Responsiveness, Assurance, Empathy

1. Introduction

Quality, the buzz word of 21st century, is a vital reflection of organizational performance and the subject of contemporary research in business world which has influenced academia as well (Yavas & Yasin, 2001; Karatepe, Yavas & Babakus, 2005) leading to the concept of corporate university in the literature on higher education (Ali, 2008). Deming (1982) is famous for introducing the quality construct in US industry. Since then, different dimensions of quality are under discussion in manufacturing, trading and service business in different cultures around the globe. What quality really means in banking; how stakeholders perceive it; what areas of indigenous banking quality are relatively stronger; and which local banks are performing better, are significant dimensions of the current study investigating perceptions of customers, employees, and managers about the service quality initiatives taken by Pakistani commercial banks in terms of tangibles, reliability, responsiveness, assurance, and empathy as sub-scales of quality.

2. Review of Literature

2.1 Service Quality Concept

Quality is perceived differently by different people. Business Dictionary (2010) depicts quality as measures of excellence; observable and interpretable attributes; or the adherence to measurable and verifiable standards. But, quality could not be understood until one compares characteristics with requirements of the user and that is actually a question of degree to which the former comply with the later; a measure of relativity (Praxiom Research Group, 2010). Quite opposite to goods quality, service quality is intangible in nature and hard to measure in objective terms compelling managers and researchers to measure it through perceptions of the customers (Karatepe, Yavas & Babakus, 2005) who pay its price. As technology has enhanced the growth of service delivery to customers (Dabholkar & Bagozzi 2002), service quality is also measured in terms of automated service (Parasuraman, Zeithmal, & Malhotra, 2005) that is an electronic provision of service (Buckley, 2003) possible through information and communication technology (Surjadjaja, Ghosh & Antony, 2003) and businesses like banks may enhance the quality of their services and customer relations (Mols, 2000) using this system.

These initiatives taken by banks and other service organizations to ensure quality, is a matter of customer satisfaction. An acceptable level of service quality leads to customer satisfaction, attraction of new customers and customer retention (Lassar, Manolis & Winsor, 2000; Karatepe, Yavas & Babakus, 2005; Ibrahim, Joseph & Ibeh, 2006). Keeping in view the rating by price paying customers, the entrepreneurial view of the service quality dictates that the degree of customer satisfaction really determines the level of success or failure of the business (Santos, 2003).

2.2 Measuring the Service Quality

If service quality matters this much, it must have been a regular phenomenon at all organizations. The description of service quality could be traced back in 1960s (Karatepe, Yavas & Babakus, 2005) but its measurement got ground from the pioneer work of Parasuraman, Berry and Zeithmal (1985) that led to the first formal measurement of service quality by Parasuraman, et al. (1988) through the famous tool namely SERVQUAL and the interest in topic gained high acceleration during the past twenty years or so (Karatepe, Yavas & Babakus, 2005). Different studies (Cronin & Taylor, 1992; Cronin & Taylor 1994; Newman, 2001; Aldlaigan & Buttle, 2002; Greenland, Coshall, & Combe, 2005) have established the worth of SERVQUAL as a service quality measurement tool. However, what is measured as quality is a matter of serious concern and the following lines encompass its scope.

The literature on service quality provides different dimensions researchers have identified such as expectations, outcome and image (Gronroos, 1984); tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman et al., 1988); service product, service environment, and service delivery (Rust & Oliver, 1994); interaction quality, physical environment quality, and outcome quality (Brady & Cronin, 2001); service environment, interaction quality , empathy , reliability, customer satisfaction, purchase intention (Karatepe, Yavas & Babakus, 2005); and tangibles, courtesy, reliability, customer understanding, and assurance (Cauchick Miguel, Silva, Chiosini & Schutzer, 2009). Despite this debate on dimensionality, SERVQUAL is still a widely used instrument adapted for different services and cultures (Imrie, Cadogan & McNaughton, 2002; Long & McMellon 2004). Ibrahim, Joseph, and Ibeh (2006), Şafakli (2007), Petridou, Spathis, Glaveli and Liassides (2007), and Ravichandran, Prabhakaran and Kumar (2010) reported their investigations of quality on SERVQUAL specifically in banking sector.

In SERVQUAL, tangibles refer to the appearance of physical facilities, equipment, personnel, and communication materials (Parasurman et al. 1988, 1991), counter partitions in the bank (Othman & Owen, 2003), overall appearance of branches (Jabnoun & Al-Tamimi, 2003), and a distinct aspect that does show consistency across cultures (Cui, Lewis & Won Park, 2003). Reliability is the bank's ability to perform the promised service with dependability and accuracy (Osman & Ali, 2009). Responsiveness is willingness of staff to help customers and provide prompt service (Parasurman et al., 1994; Jabnoun & Al-Tamimi, 2003; Sureshchandar, Rajendran & Anantharaman, 2003). Assurance reflects employee attitudes and behavior and the ability of staff to provide a competent, confidential and courteous service, and ability of staff to be friendly (Newman, 2001). And at the end, empathy is the care and individualized attention the organization provides to its customers (Parasurman, et al, 1994; Greenland, et al., 2005).

The SERVQUAL, as noted above, has been used in different cultures and service sectors including banking. Such efforts were made mostly outside Pakistan. The current study was designed to investigate perceptions of customers, employees, and managers about the service quality initiatives taken by Pakistani commercial banks in terms of tangibles, reliability, responsiveness, assurance, and empathy as sub-scales of quality. More specifically, the study pursued the following objectives:

1. explore opinions of customers, employees, and managers of banks regarding service quality of banks in terms of tangibles, reliability, responsiveness, assurance, and empathy as sub-scales;
2. compare the perceptions of customers, employees, and managers of banks regarding service quality of banks in terms of tangibles, reliability, responsiveness, assurance, and empathy as sub-scales; and
3. compare the perceptions of customers, employees, and managers of banks regarding service quality of banks in terms of background variables.

3. Methodology

3.1 Sample

The service quality of banks is intangible and could be measured through the perceptions of those who are benefiting from it (Karatepe, Yavas & Babakus, 2005). Therefore, the sample included managers, employees and customers. There were 04 public and 20 private banks in Lahore affiliated with the State Bank of Pakistan by September 2010. Out of these, one public and five private banks were selected through 25 % stratified random sampling technique. There were 357 branches of these banks in Lahore from which 36 (10 % approx) were randomly selected. Hence, a sample of 36 managers, 144 employees and 360 customers was selected taking 1 manager, 4 employees and 10 customers each from 36 branches of sample banks.

3.2 Data Collection and Analysis

A SERVQUAL used in banking sector was adopted from Şafakli (2007), which was found reliable at 0.866 Cronbach's alpha for the purpose of current study. Data were collected by second and third researchers.

The responses of respondents were quantified ranging fron 05 for strongly agreed and 01 for strongly disagree. Mean score 03 was taken as cut point (Aksu, 2003) and mean scores 03 and below were taken as representing inadequate measures of service quality. Whereas, mean scores above 03 were taken as representing adequate measures of service quality of banks. Mean scores, alphas, and correlations were calculated for the five sub-scales namely tangibles, reliability, responsiveness, assurance, and empathy. One-Sample t-test, Independent samples t-test, and One-way ANOA were employed for significance and variance analysis.

4. Results

A total of 447 responses, 36 manager (100 %), 118 out of 144 employees (81.94 %) and 293 out of 360 customers (81.39 %) were received thus giving an overall response rate of 82.78 %. The gender split of these respondents revealed that majority of managers (77.8 %), employees (55.1 %) and customers (67.6 %) was male. As a whole, 294 (66 %) respondent were males and 153 (34 %) were females. Bank affiliation was noticed as Bank Alflah (BA) 60 (13 %), Allied Bank (ABL) 90 (20 %), Bank of Punjab (BOP) 63 (14 %), MCB Bank (MCB) 114 (26 %), United Bank (UBL) 64 (14 %), and Standard Chartered Bank (SC) 56 (13 %). These respondents were Graduate (142, 32 %), Master (267, 60 %), MPhil (6, 01 %), PhD (3, 01 %), and other (29, 06 %) degree holders.

The correlations (table 1) are week within sub-scales against those with the SERVQUAL and this situation validates these factors of the scale and their alpha values ranging from 0.638 to 0.702 (table 2) point out that these fall in acceptable range (Gursoy & Umbreit, 2005; Raza, Majid & Zia, 2010) enhancing further the validity of the scale.

One-Sample statistics for service quality dimensions as given in table 2 indicate that tangible aspect of service quality of banks got the highest position. Reliability and empathy were almost at same level. Below these was assurance and responsiveness fell in rejection region as its mean value is below 03.

Analysis of background variables revealed that female respondents were more satisfied with service quality of banks as compared with males. In respondents, customers were less satisfied with the service quality of banks as compared with employees and managers. In banks, BA was leading in tangible category followed by ABL, and MCB. ABL was leading in reliability, empathy, assurance and responsiveness followed by BA. ABL and BA in reliability; ABL and BA in responsiveness; ABL in assurance; and ABL, MCB, and UBL in empathy were significantly better than other sample banks.

5. Discussion

The significance of SERVQUAL as a service quality measurement tool is established, but studies like Gronroos (1984), Dabholkar, and Bagozzi (2002, Imrie, Cadogan and McNaughton (2002), Cui, Lewis, and Won Park (2003), Long and McMellon (2004), Greenland, Coshall and Combe (2005), Ibrahim, Joseph and Ibeh (2006) and Şafakli (2007) pointed out that the situation of service quality is different in various countries and cultures. One possible reason of this tendency could be the difference in the perceptions of the users of service quality in different countries and cultures. This tendency would verify the similarities/dissimilarities of the findings of current study with those referred in 2.1 and 2.2 above.

5.1 Service Quality of Pakistani Banks

The first objective of the study was to explore opinions of customers, employees, and managers of banks regarding service quality of banks in terms of tangibles, reliability, responsiveness, assurance, and empathy as sub-scales. The findings of the study revealed that the overall situation of service quality of banks is unsatisfactory as the average mean score for all the five aspects of quality is 3.5 which is below 04, the point of agreement of respondents on the survey scale. It means that respondents show their disagreement on providing quality services to the stakeholders by the banks. In this unhealthy state of affairs, the condition of tangibles (4.425) is relatively better and falls above the level of agreement of respondents on the service quality of banks at SERVQUAL. This finding is consistent with Petridou et al. (2007) and Ravichandran, Prabhakaran and Kumar (2010). It means that Pakistani banks are providing good tangible facilities to the customers. Reliability (3.729) and empathy (3.631) are almost at same level which is below the agreement of respondents at the rating scale. The case of assurance (3.098) also falls in the same category. However, the respondents have rejected the responsiveness (2.812) ability of banks. These finding being contradictory to the dictates of total quality standards, are highlighting Pakistani banks facing this critical situation, especially in responsiveness where bank staff is not willing to provide prompt services to their customers. Findings also point out the inability of Pakistani banks to compete with foreign banks operating in Pakistan at the one hand, and support the report of rating agencies highlighting the problems these banks are facing at the other.

5.2 Comparison of Respondents' Opinion

The second objective of the study was to compare the perceptions of customers, employees, and managers of banks regarding service quality of banks in terms of tangibles, reliability, responsiveness, assurance, and empathy as sub-scales. Findings of the study revealed that customers were less satisfied with the service quality of banks in terms of the sub-scales as compared with employees and managers. Further analysis indicated that employees were less satisfied with the service quality of banks as compared with managers. The point of view of employees who directly face customers at different bank counters, actually verifies the reservations of customers. This may also reflect the managers' defensive position being part of the top management. But the opinion of employees, especially the customers who are not satisfied with the service quality of banks, needs to be considered. One possible cause of this need is the unacceptable level of service quality for customer satisfaction and retention (Ibrahim, Joseph & Ibeh, 2006) that determines the level of success of the banks (Santos, 2003).

5.3 Background Variables vs Service Quality

The third objective of the study was to compare the perceptions of customers, employees, and managers of banks regarding service quality of banks in terms of background variables. Analysis of background variables revealed that males, the majority segment, were unhappy with all aspects of the service quality of banks. This trend gets intensified in respondents' analysis in 5.2 where customers were less satisfied with the service quality of banks as compared with employees and managers. These findings provide serious insights to the banking leaders who need to satisfy customers for survival in the growing competition. In bank category, BA was leading in tangibles followed by ABL and MCB. ABL was leading in reliability, empathy, assurance and responsiveness followed by BA. ABL and BA in reliability; ABL and BA in responsiveness; ABL in assurance; and ABL, MCB, and UBL in empathy were significantly better than other sample banks. The bank-wise analysis revealed that the privatized banks were performing better as compared with those in the public sector. One possible cause of this trend may be the smaller contribution of public sector in the sample of the current study. But, these findings really get support from the usual quality available at public banks, especially from the harsh behavior of their employees with customer. These findings also signify the need for privatization of service sector in order to improve cost and enhance managerial efficiencies for the uplift of this important segment of economy.

6. Conclusion and Recommendations

Though the female component is quite reasonable, males are still the majority segment of users of banking quality in Pakistan. The results of service quality initiatives taken by banks are not satisfactory and the most important stakeholders, the customers, are unhappy with the quality banks are providing to them in terms of tangibles, reliability, responsiveness, assurance, and empathy. The condition of tangibles available at Pakistani banks is relatively better as compared with other aspects of service quality. Reliability and empathy are almost at same level which is below the point of satisfaction of respondents. The case of assurance also falls in the same category. However, the respondents have rejected the responsiveness ability of Pakistani banks. The privatized banks are performing better as compared with those in public sector. The small size of the sample could be a limitation of this study; even then the findings represent the second largest city of the country and point out serious intimidation for the banking leaders who need to revisit their entrepreneurial endeavors. Banks, especially those in public sectors should take remedial measures to improve upon the situation or they may face consequences like postal and telecommunication services of Pakistan. Improvement of services along with training of employees could be a better solution. Political as well as business leaders should join hands to accelerate the privatization process at standards acceptable to stakeholders.

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Table 1. Correlation between Sub-Scales and SERVQUAL

	Tangibles	Reliability	Responsiveness	Assurance	Empathy
SERVQUAL	0.587**	0.730**	0.732**	0.668**	0.737**
Tangibles		0.379**	0.314**	0.336**	0.388**
Reliability			0.436**	0.425**	0.452**
Responsiveness				0.454**	0.442**
Assurance					0.380**

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

Table 2. One-Sample Statistics for Service Quality Dimensions

Factors	Mean	SD	df	Alpha	*t*-Value
Tangibles	4.425	0.651	446	0.653	46.25*
Reliability	3.729	0.712	446	0.679	21.65*
Empathy	3.631	0.755	446	0.687	17.67*
Assurance	3.098	0.659	446	0.638	3.16*
Responsiveness	2.812	0.752	446	0.702	-5.28*

* $p<0.05$.

The Pricing of Audit Services: Evidence from Jordan

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Received: November 14, 2011 Accepted: December 30, 2011 Published: March 1, 2012
doi:10.5539/ibr.v5n3p114 URL: http://dx.doi.org/10.5539/ibr.v5n3p114

Abstract

This study surveys views of Jordanian auditors about how the most important factors affecting the pricing of audit services, provides evidence whether the factors related to the client's corporate, factors related to the audit office. To accomplish these objectives, a questionnaire was designed and distributed to a sample of (235) of Jordanian auditors, To Conduct data analysis descriptive statistics, means, standard deviation were used. The results revealed by this study that the auditor's service pricing is determined by factors related to the client's corporate such as the number of branches and departments of the entity, net flow of operating activities, in addition to the factors related to the audit office such as the audit office subordinated to international office, reputation of audit office. While Jordanian auditors are not consider the office size, Conducting of ethics of accounting profession, and Conducting of mandatory legislation and accounting standards as determinants of audit service pricing.

Keywords: Pricing, Audit service, Jordan, Client, Audit office

1. Introduction

The audit fees known as the amounts, wages or fees charged by the auditor for an audit process performed for the accounts of an enterprise, the audit fees determined according to the contract which is between the client and the auditor in accordance with the time spent on the audit process, the service required, and the assistants needed for the audit process. And do not forget that the fees are determined before begin the process of auditing and fees must be fair and consistent with the effort that will spend, reputation of the auditor office, and his professional experience, as well as the degree of risk which may be incurred (Al-Matarneh, 2009).

Since more than twenty years the controversy and debate on the audit fees and factors that affect it has been started. There is a growing trend in recent years in accounting thought about discussing this issue. The problem sometimes arises because of the impact of the big audit firms on audit fees, and whether these offices get an increase in the audit fees and what is the reason behind it. Also sometimes the problem occurs because of the impact of advisory services provided by the audit office to the customer on the audit fees. On other hand controversy occur because of the different audit fees from one sector to another, as well as many questions occur about the impact of the clients entity size, the complexity of its operations, and the extent of the risk associated with the audit process and its impact on audit fees. Therefore this study aims to provide evidence on the question of whether the audit fees determined by the factors related to the client, and factors related to the audit office. This is achieved by examining the impact of these factors on the audit fees.

The paper is organized as follows. Section 2 provides a review of related literature. Section 3 provides a background of auditing in Jordan. Section 4 provides theoretical framework about audit fees. Section 5 describes the research methodology. Section 6 presents the results of the study, while Section 7 summarizes the study and provides its main conclusions.

2. Review of Related Literature

There is now a substantial and growing literature concerned with the multivariate modeling of audit fees. Many of these studies contain common variables, including measures for size, complexity and risk. Several constructs and measures have been used to operationalize each of these variables; therefore the present study focuses on all these factors from the Jordanian auditors' point of view. In this review previous studies are separated into two main categories: the first covers studies conducted in developed countries and the second covers studies conducted in developing countries.

2.1 Studies in Developed Countries

Gonthier & Schatt (2007) study seeks to contribute to the international literature by researching the factors influencing audit fees in France, where law requires a joint auditing process involving two separate auditors for firms that publish consolidated financial statements. Since, 2003, the disclosure of audit fees has been compulsory in France, but numerous firms decided to voluntarily disclose their audit fees for the year 2002. An attempt is made here to elucidate the amount spent on audit fees in 2002 in a sample of 127 French (non-financial) firms. The main finding is that audit fees depend on firm size, firm risk, and the presence of two of the Big Four firms. When two Big Four firms audit company accounts, the fees charged (adjusted for company size) are significantly lower in comparison with those paid in the other cases. These results appear not to have been influenced by the share of fees paid by the companies to the main auditor.

Study of Ferguson *et al* (2003) examines the role of auditor industry expertise in the pricing of Big 5 audits in Australia. The study tests if the audit market prices an auditor's firm-wide industry expertise, or alternatively if the audit market only prices office-level expertise in those specific cities where the auditor is the industry leader. The study document that there is an average premium of 24 percent associated with industry expertise when the auditor is both the city-specific industry leader and one of the top two firms nationally in the industry. However, the top two firms nationally do not earn a premium in cities where they are not city leaders. Also further document that national leadership rankings are, in fact, driven by the specific offices where accounting firms are city leaders. Thus, the overall evidence supports that the market perception and pricing of industry expertise in Australia is primarily based on office-level industry leadership in city-specific audit markets.

Maher *et al* (1992) found that a significant decrease in real audit fees between 1977 and 1981. These findings were not sensitive to alternative specifications of the audit fee model and were not driven by any particular industry or audit firm. The results of this study are consistent with claims of increasing fee competition in the market for independent audit services. In view of the number of changes occurring in the audit profession and the market during that period, it is difficult to make causal inferences about the effects of particular changes in the profession on audit fees.

Study of Goddard & Masters (2000) suggest that audit committees have been through a transitional phase comprising changes to the general audit environment and a learning phase for the establishment and operation of committees. By 1995 there is no evidence that audit committees, whether adhering to the Cadbury Code or not, has any overall effect on audit fees. The only effect found was a reduction in fees due to improved internal controls in the presence of audited complexity. There was evidence that size was the main determinant of the presence of an audit committee.

Larcker & Richardson (2004) find consistent evidence of a negative relation between the level of fees (both audit and non-audit) paid to auditors and accruals (i.e., higher fees are associated with smaller accruals). The latent class analysis also indicates that this negative relation is strongest for client firms with weak governance. Overall, the study results are most consistent with auditor behavior being constrained by the reputation effects associated with allowing clients to engage in unusual accrual choices.

2.2 Studies in Developing Countries

Naser & Nuseibeh (2007) investigates the structure of audit fees in an emerging economy by using regression model tested by running across-sectional linear ordinary least squares (OLS) regression of the audit fees on corporate size, the status of the audit firm, the degree of corporate complexity, profitability, risk, corporate accounting year end and the lag between the audit report and the end of the accounting year. The results of the analysis revealed that corporate size, status of the audit firm, industry type, degree of corporate complexity and risk are the main determinants of audit fees. However, variables such as corporate profitability, corporate accounting year-end and time lag between year end and the audit report date appeared to be insignificant determinants of audit fees.

The study of Ji & Hong (2007) makes use of OLS regression to build audit service pricing model and documents a statistically significant association between audit fee and client's company size measured by total assets and sales at the same time. Proxies of client's company size as they are, total assets and sales are complementary, which is different from other conclusions. It is also supported in this study that client's company complexity measured by number of consolidated subsidiaries is an important determinant factor of audit fee. The more consolidated subsidiaries are the more complex audit business is. Accordingly, auditors have to make more effort and the audit fee will be higher. Quick ratio is used as proxy of short-term financial risk, which is also different from other studies. If it is relatively higher, liquidity and short-term financial structure will be more stable. Hence, lower audit fee is charged because auditors burden lower level of short-term financial risk. Audit fee premium is also observed in audit firms that cooperate with Big 4, which means auditor size is also an important determinant factor of audit fee.

Study of Al-Harshani (2008) indicates that the amount of external audit fees is significantly influenced by the audit client size, liquidity ratio, and profitability ratio. The results, however, do not provide evidence of a significant relation between audit fees and the number of audit locations, or the size of the audit firm.

In Qatar Kutob & Al-khater (2004) indicates that the most important factors in determining audit fees are revenues of audited firm, number of branches of the audited firm, type of industry of audited firm, and the competitive position (reputation) of auditing firm. By using financial and nonfinancial data for all listed companies on Doha stock market (DSM) in Qatar, the results show that the audit fees are significantly associated with the following variables: total assets of the audited firm, number of branches, net income, type of industry, accounts receivable ratio to total assets, and hours required for audit process. However, when using multiple regression models, the results reveal that other important issues be considered such as the size of both audited firm and auditing firm and non-audit services.

Study of Ma &Wang (2010) found that a major factor in the annual audit fees is the size of listed companies, place of registration for the economically developed regions, asset-liability ratio; the most critical factor is the size of listed companies. The number of independent directors on the annual audit costs whiles no significant effect.

A study of Cobbin (2002) showed the comparative, analytical review highlights the use of a core audit fee determinants model that is used and adapted in a limited way, to reflect market specific circumstances and to address market specific issues. The review indicates some consistency across markets in respect of generic variables identified as core determinants of the level of audit fees. There is little evidence in the literature to indicate historical, cultural, institutional or other market-specific factors being addressed in a systematic way, particularly in respect of developing countries.

3. Background of Auditing in Jordan

The development of auditing in Jordan has gone along with the development of the country itself. According to Abdullah (1986), the first audit firm to open in Jordan was George Khader's firm in Amman in 1944. Before that, auditors from Palestine used to undertake auditing in what was then known as TransJordan. After 1948, many auditors moved from Palestine to Jordan, and the profession in Jordan began to increase in size (Abdullah, 1986). At present, there are about 220 audit firms in Jordan, differing significantly in terms of size. Most firms are small, some with only one or two practicing auditors. However, some audit firms are significantly larger in size, deal with much larger clients (including multinational clients operating in Jordan) and offer a range of financial services. The Jordanian Association of Certified Public Accountants (JACPA) has over 480 registered licensed members, of which about 350 are in public practice. Some practicing auditors hold international auditing certificates, especially the American CPA.

The Big Four international audit firms, along with several other large international firms, operate in Jordan through some sort of affiliation with a Jordanian audit firm. Some firms have a strong relation, generally termed by the audit firms as a full membership relation, while some have a weaker relation, generally termed by the audit firms as a correspondence relation. The Jordanian audit firm is a full member of the international audit firm. This generally includes local Jordanian partners regularly attending meetings at the firm's headquarters, the Jordanian firm having to strictly follow the international firm's audit approach and quality control criteria and be peer-reviewed on that by non-Jordanian staff from the international firm, the Jordanian staff regularly taking training courses designed by the international audit firm and benefiting from any rewards associated with attending these courses, the Jordanian audit firm using the official name and logo of the international audit firm, either accompanied by or replacing the local name of the audit firm, etc. On the other hand, Jordanian audit firms which have a correspondence relation are not full members in the related international audit firm. This may mean that the related international audit firm does not want to give them full membership or that they are under a period of probation with the possibility of full membership to come after several years. This group of firms is under significantly less scrutiny by the international firms and has more freedom of selecting and applying their own audit approaches and practices. However, they may benefit from the affiliation in terms of name reputation and reference by the international firm of its multinational clients operating in Jordan. Most of the Jordanian audit firms affiliated with an international audit firm have a relation that can be formally classified as a full membership (Abdullatif & Al khadash, 2010).

Jordan is committed to aligning its national corporate financial reporting requirements with the International Financial Reporting Standards and the International Standards on Auditing, and it has achieved significant steps towards achieving this objective, including issuance of a new Accounting Profession Law in 2003. The law sets guidelines on education and experience necessary for certification for public practice, and it also sets penalties to be given to auditors who violate audit laws and regulations. Based on the new law a high commission for the accounting profession was established. It is headed by the Minister of Industry and Trade, and has responsibility for regulating issues related to the accounting profession in Jordan. Its members include the Controller of the Companies in the Ministry of Industry and Trade and representatives from the Central Bank of Jordan, the Jordan Securities Commission, the Insurance Commission, and the Auditing Bureau, in addition to three elected auditors and one academic specializing in accounting. The High Commission of the Accounting Profession requires auditors to apply International Standards on Auditing (Al-Matarneh, 2009).

Monitoring auditors' performance is generally not rigorous in Jordan. However, international audit firms which have affiliated audit firms in Jordan do practice their own monitoring and peer review in order to enhance the quality of their international audits.

The system governing the audit profession in Jordan has a number of shortcomings. For example, the World Bank (2004) states that although JACPA has responsibility to draft its own by laws and has disciplinary authority over its members; it lacks resources to function properly as an effective professional accountancy body. The World Bank (2004) also reports that JACPA lacks effective monitoring and enforcement mechanisms to ensure that auditors follow auditing standards and the code of ethics issued by the International Federation of Accountants (IFAC). This view is, to some extent, confirmed, for example, by JACPA's self-assessment questionnaire (IFAC, 2006), where it reports that although it has a quality control system in place to monitor member audit firms, such quality control checks have never been made. The questionnaire does not show details of any other actual cases of enforcement of any laws or monitoring their application.

The World Bank (2004) also reports several problems facing the audit profession in Jordan. These include poor auditor independence (due to heavy reliance on few clients and strong personal relations with clients), poor following of audit procedures concerning related parties (especially important given the dominance of the family business system), poor use of external confirmation, poor use of the audit report (such as not qualifying it for departure from accounting standards), heavy reliance on management representations without obtaining corroborative evidence, and poor compliance with quality control requirements (including continuous education of auditors).

The first auditing firm was established in Jordan in 1944; before that the auditing services were provided through auditing firms in Palestine. The professional codes were taken from British Companies Law, until the issuance of the Jordanian Companies Law 33/1962 (6). Jordanian Association of Certified Public Accountants (JACPA) board was founded in 1988 (under Law 42/1987). A new Accountancy Profession Law 73/2003 was issued on June 16, 2003. Important features of the Accountancy Profession Law include the establishment of a "High Council for Accounting and Auditing" headed by the Minister of Industry and Trade, and the creation of an improved (JACPA).

The new Jordan's Companies Law 22/1997 obliges all companies registered under the Companies Law to maintain sound accounting records and present annual audited financial statements in accordance with "internationally recognized accounting and auditing principles." Auditors are elected for one year with the possibility of renewal. The Accountancy Profession Law gives new powers to (JACPA), such as responsibility to draft its laws, disciplinary authority over its own members, and the right to inspect its members' working papers.

In Jordan there are two important laws governing audit practice: The Law of Audit Profession 1985 and The Companies Law 1997. With regard to audit licensing, Article 4 of the Audit Profession Law, 1985 stipulates that in order to be licensed as a professional auditor, the following criteria must be met. The applicant must be a Jordanian citizen, of good moral character, and must meet at least one of the following requirements:

- PhD degree in accounting, with a minimum of one year of practical accounting and auditing experience, or a two-year minimum of teaching experience, or;
- Master's degree in accounting or its equivalent, with a minimum of two-years, Practical accounting and auditing experience, or;
- Bachelor's degree in accounting or its equivalent, with a minimum of three years' practical accounting and auditing experience, or;
- Any holder of a college degree who has adequate experience of seven years or more, or;
- Any holder of a professional qualification from an accredited accounting body, such as AICPA (Al-Matarneh, 2009).

The World Bank report showed that the quality of some audits in Jordan was materially affected by management attitudes in client companies, and severe competition between audit firms. And it is observed that the quality of many audits is affected by management misconception about the value-added created by audit. Management attitude contributes to the low audit fees. Thus the degree of compliance with the applicable auditing standards varies between large and small firms (Obadiah, 2007).

4. Factors Affecting the Audit Service Price

Based on previous studies and through preliminary interviews with auditors the factors that affecting the pricing of audit services can be classified as follows:

Factors related to the client's corporate. The factors affecting the pricing of audit services with respect to the client company include: the number of branches and departments of the entity, net flow of operating activities, the market value of shares, fiscal year ended of the client (in the peak or late), the value of assets, net profit, the nature of the entity and its revenue and sales, percentage of debtors to assets, the strength of the internal control system, net working capital, rate of return on assets, the sector which the company belongs to, net operating cash flows, the nature of ownership (private-joint), percentage of inventory to assets.

Factors related to the auditor's office. the factors affecting the pricing of audit services with respect to the auditor's office include: the audit office subordinated to international office, reputation of audit office, number of assistants needed for the audit, auditor's assessment of risks, specialty audit office in a particular sector, advisory services provide by the audit office, skill necessary to carry out the audit, annual revenues of the audit office, audit office size, number of customers who audit their accounts, the length of the contract between the audit office and the entity, competition among audit offices, the period between the date of contracting and the date of audit report, conducting of ethics of accounting profession, conducting of mandatory legislation and accounting standards.

5. Research Methodology and Questions

5.1 Research Methodology

The research depended on the method of analytical statistics and analysis of content, and on secondary and primary data. Secondary data for the study were obtained through reference, research, and universities research papers. For the initial data, they were collected through a questionnaire, which is designed depending on the nature of the elements of the problem which is available in literature reviews. The statistical descriptive style analysis technique also the content analysis has been used to achieve the objectives of the study. The survey questionnaire contains two parts, first part included demographic characteristics, the second part covers the responders' commitment, each set questions formed a field paragraph, which covers the questions of the study. Five-Likert scale has been used as a measure of reflect the views of respondents regarding the paragraphs contained in the questionnaire, which was allocated weight (5) for the situation strongly agree, and (4) for agree, and (3) for the situation is neutral and (2) for disagree, and (1) for Strongly Disagree. the questionnaire has introduced to a group of professionals and professors for the purpose of arbitration, where they can modify it based on their observations and a previous test was conducted on it, and the amount of Cronbach's alpha were reached (78.45 %), which is indicated on the consistency and steadfastness (Sekaran, 2005). And arithmetic mean, standard deviation and percentages were used in the quarterly analysis of the responses to the questionnaire.

5.2 Research Questions

Research seeks to answer the following questions:

1. Do the factors associated with the client's corporate affect the pricing of audit services?

2. Do the factors associated with the audit office affect the pricing of audit services?

5.3 Sample of Auditors and Data Collection

The study population consists of the licensed Jordanian external auditors by the end of the year (2010), of the sum of (486) auditor, according to Jordanians Chartered Accountants Association, random sample were selected, representing (50 %) of the study population, (242) questionnaire were distributed, (235) of them recovered and valid for analysis, and thus the percentage of the collected questionnaires to the population were (48.4 %).

6. Results of the Study

The demographical characteristics are described for the respondents and analyze their opinions and responses on the survey questionnaire, and the arithmetic means and standard deviations were extracted from their responses for each field of the questionnaire Table 1 shows that 180 respondents or 76.6 percent hold a bachelor degree, 25 respondents or 10.7 percent hold Higher Diploma, and 30 respondents or 12.7 percent have a master certificate, As for the area of study, the overwhelming majority of the respondents 78.7 percent have an academic degree in accounting, and 10.7 percent have finance, also10.7 percent have business administrative certificate. The job level for respondents reveal that 20.4 percent partner, 55.3 percent are senior auditors, and 24.3 percent auditors. It can also be seen from the table that the majority of responders 63 percent have had experience for more than ten years. Overall, the table information indicates that they are qualified to answer the questionnaire and can be trusted in their abilities and information.

Table 2 points out the arithmetic mean of the paragraphs that reflect the effect of factors associated with the client's corporate on the pricing of audit services provided by the auditor. The highest arithmetic mean were for the number of branches and departments of the entity reached to (4.1660), and the standard deviations were (.71171), followed by net flow of operating activities as the arithmetic mean reached to (4.1021), and the standard deviations were (.77776). The lowest mean were for the factor of percentage of inventory to assets, the arithmetic mean reached to (2.7277), and the standard deviations were (1.18497) that is mean this factor does not affect the pricing of audit services. The arithmetic means of the respondent's answers of this field are reached to (3.6241), and the standard deviations were (.24211) which means that the respondents believe that factors related to the client's corporate effect the pricing of audit services.

Table 3 points out the arithmetic mean of the paragraphs that reflect the effect of factors associated with the audit office on the pricing of audit services provided by the auditor. The highest arithmetic mean were for the subordinating of audit office to international office reached to (3.9532), and the standard deviations were (.74675), followed by reputation of audit office as the arithmetic mean reached to (3.9277), and the standard deviations were (1.01225). The table shows that annual revenues of the audit office, the reliance of the auditor on the internal auditor , and the number of customers who audit their accounts does not affect the pricing of audit services, the lowest mean were for this factor reached to (2.1617), and the standard deviations were (.76196). The arithmetic means of the respondent's answers of this field are reached to (3.3098), and the standard deviations were (.34426) which means that the respondents believe that factors related to the audit office effect the pricing of audit services.

7. Summary and Conclusion

The main objectives of this study were to identify the most important factors affecting the pricing of audit services, provides evidence whether the factors related to the client's corporate, and factors related to the audit office determine the pricing of audit service.

To accomplish these objectives, a questionnaire was designed and distributed to a sample of Jordanian auditors. The outcome of the study offers an important insight into the determinants of audit fees from developing country like Jordan. Audit fees are determined by the number of branches and departments of the entity, nature of the entity and its revenue and sales, fiscal year ended of the client, strength of the internal control system, the sector which the company belongs to, and the nature of ownership (private-joint), the study results are consistent with the study of Kutob & Al-khater (2004), the ratios determine the audit service fees, net flow of operating activities, market value of shares, net profit, net working capital, rate of return on assets, and percentage of debtors to assets, this is consistent with the study of Naser & Nuseibeh(2007), Ji & Hong (2007), Al-Harshani (2008). As evidenced by the respondents answers the audit office subordination to international office, reputation of audit office, is the most important factors affecting the audit service pricing, this is consistent with the study of Gonthier & Schatt (2007), Ji & Hong (2007), Larcker & Richardson (2004).

The study also showed that the number of assistants needed for the audit, the length of the contract between the audit office and the entity, auditor's assessment of risks, specialty audit office in a particular sector, competition among audit office as factors affecting the audit service pricing, this is consistent with the study of Maher *et al* (1992), as the period between the date of contracting and the date of audit report, advisory services provide by the audit office, this is consistent with the study of Naser & Nuseibeh (2007).

The results, however do not provide significant evidence of the expected relation between external audit fees and the conducting of ethics of accounting profession, annual revenues of the audit office, conducting of mandatory legislation and accounting standards, audit office size, as factors determine the audit service pricing, this is consistent with the study of Goddard & Masters (2000).

This study, nonetheless, contributes insights into the international audit fee literature by empirically investigating the pricing of audit fees in Jordan. It is hoped that this study's findings will be useful in setting the stage for future research on the pricing of audit services in Jordan. Audit researchers can benefit from the findings of this study in the development of future research about the audit market in Jordan. In particular, future research can make use of this study's results in the development of audit fees models that are specific to the Jordanian audit market.

8. Limitation of the Study

Similar to other studies, this study has its limitations. The most important is that the most of the certified auditors in Jordan are those who work in small firms. The population should have aimed at auditors with ample experience, not auditors with low experience. While many experienced Jordanian auditors work for large or international firms, and do not have Jordanian certification (but aim at international certifications).

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Table 1. Demographic Distribution of the Respondents

Variable	Variable Categories	Frequency	%
Qualifications	Bachelor's Degree	180	76.6
	Higher Diploma	25	10.7
	Master's Degree	30	12.7
Specialization	Accounting	185	78.7
	Finance	25	10.7
	Business Administrative	25	10.7
Job Level	Partner	48	20.4
	Senior Auditor	130	55.3
	Auditor	57	24.3
Experience	less than 5 years	24	10.2
	From 5-10years	63	26.8
	From 10-15years	96	40.8
	More than 15 years	52	22.2

Table 2. Factors Related to the Client's Corporate

Paragraph	Mean	S D	Significance Degree
The number of branches and departments of the entity	4.1660	.71171	1
Net flow of operating activities	4.1021	.77776	2
The market value of shares	4.0979	.83908	3
The value of assets	4.0936	.89619	4
Net profit	3.8511	.80007	5
The nature of the entity and its revenue and sales	3.6043	1.19149	6
Fiscal year ended of the client (in the peak or late).	3.5830	.81945	7
Percentage of debtors to assets	3.5702	.98187	8
The strength of the internal control system	3.5617	.67891	9
Net working capital	3.5574	.85228	10
Rate of return on assets	3.5149	.82870	11
The sector which the company belongs to	3.4596	1.04261	12
Net operating cash flows	3.3447	.65071	13
The nature of ownership (private – joint)	3.1277	.88716	14
Percentage of inventory to assets	2.7277	1.18497	15
Total Field	**3.6241**	**.24211**	

Table 3. Factors Related to the Audit Office

Paragraph	Mean	S D	Significance Degree
The audit office subordinated to international office	3.9532	.74675	1
Reputation of audit office	3.9277	1.01225	2
Number of assistants needed for the audit	3.9191	.82551	3
The length of the contract between the audit office and the entity	3.8340	.87834	4
Auditor's assessment of risks	3.7957	.91567	5
Specialty audit office in a particular sector	3.7447	.90743	6
Competition among audit offices	3.6000	1.08683	7
The period between the date of contracting and the date of audit report	3.5106	.92155	8
Advisory services provide by the audit office	3.4128	1.13032	9
Skill necessary to carry out the audit	3.3447	.96317	10
Conducting of ethics of accounting profession	2.7149	.78962	11
Annual revenues of the audit office	2.6383	1.16622	12
Conducting of mandatory legislation and accounting standards	2.5830	1.01512	13
Audit office size	2.5064	.89333	14
Number of customers who audit their accounts	2.1617	.76196	15
Total Field	**3.3098**	**.34426**	

Auditing Human Resources as a Method to Evaluate the Efficiency of Human Resources Functions and to Control Quality Check on HR Activities

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Received: December 26, 2011 Accepted: January 18, 2012 Published: March 1, 2012

doi:10.5539/ibr.v5n3p122 URL: http://dx.doi.org/10.5539/ibr.v5n3p122

Abstract

Human Resources Audit, measures of human resource outputs and effectiveness under the given circumstances and the degree of utilization of human resource outputs. It gives feedback about the HR functions to operating managers and HR specialists. It also provides feedback about how well managers are meeting their HR duties. In short, the audit is an overall quality control check on HR activities in a division or company and an evaluation of how these activities support the organization's strategy. Evaluation of an HR function is useful to justify the existence of the department and the expenses incurred on it. If the department fails to contribute to the company's bottom line, it has no reason to function. The current study aims to evaluate the efficiency of human resources functions and to control quality check on HR Activities through human resource auditing. The scope of the study will cover areas such as; human resource functions, managerial compliance, and human resource climate. The study concluded that audit can be used as a measure to evaluate the personnel activities, climate, and compliance of an organization's policies.

Keywords: Human resource audit, Human recourses, Human resource functions

1. Introduction

The term human resource auditing borrows its title and rationale from accountancy, it also makes use of the system and methods of the social and scientific information. Human Resources Audit can be defined as "a systematic assessment of the strengths, limitations, and developmental needs of its existing human resources in the context of organizational performance" (Flamholtz, 1987). Human Resources Audit, "measures of human resource outputs and effectiveness under the given circumstances and the degree of utilization of human resource outputs and effectiveness under the given circumstances and the degree of utilization of the human resources in the best possible manner conducive to the organization" (AbdulAziz Arain, 2001). The audit of human assets is analytical rather than prescriptive. It aims, "to encourage professional managers and executives to develop their own ways of measuring performance against targets and objections developed from the experience and needs of their own particular unit, department and section. Executives be encouraged to revise, adapt and apply the various diagnostic methods which are best suited to their own circumstances" (Willion B. Werther & Keith Davis, 1996).

A cost based financial manpower decision can provide a form of scenario analysis whereby various different inputs and outputs can be compared with assistance of the computer spreadsheets this analysis will organize the numerical and cost dimensions of human resources decisions in such a way which can emphasizes contingencies and probability, rather than prescription and certainty. This analysis will compel the executives to clarifying their own understanding on the way in which human capital are used and their value to the organization assessed (Boudreau & Ramstad, 1997). Human resource audit "is one of the methods of gathering factual information of management controls and activities based on an unbiased assessment of objective evidences rather than subjective opinion" (Willion B. Werther & Keith Davis, 1996).

Due to expansions and competition in the business trading, and manufacturing cost, the management in particular intend to reduce the cost of production without deteriorating quality, which is possible by eliminating waste, avoiding breakdowns, bottlenecks and by utilizing fully the human resources, along with other factors of production, for which human resource audit can be useful tool and assistance for better and improved management controls. It is an independent appraisal study of various management levels to ensure the fulfillment of the organizational objectives, policies, and procedures. Human resource audit in its scope is beyond the conventional audit. The human resource audit is more clearly defined as "a method to evaluate the efficiency of human resource at all levels throughout the organization, in order to ascertain whether sound management prevails throughout, and to recommend its effectiveness where such is not the case" (Willion B. Werther & Keith Davis, 1996).

1.1. Research Problem

The research problem will try to find out whether the human resources of a certain entity is effective, and whether they are functioning properly and meeting their HR duties in order to achieve the organization's goals.

1.2 Research Objectives

Auditing human resource is a tool to measure the effectiveness of human resources and to provide evidence of proper management functions.

1.3 Research Hypothesis

- Null Hypothesis H0: Human resource audit **can't** be performed through the measurement of the effectiveness of the HR functions of an organization.
- Null Hypothesis H0: Human resources **are not** complied with the managerial policies, procedures and legal provisions.
- Null Hypothesis H0: The Human Resource Management's climate **does not** have an impact on employee motivation, morale and job satisfaction.

1.4 Research Scope

A HR audit must cover the activities of the department and extend beyond, because the people's problems are not confirmed to the HR department alone. Thus, the audit should be broad in its scope. It must evaluate the personnel function, the use of its procedures by the mangers and the impact of these activities on the employees.

Specifically, a HR audit covers the following areas:

- Audit of human resource function
- Audit of managerial compliance
- Audit of the human resource climate

1.5 Research Methodology

Primary data will be collected through a questionnaire, which aims to cover the research hypothesis, and forming questions which can measure the effectiveness of human resources functions. Collected data will be analyzed using the descriptive statistics (Mean and Standard deviation). Research findings and conclusions will be finally stated. Secondary data will be collected from the published books, journals, and articles in the field of research topic.

1.6 Purpose of Human Resource Audit

- To examine and pinpoint strength and weaknesses related to H.R. areas and skills and competencies to enable an organization to achieve its long-term and short-term goals.
- To increase the effectiveness of the design and implementation of human resource policies, planning and programs.
- To help human resource planners develop and update employment and program plans.

1.7 Research Community

Random samples of first class auditors have been chosen. The auditors are having the JCPA certificates, with experience not less than 10 years, and working in cogent auditing companies. The number of questionnaires distributed was 100 questionnaires. 90 of them were good for analysis.

2. Benefits of Human Resource Audit

Several benefit that results from an HR audit are (Willion B. Werther & Keith Davis, 1996):

- Identification of the contributions of HR department to the organization.
- Improvement of the professional image of the HR department.
- Encouragement of greater responsibility and professionalism among members of the HR department.
- Clarification of the HR department's duties and responsibilities.

- Stimulation of uniformity of HR policies and practices.
- Finding critical personnel problems.
- Ensuring timely compliance with legal requirements.
- Reduction of HR costs through more effective personnel procedures.
- Creation of increased acceptance of the necessary changes in the HR department, and
- A thorough review of the department's information system.

The HR manager himself or herself is interested in knowing his or her department's effectiveness. It is not that the department is infallible. Errors do happen. Policies and practices become outdated. By auditing itself, the department finds problems before they become serious. Done correctly, the evaluation process can build a strong rapport between the department and operating managers, and it can reveal outdated assumptions that can be changed to meet the department's objectives and future challenges (T.V. Rao & Udai Pareek, 1997). Systematic assessment instills discipline in the personnel staff and encourages them to move away from intuitive techniques to more rigorous assessment of the likely benefits to be achieved. Further, "a personnel function must establish credibility with the management by justifying its programs and clearly demonstrating how it contributed to the attainment of organizational goals" (Pareek, 1997).

Nature of Human Resource Audit: A Human Resource audit "is a tool for evaluating the personnel activities of an organization. The audit may include one division or an entire company" (K. Aswathappa, 2006). It gives feedback about the HR functions to operating managers and HR specialists. It also provides feedback about how well managers are meeting their HR duties. In short, the audit is an overall quality control check on HR activities in a division or company and an evaluation of how these activities support the organization's strategy. Figure 1 illustrates this relation.

3. Audit of Human Resource Function

This involves audit of all HR activities. For each activity, the auditors must (i) determine the objective of each activity, (ii) identify who is responsible for it performance, (iii) review the performance, (iv) develop an action plan to correct deviation, if any between results and goals, and (v) follow up the action plan.

A questionnaire has been developed to measure the effectiveness of the HR function of an organization.

Evaluation of HR function "is useful to justify the existence of the department and the expenses incurred on it" (Pareek, 1997). If the department fails to contribute to the company's bottom line, it has no reason to function. Similarly, if the expenses incurred on the HR department far exceed its benefits to the organization, they must be pruned drastically to make the department economically viable.

4. Audit of Managerial Compliance

This involves audit of managerial compliance of personnel policies, procedures and legal provisions. How well are these complied with, should be uncovered by the audit so that corrective action can be taken. Compliance with the legal provisions is particularly important as any violation makes the management guilty of an offence.

5. Audit of the Human Resource Climate

The HRM climate has an impact on employee motivation, morale and job satisfaction. The quality of this climate can be measured by examining employee turnover, absenteeism, safety records and attitude surveys.

5.1 Employee Turnover

Employee turnover refers to the process of employees leaving an organization and requiring to be replaced. High turnover involves increased costs on recruitment, selection and training. In addition, high labor turnover may lead to disruption of production, problems in quality control, and difficulty in building teamwork and morale.

Certain percentage of labor turnover is unavoidable. Resignation, retirement, death and transfers do take place-causing displacement in work force. Similarly, business expansion necessitates hiring of people.

What should cause concern to the HRM is the avoidable turnover. Avoidable turnover gives an excellent measure of the HR climate as it direct attention to that, will help minimize employee turnover shall be better hiring practices, orientation training, working conditions, remuneration and benefits, and opportunities for advancement. What is significant is that a low turnover rate is worse than a high turnover if the top performers are not retained. Therefore, quality of turnover is more important than the quantity of people leaving and people joining an organization.

5.2 Absenteeism

Absenteeism refers to the failure on the part of employee to report to work though they are scheduled to work. In other words, unauthorized absences constitute absenteeism. Absenteeism is computed and is expressed in terms of percentages. In a research study (muhsen A. makhamreh, 1985) found out the size he firm, the number of disputes which occurred in the firm and the workers annual, wage increase significantly affect absenteeism rates. It was also found that the size of the firm, the, number of disputes which occurred, the workers annual wage increase and the employees average years of employment in the firm are related to the turnover rate, explaining 74 percent of the variance in the rate. Moreover, absenteeism is found as a precursor to turnover in Jordanian business. Absenteeism costs money to the organization, besides reflecting employee dissatisfaction with the company.

Like employee turnover, there is avoidable and unavoidable absenteeism. Absenteeism in unavoidable when the employee himself or herself falls sick, his or her dependants at home suddenly become unwell or there is an accident inside the plant. Unavoidable absenteeism is accepted by managers and is even sanctioned by labor laws. Avoidable absenteeism arises because of nigh shifts, opportunities for moonlighting and earning extra income, indebtedness, lack of job security, job dissatisfaction and unfriendly supervision. This absenteeism needs intervention by the management. Managers must create a work environment, which will make the employees realize that it makes sense to work in the factory rather than staying at home and waste their time.

5.3 Accidents

Organizations maintain records relating to accidents. Accidents do cost money to the organization. They also reflect the prevailing organizational climate. The management must have a safety plan, implement it and evaluate its effectiveness.

5.4 Attitude Surveys

Attitude surveys are probably the most powerful indicators of organizational climate. Attitudes determine an employee’s feeling to wards the organization, supervisor, peers and activities.

Attitude surveys may be conducted through face-to-face interviews but are usually done through anonymous questionnaires. The resulting information from the survey provides an invaluable insight into what employees are feeling and thinking. It can also be used to specifically address business problems associated with productivity, turnover, absenteeism, tardiness, work-group effectiveness, and industrial relations.

6. Audit of Corporate Strategy

Besides functions, compliance and satisfaction audit may extend to corporate strategy also. HR professionals set corporate strategy to help the organization and gain competitive advantage. By assessing the company’s internal strengths and weaknesses and its external threats and opportunities, the senior management devises ways of gaining an advantage. Whether the company stresses superior marketing channels, service, innovation, low-cost production, or some other approach, HRM is affected. Understanding the strategy has strong implications for HR planning, staffing, remuneration, industrial relations, and other HR activities (William B. Werther & Keith Davis, 1996).

7. Audit and Personnel Research

HR auditors depend on personnel or HR research for data. Research is understood as the systematic and goal-oriented investigation of the facts to establish a relationship between two or more phenomena. Its purposes are varied. Specifically, research can lead to an increased understanding of and improvement in HR practices. The major topics covered in HR research are:

- Wage surveys
- Effectiveness of various recruitment sources
- Effectiveness of training efforts
- Survey of supervisor's effectiveness
- Recent industrial settlements
- Job analysis
- Job satisfaction survey
- Survey of employee needs
- Attitude survey towards reward system, and
- Area of high accident frequency

The above topics and other related areas constitute the basis for HR audit.

8. Approaches to Human Resource Audit

Auditors may adopt any of the five approaches for the purpose of evaluation. (i) Cooperative approach, (ii) outside authority approach, (iii) Statistical approach, (iv) Compliance approach and (v) Management by objectives (MBO) approach. It may be stated that irrespective of the approach, the data for assessment are provided by HR research.

In the comparative approach the auditors identify another company as the model. The results of their organization are compared with those of the model company. Often, the auditors use standards set by an outside consultant as benchmark for comparison of own results. This approach is called the outside authority approach. The third approach is the statistical approach. Here, statistical measures of performance are developed based on the company, existing information. Examples of such measures are absenteeism and turnover rates. These data help auditors to assess the performance. In the compliance approach, auditors review past actions to determine if those activities comply with legal requirements and company policies and procedures. A final approach is for specialists and operating managers to set objectives in their areas of responsibility. The MBO approach creates specific goals against which performance can be measured. Then the audit team researches actual performance and compares it with the objectives.

The audit program comes to an end with the preparation of the audit report. The report may be clean or qualified. The report is qualified when the HR performance contains gaps. Where gaps are observed, remedial measures are suggested. The report is clean where the performance is fairly satisfactory.

9. Findings and Hypothesis Testing

9.1 The Reliability Test

Cronpanch Alpha was used to test the reliability of the scale and it was (0.855) which is good because it's higher than the accepted percent (0.60). Table 5 illustrates this result.

9.2 Hypothesis Testing

Hypothesis (#1):

Ho: Human resource audit **can't** be performed through the measurement of the effectiveness of the HR functions of an organization.

Ha: Human resource audit **can** be performed through the measurement of the effectiveness of the HR functions of an organization.

One sample t-test was used to test our hypothesis. As Table 1 shows, we found that (calculated t=28.504), which is greater than tabulated t=1.987. According to our decision rule: Accept Ho if calculated value is less than tabulated value and reject Ho if calculated value is greater than tabulated value. So we will reject Ho and accept Ha. So that HR Audit can be performed through the measurement of the effectiveness of the HR functions of an organization.

Hypothesis (# 2):

HO: Human resources **are not** complied with the managerial policies, procedures and legal provisions.

Ha: Human resources **are** complied with the managerial policies, procedures and legal provisions.

One sample t-test was used to test hypothesis (#2). Table 2 shows that (calculated t=27.516), which is greater than tabulated t. According to our decision rule: Accept Ho if calculated value is less than tabulated value and reject Ho if calculated value is greater than tabulated value. So we will reject Ho and accept Ha. So that Human Resources are complied with the managerial policies, procedures and legal provisions.

Hypothesis (#3):

HO: The Human Resource Management's climate does not have an impact on employee motivation, morale and job satisfaction

Ha: The Human Resource Management's climate has an impact on employee motivation, morale and job satisfaction

One sample t-test was used to test hypothesis (#3). Table 3 shows that (calculated=21.643), which is greater than tabulated t. According to our decision rule: Accept Ho if calculated value is less than tabulated value and reject Ho if calculated value is greater than tabulated value. So we will reject Ho and accept Ha. So that The Human Resource Management's climate has an impact on employee motivation, morale and job satisfaction.

10. Summary & Conclusions

A Human Resource audit can be used as a measure to evaluate the personnel activities of an organization. It gives feedback about the HR functions to operating managers and HR specialists. It also provides feedback about how well managers are meeting their HR duties. In short, the audit is an overall quality control check on HR activities in a division or company and an evaluation of how these activities support the organization's strategy. HR Audit also gives feedback HR compliance with the legal provisions and company's policies. HR audit proved that HR climate has an impact on employee motivation, morale and job satisfaction.

So we can conclude that:

- HR Audit can be performed through the measurement of the effectiveness of the HR functions of an organization.
- Human Resources are complied with the managerial policies, procedures and legal provisions.
- The Human Resource Management's climate has an impact on employee motivation, morale and job satisfaction.

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Table 1. Test of Hypothesis (#1)

Calculated-t	t-tabulated	t-Sig	Result of Ho
28.504	1.987	.000	reject

Table 2. Test of Hypothesis (#2)

Calculated-t	t-tabulated	t-Sig	Result of Ho
27.516	1.987	.000	reject

Table 3. Test of Hypothesis (#3)

Calculated-t	t-tabulated	t-Sig	Result of Ho
21.643	1.987	.000	reject

Table 4. Case Processing Summary of Questionnaire

		N	%
Cases	Valid	90	100.0
	Excluded[a]	0	.0
	Total	90	100.0

[a] Listwise deletion based on all variables in the procedure.

Table 5. Reliability Statistics

Cronbach's Alpha	N of Items
.855	35

Table 6. Std. Deviation & Mean Test One-Sample Statistics (T-Test)

	N	Mean	Std. Deviation	Std. Error Mean
h1	90	4.0833	.36056	.03801
h2	90	4.2556	.43289	.04563
h3	90	4.1389	.49922	.05262

Table 7. Test Value One-Sample Test

	Test Value = 3					
					95 % Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
h1	28.504	89	.000	1.08333	1.0078	1.1589
h2	27.516	89	.000	1.25556	1.1649	1.3462
h3	21.643	89	.000	1.13889	1.0343	1.2434

ISSN 1913-9004 E-ISSN 1913-9012

Table 8. Descriptive Statistics of Questionnaire

Question	N	Minimum	Maximum	Mean	Std. Deviation
q1	90	2	5	4.53	.796
q2	90	2.00	5.00	4.2889	.69094
q3	90	2.00	5.00	4.0556	.90394
q4	90	2.00	5.00	3.8889	.91730
q5	90	2.00	5.00	4.3111	.72893
q6	90	2.00	5.00	4.1222	.83232
q7	90	2.00	5.00	4.0111	.67864
q8	90	3.00	5.00	4.2889	.60419
q9	90	3.00	5.00	4.3333	.70312
q10	90	2.00	5.00	3.8778	.74695
q11	90	3.00	5.00	4.1556	.61646
q12	90	1.00	5.00	3.7444	1.12740
q13	90	2.00	5.00	3.9222	.79645
q14	90	2.00	5.00	4.2778	.91219
q15	90	2.00	5.00	4.0000	.70312
q16	90	2.00	5.00	3.6889	.94387
q17	90	2.00	5.00	4.1444	.93088
q18	90	2.00	5.00	3.8778	.85890
q19	90	2.00	5.00	4.0111	.74191
q20a	90	2.00	5.00	4.1333	.82380
q20b	90	2.00	5.00	3.9556	.83345
q20c	90	2.00	5.00	3.9222	.85101
q20d	90	2.00	5.00	3.9111	.77379
q20e	90	2.00	5.00	4.0000	.63600
q21	90	3.00	5.00	4.6556	.54383
q22	90	2.00	5.00	4.1000	.68777
q23	90	3.00	5.00	4.0111	.46191
q24	90	1.00	5.00	3.9889	.74191
q25a	90	2.00	5.00	4.2111	.75691
q25b	90	3.00	5.00	3.8889	.64380
q25c	90	2.00	5.00	3.8444	.80603
q26	90	2.00	5.00	4.1444	.74292
q27	90	2.00	5.00	4.4778	.79645
q28	90	2.00	5.00	4.1444	.72764
q29	90	3.00	5.00	3.8667	.65686
Valid N (listwise)	90				

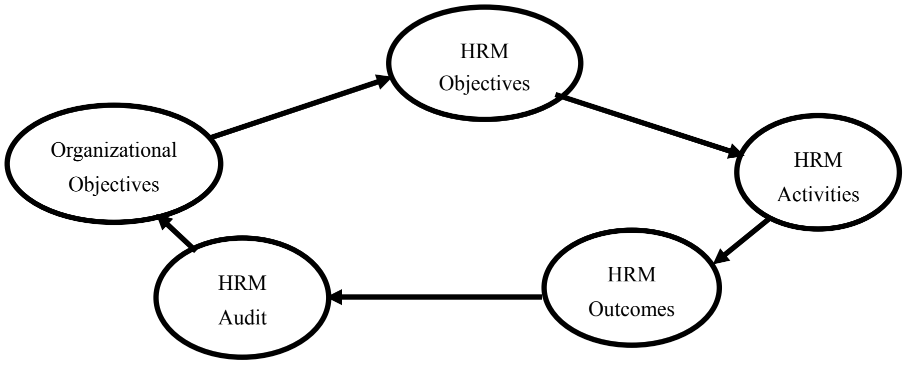

Figure 1.

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ISSN 1913-9004