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The Impact of Environmental Sensing Strategies on the Organizational Effectiveness: Evidence from Jordan

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Abstract

The purpose of study is to identifying the impact of environmental sensing strategies on the organizational effectiveness among Jordanian commercial banks. In order to achieve the study objective, a questionnaire was designed and distributed to 175-members study community from the managerial level (director, deputy director and head of department). The appropriate statistical methods were used to analyze the data.

The result of the study reveals that, the level of applying environmental sensing strategies in Jordanian commercial banks has reached a high level. The level of organizational effectiveness in Jordanian commercial banks, has also reached a high level. There is a statistically significant impact of environmental sensing strategies (flexibility strategy, containment strategy, and forecasting strategy) on the organizational effectiveness as a whole and on its dimensions, individually, (availability of information, stability).

The study reached a number of recommendations, the most important are: creating a system of incentives and rewards for the employees to motivate them to work and to demonstrate distinguished abilities to interpret and clarify the information in a way that serves the organization.

Keywords: environmental sensing strategies, organizational effectiveness, Jordanian commercial banks

1. Introduction

The banking sector faces serious strategic and competitive challenges due to the rapid changes in the global business environment towards the globalization of economies, the opening up of global markets, the network-free exchange of funds, knowledge and information, as well as the flexibility of the banking industry to accept new entrants and players in the industrial market, which obliged the banks to re-engineer their strategic choices and directions. Therefore, many of the leading global banks have committed to environmental sensing as a valuable and key tool for the success of reengineering of bank business processes, based on deep systemic perceptions of opportunities and the determinants of industry environment as well as businesses' resources and strategic capabilities.

Thus, the current study attempts to clarify the environmental sensing strategies of the Jordanian commercial banks, the impact of these strategies on achieving the organizational effectiveness and the speed of response to the variables and the reduction of environmental uncertainties.

2. Study Problem and Questions

Continuous change is an essential feature of the nature of commercial banking activities, which requires a rapid response through adaptation to this change, sensing and monitoring information as well as identifying opportunities and threats resulting from changes in the environment through developing and implementing the strategies due to their role in addressing complexities and changes and achieving long-term success.

According to the above discussion, the problem of the study is to identify whether there is "an impact of the strategies of environmental sensing on the organizational effectiveness: an applied study on Jordanian commercial banks".

Therefore, this study was developed to answer the following questions:

1. *What is the impact of environmental sensing strategies on the organizational effectiveness in Jordanian commercial banks from the point of view of the respondents?*

2. *What is the level of practicing environmental sensing strategies in Jordanian commercial banks from the point of view of respondents?*

3. The Importance of the Study

This study derives its importance from the following points:

1. There are very few studies have dealt with this issue in the Arab environment, particularly in Jordanian context. For this reason it is important to examine this relationship in order to introduce new evidence and fill this gap in the administrative literature in the field of environmental sensing strategies, 2. The study will open the way for researchers and interested parties to conduct research and future studies that will help organizations in the public and private sectors to strengthen the strategies of environmental sensing and their impact on the organizational effectiveness in the light of the findings and recommendations of the study.

4. Study Objectives

The current study seeks to identify the impact of environmental sensing strategies on the organizational effectiveness in Jordanian commercial banks. Out of this main objective, sub-goals emerge:

1. This study intended to determine the level of applying the concept of environmental sensing strategies in Jordanian commercial banks from the point of view of the respondents.

2. This study intended to determine the level of the concept of the organizational effectiveness in Jordanian commercial banks from the point of view of the respondents.

5. Study Hypotheses

The study seeks to test the validity of the following hypotheses:

5.1 The Main Hypothesis

There is no significant relationship between the effectiveness of projects management environmental sensing strategies (flexibility strategy, containment strategy, forecasting strategy) and the dimensions of organizational effectiveness (availability of information, stability) in Jordanian commercial banks. The following sub-hypotheses emerge from this hypothesis

5.1.1 The First Sub-Hypothesis

There is no significant relationship between the environmental sensing strategies (flexibility strategy, containment strategy, forecasting strategy) and availability of information as a dimension of the organizational effectiveness in Jordanian commercial banks.

5.1.2 The Second Sub-Hypothesis

There is no significant relationship between the environmental sensing strategies (flexibility strategy, containment strategy, forecasting strategy) and Stability as a dimension of the organizational effectiveness in Jordanian commercial banks.

6. Literature Review

6.1 Concept Environmental Sensing

The environmental sensing activity, or so-called (environmental monitoring and survey), is the process of searching for information in the environment and looking for opportunities and threats that may arise as a result of major changes in the general environment. The main function of Sensing is to collect important information, interpret them regularly and input the results of analysis in the process of strategic decision-making of the organization (Hareem, 2003).

The Sensing is also defined as: "Monitoring, evaluation and dissemination of information from the external and internal environment to key persons within the organization (Babatunde & Adebisi, 2008).

Therefore, the environmental Sensing is interested in monitoring the environmental events outside and within the boundaries the organization, it analysis's the impact of the activities and operations in order to enable the organization to be succeed.

The main purpose of the analysis of the environment is (Yassen, 2010):

1. Identifying important forces in the environment that reflect opportunities and threats to the organization.
2. Planning and forecasting the changes that may occur to those forces in the future.
3. Classification of results of future forecasts to contribute in the decision-making process.

Analysis of the external environment means the process of exploring factors and variables in order to identify the opportunities and threats in the external environment of the organization and to identify the sources and components of these opportunities and threats by fragmenting them into elements or sub-sections as well as understanding the mutual relations between them, on one hand, and between them and the business organization on the other hand. This will help them to establish an early warning system and prepare the necessary preparations before the potential threat appears at the right time, and to design efficient strategies capable of countering that threat and minimizing its negative impact, or turning it positively towards achieving the goals.

In addition, the main focus of the analyzing environment process is to examining opportunities that have to be achievement, and threats that should be avoided or dealt with if they do occur through the preparation of studies and research for all areas of the external environment (Gupta, 2013).

6.2 Organizational Effectiveness

The organizational effectiveness is defined as the ability of the organization to achieve the long and short term goals, which reflects the balance of power of influential parties and the interests of the parties concerned with the evaluation, as well as and the stage of growth and development experienced by the organization (Al-Qarouti, 2009). This ability and standards used to measure it depend on the model used to measure it.

Organizational effectiveness is defined as the ability of the organization to optimize the use of resources and to create a state of balance between internal factors and external influences, with full ability of adaptation to ensure achieving the objectives (Mohammedi, 2010).

The organizational effectiveness focuses on the objectives. The organizational effectiveness means that it can achieve its objectives (i.e. focusing on the goals as an indicator of determining the organizational effectiveness based on the available external environment resources and determining the nature of the objectives in terms of formal and non-formal, which is the degree of congruence between objectives within available resources) as well as remaining in the market despite competition (Nawar, 2006).

In general, effectiveness is the degree that the goals are achieved where the Organizational effectiveness means the degree of the organization objectives is achieved, in respect to the internal and external environmental determinants.

6.2.1 Factors Affecting the Organizational Effectiveness

The researchers and those interested in determining the meaning of the effectiveness differed in determining the factors affecting the organizational effectiveness and the degree of its impact

There is a group of factors that affect the organizational effectiveness, namely, (Al-Sirafi, 2006):

1. The Economic system: refers to the components that are directly related to the production of outputs, such as: division of labor, specialization in the division of labor, and the continuous basis of decision-making
2. The Political system: refers to the components or procedures within the organization that make decisions and try to obtain the influence and support for their decisions from the surrounding environment such as social acceptance of decisions and the legal and logical basis for decision-making.
3. The regulatory system: is the part of the organization that pushes its employees to comply with its objectives such as: the strict punishment system and communication.
4. The Environmental system: A set of determinants relating to population and environment that affect the organizational effectiveness in varying degrees and in different forms.

While Al-Shamma and Hamoud, (2007) see that the factors influencing the organizational effectiveness are:

1. Technical and technological factors, representing buildings, equipment, working conditions, organizational behavior and other factors of a general nature.
2. Factors related to human resources and include the morale of individuals and their attitudes and motives as well as the conflict and the working environment and its relations.
3. Factors related to the outputs of the organization and include feedback from beneficiaries or from the external environment such as the degree of its compatibility with their actual needs and its ability to provide saturation at the right time and place.

6.2.2 The Environment of the Organization and Its Relationship with Organizational Effectiveness

The environment is defined as: the set of circumstances under which the organization operates, and is divided into an internal and external environment".

The internal environment: is the level of civilization, culture and values, which reflects the management method in determining the activity of the workers and their behavior. The managers cultivate this culture in their employees, and the organization derives its culture from the social environment in which it lives, and the civilization standards determine the extent of organizational effectiveness and the level of success.

The external environment: It refers to all external forces that affect the organization, and it is divided into two types:

1. The general environment: Long-term and indirect impact, such as political, legal, economic and technological conditions as well as social and global change.
2. The Activity environment: It includes dealers, competitors, trade unions, suppliers, partners, etc. The organization cannot operate in isolation from the surrounding environment. Rather, organizational effectiveness requires that the organization be an open system that ensures the continuity of the flow of inputs from the environment, and then turn them to outputs that return to the environment again to reach a state of equilibrium.

6.3 Previous Studies

(Tourah, 2018) study entitled "The Effect of Building the Organizational Structure on the Organizational Effectiveness in the Jordanian Ministries", a field study. The study found many results that showed that the level of availability of the dimensions of the organizational structure in the Jordanian ministries under study, from the point of view of the respondents, was at medium average, Also, the level of achieving the goals dimension, from the point of view of the respondents, was high, The results of the descriptive analysis showed that the level of organizational effectiveness in the Jordanian ministries, from the researchers' point of view, was medium, The study reached several recommendations stressing the need to grant staff specific and written powers, as required by the Formality dimension in the organizational structure. It also demands determining the nature of the functions of each unit in the organizational structure, and defining the tasks and duties of each department in the ministry. Similarly, Alawawdeh, (2017) conducted a study, entitled "The Effect of the Strategic Environmental Survey on the Total Organizational Effectiveness of Jordanian Chemical Industrial Companies". The study covered three dimensions of the strategic environmental survey: internal environment, industry environment, external environment, as well as four dimensions of organizational effectiveness: financial performance, customer service, internal processes, learning and growth, The study showed that the external environment analysis variable was the most influential on the indicators of the organizational effectiveness followed by the industry environment variable and finally the internal environment variable. The study concluded with a number of recommendations for the companies surveyed and for future research in light of its results.

Furthermore, Al-Jazi, (2017) studied the Effect of Bureaucratic Features on Enhancing the Organizational Effectiveness: A Field Study on the Employees in Jordanian Ministries" The study reached a number of results, the most important that there is a statistically significant effect of the dimensions of bureaucratic features on the dimensions of organizational effectiveness in Jordanian ministries. The study reached a number of recommendations, most important is: drawing of plans by the Jordanian ministries to prepare managers for the need to rapidly respond to new changes and enhance the ability of the Jordanian ministries to cope with emergency situations and circumstances.

(Abu Awrah, 2016) study, entitled "Environmental Sensing Strategies and their Impact on Achieving Strategic Flexibility for Managers of the Jordanian Phosphate Mines Company, The study reached a number of results, most important are that the level of applying the strategies of environmental sensing in Jordan Phosphate Mines Company has reached a high degree of application, and the level of achieving the strategic flexibility with its dimensions came high. Also, there is a statistically significant effect at the level of ($\alpha \leq 0.05$) of the strategies of environmental sensing (strategy of closure, strategy of forecasting, strategy of gradation, strategy of rationalization) in achieving the strategic flexibility of Jordan Phosphate Mines Company, In the light of these results, the study recommends that the company be careful to develop more flexible plans capable of modifying the characteristics of the current products to suit customer requirements, undertake continuous changes and proactive strategies to cope with market changes.

By using a sample of Orange Jordan Mobile Telecommunications, Abu Sleem, (2014) examined the Impact of Environmental Sensing Strategies on Achieving Strategic Excellence. The study investigated the relationship between environmental sensing strategies (strategy of closure, strategy of gradation, forecasting strategy) and achieving Strategic Excellence in Orange Jordan Mobile Telecommunications Company, The study reached several results, the most prominent is that there is a positive effect of the strategies of environmental sensing (closure, gradation, forecasting) in achieving strategic excellence in its three dimensions: (Strategic sensitivity, exploratory innovation, optimal utilization of available opportunities) of Orange Jordan Mobile

Telecommunications Company.

7. Methodology

This study is based on using the analytical descriptive method to review the most important literature related to the strategies of environmental sensing and the organizational effectiveness to cover the practical aspect of this study, through which the study tried to test the validity of its hypotheses, answer its questions and extract its results by relying on a questionnaire developed for this study In accordance with recognized practical steps.

7.1 The Study Community

The study community is composed of Jordanian commercial banks that perform a licensed economic activity, which were 12 banks. The number of managers was 240 managers in middle and lower management (the personnel department of the banks surveyed in 2018), through the comprehensive survey method as shown in the table below.

Table 1. Distribution of members of the study community according to the bank

Number	Bank	Distributed questionnaires	Retrieved questionnaires	Questionnaires valid for analysis
1	Arab Bank	20	18	16
2	Jordan Ahli Bank	20	16	13
3	Bank of Jordan	20	13	11
4	Housing Bank for Trade and Finance	20	16	14
5	Jordan Kuwait Bank	20	18	16
6	Arab Jordan Investment Bank	20	15	14
7	Commercial Bank of Jordan	20	17	17
8	Invest Bank	20	18	16
9	Arab Banking Corporation	20	13	12
10	Bank al Etihad	20	19	17
11	Society General de banque / Jordan	20	14	14
12	Jordan Financial Bank	20	17	15
Total		240	194	175

All members of the study community were surveyed from the workers in the middle and lower managements, where (240) questionnaires were distributed. (194) questionnaires were retrieved and (19) others were excluded due to their inefficiency in statistical analysis. Thus, the number of valid questionnaires which went through statistical analysis were (175) questionnaires which is (75%) of the total number of questionnaires distributed, and it is considered acceptable rate for statistical analysis.

Table 2. Distribution of members of the study community according to personal and functional variables

Variable	Variable categories	Number	Percentage
Gender	Male	101	57%
	Female	74	43%
Age	30 and younger	81	46%
	31-40 years	56	32%
	41-50 years	19	11%
	51 and above	19	11%
Education	Diploma and less	11	6%
	Bachelor	89	51%
	M.A.	59	34%
Work Experience	PhD	16	9%
	5 years and less	55	31%
	6-10 years	59	34%
	11-15 years	47	27%
	16 years and more	14	8%

7.2 Validation

The questionnaire was presented to a number of university faculty members to ascertain the veracity of the questionnaires.

7.3 Stability of the Tool

was extracted the internal consistency coefficient of the study tool for each dimension of the study's dimensions through using the (Cronbach's Alpha) coefficient

Table 3. Values of Internal consistency coefficient of the Study tool paragraphs (Cronbach's Alpha) scale

Number	Dimension	Paragraphs number	Cronbach's Alpha value
1	Flexibility Strategy	5	0.719
2	Containment Strategy	5	0.825
3	Forecasting Strategy	5	0.736
4	Information Availability	5	0.801
5	Stability	5	0.790

7.4 Statistical Processing

Used the statistical package (SPSS.16) In order to answer the study questions and test the validity of its hypotheses, descriptive and analytical statistical methods were used as follows:

Descriptive Statistic Measure: The Variance Inflation Factory (VIF) and (Tolerance) Test were used. The (Skewness) test was used to ensure that the data follows the (Normal Distributions). The (Multiple regression analysis) was used. The (Stepwise Multiple Regression Analysis) was used.

8. Data Analysis & Findings

Table 4. Variance Inflation Factory test, Tolerance and Skewness

Dimensions of the independent Variable	VIF	Tolerance	Skewness
Flexibility Strategy	1.501	.520	0.372
Containment Strategy	1.217	.641	-1.702
Forecasting Strategy	1.420	.752	-1.673

We note that VIF values for all variables are less than 10 and range between (1.217-1.501) and Tolerance values ranged from (0.520 to 0.7520), which is greater than (0.05), and this an indicator that there wasn't high (multicollinearity) between the independent variables. It was ascertained that the data follow the normal distribution by calculating the (skewness) coefficient, where the values were close to the value of (0), which means less than (1), so, we can say that there is no real problem related to the normal distribution of the study data. In addition, the validity of the model for each individual hypothesis was ascertained. Table (5) shows the results.

Table 5. Results of (analysis of variance) to verify the validity of the model to test the hypotheses of the study

Dimensions of the Dependent variable	Source	Coefficient of determination R2	Total Squares	Average squares	F calculated value	Level of significance F
Information availability	Regression	0.495	60.504	20.300	67.613	**0.00
	Error		86.401	.227		
Stability	Regression	0.570	59.307	19.176	126.411	**0.00
	Error		48.716	.136		

**** Statistical significant at the level of significance ($\alpha \leq 0.01$)**

Table (5) shows the validity of the model of testing the study hypotheses in terms of the calculated value of (F) and its associated level of significance at the level of significance ($\alpha \leq 0.01$). The strategies of environmental sensing, explain (49.5%) of the variance in the dimension (Information availability). It also explains (57.0%) of the variance in the dimension (Stability).

All this confirms the impact of environmental sensing strategies on the interpretation of the dimensions of the organizational effectiveness. According to that, we can test the hypotheses of the study as follows:

8.1 The Main Hypothesis

There is no significant relationship between the effectiveness of projects management environmental sensing strategies (flexibility strategy, containment strategy, forecasting strategy) and the dimensions of organizational effectiveness (availability of information, stability) in Jordanian commercial banks.

Table 6. Results of (Analysis of Variance) to verify the validity of the model to test the first main hypothesis

Source	Coefficient R2	Total Squares	Freedom degrees	Average squares	F calculated value	Level of significance F
Regression	0.549	13.609	6	2.268	*17.336	0.000
Error		11.623	94			
Total		25.232	100	0.124		

**** Statistical significant at the level of significance ($\alpha \leq 0.05$)**

The statistical results in the previous table indicate the validity of the model to test the main hypothesis and that there is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) of the environmental sensing

strategies in its dimensions (flexibility strategy, containment strategy, forecasting strategy) on the organizational effectiveness in its dimensions (availability of information, stability), based on the F calculated value that reached (17.336) at a level of significance ($\alpha=0.000$).

The statistical results in the same table show that the dimensions of the concept of environmental sensing strategies as an independent variable explain (54.9%) of the variance in the dependent variable (Organizational Effectiveness), which is an explanatory power that reflects an acceptable degree of strength and stability of the study model. Therefore, we reject the study's main hypothesis as nihilistic, and accept the alternative hypothesis which states that there is an important statistically significant effect at the significance level of ($\alpha \leq 0.05$) of the environmental sensing strategies (flexibility strategy, containment strategy, and forecasting strategy) on the organizational effectiveness (Information availability, Stability).

Table 7. Results of multiple regression analysis to test the impact of environmental sensing strategies and its different dimensions on the organizational effectiveness

Dimensions of environmental sensing Strategies	B	Standard Error	Beta	t value	Significance level
Flexibility Strategy	0.190	0.080	0.230	*2.387	0.019
Containment Strategy	0.223	0.091	0.262	*2.462	0.016
Forecasting Strategy	0.131	0.079	0.173	1.662	0.100

** Statistical significant at the level of significance ($\alpha \leq 0.05$)

It is clear from the statistical results in the previous table and from the follow-up of (Beta) coefficients and (t) test that the dimensions of the independent variable (flexibility strategy and containment strategy), respectively, have a statistically significant effect on the dependent variable (organizational effectiveness) in terms of the (t) high calculated values in the previous table at the significance level of ($\alpha \leq 0.05$) and the statistically significant influential power of (Beta) values.

The results in the table above indicated that there is no statistically significant effect of the independent variable (Forecasting strategy) on the dependent variable (the organizational effectiveness) in terms of the decrease in the calculated (t) values shown in the previous table and the high level of significance over ($\alpha \leq 0.05$) and the statistically significant influential power of (Beta) values.

Table 8. Results of the Stepwise Multiple Regression analysis to predict the organizational effectiveness through the dimensions of the environmental sensing strategies

The order of entry of independent Variables in the Forecasting equation	R ² value	t calculated value	t significance level
Flexibility Strategy	0.422	*8.384	0.000
Containment Strategy	0.481	*3.345	0.001

** Statistical significant at the level of significance ($\alpha \leq 0.05$)

When applying the stepwise multiple regression analysis to determine the importance of each dimension of the independent coefficient individually in contributing to the mathematical model $y = a + bx$, which represents the effect of the dimensions of the concept of environmental sensing strategies on the organizational effectiveness, the previous table explains the order of entry of the dimensions of the independent coefficient in the regression equation. The Flexibility Strategy dimension ranked first and explained (42.2%) of the variance in the dependent variable (the organizational effectiveness) followed by the Containment strategy dimension, which explained with the Flexibility strategy Dimension, (48.1%) of the variance in the dependent variable (the organizational effectiveness). The Forecasting strategy came out of the Forecasting equation.

8.1.1 The Results of Testing the First Sub-Hypothesis

There is no significant relationship between the environmental sensing strategies (flexibility strategy, containment strategy, forecasting strategy) and availability of information as a dimension of the organizational effectiveness in Jordanian commercial banks.

Table 9. Results of Analysis of Variance to validate the validity of the model to test the first sub-hypothesis

Source	Coefficient R2	Total Squares	Freedom degree	Average squares	F calculated value	Level of significance F
Regression		15.721	6	2.620		
Error	0.523	14.647	94	0.156	*15.721	0.000
Total		30.368	100			

** Statistical significant at the level of significance ($\alpha \leq 0.05$)

The statistical results in the previous table indicate the validity of the model to test the first sub-hypothesis and

that there is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) of the environmental sensing strategies (flexibility strategy, containment strategy, forecasting strategy) on the availability of information as a dimension of the organizational effectiveness, based on the calculated value of (F) which reached (15.721) at the level of significance ($\alpha = 0.000$).

The statistical results in the same table show that the dimensions of the environmental sensing strategies as an independent variable explain (52.3%) of the variance in the dependent variable (availability of information), which is a medium explanatory power that reflects an acceptable degree of the stability and strength of the study model. So, we reject the study first sub-hypothesis as nihilistic, and accept the alternative hypothesis that states that there is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) of the environmental sensing strategies (flexibility strategy, containment strategy, forecasting strategy) on the availability of information as a dimension of the organizational effectiveness.

Table 10. The results of the multiple regression analysis to test the impact of environmental sensing strategies and their various dimensions on the availability of information as a dimension of the organizational effectiveness

Dimensions of environmental sensing Strategies	B	Standard Error	Beta	t value	Significance level
Flexibility Strategy	0.470	0.102	0.504	*3.917	0.000
Containment Strategy	0.247	0.074	0.295	*3.422	0.001
Forecasting Strategy	0.123	0.089	0.148	1.383	0.170

** Statistical significance at the level of significance ($\alpha \leq 0.05$)

It is clear from the statistical results in the previous table and from the follow-up of (Beta) coefficients and the (t) test, that the dimensions of the independent variable (flexibility strategy, containment strategy), respectively, have a statistically significant effect on the dependent variable (availability of information) in terms of the high calculated values of (t) as shown in the previous table at the level of significance ($\alpha \leq 0.05$) and the statistically significant influential power of the values of (Beta).

The results in the table above indicate that there is no statistically significant effect of the independent variable (forecasting strategy) on the dependent variable (availability of information) in terms of the low calculated values of (t) in the previous table at the level of significance ($\alpha \leq 0.05$) and the statistically significant influential power of the values of (Beta).

Table 11. The results of Step Wise Multiple Regression analysis to predict the availability of information through the dimensions of the environmental sensing

The order of entry of independent Variables in the Forecasting equation	R ² value	t calculated value	t significance level
Flexibility Strategy	0.438	*7.978	0.000
Containment Strategy	0.462	*4.104	0.002

** Statistical significance at the level of significance ($\alpha \leq 0.05$)

When performing the Stepwise Multiple Regression analysis to determine the importance of each dimension of the independent factor in contributing to the mathematical model that represents the effect of the dimensions of the environmental sensing strategies on the availability of information, the table above shows the order of entry of the dimensions of the independent factor into the regression equation.

The Flexibility strategy came first and explained (43.8%) of the variance in the dependent variable (availability of information), followed by the containment strategy, which explained with the Flexibility strategy (46.2%) of the variance in the dependent variable (availability of information). The (Forecasting strategy) came out of the forecasting equation.

8.1.2 Results of Testing the Second Sub-Hypothesis

There is no significant relationship between the environmental sensing strategies (flexibility strategy, containment strategy, forecasting strategy) and Stability as a dimension of the organizational effectiveness in Jordanian commercial banks.

Table 12. Results of Analysis of Variance to verify the validity of the model to test the second sub-hypothesis

hghf	Coefficient R2	Total Squares	Freedom degrees	Average squares	F calculated value	Level of significance F
Regression		13.898	6	2.316		
Error	0.442	16.465	94	0.175	*14.116	0.000
Total		30.364	100			

** Statistical significance at the level of significance ($\alpha \leq 0.05$)

The statistical results in the previous table indicate the validity of the model to test the second sub-hypothesis and that there is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) of the environmental sensing strategies (flexibility strategy, containment strategy, forecasting strategy) on Stability as a dimension of the organizational effectiveness, based on the calculated value of (F), which reached (14.116) at the level of significance ($\alpha = 0.000$).

The statistical results in the same table also show that the dimensions of the strategies of the environmental sensing as an independent variable explain the (44.2%) of the variance in the dependent variable (Stability), which is a medium explanatory power that reflects an acceptable degree of the strength and stability of the study model.

Accordingly, we reject the study's second sub-hypothesis as nihilistic, and accept the alternative hypothesis that: There is an important statistically significant effect at the level of significance ($\alpha \leq 0.000$) of the environmental sensing strategies (flexibility strategy, containment strategy, Forecasting strategy) on the Stability as a dimension of the organizational effectiveness.

Table 13. The results of multiple regression analysis to test the impact of environmental sensing strategies, and various dimensions, on stability as a dimension of the organizational effectiveness

Dimensions of environmental sensing Strategies	B	Standard Error	Beta	t value	Significance level
Flexibility Strategy	0.206	0.095	0.228	2.142	0.028
Containment Strategy	0.193	0.094	0.232	2.001	0.036
Forecasting Strategy	0.205	0.108	0.220	1.905	0.060

** Statistical significance at the level of significance ($\alpha \leq 0.05$)

It is clear from the statistical results presented in the previous table, and from the follow-up of (Beta) coefficients, and the (t) test that the dimensions of the independent variable (flexibility strategy and containment strategy) respectively have a statistically significant effect on the dependent variable (stability) in terms of the significance and high calculated values of (t), as shown in the previous table, at the significance level of ($\alpha \leq 0.05$) and the statically significant influential power of (Beta) values.

The results in the table above indicate that there is no statistically significant effect of the dimension of the independent variable (forecasting strategy) on the dependent variable (stability) in terms of the decrease in the calculated values of (t), as shown in the previous table, at the significance level of ($\alpha \leq 0.05$) and the statically significant influential power of (Beta) values.

Table 14. Results of Step Wise Multiple Regression analysis, to predict stability through the dimensions of environmental sensing strategies

The order of entry of independent Variables in the Forecasting equation	R ² value	t calculated value	t significance level
Flexibility Strategy	0.331	*7.171	0.000
Containment Strategy	0.376	*3.015	0.003

** Statistical significance at the level of significance ($\alpha \leq 0.05$)

In the analysis of the stepwise multiple regression, to determine the importance of each dimension of the independent factor in contributing to the mathematical model that represents the effect of the dimensions of the strategies of environmental sensing on stability, the table above shows the order of entry of the dimensions of the independent factor into the regression equation. The flexibility strategy ranked first and explained (33.1%) of the variance in the dependent variable (stability). Finally, the containment strategy dimension entered and explained with the flexibility strategy dimension (37.6%) of the variance in the dependent variable (stability). The forecasting strategy came out of the forecasting equation.

8.2 Conclusion

1. The results showed that there is an important statistically significant effect at the level of significance ($\alpha \leq 0.05$) of the environmental sensing strategies (flexibility strategy, containment strategy, forecasting strategy) combined on the organizational effectiveness. What explains this result is that the awareness of employees in the upper and middle managements of Jordanian commercial banks of environmental sensing strategies directs the organization to respond quickly to opportunities and threats in changing environmental conditions, create conditions that support innovation, generate ideas and innovations and establish control systems in advance, which help in achieving the organizational effectiveness.

Individually, the dimensions of the independent variable (flexibility strategy and containment strategy)

respectively had a statistically significant effect on the dependent variable (the organizational effectiveness), whereas there was no statistically significant effect of the dimension of the independent variable (forecasting strategy) on the dependent variable (organizational effectiveness).

2. The results indicated that there is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) of the environmental sensing strategies (flexibility strategy, containment strategy, forecasting strategy) on the availability of information as a dimension of the organizational effectiveness. This result explains that the awareness of employees in the upper and middle managements of Jordanian commercial banks of environmental sensing strategies contributes to the organization's ability to manage change in the organizational and administrative structure by dividing and defining administrative levels, scope of supervision, redesigning relationships and coordinating tasks to achieve stability and improve performance.

The results showed that the dimensions of the independent variable (flexibility strategy and containment strategy) individually and respectively had a statistically significant effect on the dependent variable (availability of information). The results also indicated that there was no statistically significant effect of the dimension of the independent variable (forecasting strategy) on the dependent variable (availability of information).

3. The results also indicated that there is a statistically significant effect at the level of significance ($\alpha \leq 0.05$) of the environmental sensing strategies (flexibility strategy, containment strategy, forecasting strategy) on stability as a dimension of the organizational effectiveness. This means that Jordanian commercial banks are capable of providing all the elements that guarantee the satisfaction of their employees. This is due to a number of factors including the banks' ability to adapt and innovate in solving problems, respond to changes in the demands and needs of the market and to have mutual trust and respect between employees and bosses. These factors had an impact in increasing the level of job satisfaction for employees in Jordanian commercial banks.

The results also showed that the dimensions of the independent variable individually (flexibility strategy and containment strategy), respectively, had a statistically significant effect on the dependent variable (stability). The results also indicated that there was no statistically significant effect of the dimension of the independent variable (forecasting strategy) on the dependent variable (stability).

9. Conclusions

This study aims to examine the effect of environmental sensing strategies on the organizational effectiveness among Jordanian commercial banks. Results of the study show that, the level of applying environmental sensing strategies in Jordanian commercial banks has reached a high level. The level of organizational effectiveness in Jordanian commercial banks, has also reached a high level. There is a statistically significant impact of environmental sensing strategies (flexibility strategy, containment strategy, and forecasting strategy) on the organizational effectiveness as a whole and on its dimensions, individually, (availability of information, stability). The study has several limitations, such as the sample of the study focus on the Banking sector, while, future studies could be focus on non-financial sectors. Also, the current study examined this relationship among Jordanian companies. Future research might be consider another sample. Based on the previous findings, the current study presents the following recommendations:

1. The Jordanian commercial banks shall make the best use of their human resources capabilities by training and qualifying their managers in how to practice environmental sensing strategies in the external environment to achieve organizational effectiveness.
2. The Authority should ensure that the necessary information about the surrounding environment is collected prior to any structural change it intends to undertake.
3. Create a system of incentives and rewards for employees to motivate them to work and to demonstrate the distinguished abilities to interpret and clarify information in a way that serves the organization.
4. The need to focus on the skills of leaders in Jordanian commercial banks by focusing on the outstanding capabilities in clarifying the new knowledge in a way that enhances the potential to use this knowledge in boosting the competitive position and competitive advantage.
5. Provide scientific references in the field of environmental sensing strategies for researchers and scholars to facilitate the preparation of research and studies.

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Effective Strategies to Overcome Challenges in ERP Projects: Perspectives from a Canadian Exploratory Study

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Abstract

This qualitative exploratory case study explores strategies and mitigating actions for successful Enterprise Resource Planning (ERP) implementations. The research was conducted in a Canadian case organization in the oil and gas industry, using a semi-structured interview guide with a total of twenty interviews that includes members from four project role groups of senior leaders, project managers, project team members, and business users. For triangulation purposes, the study used interview responses and also ERP project documentation collected for the purpose. The research highlighted several strategies and mitigating actions that can be put in use by organizations. The key themes that emerged as effective strategies include having the right people for support and guidance from experts, change management, clear communications, hands-on training, lots of testing, and risk management. The study also provided evidence that adopting strategies can help overcome critical challenges during ERP implementations.

Keywords: Enterprise Resource Planning (ERP), implementation, exploratory study, strategies, mitigating actions, critical challenges, Canada, oil and gas industry

1. Introduction

It is commonly acknowledged that information technology is capable of fundamentally changing the way business works; many organizations in particular have used the advanced information technology solution of Enterprise Resource and Planning (ERP) systems to improve their competitiveness (Davenport, 1998; Erkan & Rouyendegh, 2011). Despite lengthy time frames and high costs, ERP projects most often do not perform according to business expectations (Davenport, 1998; Ehie & Madsen, 2005; Momoh, Roy, & Shehab, 2010; Stanciu & Tinca, 2013). There is also a lack of understanding on addressing critical challenges during implementation, which can lead to large cost overruns, cancellations, and project failures (Momoh et al., 2010; Stanciu & Tinca, 2013). This qualitative, exploratory single-case study in the Canadian energy industry, is an examination of the strategies and mitigating actions that organizations can adopt during ERP implementation.

2. Foundational Studies

This study reviewed some of the foundational studies by Davenport (1998); Somers & Nelson (2001); Finney & Corbett (2007); Mishra & Mishra (2011); and Stanciu & Tinca (2013). Davenport's seminal article, though not first in the field of ERP study had a great impact, which highlighted some of the initial failure stories in ERP. Davenport (1998) emphasized that ERP systems can produce rewards, but there are risks involved, and that the managers should avoid being blinded by the hazards. Davenport (1998) argued that in petrochemical industry, which related to the current study, installation of ERP systems improved information flow through the supply chain, making it an industry standard. The empirical study from Somers and Nelson (2001) highlighted critical issues affecting the ERP implementation process and the need to effectively address them. Somers and Nelson (2001), identified some of the critical success factors (CSFs) that include top management support, the need for a project champion, user training, project planning, technological competence, change management, and project management. Addressing the success factors can improve the success of the project.

Finney and Corbett (2007) structured methodological approach identified twenty-two critical success factors grouped into strategic and tactical factor categories. Strategic factors are doable elements that address the larger picture, whereas tactical factors correspond to skillful methods. Implementation strategy and timeframe, top

management commitment and support, visioning and planning, project champions, building a test case, vanilla ERP, project management, change management, are some of the strategic critical factors (Finney & Corbett, 2007). The key tactical strategic factors are selection of ERP, communication plan, balanced team, a project team composed of brightest and the best, team morale and motivation, project cost planning and management, legacy system considerations, client consultation, data conversion, testing, and training (Holland & Light, 1999; Finney & Corbett, 2007). Finny and Corbett further argued that “all of the ERP success factors are important in their own right; however, the need to approach the implementation from a change management perspective is central to the success of any ERP project” (2007, p. 344).

Mishra and Mishra (2011) highlighted some of the specific ERP implementation challenges in the oil and gas sector. Mishra and Mishra (2011) pointed out that ERP implementations saw great improvement in areas such as maintenance, financial, and procurement; whereas some other areas, such as like employee records, contract administration, and integrated planning remained weak. Mishra and Mishra (2011) argued that ERP systems will bring in personnel and process changes, including job reductions and responsibility rationalizations. Stanciu and Tinca (2013) empirical study explored two ERP implementation projects, highlighting significant factors that determined project success and failure. In the context of ERP, Stanciu and Tinca (2013) noted ultimate user satisfaction, ERP project team and service, ERP product, user knowledge and involvement, and the continuous commitment to change and processes in the ERP system as the significant factors for ERP project success (Florescu, Ionescu, & Tudor, 2010). According to Stanciu and Tinca, “management commitment, project opposition, corporate culture, planning and change management, users’ training, [and] rollout strategy” (2013, p.630) are the main factors contributing to ERP success. In summary, identifying and mitigating potential risks or challenges must be undertaken throughout the project and can be done by drawing a road map and performing an adequate risk management process. Learning from past mistakes and using experience gained from previous projects will help the practitioners, as well as the organization, to avoid similar errors, thereby increasing ERP success (Stanciu & Tinca, 2013). The importance of strategies that must be adopted as early as the start of the project is therefore critical for a successful ERP implementation.

3. Methodology

The research study used a qualitative exploratory single-case study design in order to understand the perceptions of each of the four project role groups with respect to strategies and mitigating actions in ERP implementations. Exploratory case study research is used to investigate a phenomenon by understanding perceptions and is usually focused on a small sample population for arriving at in-depth and rich data (Hewlett, 2005; Yin, 2014). Qualitative exploratory case studies typically involve small heterogeneous samples that can offer in-depth investigation, and such a case study is considered an appropriate tool for undertaking research in ERP implementation (Yin, 2009; Mishra & Mishra, 2011). Important characteristics applicable to exploratory case study research were aligned with this study’s objectives. These were enabling deep focus on scope, instead of a broad focus, generating hypotheses rather than testing them, and exploring a heterogeneous population instead of a homogeneous one (Gerring, 2007). The study design was also conducive to identifying rich insights into the identified role groups’ perceptions and differences (Woodside, 2010). This exploratory case study research also involved in collecting documentation, archived records, or both (Denzin, 2012; Howe, 2012; Nickson, 2014).

The case setting used for the current study is a Canadian oil and gas company involved in ERP implementation. Three oil companies in Canada were identified as having integrated refining capabilities such as upstream, downstream, and retail business capabilities. All three organizations had significant staff size and ERP implementation project history. For general guidance toward site selection for a qualitative case study exploring ERP in the oil and gas industry, examples were drawn from the literature (Mishra & Mishra, 2011). One of the three suitable Canadian oil and gas companies agreed to participate in the study. The inclusion criteria required that the participants must have experience in ERP project roles. The participants also must have worked in ERP implementation projects in the Canadian oil and gas industry. The organization assisted in soliciting employee participation; however, participants were selected based on inclusion criteria and on a first-response basis.

4. Data Collection

Stratified sampling was used due to the small sample size and the desire to obtain data from each stratum or participant group of the sample (Gerring, 2007). Twenty participants were selected for this study using stratified purposive sampling from the chosen Canadian oil and gas company. The sample represents four participant project team roles that consisted of three senior leaders, four project managers, six project team members, and seven business users, for a total of 20 subjects. Characteristics that were noted but not used as selection criteria included project-team member age level, overall employment experience, and educational level. McLeod (2010)

suggested that case-study research advocates for participants be knowledgeable about the phenomenon in its context, which was a requirement for participant inclusion in this study. The inclusion criteria required that the participants must have experience in ERP project roles and also must have worked in ERP implementation projects in the Canadian oil and gas industry. The organization assisted in soliciting employee participation; however, participants were selected based on inclusion criteria and on a first-response basis.

The draft interview guide was composed of interview questions and compiled based on research questions for the current study. The research was field-tested using SMEs and role-players. To lessen interviewer bias, all questions were asked in the same order (Gubrium & Holstein, 2001). All the interviews were held in a safe public place and was recorded using two digital audio recorders. Among interview questions researcher asked the participants about: “what strategies and mitigating actions are used to overcome barriers or challenges during ERP implementation”? In this study document review facilitated data triangulation, which provided another source of data beyond the semi-structured interviews with senior leaders, project managers, project team members, and business users (Yin, 2009; Denzin, 2012; Howe, 2012; Nickson, 2014).

5. Data Analysis

The researcher conducted a total of 20 face-to-face interviews with participants from the four project team role groups: senior leaders, project managers, project team members, business users. The researcher’s step-by-step analysis are detailed in the following numbered list:

1. The researcher recorded the in-person interviews and took notes;
2. The researcher transcribed the audio files, and organized the notes for data entry;
3. The researcher entered the collected data into NVivo software for data coding and analysis;
4. The researcher triangulated multiple data sources to address interview data among four groups as well as between interview data and documents collected (Jonsen & Jehn, 2009);
5. The researcher prepared charts and graphs with NVivo software and Microsoft Excel to illustrate the data results; and
6. The researcher conducted data analysis.

Qualitative data analysis software NVivo 11, by QSR International (2016), was used to organize, tabulate, and code the interview responses. The identified themes and findings were loaded into NVivo for qualitative data analysis using the following steps.

1. Read transcripts and field observations; read documentation by site sponsor;
2. Apply tools for evaluation, enter data information; Evaluate and triangulate data.

The data analysis process described above was also used for document analysis. Document review facilitated data triangulation such that it provided another source of data (Denzin, 2012; Jonsen & Jehn, 2009; Yin, 2009). The triangulation helped with understanding perceptions of the four participant team role groups based on this study’s research questions (Vogt, Gardner, & Haeffele, 2012).

6. Discussion of Results

Research findings from the interview responses from the four ERP project role groups are discussed below according to the relevance of strategies and mitigating actions for ERP implementations. Research showed 29 strategies (see Appendix A) to overcome the critical challenges during ERP implementation (Menon, 2016; Menon, Muchnick, Bulter & Pizur, 2019). Based on highest frequency count, six themes were identified as the strategies that can be used to overcome critical challenges as detailed in Table 1. The key themes that emerged as strategies include having the right people for support and guidance from experts, change management, clear communications, hands-on training, lots of testing, and risk management. However, one project manager and two project team members were unfavorable, stating that they didn’t see any strategies being used. Response also identified four mitigating actions as outlined in Table 2. Similarly, one of the senior leaders argued that no real mitigation was in place to overcome challenges.

Table 1. Strategies to Overcome the Critical Challenges as Reported by Members of the Project Role Groups

Strategies: Top Themes	Senior Leader	Project Manager	Project Team Member	Business User
Having the right people for support and guidance from experts	1	–	4	4
Change management	2	1	1	1
Clear communications	–	–	1	2
Hands-on training	1	1	–	1
Lots of testing	–	–	1	2
Risk management	–	1	2	–
Didn't see any strategies used	–	1	2	–
Total	4	4	11	10

Note. The table highlights top six strategies that can help overcome critical challenges during ERP implementation. This is based on high-frequency count across all four project role groups. A dash indicates that no member of the group reported that strategy for overcoming critical challenges.

Table 2. Mitigating Actions as Reported by Members of the Project Role Groups

Mitigating Actions	Senior Leader	Project Manager	Project Team Member	Business User
Manual interventions	–	–	1	1
Reduce stress of people by recognition, time off	–	–	–	1
Making personal calls to customers	–	–	–	1
Blocking wrong customer accounts	–	–	–	1
There is not a lot of mitigation in place	1	–	–	–
Total	1	–	1	4

Note. The table highlights the mitigating actions used by the case organization for overcoming critical challenges during ERP implementation. This is based on high-frequency count across all four project role groups. A dash indicates that no member of the group reported that mitigating action.

Senior leader role response highlights. Participant SL1 indicated that the main strategies used (Appendix A) were temporary reporting measures, focusing on top-ten list accounts, properly operating disputes systems, transferring lessons learned from large accounts to all other accounts, implementing changes to eliminate root causes, and finally addressing problems according to lines of business by setting up multi-function groups. According to SL2, project leadership strategy was to deliver on time and on budget, with little flexibility and no real mitigation in place. Participant SL3 listed change and engage strategy, well-defined and rigorously applied project methodology, implementation methodology, resourcing project teams, and deploying project team members back to business as some of the strategies effectively used during implementation. SL3 stressed the importance of change and engage:

Um, yeah, so there was a huge change and engage strategy that's probably, yeah, probably one of the most noteworthy strategies, which was quite comprehensive, and it was really intended to help overcome a number of the barriers I alluded to, right.

Project manager role response highlights. Participant PM1 highlighted the main strategies as risk management, changing leadership during the process, and strict change control. Also, PM1 noted a very good strategy to capture a particular business but added “we weren't so good at the integrated strategies [across the organization].” Participant PM2 indicated that the downstream strategy was well put-together, with different teams responsible for different tasks and different stage gates to ensure that every team met the project deliverables; learnings were shared with delivery and implementation teams, and all potential risks were mitigated. Participant PM3 didn't see any strategy used during the implementation except pushing ahead:

I didn't, I don't really see any real guidance on the strategy to work through that. I didn't, I did not see it.

Participant PM4 named some of the important strategies as implementing global practices before the tools were ready; identifying the gaps and workarounds between the global practices and the local requirements; regular status calls with global teams, deployment teams, and business process teams; strong global process ownership within the company business; change management effort; considerable training effort prior to going live; and live environment simulations.

Project team member role response highlights. Whereas TM1 and TM4 were not aware of strategies used

during implementation, TM2 highlighted two key strategies, reuse of human resources with past experience and building core competency within internal staff. Participant TM3's stated strategies included continuous improvement projects initiated to reduce manual journal entries, corrections, and fixes, as well as to reduce emergency responses, manual interventions, and user overrides during post go-live. TM3 further added:

There was never any catastrophic issue at quarter end or a year end [cough]. We were able to submit on time to our global submitters, able to do our annual reports on time, so we haven't [pause] so we were able to submit to tax authorities on time [pause] so you know, I think there was a focused approach to ensure that we hit our deadlines. The main issues were around supplier agreements, such as taxes, EDI tax, excise duty issues, and incorrect pricing. It took a focused effort of over nine months to get these issues worked out through the system.

Regarding customer master area, TM4 indicated that a document requesting specific fields was sent out to customers using mass communication; the company also hired a few extra people to follow up with customers to get the information and brought in some resources from the global case organization for support. The strategies stated by TM5 included use of delta loads during the no-fly zone and pulling resources with experience in business streams from global community to provide support; the latter was also a mitigating measure. Redeploying people, bringing SMEs to the project, and allocating time and resources were some of the strategies mentioned by TM6.

Business user role response highlights. Participant BU1 was not entirely sure but stated that the regular engagement of global process experts was one of the strategies used. Participant BU2 described clear communications, bringing people on board, time checks and evaluations, and a large number of meetings to reassure workers. BU3 highlighted hands-on training, following the no-fly zone, and putting the project team with the business on the same floor. Mitigating actions included blocking a customer's wrong customer accounts, making personal calls to customers, involving project teams in manual invoice corrections, and use of hyper-care phone lines to deal customer complaints. Participant BU3 added:

Say a customer have been billed twice by accident; we just immediately pushed them the money back rather than just doing the whole corrections, we just gave them the money back. Because we know there was a mistake, we can tell them it's a mistake, and some of them, in retail somebody running a gas station, this could be a very small business, billing them twice, or billing them a few load that didn't go to them, that could make them not be able to pay their employees.

Participant BU4 asserted that obtaining guidance from experts and seeking help from managers were some of the strategies used. According to BU5, having the right people to support the business was the best strategy. BU5 said it was important to reduce stress on people, which could be achieved by massages, stretches, food and drink, time off, and recognition with money and awards. For BU6, it was meetings and workshops; however, BU6 stated, "I can't answer that question for the strategies, because I wasn't part of the strategic part of it, right." BU7 described many meetings and a great deal of testing as some of the strategies used.

Significance of strategies to overcome challenges

The study highlighted the importance of strategies needed to overcome critical challenges (Table 3; Figure 1). Whereas 60% (12 out of 20) of the participants agreed that strategies helped overcome the challenges, 30% (6 out of 20) partially agreed that strategies also helped overcome the challenges. However, two participant responses to Interview Question 11, one from a project manager and another from a business user, did not agree that the strategies helped overcome the challenges.

Table 3. The Ability of Strategies to Help Overcome the Challenges in ERP Implementation as Reported by Members of the Project Role Groups

Strategies help overcome challenges	Senior Leader	Project Manager	Project Team Member	Business User
Strategies help overcome challenges—Agree	1	2	4	5
Strategies help overcome challenges—Partially agree	2	1	2	1
Strategies help overcome challenges—Do not agree	—	1	—	1
Total	3	4	6	7

Note. The table highlights the importance of strategies to overcome critical challenges during ERP implementation. This is based on high-frequency count across all four project role groups. A dash indicates that no member of the group gave this response.

Senior leader role response highlights. The adopted strategies, such as reporting measures and ad-hoc groups,

helped troubleshoot problems, resolve problems, capture learning, update processes so that mistakes weren't repeated, and had a strong mitigating effect across organization, according to SL1. Sticking to standard processes, minimizing change, and implementing the standard template reduced issues for the business. Also, strong leadership support and commitment showed success to finance implementation. Participant SL2 added:

Even though finance was one of the most difficult implementations, the commitments from their senior leaderships were so strong. I think it made a huge difference. Our company controller was also... 100% committed to the success of this, and it think it showed in, actually in our finance processes. We are not the ones that causes the issues [pause, laugh] we could close the books [pause] ehh you know we could do our government reporting, taxation and so on, it wasn't perfect by any means, but I think I think that really helped. Yeah.

Project manager role response highlights. Participant PM1 emphasized the importance of risk management and use of production data during testing phases. This improved data quality improvement by 30%, reducing the number of issues at go-live. PM3 did not state any implications and added:

I didn't see a lot and, even from myself, kind of moved on fairly quickly. Um, I don't really know how to answer that because I did not, I was not present for that, and no direct experience much about that.

According to PM2, the strategies helped for most part, and communicating changes and notifying the external stakeholders provided them with the opportunity to be aware of the changes in advance. Participant PM4 observed that the organization had established ways to resolve and support issues based on previous implementations in several countries.

Project team member role response highlights. While the project moved through testing and data conversation iterations, there was a need to obtain business sign-offs, and these sign-offs could be obtained only applying the strategies, according to TM1. One of the points noted by TM2 regarded data cleansing activities and strategies to advance them. The key here is to clearly communicate what is changing and the rationale behind it: that it can improve the data quality. Minimizing customization is an important strategy, as noted by TM2:

So again, you don't want to be in a situation, and this is not just with the ERP system, it's really with a lot of IT systems now, where you are heavily customized because then they can really take lot of run maintain costs and individual specific skill sets that you need to be able to support something. So I think you can take kind of out of the box install and minimize customization as much as possible.

Participant TM3 spoke about the strategy of manual intervention after go-live to allow business to move product, buy, sell, and continue in real time. The manual interventions were allowed only for minor periods and the task force allowed fixes and corrections to manage end-to-end process and manage issues effectively. The task force or the core team was composed of skilled resources and was formed after the go-live to tackle inventory reconciliations, cancellations and rebilling, and invoice corrections. The business also used risk management processes and a defect system to track issues to ensure that items were fixed. Skilled resources from the global team helped in the push near the end of the project with mass uploads; however, according to TM4, "it's hard to think of things that strategically they did that helped, because it felt like it went so poorly at go-live." Participant TM5 added that the strategies on data load and data quality worked well with the support of global consultants. TM6 stated that the strategies worked well during implementation for data conversion and testing. Being realistic, understanding risks, being open to ideas, and adapting to change are some of the strategies suggested as important by TM6.

Business user role response highlights. According to participant BU1, regular engagements with global process experts helped the team gain knowledge, understand the global process, and think outside the box to streamline the process. However, BU1 argued:

I wouldn't say that the strategies always helped us to overcome the challenges. However, I suppose it did help mitigate some of them.

Participant BU2 stated that the strategies forced people to participate, even with lot of resistance, and that management had good intentions to take people on board and participate in the program. On overcoming challenges, BU2 added:

Um, at some level, you know, yeah. Again my thought is up front, helping, really people understanding what each step of the process is and what it means to them and being able to convey it to them.

Participants BU3, BU4, BU6, and BU7 observed that strategies helped overcome challenges. Flying in experts to work with the business during hyper-care was a good strategy, according to BU5. However, the knowledge

sharing was limited, as these experts were working on strict timelines to fix problems and deliver. These experts were gone after 4 weeks, and the business had to bring in another team who had “no idea of what’s going on.” So, this strategy resulted in a short hyper-care period, after which the experts who were responsible for implementation were gone and the business had to bring in new people.

Research findings indicated 29 strategies (Appendix A), from which top six themes on strategies (Table 1) and four mitigating actions were highlighted (Table 2). Specifically, the strategies were significant to overcome the challenges during ERP implementation, which was acknowledged by all ERP project role groups (Figure 1).

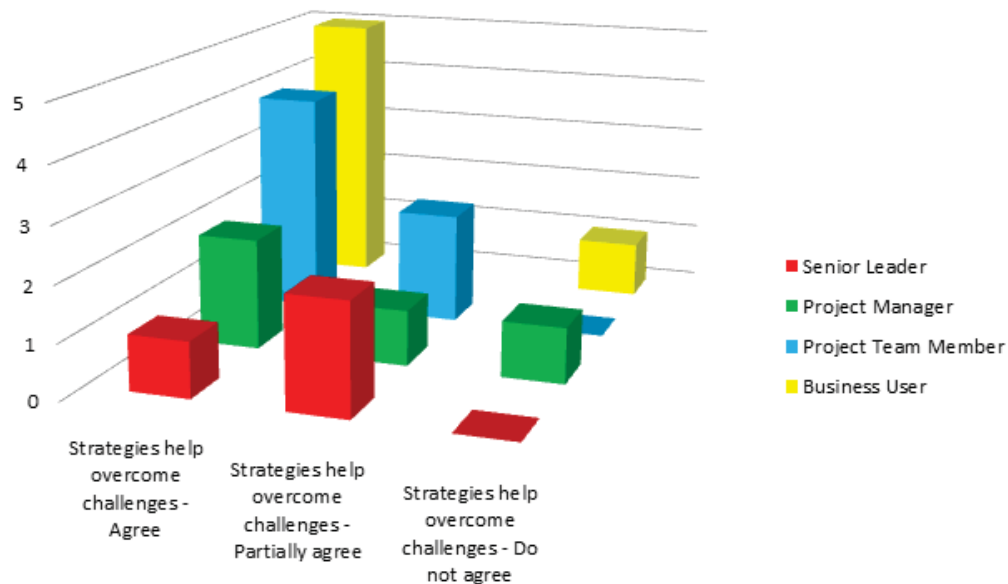


Figure 1. Significance of strategies to overcome critical challenges, as answered by members of each of the four project role groups.

In triangulating responses, it became apparent all the four ERP project role groups—senior leader, project manager, project team member, and business user—responded evenly toward the strategies and their significance to overcome the critical challenges. The majority of participants across all project role groups indicated the importance of having the right people and guidance from experts (nine out of 20 participants, 45%) and change management (five out of 20 participants, 25%). Regarding strategies on clear communications and lots of testing, the participants from senior leader or the project manager role group was unable to provide any feedback. Participants also responded to seeing significant power in the strategies of hands-on training (15%) and risk management strategies (15%).

7. Key Themes

The strategies and mitigating actions (see Table 4) that emerged from interview responses can be used to overcome critical challenges in ERP implementation (Menon, 2016; Menon et al., 2019). Six key themes on strategies and four themes on mitigating actions were unpacked from interview responses based on high frequency counts. Among the key strategies named, references were found in the literature for risk management (Jayaraman & Bhatti, 2008), change management (Finney & Corbett, 2007; Hasibuan & Dantes, 2012; Jayaraman & Bhatti, 2008; Poti, Bhattacharyya, & Kamalanabhan, 2010; Somers & Nelson, 2001), hands-on training (Somers & Nelson, 2001), clear communications (Holland & Light, 1999; Nah, Lau, & Kuang 2001; Jayaraman & Bhatti, 2008), and having the right people for support and guidance from experts (Parr & Shanks, 2000; Tsai, Shaw, Fan, Liu, Lee, & Chen, 2010).

Table 4. Strategies and Mitigating Actions

Strategies & Mitigating Actions	Literature
Having the right people for support and guidance from experts Change management	Parr & Shanks, 2000; Tsai et al., 2010 Somers & Nelson, 2001; Finney & Corbett, 2007; Jayaraman & Bhatti, 2008; Poti et al., 2010
Clear communications	Holland & Light, 1999; Nah et al., 2001; Jayaraman and Bhatti, 2008
Hands-on training	Somers & Nelson, 2001
Lots of testing	Doom, Milis, Poelmans, & Bloemen 2010; Finney & Corbett, 2007; Nah et al., 2001
Risk management	Jayaraman & Bhatti, 2008; Salmeron & Lopez, 2012
Manual interventions	—
Reduce stress of people by recognition, time offs	—
Making personal calls to customers	—
Blocking wrong customer accounts	—

Note. Themes on strategies and mitigating actions are based on highest frequency count. Literature is the corresponding research literature. A dash indicates that the theme was not found in the literature.

The first strategy can be summarized as “having the right people to support the business and guidance from experts.” According to participant BU5, “Having the right people to support the business was the best strategy. It is to connect the people, the doer with the people that knew about it, and [this could] really change things around.” Participant SL1 underscored the importance of change management as a strategy that can overcome challenges, explaining it as “figure out root causes and implement changes to eliminate the root causes.” As explained by participant TM2, “clear communications” are an important strategy as well, and the ability to “communicate in a clear manner [on] how stuff is changing and the rationale behind it, I think helped improve” and overcome challenges (TM2).

“Hands-on training” and considerable training effort are required to overcome the challenges (BU3; PM4). Many interview responses also stressed the importance of testing. Participant BU7 emphasized this strategy: “lots of testing, I was involved in the testing and I had to test with people higher in the company to know how to work on it, [and] nothing was left behind.” The final strategic theme highlighted was “risk management,” and this strategy was underscored by doing “a lot of risk management exercise” (PM1), having “enough people with right skills” (PM1), and continued “use of defect system” (TM3).

Among mitigating actions (Table 2), the first mitigating action adopted to overcome challenges was to use “manual interventions.” Manual intervention is an effective mitigating action, especially when making invoice corrections (BU3). For reducing stress on people, participant BU5 indicated giving people time-offs, recognizing efforts with money, and engaging in relaxing processes such as massages and having food delivered. The third mitigating action discussed was “making personal calls to customers” to apologize for erroneous invoices, arrange a credit, and give the customer advance notice (BU3). Finally, “blocking wrong customer accounts” is another mitigating action effectively adopted by the organization so that customers were not wrongly charged (BU3).

The implication of the finding addresses change management; the current study supports the study of Poti et al. (2010), which indicated the significance of implementing change as well as guiding people through the change management process. The change management strategy, which uses an integrated framework of knowledge formulation, strategy implementation, and status evaluation, can be also used to overcome resistance to change during implementation (Aladwani, 2001). Whereas literature produced other change management models, change management as a strategy is crucial and significant, since ERP implementation involves changes to processes, people, and system (Bourrie, Sankar, & McDaniel 2012; Edwards & Humphries, 2005; Hasibuan & Dantes, 2012; Kotter, 2012; Malek & Yazdanifard, 2012; Schniederjans & Yadav, 2013; Stapleton & Rezak, 2004).

The second implication of the finding addresses risk management, supporting the key area of uncertainty in project complexity (Besner & Hobbs, 2012; Salmeron & Lopez, 2012). Whereas in effective project management, answers can be found for known problems and known unknowns (Chapman & Ward, 1997), unplanned outcomes can result from significant deviations from plan. Differences during realization and execution can affect the project plan (Pundir, Ganapathy, & Sambandam, 2007). A proper risk management plan using defect logs, as adopted by the case organization, can be used to effectively capture systems issues during implementation.

8. Conclusion

The research study on strategies and mitigating actions for ERP implementation is expected to increase organizational prospects toward project success. The literature espouses many strategies that can be adopted during ERP implementation, yet these strategies are not fully recognized by organizations. The current study examined a large-scale ERP implementation in the Canadian oil and gas industry. The strategies and mitigating actions that emerged from interview responses can be effectively used to overcome critical challenges in ERP implementation. Six key themes on strategies and four themes on mitigating actions were unpacked from interview responses based on high frequency counts. References were found in the literature for key strategies that include change management (Finney & Corbett, 2007; Hasibuan & Dantes, 2012; Jayaraman & Bhatti, 2008; Poti et al., 2010; Somers & Nelson, 2001), risk management (Jayaraman & Bhatti, 2008), hands-on training (Somers & Nelson, 2001), clear communications (Holland & Light, 1999; Nah et al., 2001; Jayaraman & Bhatti, 2008), and having the right people for support and guidance from experts (Parr & Shanks, 2000; Tsai et al., 2010).

Like other exploratory case studies, this study has limitations. Although the selected sample size was within norms and appropriate, the sample size was not significant enough to generalize study population (Marshall, Cardon, Poddar, & Fontenot, 2013; Yin, 2011). The selection of 20 participants from four project role groups of senior leaders, project managers, project team members, and business users allowed acquisition of productive data on strategies and mitigating actions in ERP implementation. The researcher therefore believes that if the study were to be replicated, it would be necessary to avoid having a general senior leader group and instead add a business leader group and an IT leader group to get the perspectives of both the business and IT from senior leadership, instead of one single role group of senior leaders. The strategies and mitigating actions generated by the current study add to the body of knowledge. A suggestion to organizations undertaking future implementations would be to review the list of strategies and mitigating actions generated by the current study.

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Appendix A. Full List of Strategies Used to Overcome Challenges in Erp Implementation

Strategies used to overcome challenges	Senior Leader	Project Manager	Project Team Member	Business User
Building competency within internal staff	–	–	1	–
Change management	2	1	1	1
Changing leadership	–	1	–	–
Checks and evaluations	–	–	–	1
Clear communications	–	–	1	2
Continuous improvement projects	–	–	1	–
Deploying resources back to business	1	–	1	–
Didn't see any strategies used	–	1	2	–
Established ways to support based on previous implementations	–	1	1	–
Follow no-fly zone	–	–	1	1
Get people on board	1	–	–	1
Hands-on training	1	1	–	1
Having the right people for support and guidance from experts	1	–	4	4
Implementation methodology	1	–	–	–
Live environment simulations	1	1	–	–
Lots of testing	–	–	1	2
Lots of meetings to reassure people	–	–	–	2
Not involved in the strategy	–	–	–	1
Project leadership was determined to deliver on time and on budget	1	–	–	–
Properly operating disputes systems	1	–	–	–
Putting project team with the business on the same floor	–	–	–	1
Regular engagement with the global process experts	–	–	–	1
Resourcing project team	2	–	–	–
Risk management	–	1	2	–
Seeking help from managers	–	–	–	2
Strong senior leadership commitment	1	–	–	–
Temporary reporting measures	1	–	–	–
Use of production data for testing	–	1	–	–
Well-defined and rigorously applied project methodology	1	–	–	–
Total	15	8	16	20

Note. The table shows all 29 strategies used by the case organization that can overcome critical challenges during ERP implementation. This is based on high-frequency count across all four project role groups. A dash indicates that no member of the group reported the strategy.

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Measuring the Efficiency of Tax Collection among Economic Sectors in Paraíba State Northeastern Brazil (2013-2015)

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Abstract

This study investigates the efficiency of tax collection on operations related to the circulation of goods and interstate services (ICMS) in far east of Brazil, Paraíba State. The efficiency was estimated using quarterly data of the electronic invoices from the period of January 2013 to December 2015. In addition, we aim to identify levy's key factors among distinct sectors, disaggregated into 489 sub-classes, according to the national classification of economic activities. It was used a stochastic frontier analysis which suggests that the average of the technical efficiency of the tax collection among sectors was 73.75% of the potential tax revenues. The amount of uncollected tax during the studied period were approximately US\$7 billion. There is technical inefficiency of tax levy among important sectors of the economy of the state of Paraíba, demonstrated by 88.88% of inefficiency of tax collection itself. The sector comprehends clothing, wholesale of personal care products and leather shoes, among others. We verify that an increase of oversight actions by the tax collection agency helps to inhibit the inefficiency of tax levy.

Keywords: Brazil; efficiency, sectors, stochastic frontier analysis, tax levy

1. Introduction

Brazilian tax system is complex, with subnational entities as states and municipalities that share distinct sources of revenues (Varsano et al., 1998; Piancastelli, 2001). Tax management is subject to many types of inefficiency caused by opportunism in different areas of the government (OECD, 2017). This framework brings the opposition of interests and gets worse when we take into account: 1) There is a great distance between the taxpayer and the decisions of government; 2) That local tax offices are responsible for collect the financial resources of local governments (Huang, Yu, Hwang, Wei & Chen, 2017) and; 3) That the political instability also reduce the efficiency of tax collection (Aizenman & Jinjarak, 2008).

Moreover, Barros (2007) and Brun and Diakité (2016) proposes that inefficiency in taxation depends more on policy decisions than on tax administration performance. They also argue that low-income countries have higher tax effort, even if their tax effort decline, while Alm and Duncan (2014) claims that countries considered to be inefficient can improve their fiscal position by using inputs more strategically. In Brazil, the continuous process of increasing tax burden registered in the last decades constrains tax collection by government (Mariano, 2005). Base erosion, which constitutes a serious risk to tax revenues, and recession affect the inefficiency of tax collection and constitute a serious barrier for local development process (Cordero, Díaz-Caro, Pedraja-Chaparro & Tzeremes, 2018). In this scenario, decreasing of public investments and competition for savings are inevitable (Schwengber & Ribeiro, 2000).

However, the measurement of inefficiency of tax levy, as in Brazil as in other countries, is full of complexities (Ferrigno, 2006; Mattos, Rocha & Arvate, 2011; Postali, 2015). It affects the tax framework, as well as the funding of the Brazilian public sector itself. The advent of Brazilian Complimentary Law No 101/2000 - fiscal responsibility law – has increased the transparency in the revenues' prediction and promote control on public spending. Hence, it is important to analyze the variations of efficiency of tax collection in order to understand its causes and provide information for fiscalization and evasion prevention. In this direction, our paper estimates the technical efficiency of tax collection on operations related to the movement of goods and services in interstate, intermunicipal and communication transport (ICMS) using stochastic frontier analysis.

In Paraíba, eastern state of Northeast Brazil, the economy is mainly based on the commerce and services sector, that accounts for 94.33% of total tax levy. The innovation of the stochastic frontier analysis developed by Battese and Coelli (1995) is to consider that external random factors also affects the performance of technical efficiency. In a similar strategy followed by Ferrigno (2006), the dataset is composed by the sub-classes of sectors disaggregated by the National Classification of Economic Activities. The panel data of the electronic invoices issued in the state of Paraíba between 2013 and 2015 was provided by the Secretary of State of Revenue of Paraíba (SER/PB). The electronic invoice is a system with digital accounting and digital fiscal accounting dimensions. It is part of the new information technologies within the Brazilian federal public administration, integrating the e-Government framework.

Our goal is to improve the strategy of tax collection agency, similar to the Internal Revenue Service in the United States, in the direction of reducing the inefficiency of tax levy. The frontier estimated by sector from selected inputs, e.g. control variables of local government policies, market characteristics, tax system and stochastic variables. The technical inefficiency is decomposed into control and stochastic variables as well. Proxies as the hours worked per sector, the number of tax rates per sector, as the concentration of the economic sectors are used to characterize the complexity of the locus and tax system. The model also let us to test if sectors that receiving more attention from the tax collection agency tend to be more efficient than the others.

The hypotheses of this paper are that (i) sectors with small number of firms and less labor intensive have better efficiency scores; (ii) sectors which receive more attention of tax collection agency have efficient scores of tax levy; (iii) the higher the number of tax rates per sector, the more inefficient the scores of tax levy will be. This paper is divided into five sections, including this brief introduction. Section 2 details the empirical strategy. Section 3 deals with the design of the sample and data processing. The results are presented in section 4, and section 5 exhibit the conclusions regarding the efficiency of tax collection.

2. Empirical Strategy

2.1 Stochastic Frontier Analysis

This paper uses the estimation of efficiency of tax collection initially proposed by Aigner, Lovell and Schmidt (1977) and Meeusen and Van den Broeck (1977). The efficiency score is decomposing into technical and allocative price efficiency (Charnes, Cooper & Rhodes, 1978). Generally, non-parametric methods for obtaining these scores do not require a specification of the functional form in the estimation process. Although non-parametric methods are more flexible in terms of their algorithm to obtain the scores, their results are generally inelastic to the stochastic factors (Syrjänen, Bogetoft & Agrell, 2006). Thus, the main difference between the models to estimate efficiency scores is whether or not to consider random errors inherent to the model estimation process (Coelli & Battese, 1998).

The theoretic original specification of efficiency involves a production function with a two-component error term – one to capture technological inefficiency, and another to represent the random effects. A limitation of such models is the high number of hypotheses necessary to be defined, e.g. the estimator type, the functional form to fits the data, and the type of distribution of the error term $\mu_{i,t}$. Our concern goes in the direction of an estimator that incorporates the technical inefficiency component of production for panel data, as first proposed by Pitt and Lee (1981). In addition to estimating the frontier, Battese and Coeli (1995) suggests analyzing inefficiency by decomposing it into a vector of variables. It is a regression model estimate by maximum likelihood with an error term considered asymmetric and not normal.

2.1.1 Frontier Estimation

In their model, Battese and Coeli (1995) decomposes the error term ($e_{i,t}$) in two components: a non-negative random variable, representing technical inefficiency, and $\mu_{i,t}$, a random error term that reflects the stochastic influences on cross-section sectoral units that may not be controlled. The main advantage of this model is the possibility of doing analysis of statistical inference. The equation for the score of efficiency of tax levy adapted from Battese and Broca (1997) is:

$$R_{i,t} = C_{i,t}(x_{i,t}) Iefic_{i,t} \quad (1)$$

wherein $R_{i,t}$ is the actual revenue, $x_{i,t}$ is a vector ($1 \times k$) factors that influence the ability of tax levy, $C_{i,t}(x_{i,t})$ is the tributary capacity and $Iefic_{i,t} \in [0, 1]$ is the efficiency of tax collection index. In this model, the observed tax revenue is also affected by random factors, generally captured by a white noise error. Therefore, the function (1) is now shown as follows:

$$R_{i,t} = \exp(x_{i,t}\beta_{i,t} + v_{i,t} - \mu_{i,t}) \quad (2)$$

$$R_{i,t} = \exp(x_{i,t}\beta_{i,t}) \exp(v_{i,t} - \mu_{i,t}) = \exp(x_{i,t}\beta_{i,t}) Iefic_{i,t} e_{i,t} \quad (3)$$

where $v_{i,t}$ denotes random errors independent and identically distributed (i.i.d.); $\mu_{i,t}$ is a non-negative random variable; $Iefic_{i,t} = \exp(-\mu_{i,t})$ is the differentiated efficiency index for each firm at a given time; $\beta_{i,t}$ is a vector ($k \times 1$) of unknown parameters to be estimated; and x_i is a vector ($1 \times k$) of values corresponding to a function of the institutional and structural variables, i.e., of the inputs of the tax-producing function. The random error $\mu_{i,t}$ is based on the conditional expectation of $\exp(-\mu_{i,t})$, given $e_{i,t} = v_{i,t} - \mu_{i,t}$.

Tax collection deviations in relation to the frontier function also reflect failures in the optimization of the public administration process. In order to measure it properly, the error term $\mu_{i,t}$ has been decomposed into a symmetric term, which captures random factors out of control of the tax collection agency, and a term that represents the technical inefficiency of each sector. More specifically, the degree of an industry's efficiency of tax collection relative to its potential will be estimated using (4), which indicates the radial distance from the origin and the frontier (Kumbhakar & Lovell, 2000). This measure will be written using the ratio and will be considered efficient if the metric approximates on the unit value:

$$TE_{i,t} = y_{i,t} / f(x_{i,t}, \beta) e^v_{i,t} \quad (4)$$

where $f(x_{i,t}, \beta) e^v_{i,t}$ is the time-variant stochastic production frontier, and $v_{i,t}$ is an unrestricted signal random variable. The deterministic frontier $f(x_{i,t}, \beta)$ is common to all sectors, and the term $e^v_{i,t}$ has the purpose of capturing the effect of random shocks that are outside the control of the tax collection agency for each sub-class of economic activities. This relationship means that if $TE_{i,t}$ is the product vector (tax levy) and $y_{i,t}$ is the percentage of the maximum possible tax levy. Thus, consider that $f(x_{i,t}, \beta)$ is linear in logarithms, we have the following model:

$$\ln y_{i,t} = \beta_{0,t} + \beta_{1,t} \ln x_{i,t} + \dots + \beta_{n,t} \ln x_{n,t} + v_{i,t} - \mu_{i,t} \quad (5)$$

where $\mu_{i,t} = -\ln TE \geq 0$. In equation (5), the deviation between the deterministic part of the production frontier and the level of tax collection $y_{i,t}$, while $v_{i,t}$ is a symmetric error term. It captures any random shock outside the control of the tax collection agency (Kumbhakar & Lovell, 2000).

It is assumed that the $v_{i,t}$ is i.i.d., with normal distribution of zero mean and variance σ^2 , and $\mu_{i,t}$ is an error term that captures the effect of technical efficiency. It does not assume negative values, and has a normal truncated extended distribution, where the conditional mean of the inefficiency parameterization is a linear function of the proposed regressors. Their calculation may be denoted as the frontier tax collection deviations. In addition, the stochastic frontier parameters and the technical inefficiency are estimated by maximum likelihood (Wang & Schmidt, 2002). Whereas $e_{i,t} = v_{i,t} - \mu_{i,t}$, we have :

$$\ln y_{i,t} = \beta_{0,t} + \beta_{1,t} \ln x_{i,t} + \dots + \beta_{n,t} \ln x_{n,t} + e_{i,t} \quad (6)$$

This framework is defined by a system of two equations. The first one (Equation I) is given by equation (4), i.e. the estimation of the stochastic frontier. The Equation II consists in estimating the efficiency deviations in relation to the control variables, using linear regression. The functional form of stochastic frontier analysis is defined as a Cobb-Douglas type function, which is justified (i) because most of the functions violate one or more desirable econometric properties when conditioned to the envelope functional form; (ii) to avoid bias problems in the parameter estimates and (iii) to avoid problems of multicollinearity that often occur in the translog-type functions.

2.2 Empirical Model

The parameters of equation (7) represent the estimated empirical form (Equation I), obtained by maximum likelihood, which allows the calculation of scores of efficiency of tax collection by sub-classes of sectors. Hence, it will be possible to identify and improve the fiscalization strategies for inefficient sectors that have a greater impact on tax levy.

$$\ln(TAX)_{i,t} = \beta_{0,t} + \beta_{1,t} \ln(ALIQ)_{i,t} + \beta_{2,t} \ln(DISC)_{i,t} + \beta_{3,t} \ln(EXIT)_{i,t} + \beta_{4,t} AGRI_{i,t} + \beta_{5,t} IND_{i,t} + \beta_{6,t} WHO_{i,t} \\ + \beta_{7,t} \ln(L)_{i,t} + \beta_{8,t} \ln(B)_{i,t} + \beta_{9,t} \ln(S)_{i,t} + e_{i,t} \quad (7)$$

where the variables are TAX , as the value of tax collection by sector; $ALIQ$ is the average of the different rates existing in each sector; DIS represents the discharge percentage over the total value of sales; $EXIT$ is the fraction of the goods whose destination are other Brazilian states in relation to the book value of total sales; $AGRI$ is a dummy variable that tries to control the results for the sectors related to agriculture; the IND is a dummy variable for industry-related sectors; WHO characterizes the sectors related to wholesale commerce; the variable L represents the weekly worked hours on average per sector; B is the ratio of the basis of calculation of ICMS by sector in relation to the total value of the products sold; and S is given by the Herfindahl index, calculated by the

ratio between the number of firms/business and the total book value of sales by sector.

The *ALIQ* characterize how each sector responds to taxation. However, this relationship may indicate some concavity, similar to that proposed by the Laffer Curve (Laffer, 1986). According to Allingham and Sandmo (1972), an increase in tax rate reduces the revenues, similar to a risky asset, *ceteris paribus*, the risk averse agent will take less risk and to avoid tax evasion. The average tax rate also has the function of determining the potential tax collection in each sector. The percentage of discharge determines the potential tax levy (Ferrigno, 2006), and is consider to be non-collected tax due to the particularity of tax levy legislation.

The average weekly hours worked per sector was used to verify if whether the more labor intensive and less capital intensive are, the more inefficient tax collection is. The Herfindahl-Hirschman or IHH index (Herfindahl, 1950) measures the concentration of the economic sectors. It represents the market share of each firm *i* from sector *j*. We expect that the higher the index, the higher is tax levy, since this means that the tax collection agency (SER/PB) would have fewer firms and fiscalization costs. Moreover, we observe how the fiscalization efforts and tax collection are related to the inefficiencies not explain by (8). Equation II is given by a simultaneous linear regression, where dependent variable is the residuals of (8), i.e. $\mu_{i,t}$:

$$\mu_{i,t} = \delta_{0,t} + \delta_{1,t} \ln(PEN)_{i,t} + \delta_{2,t} \ln(OS)_{i,t} + \delta_{3,t} \ln(NALIQ)_{i,t} + \varepsilon_{i,t} \quad (8)$$

where *PEN* is the number of penalties generated by the fiscalization carried out; the *OS* is the number of orders of fiscalization by sector, i.e., the number of fiscalization of tax collection agency by sector; and *NALIQ* represents the number of different tax rates by sector.

The fines generated by the fiscalization carried out and the number of orders of fiscalization are proxies for the probability of cross-sectoral fiscalization. We proceed the test if sectors that receive more attention from the tax collection agency increase the efficiency of tax levy. The number of different tax rates per sector is also a proxy to characterize the complexity of the tax system. According to Fenchietto and Pessino (2013), the more complex the tax system is, the more it will incorrectly label a multi-output firm, i.e. that produces more than one type of good or service, causing inefficiency in tax collection.

3. Sample Planning and Data Processing

Table 1 exhibits the economic activities responsible for the largest contributions in the tax levy in Paraíba by respective sub-classes and number of firms by sector:

Table 1. Tax collection of main sub-classes of sectors (2015)

Sectors	Tax collection (US\$ thous.)	% of tax levy	Nº of firms by sector
Distribution of electricity	192170.01	9.28	9
Wholesale trade of fuel alcohol, biodiesel, gasoline and other petroleum products, except lubricants	169676.53	8.19	78
Retailing of merchandise in general, predominantly food products supermarkets	90244.74	4.35	301
Cellular mobile telephony	85972.98	4.15	22
Wholesale of foodstuffs in general	75789.07	3.66	133
Retailing of merchandise in general, predominantly food products hypermarkets	71876.43	3.47	43
Manufacture of leather shoes	57944.51	2.79	106
Wholesale of drugs for human use	53992.75	2.60	126
Department stores or magazines	51010.41	2.46	171
Retailing of merchandise in general, predominantly food products by small stores and warehouses	49868.49	2.40	9815

Source: SER/PB, Brazil.

The quarterly natural logarithm 5277 observations' dataset provided by the SER/PB has 489 sub-classes of sector - from total of 597 - between 2013 and 2015. The data was deflated through the broad consumer price index (IPCA). The information of worked hours per sector were obtained from the National Survey by Household Sample (PNAD/IBGE) from 2013 to 2015. Electronic invoices were implemented in Paraíba from 2013. Thus, we used a reduced window of time electronic invoice data less subject to negative bias, in contrast to using data from the taxpayer's own declarations. Table 2 illustrates the descriptive statistics:

Table 2. Descriptive statistics of the selected variables

Variable	Min.	Max.	Average	Stand. Deviat.	Kurtosis	Asymmetry
<i>ALIQ</i>	0	30	8.8148	6.4859	358.5903	16.9143
<i>DIS</i>	0	1	0.6338	0.3112	1.8344	-0.4863
<i>EXIT</i>	0	0.6008	0.0019	0.0183	139.4968	6.0616
<i>L</i>	0	8950619	70237.9	180647.1	1274.984	27.4524
<i>BASE</i>	0	0	0	0	16.2314	1.9074
<i>S</i>	0	0.0029	0.0003	0.0002	35.8580	2.8151
<i>PEN</i>	0	13550000	86895.80	603384.3333	100.9524	4.9968
<i>SO</i>	0	241	7.1711	16.5497	41.8986	5.1728
<i>NALIQ</i>	1	40	5.4700	3.1251	17.5020	2.3652

Source: SER/PB and IBGE, Brazil.

Table 3 illustrates the estimation of the correlation matrix between the variables. It was observed that they have a weak correlation with each other, except for the tax base (*BASE*) and the Herfindahl index (*S*) that which exhibit a correlation of 74.86%; and the total input, which also indicates correlation with *BASE*, *S* and the number of tax rates by sector (*NALIQ*), respectively.

Table 3. Correlation matrix

Variable	<i>ALIQ</i>	<i>DIS</i>	<i>EXIT</i>	<i>L</i>	<i>BASE</i>	<i>S</i>	<i>PEN</i>	<i>OS</i>	<i>NALIQ</i>
<i>ALIQ</i>	1								
<i>DIS</i>	-0.1029	1							
<i>EXIT</i>	0.0387	0.1931	1						
<i>L</i>	0.0543	0.1013	-0.0838	1					
<i>BASE</i>	0.1173	-0.6394	-0.2527	0.2141	1				
<i>S</i>	0.0537	-0.0614	-0.1970	0.3638	0.7486	1			
<i>PEN</i>	0.0951	0.0137	-0.0191	0.3782	0.3523	0.4781	1		
<i>OS</i>	0.0873	-0.0425	-0.0648	0.4182	0.4918	0.6171	0.6727	1	
<i>NALIQ</i>	0.0898	-0.1890	-0.1213	0.3389	0.6885	0.7342	0.4670	0.6717	1

Source: SER/PB and IBGE, Brazil.

4. Results

Similar to Mattos, Rocha, and Toporcov (2013), it was also not possible to verify any evidence that electronic invoices have promoted the reduction of tax collection inefficiency. However, this technology helps to organize databases for identification of relevant information about tax levy and production of reports, strategies and policies improvements. Table 4 exhibits the results of the estimation of the tax collection stochastic frontier (7) using the *R Statistics* software:

Table 4. Stochastic frontier of tax collection

Variable	Parameter	Stand. Deviat.	<i>z</i>	$P > z $	Interval of 95% of confidence	
<i>ALIQ</i>	0.19524	0.02509	7.78	0.000	0.14604	0.24443
<i>DIS</i>	-0.06049	0.00991	-6.11	0.000	-0.07990	-0.04107
<i>EXIT</i>	0.04272	0.00656	6.52	0.000	0.029872	0.05558
<i>AGR</i>	-0.79527	0.33356	-2.38	0.017	-1.449036	-0.14150
<i>IND</i>	0.34283	0.097113	3.53	0.082	0.15249	0.53317
<i>WHO</i>	0.80203	0.11786	6.80	0.000	0.57102	1.03305
<i>L</i>	-0.08295	0.00891	-9.31	0.000	-0.10041	-0.06548
<i>BASE</i>	0.55904	0.00843	66.29	0.000	0.54251	0.57557
<i>S</i>	873.7121	69.16337	9.86	0.000	738.1544	1009.27
Constant	11.04679	11.19912	0.99	0.324	-10.90309	32.99667
Gamma	0.88886	0.00705	2243.53	0.000	0.87428	0.90195
Sigma^2_u	0.23570	0.00653	37.28	0.000	0.22571	0.24237

Source: SER/PB and IBGE, Brazil.

The *ALIQ* was positively related to tax levy, showing that the higher the tax rate, the higher its tax levy. The relationship between the exit of goods and services to other states denoted by *EXIT*, the *BASE* and *S* were positively related to tax levy. The results also demonstrate that the greater the *EXIT* the higher the *BASE*, and higher the tax levy. The ratio of total discharges (*DIS*), the *EXIT* and tax collection is negative, i.e. the larger the discharges by sector, the lower the tax levy. This suggests that eventual reductions in tax inefficiency and increases economic activity promoted by discharges are not sufficient to balance the tax levy losses. The parameter of worked hours appears with the positive sign, indicating that the more labor intensive the sector, the less the tax levy. This outcome suggests the difficulty faced by the tax collection agency to monitoring firms or sectors that are based on the added value by the human work.

The dummy variables *AGR*, *IND* and *WHO* present parameters statistically significant, at 5%, 10% and 1% respectively, and points out that the sectors of wholesale commerce have a greater marginal effect (0.8020) on increasing efficiency of tax levy. The estimated value for γ (Gamma) 0.8888 is statistically significant and means that 88.88% of the error resulting from (7) is caused by the technical inefficiency of collection, and the other 11.12% are attributed to random events. It indicates that tax revenues depend on tax administration performance, also found in Brun and Diakit  (2016). The γ different from zero means that the inclusion of the control variables by the tax collection agency to reduce the inefficiency could be strategic. Moreover, the parameter σ^2_μ (0.23570), i.e. the classic idiosyncratic error variance, demonstrates the variance of tax levy inefficiency. Table 5 presents the results of (8):

Table 5. Linear Regression Model

Variable	Parameter	Stand. Deviat.	t	P> t	Interval of 95% of confidence	
<i>PEN</i>	-0.01161	0.00305	-3.80	0.000	-0.01759	-0.00562
<i>OS</i>	-0.10383	0.01337	-7.76	0.000	-0.13004	-0.07761
<i>NALIQ</i>	-0.84865	0.02427	-34.97	0.000	-0.89623	-0.80108
<i>Const.</i>	8.24712	0.03451	238.97	0.000	8.17946	8.31478

Source: SER/PB and IBGE, Brazil.

For the *F* test at 1% significance, the technical inefficiencies (8) rejects the hypothesis that all the parameters are statistically equal to zero. The adjusted coefficient R^2 shows that 12.18% of the deviations in the efficiency scores. In other words, the error term estimated in (7), could be explain by the selected regressors. Used to control the scores of inefficiencies by sectors, the parameters of *PEN* and *OS* are both negative. This suggests that the larger the number of fiscalization and the higher the fine imposed on the supervised firms, the lower the efficiency of tax levy. The parameter of *NALIQ* appears negatively related to *TAX*, as expected. It means that there are sectors with different tax rates, which registered at maximum 40 tax rates, as found in Table 2. Hence, the higher the tax system complexity, the less is tax levy.

The average efficiency of tax collection during the period from 2013 to 2015 was 0.7376. This means that the tax authority was able to collect about 73.76% of the total potential tax. It was just close to the average efficiency estimated by Ferrigno (2006) for Federal District, Brazil, which was 74.78%. The histogram exhibited in Figure 1 point out that there are many sectors whose efficiency concentrates close to 80%. However, there are also sectors, even with low frequency, in all lower efficiency quantiles.

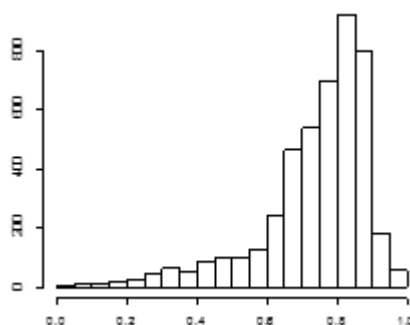


Figure 1. Histogram of efficiency index of tax levy

Source: SER/PB and IBGE, Brazil.

Table 6 demonstrates the twenty-eight most important sectors in terms of tax collection in the state of Paraíba:

Table 6. Main sub-classes of sectors in the tax collection of the state of Paraíba

Sector	Efficiency	Tax collec. (US\$)	Tax lost (US\$)
Wholesale trade of fuel alcohol, biodiesel, gasoline and other petroleum products, except lubricants	91.80%	679190728	60668452.83
Distribution of electricity	93.69%	488038946.5	32869311.05
Retailing of merchandise in general, predominantly food products by supermarkets	81.13%	273827086.5	63689351.93
Cellular mobile telephony	95.27%	265976446.7	13205296.45
Retailing of merchandise in general, predominantly food products by hypermarkets	79.05%	239478186.8	63467021.05
Wholesale of foodstuffs in general	83.25%	233304271.9	46941099.75
Manufacture of leather shoes	66.66%	198980146.1	99519923.05
Department stores or magazines	74.67%	170511876	57842049.28
Wholesale of electrical equipment for personal and domestic use	79.91%	165240209.4	41542683.11
Manufacture of footwear with non-leather material	50.86%	160940086.5	155497362.4
Wholesale of drugs for human use	69.06%	160216118.6	71779419.5
Retail sale of furniture and bedding products	88.14%	157936746.2	21251756.41
Retailing of merchandise in general, predominantly food products by small stores and warehouses	80.49%	143914477.6	34883481.89
Wholesale trade of goods in general, without predominance of food or agricultural inputs	69.10%	132293960.5	59158949.06
Fixed-line telephone services	91.64%	131212185.9	11970033.55
Manufacture of cement	80.64%	123380830.6	29621191.47
Manufacture of beers and draft beer	73.89%	120015192.6	42408941.39
Wholesale trade of goods in general, with predominance of food products	79.43%	113553684.7	29407016.18
Retail sale of clothing and accessories	86.38%	109469988	17260722.81
Retail sale of furniture	80.34%	108978517.7	26668131.16
Preparation and spinning of cotton fibers	67.41%	95383116.67	46113866.97
Wholesale of personal hygiene products	64.97%	74524332.42	40181427.81
Wholesale trade of cereals and legumes benefited	79.95%	72671243.72	18224620.85
Wholesale of cigarettes, cigarillos and cigars	94.53%	72669708.54	4205049.25
Retailing of sporting goods	85.32%	61642698.24	10606127.64
Weaving of cotton yarn	68.32%	59568716.18	27622027.64
Retail trade of household appliances and audio and video equipment	82.57%	58357307.57	12318855.16
Wholesale of construction materials in general	79.74%	58276571.72	14806663.44
Total		4729553382	1153730833

Source: SER/PB and IBGE, Brazil.

Some sectors have an expressive efficiency of tax levy, as the sectors of distribution of electric power and cellular mobile telephony, since the number of firms is small (9 and 22, respectively), as illustrated in Table 1. This facilitates the fiscalization by the tax collection agency. In addition, where tax is collected through the instrument of tax substitution, e.g. fuel manufacturing industries, the wholesale trade of alcohol, biodiesel and gasoline; the distribution of electric energy; fixed-switched telephone services; cellular mobile telephony; and wholesale cigarette trade, there is redundant efficiency above 90%.

In order to not overestimate the stochastic frontier, these sectors were removed from the sample, resulting in the 489 sub-classes used to obtain the efficiency scores. The sum of uncollected tax values from 2013 to 2015 all sectors is approximately US\$7 billion. There is a greater difficulty of fiscalization in other sectors, such as the retail trade in clothing, furniture and footwear, also responsible for higher tax collection revenues, where the tax collection was lower. There are also the sectors responsible for high participation in tax levy, but which demands more attention from the tax collection agency, due to their small efficiency scores. They are manufacturing sectors of leather shoes and footwear manufacturing with non-leather material, with efficiency of tax collection of 66.66 % and 50.86%, respectively.

However, these sector occupy the 7th and 10th largest collections, although with an efficiency below the overall average efficiency of 73.75%, as wholesale of personal care products and drugs for human use and wholesale trade in general merchandise, respectively. This result may be explained by the fact that it is more difficult to control the large number of small firms, often distributed in private family-owned houses, located in the countryside of the state. Following Ferrigno (2006), the worst results of the efficiency of tax collection were found in the sectors of retail trade in sanitizing products and wholesale trade of bags, suitcases and travel articles, with 15.38% and 17.31% of efficiency score, respectively. The determinants of the inefficiency of tax collection indicates that the sectors with the highest number of fiscalization were above the efficiency of tax levy average. This suggests that better-supervised sectors evade less taxes than others.

5. Conclusion

This paper estimates the technical efficiencies of tax levy of each subclass of sectors of state of Paraíba, Brazil. It was also provided empirical evidence related to the collection increasing, such as the fiscalization, the application of fines of the infraction notices, the quantity of fiscalization orders and the number of tax rates by sector. It was observed that the tax collection is negatively related to discharges. Moreover, the technical inefficiency, given by *Gamma* (88.88%), may be reduced by increasing the number of fiscalization and strategic actions by the tax collection agency. In addition to confirm our initial two hypotheses, the empirical outcomes also suggest that the complexity of tax legislation and the high number of small firms by sector make it impossible to implement policies that may cover all sectors of the economy.

Therefore, these characteristics demonstrate that it is necessary in-depth researches prior to develop proper tax collection strategies for each of the distinct economic activities in state of Paraíba. The estimated inefficiency of tax collection suggests that the tax collection agency has an important role in sense to reduce the dependence on the state from federal transfers, i.e. the State Participation Fund. Taking into account that 1) the goal of this fund is to reduce (but not eliminate) the inequality between Brazilian states, and 2) that the determinant criterion of revenue allocation is the tax collection capacity of the state, it is extremely important that each Brazilian federative entity establish tax collection policies to reduce their inefficiency.

Both the tax discharges and their effect on tax revenue and the growth of indirect taxes, especially those that focus on profit, have privileged less competitive firms. Largely known, the current Brazilian tax structure needs to be reformed. However, this reform clearly demands a new federative pact to establishes incentives to economic activities being based on the comparative and competitive advantages of each state and region. Thus, a tax reform agenda must include (i) more equitable distribution and transparent assessment criteria of oil royalties and State Participation Fund, (ii) transparent indexation of state public debts, and (iii) update the classification of new business activities due to the rapid expansion of new markets and technological innovations to face base erosion and expose tax revenues.

Our paper reinforces the evidence found in international literature and point to policy revision to strength governance environment framework. It is necessary to reduce tax distortions, which has promoted incentives for *tax wars* between regions in Brazil. This tax could lead to reduction of taxation on capital. For future research, we recommend to estimate the efficiency of tax collection in other regions and countries and testing other efficiency measures. A map with more detailed tax efficiency information from each region could be used for fiscal policy, mainly to vulnerable states, e.g. Minas Gerais, Rio de Janeiro, Rio Grande do Norte and Rio Grande do Sul.

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The Impact of Retail Setting Antecedents on Organizational Citizenship Behavior through Job Satisfaction

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Abstract

This study aims to investigate the impact of retailing antecedents on Organizational Citizenship Behavior through job satisfaction of front line employees in Arabic Bank branches at Amman Capital. The study's population included all front line employees in these branches at Amman Capital totaling (52) branches. The study sampling unit consists of individuals working at front line servicing clients in these branches totaling (235) individuals, where 235 questionnaires distributed at the surveyed employees, retrieved (232) and excluded (5) which comes to a total (227). To achieve the study objectives, the study used quantitative (descriptive analytical approach) through different statistical tools, most notably multiple regression analysis.

The study showed number of results namely: The retail system antecedents (Leadership support, Empowerment and Professional Development) impacted the organizational citizenship behavior of frontline employees of Arabic Bank.

The study is proposed a few recommendations for Arabic Bank branches; The managerial practices of Arabic bank management are better to link OCBs and job satisfaction, view it as a base to their strategies to manage the frontline employees.

Keywords: organizational citizenship behavior, leadership support, empowerment, professional development, job satisfaction

1. Introduction

The organizational behavior of citizenship (OCB) has an important role in the literature of organizational theory, and organizational Behavior. The main function of OCB is to ensure employees satisfaction, and to improve their performance (Kunda, Ataman, & Kartaltepe, 2019).

The concept appeared in the early 1980's to become a substantial field of research that underlined labor behavior and organizations social systems (Organ, 1997).

As a result, Ahmad, & Zafar, (2018) stated that it is always necessary to understand humans behavior in order to support this critical system, and equip workers with positive attitudes that reflected in better productivity, effective, and efficient performance (Rubel & Rahman, 2018).

In 1988 Organ confirmed the informal voluntary core of the OCB, Somech & Drach-Zahavy (2004) clarified that if the individual is performing a predefined role or is fulfilling a formal obligation, this is not a proof of the OCB. Such behavior should not be officially reimbursed as it must be outside the formal roles of employees within the organization (Jiao, Richards, & Zhang, 2011).

Organizational citizen behavior (OCB) is an evolving connotation of methods and reasons for individuals to positively contribute to organizations performance beyond their defined roles (Jain, 2016).

Previous research Podsakoff et al., (2000); Alotaibi, A.G. (2001);

LePine, Erez, & Johnson, (2002) confirmed that the citizenship behavior of the organization (OCB) is a predictor of employee job satisfaction. Hence efforts continued to find out citizenship behavior motivators either at the individual intrinsic level, or at the organizational endeavors.

Moh'd (2013); Kunda, et al., (2019) found that organizations social responsibility is likely to support employees' citizenship behavior at hospitality organizations.

Jones, (2010) confirmed that employees' perception of social initiatives energized their citizenship voluntary behavior. Khan, & Rashid, (2012) results underlined the role of leadership style and the organizational justice practices in promoting citizenship behavior. Jha (2014); Han et al., (2016) proved that supportive, inspirational leadership accompanied with empowering employees are drivers for creating and enhancing citizenship attitudes and behavior. Meanwhile Rubel & Rahman (2018) findings connected citizenship behavior with training and development programs provided to banking sector employees at Dhaka.

Recently this concept expanded in an accelerating manner particularly in business research to analyze the situation where people "go further" in the workplace in order to improve the readiness of both employees and employers to maximize the practice of citizenship and gain mutual benefits (Habeeb, 2019).

In spite that there is an agreement of the positive influence job satisfaction have on citizenship behavior, although the results vary according to the sector.

Therefore this paper aims to consider the motivators of jobs satisfaction as a mediator that lead to OCB of (Arabic Bank frontline employees) in capital Amman/Jordan. The conceptual basis and research hypotheses are created in the next sections (see the model in Figure 1). The attitude of the workplace (degree of job satisfaction) is proposed as a direct predictor of OCB.

2. Statement of Problem

Many studies have focused on the operations of businesses in developed countries, Similarly, rare researchers have been studied the relationship between organizational antecedents and job satisfaction and organizational citizenship behavior, in addition to that it is felt that there is a need to study such important subjects in the Arab countries.

This study conducted on Arab bank frontline empowered employees in Amman capital.

Consequently, the purpose of the study is to measure the impact of retail system antecedents (Leadership support, Empowerment and Professional Development) on the organizational citizenship behavior through job satisfaction as a mediating variable. To express the study's problem the researchers relied on the recommendations of Alotaibi, A.G. (2001), (Halepota & Shah, 2011); Jha, (2014) Bilgin, et al., (2015); (Jain, 2016); Ahmad, & Zafar, (2018), (Dai et al., 2018); and (Rubel & Rahman, 2018) who underlined the value of citizenship behavior, and the positive yield organizations got to confront the threat of competitors, and to achieve better outcomes.

3. Study's Hypotheses and Model

The research consists of three main variables as shown in Fig(1):

The independent variable: retailing system antecedents (Leadership support, Empowerment and Professional Development). The dependent variable: (Organizational Citizenship Behavior) & the Mediator variable: (Job satisfaction).

The following main hypotheses are stated and will be tested with the purpose of achieving the aim of the study as follows:

H01: There is no statistically significant impact of retail system antecedents (Leadership support, Empowerment and Professional Development) on the organizational citizenship behavior of frontline employees of Arabic Bank.

H02: There is no statistically significant impact of retail system antecedents (Leadership support, Empowerment and Professional Development) on job satisfaction of frontline employees of Arabic Bank.

H03: There is no statistically significant impact of job satisfaction on the organizational citizenship behavior of frontline employees of Arabic Bank.

H04: There is no statistically significant impact of job satisfaction in improving the impact of retail system antecedents (Leadership support, Empowerment and Professional Development) on the organizational citizenship behavior of frontline employees of Arabic Bank.

Antecedents system

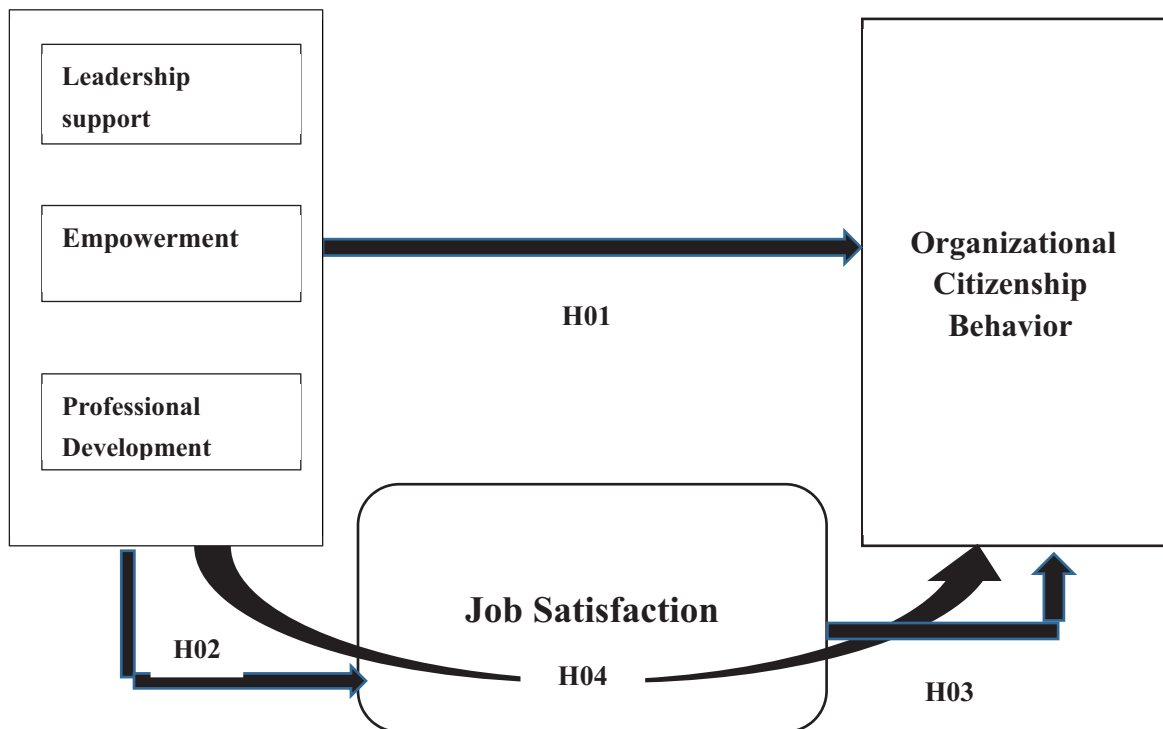


Figure 1. Research Model

4. Theoretical Background and Literature Review

4.1 Antecedents System

4.1.1 Leadership Support

Leadership is defined as the power and the ability an individual has to influence others (subordinates), and to guide them for achieving predetermined objectives (Robbins & Judge, 2013). Leadership encompasses creating a clear vision, establishing SMART objectives, moreover leaders equip followers with the knowledge and the needed tools to achieve these goals as intended (Bakir, 2017b).

Luthans (2011) also identified leaders as supporters who instill courage, empower employees, guide teams for the organizations' success.

Luthans argued that leaders support is pivotal to guarantee followers good performance. It enhances building and maintaining effective interpersonal relationships, facilitates creativity and constructs entrepreneurial spirit (Moh'd, 2018). Managers who are close to their subordinated are likely to earn loyalty and commitment (Yang, & Wei, 2018).

According to Ahmad, & Zafar (2018) those employees who work with friendly, cooperative and supportive leaders are satisfied, productive, and ready for creative initiatives.

Yukl, (2010) introduced nine behaviors the supportive leaders must adopt and be their daily story with followers: "Show acceptance and positive attitude regard others. Be polite and considerate; treat each employee as an individual. Remember important details about the person (like their name!). Be patient and helpful when giving instructions or explanations. Provide sympathy and support when the person is anxious or upset. Express confidence in the person when there is a difficult task. Provide assistance with the work when it is needed. And be willing to help with personal problems".

Within the same context Dai et al., (2018) stated that the behavior of support leaders has a remarkable influence on individuals and organization outcomes.

4.1.2 Professional Development

Theoretically it has been proven that human resources represented the inimitable competitive advantage (Armstrong & Tayler 2014), so that it is crucial to equip them with continuous development and learning programs to boost their capabilities to be able to perform successfully current and future jobs (Moh'd, 2019).

DeNisi & Griffin (2010) mentioned that organizations realized the significance of learning opportunities particularly when they can bring direct benefits to both the individual and the organization. Thus they devoted efforts, special budgets for these purposes.

Dessler (2014) illustrated that employees who are provided with development programs in terms of training, development and learning can adapt to the changing requirements of the organization and gain competitiveness in the labor market. Moreover, Terera, & Ngirande, (2014); Memon et al., (2017); Rubel & Rahman (2018); and Ocen, Francis, & Angundaru, (2017) findings revealed that there is a connection between development programs and employees job satisfaction and employees citizenship behavior.

4.1.3 Empowerment

The concept of "Employee Empowerment" is comprised of several explanations of sharing power, participating in decision making, and maximizing human resources contribution in the strategic direction of the organization (Gibson et al., 2012).

Singh, & Singh, (2019) pointed out that in empowerment employees have a role in shaping organization activities, and they have control over the processes and the outputs. They added that the ultimate goal of empowerment is satisfaction of both employees and customers.

Hunjra, Akbar, & Yousaf, (2011) denoted that empowerment is a mean of investment in employees capabilities, through granting them the freedom and authority to make decision.

According to Luthans (2011) human resources need to take risks, initiatives, to be part of the adaptation process, they attempt to be the enablers of products innovation and organization competitiveness.

Han et al., (2016) argued that these objectives can be attained through empowerment, through avoiding the traditional top down communication, and autocratic leadership styles.

Jha, S. (2014) confirmed that if organizations seek employees' creative ideas and outstanding solutions, they had to give them more autonomy, continuous leadership support, and a radical change of organizations polices structure, and culture.

Karim, & Rehman, (2012); Kiarie et al., (2017) confirmed the relationship between empowerment and job satisfaction, and citizenship behavior which in return reflected in better productivity, quality of products and services and in better customer relationship .

4.2 Organizational Citizenship Behavior

In spite of the multiplicity of OCB definitions the core remains to express any positive actions that affect positively and uphold organizational performance (Ahmad, & Zafar, 2018).

Referring to the literature, the concept was introduced by Organ in the eighties of the last century with a definition that hold readiness to cooperate and give more without compulsory (Khalili, 2017).

Organizational behavior of Citizenship (OCB) is discretionary, not directly or explicitly accepted by the formal compensation system and represents individual actions that promote the effective functioning of the organization (Jain, 2016).

According to Singh,& Singh, (2019) through OCB employees go beyond the contract conditions signed by them when they hired, they perform non-compulsory tasks without expecting any compensations or recognition by the organization. The individual does not expect any kind of return for all these activities, at the same time the absence of these actions will not be penalized (Bilgin, et al., 2015).

Eissenstat & Lee, (2017) mentioned that OCB stems from the social exchange theory, it highlighted the helping roles and the social interaction inside the organization, the inner satisfaction that the person gain and reflected later in value added actions.

As quoted in (Memon et al., 2017) Organ distributed OCB into five groups of behavior "Altruism, , Courtesy, Civic Virtue, Conscientiousness, and Sportsmanship".

All these behaviors encompass unlimited state of cooperation and willingness to work for the benefit of others and the interest of the organization, without hesitation to provide any kind of assistance.

Relying of what was introduced by (Organ, 1997) Altruism is a volunteering initiative to help others like, new employees, overworked or absent colleagues. Courtesy is the behavior that aims to prevent problems, and to reduce conflicts. Civic virtue is expressed in deep interest in organization daily affairs, involvement in social activities, attending meetings. Conscientiousness encompasses behaviors of acceptance and compliance of rules and regulations of the organization. Finally, sportsmanship is connected with individual willingness to tolerate inconveniences and perform without, complaints.

4.3 Job Satisfaction

Job satisfaction is defined as the “pleasurable and positive emotional state deriving from one’s performance appraisal in task accomplishment” (Bilgin et al., 2015).

According to Dessler (2014) job satisfaction expressed the state of consistency between employees expectations and what they got on reality at the organization.

Ocen, et al., (2017) explained that it can be positive or negative feelings associated with several facets of work place, mainly payment and incentives system.

Armstrong & Taylor (2014) connected job satisfaction with the attitudes employees had towards the nature of work, work conditions and internal environment in terms of supervisors’ style, the relationship with coworkers, job security, and the opportunity of growth.

Parvin & Kabir, (2011) illustrated it is not self-employment that caused satisfaction and dissatisfaction, but the most important factor is employee expectations, and organizations dedications to meet these expectations in a satisfactory manner.

Bladi. & Al Saed (2017); summarized basic four factors that affect job satisfaction, psychological factors, social, physical and financial factors.

However Gibson et al., (2012) pointed out that job satisfaction relied on 5 aspects (pay, job type and the degree of challenge and exciting the job has, promotion opportunities , supervisors and coworkers).

The results of many previous studies, Pouliakas, & Theodossiou, (2010); Halepota, & Shah (2011); Bailey et al., (2016); Bakir,(2017a) supported the role of job satisfaction in enhancing job satisfaction, employees commitment and loyalty, organizational citizenship behavior and as a results organizational performance.

5. The Study’s Methodology

The research uses the descriptive-analytical approach to study its problem and test its hypotheses to achieve its objectives and importance. It provides information on the reality of the retail system antecedents (Leadership support, Empowerment and Professional Development) and their impact on the organizational citizenship behavior, and the magnitude of job satisfaction to elevate OCB.

5.1 Study’s Population and Sampling Unit

The study’s population consists of front employees in the 52 branches of the Arab Bank in the capital Amman. The sample of the study was taken in a comprehensive survey of all these employees who were 235.

Accordingly 235 questionnaires were distributed to the members of the sampling unit, and retrieved 232 questionnaires and 5 questionnaires were excluded.

5.2 Sources of Data Collection and Information

The current study is based on two sources:

1. Secondary sources: The researchers sought in this aspect to analyze the content of previous literature in books & journals.
2. Primary sources: In this aspect, the researchers resorted to the questionnaire as the main tool for the study, as it is the main technique in collecting the data for the phenomenon to be subjected to classification, treatment, testing, analysis and presentation.

The researchers used the questionnaire to cover the dimensions of the study and its variables, which was distributed to the selected sample members and collected after being filled by the respondents as follow:

Section One: Personal Demographic Characteristics. Were collected with closed-ended questions, through (4) Characteristics (Age; Gender; Years of Experience and Qualification).

Section Two: Retailing Antecedents. This section was measured through (Leadership support, Empowerment and Professional Development) and consisted of (5), (6) and (5) paragraphs respectively.

Section Three: Organizational Citizenship Behavior, this section was measured through (11) paragraphs.

Section Four: Job satisfaction, this section was measured through (5) paragraphs.

The respondents agreement was measured through Likert 5 scale as explained in table (1).

Table 1. Likert 5 scale

<i>Strongly Agree</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly Disagree</i>
5	4	3	2	1

5.2.1 The Questionnaire Validity

The survey was pre-tested by group of instructors PhD qualifications, from Amman Arab University and other universities, practitioners and their major is Business Administration to ensure that the survey constructed probably. A few comments added about the survey. The comments have been taken into consideration.

5.2.2 Questionnaire Reliability

Internal consistency of the scale was established through Cronbach's alpha measure. The values of this measure are given in Table (2).

Cronbach Alpha was calculated for each of the study's variables. table (2) results show that the values ranged between (0.81-0.89), according to Sekaran (2003) these results are acceptable and indicated an acceptable internal consistency and also that the questionnaire is reliable

Table 2. Cronbach Alpha results

Variable/s	Cronbach Alpha value
Leadership support	0.86
Empowerment	0.89
Professional development	0.82
Job satisfaction	0.81
Citizenship behavior	0.84

6. Statistical Analysis Results

Statistical Package for Social Sciences "SPSS Ver.22" was used for analyzing the collected data and information as follows:

6.1 The Descriptive Statistics

The Mean and standard deviations of all areas of the study's instrument were calculated.

Table (3) displayed the results of the total means and standard deviations of (Leadership support, empowerment, and professional development) which = (4.236, 4.198, 4.101) respectively, the means values indicated that the respondents perceived their organization positively, and they got satisfactory levels of support from their leaders, and sufficient levels of authority delegation and power to participate in decision making process, and the organization provide them with the needed development activities, the table also shows the total mean of the questions that measured Job satisfaction (3.74) which signalized that the respondents are satisfied with the supportive activities provided by their organization.

The table also manifests the total mean of the questions that measured organizational citizenship behavior (4.12) which implied that the respondents have high level of citizenship feelings that reflected in their behavior towards their organization and accordingly on their performance.

The values of the standard deviation which are for all the variables less than 0.50 indicated an approval among the respondents related the study's questions.

Table 3. descriptive statistics results

Variables	Mean	Std. Deviation	Std. Error Mean
Leadership support	4.2361	.34064	.02261
Empowerment	4.1982	.34366	.02281
Professional development	4.1013	.34864	.02314
Job satisfaction	3.7419	.24704	.01640
Organizational Citizenship behavior	4.1213	.30336	.02013

N=227

6.2 Hypotheses Testing Results

H01 results:

Multiple regression is calculated to test the impact of the three independent variables (leadership support, empowerment, and professional development) on the dependent (citizenship behavior). Table (4) displays the results of the model summary, ANOVA and coefficients.

Table 4. Ho1 results

Model summary results & ANOVA Results				
R	R Square	Adjusted R Square	F	Sig.
.447 ^a	.200	.189	18.528	.000 ^b
Coefficients				
Independent variables	B	Beta	t	T sig
(Constant)	1.961		6.620	.000
Leadership Support	.156	.176	2.696	.008
Empowerment	.248	.285	4.294	.000
Professional development	.115	.130	1.848	.066

Table (4) results show that the value of $R = 0.447$ indicated that there is a positive moderate correlation between the independent variables and the dependent. The value of $R^2 (.200)$ shows that 20% of the variation in the dependent variable (organizational citizenship behavior) is impacted by the independent variables. The values of calculated F (18.528) at 0.000 sig level indicated that the model is suitable for testing regression between variables. Due to the sig level (0.000) which is less than (0.05).

The coefficient part in the table displays the values of t calculated and their significant which were as follows: Leadership support: $t = (2.696)$, at (0.008) sig level. Empowerment: $t = (4.294)$, at (0.000) sig level, Professional development: $t = (1.848)$, (0.066) sig level. These results indicate that there is a statistically significant impact of leadership support and empowerment on organizational citizenship behavior. As well as the professional development doesn't have a statistically significant impact on citizenship behavior, due to its sig level (0.06) > (0.05). Also the table results show the values of B (0.156) which means that any increase in one unit of the leadership support will increase the organizational citizenship behavior by (0.156). Furthermore the value of B (0.248) means that any increase in one unit in empowerment will have an increase in organizational citizenship behavior by 0.248.

H02 results:

Multiple regression is used to test the impact of the independents (leadership support, empowerment, and professional development) on the dependent (job satisfaction).

The results in table (5) show that the value of R (0.258) indicated that there is a positive weak correlation between the independent variables and job satisfaction. The value of $R^2 (0.066)$ shows that just 6.6% of the variation in job satisfaction resulted from the 3 independent variables. The values of calculated F (5.282) at 0.002 sig level indicated that the model is suitable for testing regression between variables.

Table (5) also shows the values of t and their significant levels of leadership support (1.544), at 0.124 sig level, and for empowerment 1.868 at 0.063 and finally for Professional development 1.226 at (0.221) sig level. It is obvious that all sig level results > 0.05 which indicated that there is no statistically significant impact of the three dimensions (leadership support, empowerment and professional development) on Job satisfaction.

Table 5. Ho2 results

Model summary results & ANOVA Results				
R	R Square	Adjusted R Square	F	Sig.
.258 ^a	.066	.054	5.282	.002 ^b
Coefficients				
Independent variables	B	Beta	t	T sig
(Constant)	2.725		10.458	.000
Leadership Support	.079	.109	1.544	.124
Empowerment	.102	.142	1.868	.063
Professional development	.062	.088	1.226	.221

H03 results:

Simple regression is utilized to test the impact of job satisfaction on the organizational citizenship behavior of frontline employees of Arabic Bank.

Table (6) shows that $R = 0.247$ indicated a weak positive correlation between job satisfaction and organizational

citizenship behavior, meanwhile the value of R^2 (0.061) indicated that job satisfaction is responsible of 6.1% of the variation in organizational citizenship behavior. The value of F (14.620) at 0.000 sig level indicated that the model is suitable for testing regression and there is an impact of job satisfaction on organizational citizenship behavior. The value of t (3.824), (0.000) sig level indicated that job satisfaction has a statistically significant impact on organizational citizenship behavior. And through the value of B (0.303), any increase by one unit in job satisfaction will result an increase in organizational citizenship behavior by 30.3%.

Table 6. Ho3 results

Model summary results & ANOVA Results				
R	R Square	Adjusted R Square	F	Sig.
.247 ^a	.061	.057	14.620	.000 ^b
Coefficients				
Job satisfaction	B	Beta	t	T sig
(Constant)	2.986	.247	10.039	.000
	.303		3.824	.000

H04 results:

There is no statistically significant impact of job satisfaction in improving the impact of retail system antecedents (Leadership support, Empowerment and Professional Development) on the organizational citizenship behavior of frontline employees of Arabic Bank.

Table 7. testing mediator, results

Hypothesis	a		b		a*b		c		c'		Decision	
	Path Coefficient	T. Value	Path Coefficient	T. Value	Path Coefficient	T. Value	Path Coefficient	T. Value	Path Coefficient	T. Value	Baron & Kenny	Botstrapiion Method
H ₀₄	0.531***	8.256	0.476***	4.957	0.215**	1.963	0.352***	4.133	0.121***	4.705	Partial Mediation	Partial Mediation

The paths of c, a, b, and c' can be estimated by multiple regression to test the job satisfaction as a mediator

Total Effect	VAF	Decision
0.604	0.41	Baron & Kenny Partial Mediation
		Bootstrapping Method Partial Mediation

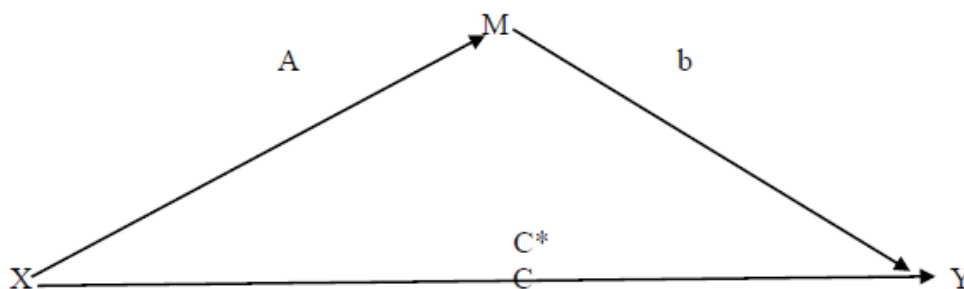


Figure 2. Testing mediator

A meditational model is correctly specified, the paths of c , a , b , and c' can be estimated by multiple regression to test the job satisfaction as a mediator improving the impact of retail system (Leadership support, Empowerment and Professional Development) on the organizational citizenship behavior of frontline employees of Arabic Bank. Tables (7) shows:

- a) Independent to mediator, with Beta =0.531 , its sig.
- b) Mediator to dependent, with Beta =0.476, its sig.
- c) Direct of independent to dependent, 0.352
- d) Total effect = 0.604
- e) VAF= 041 this result indicate that the impact of mediator is partially referred to The Baron and Kenny (1986) for testing mediation Method

7. Conclusions and Recommendations

The study aims to shed light on the impact of (Leadership support, Empowerment and Professional Development as antecedents of both job satisfaction and organizational citizenship behavior of frontline employees operating at the Arabic bank which is considered the largest bank in Jordan in terms of capital, number of employees and branches, and geographical distribution

Relying on the statistical analysis it was found that there is a statistically significant impact of the three dimensions (Leadership support, Empowerment and Professional Development) on citizenship behavior, while they don't have a statistically significant impact on job satisfaction. Based on what was introduced in the previous literature part job, satisfaction is motivated by group of factors in addition to the examined three in this study.

For example (pay, internal environment, coworkers, content of the job.. etc) were predictors for job satisfaction.

In consistency with other studies results, the findings of this study confirmed that there is an impact of job satisfaction on organizational citizenship behavior.

And finally the results of the fourth hypothesis revealed that the job satisfaction as a mediator is partially improving the impact of retail system (Leadership support, Empowerment and Professional Development) on the organizational citizenship behavior frontline employees of Arabic Bank.

Meanwhile the results of the descriptive statistics (total means) indicated a state of satisfaction and citizenship attitude and behavior among the surveyed employees.

Relying on the previous results it is recommended to give more attention to the means of job satisfaction, and to conduct surveys to assess employees' perception of work conditions, their preferences, and expectations, to be able to find the best matching between employees and the organization's objectives.

However this study has its limitations which embodied in examining 3 antecedents for motivating both job satisfaction and organizational citizenship behavior, the study was conducted just in one section at one organization. Consequently For future research it is recommended to take into considerations other antecedents and test their impact on citizenship behavior, with different mediators, and to conduct future research at different sectors than commercial banks.

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The Popular Financial Reporting between Theory and Evidence

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Abstract

The main international accounting associations have identified Popular Financial Reporting (PFR) as a decision-making tool to increase accountability and transparency as a possible decision lever coherent with the New Public Governance theory. The study has focused its attention on the features and contents of the PFR identified in the literature and present through the analysis of the 193 PFRs municipalities presented at the PFR Awards Program 2017. The analysis of the presence and absence of some characteristics confirms that the reality does not reflect the theoretical request, moreover the statistical analyzes carried out confirm various hypotheses related to the PFR but reject others such as the criterion of document length. The correlation between socio-economic characteristics of the population and the groupings of characteristics of each PFR. The study confirms a relationship between document length and level of education, and between percentage of non-native English-speaking residents and number of appearance features. To the 23 observable criteria, additional possible ones are added which, based on logic and empirical evidence, will have to be studied to assess their impact in terms of transparency and accessibility.

Keywords: popular financial reporting, transparency, accountability, reporting features, new public governance

1. Introduction

1.1 The New Public Governance and the Popular Financial Reporting

Approach to New Public Governance (Klijn & Teisman, 2003; Osborne, 2010; Osborne, Radnor, & Nasi, 2013) has placed emphasis on the relationship between the stakeholders of reference and the public administration with the introduction of new tools and new levers (Biancone, Secinaro, & Brescia, 2018a). It becomes urgent to understand and identify the priority stakeholders (Carroll, 1996; Clarkson, 1995; Donaldson & Preston, 1995) defining the main ones in terms of power, legitimacy and urgency (Mitchell, Agle, & Wood, 1997). Investors and citizens are the two main stakeholders of interest to public groups. It is emphasized how the reports and disclosures normally realized for a few providers including investors (R. Jones, 1992) supply information which is often too technical and complex to be available and accessible to the citizens (IPSASB, 2014; D. B. Jones, Scott, Kimbro, & Ingram, 1985). From this perspective, the growing need for accountability towards stakeholders (Bäckstrand, 2006; Belal, 2002; Caperchione, 2003; Collier, 2008; Sternberg, 1997) is a particular feature of the environment of local bodies; the evolution of the concept of citizenship sees him as a user and an active co-producer (Bovaird, 2007; Chess & Purcell, 1999; Doh & Guay, 2006) with decision-making power over the business choices made by the local administration. The creation of accessible and transparent financial documents is a starting point for the involvement of citizens, popular financial reporting has gained increasing attention from both scholars, managers and politicians. Several finance professional associations including the Government Finance Officers Association (GFOA), the finance professional association have been promoting the Popular Reporting as a reporting tool. Both the Governmental Accounting Standards Board (GASB) and the Association for Governmental Accountants (AGA) promote the diffusion of popular reporting differently with their own guidelines, also proposing prizes (Harris, McKenzie, & Rentfro, 2008). Popular Reporting is a communication tool that is placed at the highest level of the "Pyramid of Accountability" prepared by the Association of Government Accountants (AGA), as it can provide aggregated data that meet the needs of public administrations to account about the use of public resources (Association of Government Accountants, 2019). According to GASB the Popular Financial Reporting could be subjected to a comprehensive and easy-going availability of other potential users such as politicians, public sector employees, media, community groups, etc. (Governmental Accounting Standards Board, 1992). Popular Financial Reportings (PFRs) are defined as

financial reports targeted at public stakeholders (e.g. citizens, businesses and community group) who lack a background in public finance but who need or desire a less detailed overview of the government's financial activities (Yusuf & Jordan, 2012). The Popular Financial Reporting purpose is to facilitate public stakeholders' understanding of their government's financial activities (Clay & Olson, 2008). The Government Finance Officers Association (GFOA) as well offers a different approach to the financial statement in generally accepted accounting principles (GAAP). The IPSASB particularly emphasizes that the legislature, which acts in the interests of members of the community, is a major user of Popular Financial Report. Thus, since 2010, according to the Conceptual Framework for General Purpose Financial Reporting by Public Sector Entities, the IPSAS identified citizens as primary users of Popular Financial Report. The prospective increase in population requires the identification of tools able to focus the attention on the allocation and use of decreasing resources (Cheshire & Hay, 2017; Ehrlich & Holdren, 1971; Fogel & Costa, 1997; Ladd, 1992; Passel & D. V. U. S., 2008; Spengler, 2017). The identification of indicators associated with Popular Financial Reporting could allow a better understanding of the correct allocation of resources and outputs at the social level (Biancone & Secinaro, 2016; Biancone, Secinaro, & Brescia, 2017c, 2017b, 2018b; Biancone, Secinaro, Brescia, & Iannaci, 2018; Campra et al., 2019). Starting from the analysis of the literature and research on Popular Financial Reporting it is possible to identify the main necessary elements to increase the structure and contents of the report (Biancone, Secinaro, & Brescia, 2017a; Cohen & Karatzimas, 2015; Groff & Pitman, 2004; Yusuf & Jordan, 2012; Yusuf, Jordan, Neill, & Hackbart, 2013). Although the studies conducted do not systematically combine the features present in previous studies. There are not many studies on the subject of Popular Financial Reporting, even though the recognition by supranational bodies and national and international accounting principles of public management. Some were comparing it with other social reporting tools such as Social Reporting and Integrating Reporting denote that the Popular Financial Reporting is the only one with characteristics able to guarantee dissemination by incorporating some elements of the other social reports (Biondi & Bracci, 2018; Brescia, 2019). The document present since 1990 in the Anglo-Saxon countries and in particular in Canada and America, so much so as to lead to the creation of a prize for its diffusion, could however not comply with what is stated in the literature. Given the lack of capacity and often the distancing of the population of the expressed politics with a low turnout both in America and in Europe, one wonders if the document is well structured and if perhaps at the base there is scarce attention to those who are the criteria for giving citizens real transparency and accountability. Alternatively, the poor reading ability of the socio-demographic characteristics of the reader of the municipalities (Johnston et al., 2019). From what has been previously expressed, a theoretical GAP concerning the clarity of contents that according to the literature, the report must have to be accountable and transparent. The reality also highlights a practical GAP, the prizes provided to the Popular Financial Reporting realized in the American and Canadian cities may not respect the criteria identified with the consequence of not having the desired effect. If the tool has been identified as useful to meet the need of New Public Governance, it is helpful to investigate further. To facilitate the analysis, the Popular Annual Financial Reporting of American and Canadian cities that received an award in the 2017 Program Awards were examined. The study intends:

- 1) Carry out a brief literature review identifying all the criteria and the scientific evidences related to the realization of the document to guarantee transparency and accountability.
- 2) Verify what is actually present among the criteria in the literature in the awarded reports highlighting where new features can be found that are not available in the literature and confirming or denying the existing theory.

The article, through the methodology, better identifies the analyzed sample. The analysis of variables based on the literature review in method provides and define the criteria of the study. The results highlight how observable the literature can be both in quantitative and qualitative terms. Finally, the conclusions highlight useful elements for bridging theoretical and practical GAPs and research questions for the future.

2. Method

The 400 Popular Financial Reporting presented at the Popular Annual Financial Reporting Awards Program organized by GFOA (<http://www.gfoa.org/2017-results-popular-annual-financial-reporting-award-program>) were considered in their initial phase. The presented reports arrive from countries, school districts, municipalities and Public Employees Benefit Systems. The study analyses 193 out of 200 and considers only the Municipality according to most of the reference literature. Seven reports are not available on the official page nor on the institutional ones of the Municipalities. The figure 1 summarizes the phases of the methodology. The GFOA established the Popular Annual Financial Reporting Awards Program (PAFR Program) in 1991 to encourage and assist state and local governments to extract information from their comprehensive annual financial report to produce high quality popular annual financial reports specifically designed to be readily accessible and easily

understandable to the general public and other interested parties without a background in public finance and then to recognize individual governments that are successful in achieving that goal. American and Canadian cities are therefore an excellent case study from a theoretical point of view because the practice of years has led cities to embrace the instrument. In addition, the municipalities were selected instead of other levels of government because they were closer to the citizen and therefore with a greater relationship between the two subjects with greater capacity to influence accountability (Gaventa & Valderrama, 1999; Olsson, 2003; Hanberger, 2009).

The analysis was carried out starting from the definition of the variables and characteristics found in the published literature, the identification of the variables within the selected reports, the accounting of the variables present, the categorization of the variables present for groups according to the theory and finally the relationship between more relevant category variables and also demographic characteristics to confirm, add or deny what has been identified to date in the present literature.

The analysis of Popular Annual Financial Reporting Awards Program conducted with a bottom up coding approach by ATLAS software, elaborating grounded and relationships between variables (Bell, Bryman, & Harley, 2018) allows to identify the elements that best meet the needs of the stakeholders and that must be present in the report (Brescia, 2018). The analysed variables are justified by the Popular Financial Reporting literature aimed at guaranteeing transparency, accountability and proper allocation of resources. The counting of the variables was done directly by the study group on the reports. The presence of each characteristic has been identified and counted, counting it only once when present. The presence of the relationship between variables highlighted in the literature and observable in the chapter is conducted through simple or multivariate linear regression. All statistical analyses were performed using STATA V.13 (Stata Corp, College Station, Texas, USA, 2013) and p value <0.05 was considered significant for all analyses. A robustness test was performed for all analyzes. Since the simple linear correlation is not sufficient, tests of significance of the straight line are also carried out, to verify that the angular coefficient b deviates significantly from zero. The tests used are the t-test, also called Student's t-test, which is based on the comparison between means, and the Fisher's F which is based on the comparison between variances, for which we talk about analysis of variance (Jørgensen, 1983).

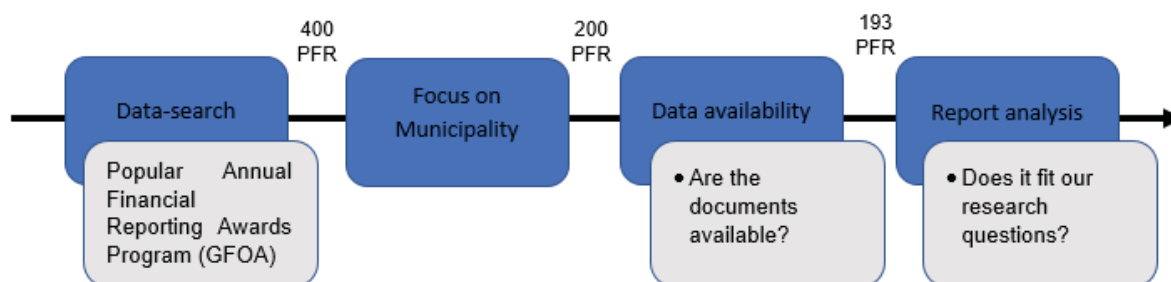


Figure 1. Screening methodology

2.1 Evidences from the Literature, Variables and Characteristics

Groff and Pittman (2004) were the first to analyse in 2004 the spread of the popular report as a tool for the dissemination and transparency of public administrations, in accordance with the recommendations of the GFOA's for using websites to access the government's budgets and financial reporting. They highlight that CAFRs represents a comprehensive and detailed report of all the explanatory elements relating to revenue and public expenditure per service of each city, including quantitative and qualitative elements. Its length varies according to the analysis from 17 to 32 pages. Between 2012 and 2013 Yusuf et al. analysed the essential characteristics and important elements that must be present in the Popular Financial Reporting in the U.S. and Canada context. The Popular Financial Reporting has spread throughout the territory, and even 75% of public bodies analysed in U.S.A. was using the tool. In Europe, and more precisely in Italy, it will be necessary to wait for the 2014/2015 financial year to have a first case of realization of the document (Biancone et al., 2016). Both the analysed American sample and the Italian one predicts a significant percentage of the population over 65, most of the population is white, most of the population has a high school level. The density of the population, the percentage of people who own a house and the level below the poverty line vary. From the two carried out analyses it is possible to identify two interesting characteristics. Among the percentage of white population and the issue of Popular Financial Reporting in America there is a significant positive correlation ($p = 0.052$) (Yusuf et al., 2013). The American analysis does not reveal significant aspects between socio-economic factors and analysed results. In Turin a positive linear correlation is identified between the level of education and the reading

capacity of Popular Financial Reporting ($p = 0.042$) (Biancone et al., 2016). Both in the case of the Study of the City of Turin and according to the sample U.S.A. the most involved departments in the realization of the document are the financial and budgeting sectors. Reading the results starting from numerical data provides a greater possibility of identifying the relevance and the "big picture" of the situation. If Yusuf (2012) had identified the most significant criteria for the PFRs to be answered through a first focus group of citizens and a subsequent evaluation of effectiveness by 75 students, in the case of the City of Turin, the second result is based on the indications of a statistically significant percentage of the population (Biancone et al., 2016) on criteria related to the document useful to ensure transparency. Yusuf et al. (2012) identifies and confirms the need for visual aids such as tables, figures and other references to the text, readable spaces and text sizes. The prototype wanted by citizens requires more information on the collection and use of taxes, expenses, economic prospects, including the perspective plan of the city, information on governance, summary of key projects in terms of commitment and use of capital, discussion and description of debt, cost of debt and interest, comparison with the previous year and future perspective, and where possible, a comparison with other cities. The students confirm the highlighted elements adding that the document should not be longer than 7 pages. A specific definition of the efficacy criteria of the PFRs is given. These criteria are largely confirmed by the structure and analysis carried out for the realization of the second European example of Popular Financial Report of the City of Turin for the year 2016/2017. Positive and negative news provide citizens with useful elements to increase credibility and trust in public administration (Anderson & Edwards, 2015; Clay & Olson, 2008; Piotrowski & Van Ryzin, 2007). The PFR in the U.S. context and Canada is used to summarize what was discussed in a discursive manner in the CAFRs with a reference to the less concise document (Groff & Pitman, 2004). Therefore, if in the Anglo-Saxon context should not exceed 7 pages, in the Italian context a more discursive form of the document is needed. Moreover, from the analyses conducted on the City of Turin, the population appreciates the type of graphs (76.73%) and tables (83.86%) and overall has a high clarity of the provided information (40.77%) although it can be further improved (55.40%). No differences were found according the level of education (Biancone et al., 2016). Cohen et al., (2015) proposes the adoption of Integrated Reporting as a tool for representing the six-capital framework as defined by the IIRC (2013; 2014) guidelines of the public administration. It proposes the construction of Popular Reporting based on essential information criteria and easy and understandable information for the citizen. This approach aimed at the citizen satisfaction, already includes the elements required for the implementation of Integrated Reporting. The realization of another report, different from the PFRs, is therefore useless, especially in a period of scarcity of available public resources. Precisely the increasing scarcity of resources as well as the perception of the population of inefficiency of municipalities and public bodies in America (ANES, 2019; Yusuf et al., 2013) and the decrease of people involved in elective activities in Italy (Cavallaro, Diamanti, & Pregliasco, 2018) shift the attention to the need of identifying how resources are actually used. This has led to a greater attention to public management and to the use of resources according to political programs (Ibrahim & Perez, 2014), costs for providing services (Daniels & Daniels, 1991), future taxation aspects (Brusca & Montesinos, 2006), as well as financial condition (Brusca & Montesinos, 2006). The use of taxes therefore represents a focal point for transparency in the PFRs (Yusuf et al., 2013). If transparency is achieved through a discussion with timely, comprehensible and complete information (Craig, 2004), then the PFR can be a useful tool for analysis. Jordan et al. (2017) has identified 23 criteria useful to create transparent reports from the fiscal point of view the disclosure, starting from what established for the CAFR in U.S.A. and in Canada, based on the criteria already defined by Yusuf et al. (2013) for the realization of the PFRs.

2.2 The Sample

The analysed sample includes 193 municipalities, of which 11 are Canadians and the remaining are Americans. The data refer to July 2017. The socio-demographic characteristics of the sample can be viewed in table 1.

Table 1. Characteristics of the sample

Variable	Mean	Std. Deviation	Min	Max
Population	167,02	698,339.6	1,270	8,622,698
Population percentage over 65	14.84	6.71	2.8	58.8
White alone, percent	77.49	16.91	7.6	96.8
High school graduate or higher, percent of persons age 25 years+, 2012-2016	84.97	21.16	7.01	99.8
Bachelor's degree or higher, percent of persons age 25 years+, 2012-2016	38.27	16.08	9.3	78.7
Persons in poverty, percent	12.35	8.10	0	46.1
Language other than English spoken at home, percent of persons age 5 years+, 2012-2016	20.74	19.55	1.6	96

The municipality with the lowest population is Westlake (TX) while the municipality with the highest population is New York (NY). The city with almost all white population is Powell (OH). The municipality with more high school graded or higher is Topeka (OH) while the one with a lower level is Westlake (TX). The municipality with the highest percentage of the population with bachelor's degree or higher is Topeka (KS) and with less is Seagoville (TX). The city with the highest percentage of people in poverty is Oxford (OH) while the one with a level of 0 is Gilberts (IL). The highest percentage of people who speak a language other than English at home is Frisco (CO) and one in which almost the entire population speaks English as a first language at home is King (NC). The socio-economic considered variables are those considered for the previous analyses identified in the literature on Popular Financial Reporting (Biancone et al., 2016; Yusuf et al., 2013). Statistical analyses conducted between socio-economic variables and characteristics linked to the document always consider the described variables.

3. Results

The literature and the conducted analysis identify 48 characteristics divided in 7 groupings: number of pages or length, comprehension, focused community, six capital frameworks, financials, appearance, access. The literature identifies 48 characteristics, but it was not possible to group them all according to the structure already identified by Jordan et al. (2017). In table 2 it is possible to identify the count of each of the characteristics and the possible attribution.

Table 2. Characteristics and groupings of Popular Financial Reporting

Code	Grounded	Code Groups	% on total sample	Std. Dev
between 51 and 100 pages	0	Pages	0	0
Explain acronyms	0	COMPREHENSION	0	0
Comics	1		1	0.072
Environmental impact on performance	1	COMMUNITY		0.072
Active voice	2	FOCUSED	1	
Cost of programs or services over the 100 pages	2	COMPREHENSION	1	0.101
Intellectual Capital	2	FINANCIALS	1	0.101
Television	3	Pages	1	0.101
Annual distribution	3	Six Capital Framework	2	0.124
between 33 and 50 pages	5		3	0.159
Platform	6	ACCESS	3	0.174
Negative financial outcomes	6	Pages	3	0.174
Human capital	7		4	0.187
Infographic	11	FINANCIALS	6	0.232
Consolidated statements	12	Six Capital Framework	6	0.242
quality of life	16		8	0.276
Natural Capital	17		9	0.284
non-financial comparison with previous year	20		10	0.030
Budget	23	Six Capital Framework	12	0.325
Description of Special or spot project	26		13	0.342
benchmark context	40		21	0.406
Manufactured Capital	41		21	0.410
Social media	43		22	0.417
Non-financial visuals	45	Six Capital Framework	23	0.424
Overview of financial condition	45		23	0.424
between zero and 12 pages	56	APPEARANCE	29	0.455
Economic trends	61	FINANCIALS		0.466
Mission statement	69		32	
representation of organization and responsibility	76	Pages	36	0.480
Grants and certifications	83	FINANCIALS	39	0.490
between 13 pages and 32 pages	83	COMMUNITY		0.496
Defined Financial terms	96	FOCUSED	43	
Contact information	96		50	0.501
Report overview	101		52	0.501
Social Capital	116	Pages	60	0.496
	116	COMPREHENSION	60	0.491
	124	ACCESS	64	0.480
	129	COMPREHENSION	67	0.472
	142	Six Capital Framework	74	0.442

Website availability	142	ACCESS	74	0.442
Demographic information	145	COMMUNITY FOCUSED	75	0.433
financial comparison with previous year	155		80	0.399
Table of contents	159	COMPREHENSION	82	0.382
10th grade reading level	163	COMPREHENSION	84	0.363
Font size	164	APPEARANCE	85	0.358
Previous year comparisons	165	FINANCIALS	85	0.353
White space	167	APPEARANCE	87	0.342
Financial capital	169	Six Capital Framework	88	0.330
Charts and graphs	170	APPEARANCE	88	0.325
Major taxes and revenues	173	FINANCIALS	90	0.306
Revenue and expenditure analysis	177	FINANCIALS	92	0.276

Two characteristics are not attributable to the analysed sample. The first refers to the explanation of each acronym which is not present in the examined reports. The use of acronyms is probably avoided to facilitate the understanding of the document. The other features refer to the length of the reports. Reports of length between 50 and 100 pages are not present. The analysed reports immediately allow to highlight that more than half of the characteristics suggested by the literature are not respected and implemented. Much evidence in the literature has been given to the length of the PFRs. In the sample, reports with a length between 12 and 32 pages (60% of the sample) and from zero to 12 pages (36% of the sample) are prevalent. The great importance given to the length of the document must however be evaluated based on the percentage prevalence of characteristics present in the document. Figure 2 shows the carried-out analysis, the groups and the present characteristics.

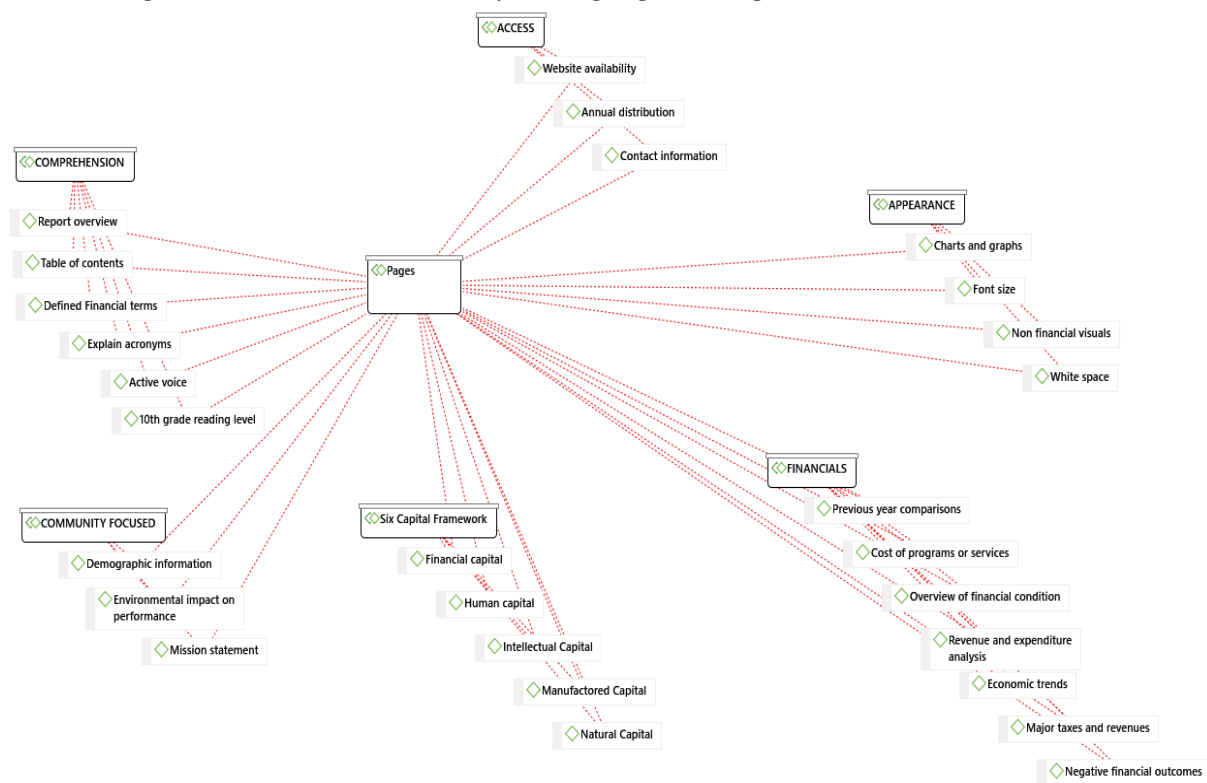
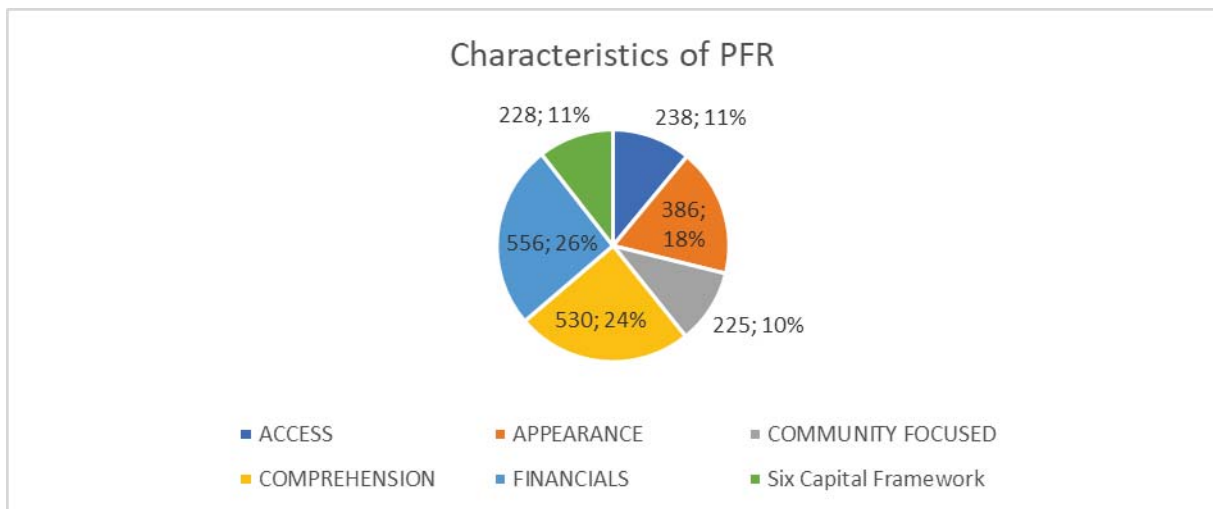


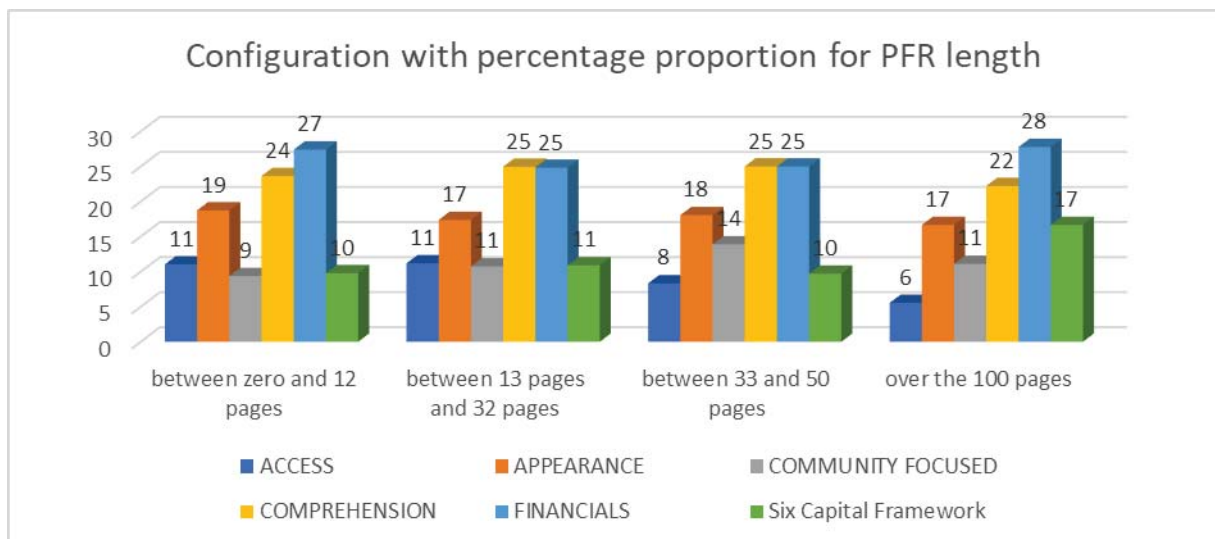
Figure 2. Relationship between number of pages and other characteristics identified in the literature

The average of observable characteristics between 0 and 12 pages is equal to 15.32, between 13 pages and 32 pages is equal to 12.99, between 33 pages and 50 is equal to 18.66 and over 100 pages is equal to 16. The balance between document length and presence of other characteristics must be considered, if the American and Canadian context favours documents with a length not exceeding 32 pages and in many cases from 0 to 12 pages, it is clear that the presence of characteristics undergoes a decrease compared to those present in the most consistent reports. In general, if the groupings of characteristics related to the PFR are analysed, it is possible to highlight a prevalence of the group related to features on financial understanding and understanding of the document as shown in graph 1.



Graph 1. The characteristics of PFR per group

If the reports are analysed by grouping them by length, it is possible to identify the different representations. Each representation can present the proportionally configured configuration of each cluster by report length Graph 2.



Graph 2. Percentage configuration of the characteristics present in the PFR by grouping

3.1 Statistical Analysis

In the literature a lot of evidence is given to the length of the pages of reporting but finding different results like best practice; the analysis will help us to understand what reality is also placing other important analyzes aimed at a deepening of the theoretical approach found.

Comparing the reports based on the length by grouping of characteristics through ANOVA, it should be noted that there is no difference between the different groupings except for criteria related to the representation of the six capital frameworks $p=0.0284$ and sum of the total totals criteria present in the document $p=0.0061$.

Through a linear regression, evaluating the relationship between PFR length and PFR grouping characteristics, there is a correlation between number of pages and two groups of characteristics (community focused and six capital frameworks). In the first case, $p=0.033$ standard error 0.610673 (F test = 0.0007; t test = 3.46) in the second case $p=0.014$ with standard error = 0.0646694 (F test = 0.0029, t test = 3.02) in both cases $R^2 = 0.1008$. There is also a correlation between document length and total number of observable characteristics, as the number of pages increases, the number of characteristics that can be observed $p=0.01$ and $R^2 = 0.0629$ with

standard error = 0.0167833 increases (F test = 0.0004; t test = 3.58). The multivariate between the length of the reports and socio-economic variables shows that the length of the pages is indirectly proportional to the level of higher education considering the resident population. The number of pages increases when the percentage of residents that have completed the High school decreases ($p = 0.001$ $R^2 = 0.0900$ coef. -0.00725; F test = 0.0002 t test = -3.75). The relationship between groupings of characteristics and socio-economic indicators does not provide significance for the grouping of features that represent access, community focus, comprehension and financials. The number of characteristics linked to the representation of the six-capital framework is inversely proportional to the percentage of inhabitants who have obtained the upper license. More information on the six capitals is represented as the percentage of inhabitants with the upper license $p = 0.019$ coef. decreases. -0.0079873 $R^2 = 0.0612$ (F test = 0.0151; t test = -2.45). More information related to the employed and available capital could be used to better understand the allocation of resources and the results of the municipality. Instead, the grouping related to the document's appearance criteria increase with the percentage of residents who do not speak English as the first language $p = 0.012$ coef. 0.0067785 $R^2 = 0.0632$ (F test = 0.0066; t test = 2.75). The clarity of the lengthening becomes essential for the understanding of the document in the graphic sense and of the distribution of contents (tables and graphs, use of white space, font, non-financial visuals).

There are no correlations between the number of awards attributed to the presented PFRs and the characteristics that can be observed in the literature for the construction and contents of the document and not even for the length of the document.

4. Conclusion and Recommendations

The study highlights some significant and useful aspects to better define the characteristics necessary to guarantee transparency and accountability towards the population. According to the theory and literature review, 48 characteristics have been identified, some of them were applied to most of the reports, others are absent. According to the second analysis, the study shows that the length remains an important feature to be assessed in the construction of popular financial reporting as this represents a different configuration of the groupings of average contained characteristics. On a theoretical level the GAP related to the systematization and verification of the literature has been filled giving confirmation of the statistical relationships already detected between socio-demographic characteristics and characteristics of the document, but there are identified additional elements related to those groupings of characteristics of PFR are correlated to the presence of socio-demographic characteristics. However, the different features related to report transparency are not always verified. Moreover, the length is related to the number of information provided on six capitals and on the community focus and deepening of the community. Differently from previous studies, the need to increase the number of pages of the PFR is confirmed when the level of people who have finished high school decreases. There is therefore no fixed number of pages that must be respected to be clear. The grouping of characteristics related to appearance becomes essential when the population has difficulties in understanding the language or does not have a good command of the language used in the municipality. The six-capital framework is important for transparency, so much so that the level of grouping of variables of six capital is closely related to the understanding where the population with a low percentage of residents holds a High school diploma. The study carried out increases and deepens the theoretical knowledge on the characteristics of PFR and rejects some hypotheses previously found in the literature. Moreover, some unclassified elements arise from the analysis and they become useful for a future analysis of the effectiveness of the document and of its possible implementation characteristics. For example, in one case we can find the use of comics to represent information as the use of active items could increase the transparency and accessibility of content. The importance of the dissemination plan is reported in both surveys (Biancone et al., 2016; Yusuf et al., 2013). Public media, local newspapers, newsletters and e-mails become the common means of communication. The official channels remain those to be considered as the most suitable ones for sharing results by the citizens but other useful tools for transparency should not be forgotten. Only in 3 percent of the analysed reports is evidence of diffusion through television, in 4 percent of cases the presence and use of dedicated platforms for accessibility and data analysis provides another useful tool whose effectiveness could be analysed in future studies. There are avant-garde elements already highlighted in the case of the City of Turin, which cannot be found so far in the Canadian and American context, such as the use and insertion of first indicators of quality, the level of social well-being and the analysis of the consolidated municipal group including investee and subsidiaries companies (Brescia, 2019). The difference between reality and the list of characteristics that the instrument must respect according to the literature is evident. There are numerous not applied features. The study therefore also has an impact on the practice, the lack of respect for all the characteristics highlights a possible and consequent lack of transparency and accountability. Moreover, thanks to scientific evidence, it is possible to increase the contents and methods of disseminating the document, making it

effectively accessible to all. As already pointed out several times by Italian scholars, the document, without being integrated into the e-government process, risks being static and far from the true need linked to full transparency capable of immediately detecting the need for information (Biondi & Bracci, 2018; Biancone et al., 2018b). The study does not address different aspects that can be explored on the subject of PFR. It has not yet been verified in reality that this group of characteristics has a more significant impact on the ability of reading of the population confirming it in different cities, which means of communication is more appropriate for the diffusion and the practical transposition of the information. No one has ever verified the real relapse and the behavior change of the residents. There are no studies on the costs related to the realization and respect of each characteristic in the realization of the document. No study is present that verifies how the implementation of the PFR also changes the approach within the Public Group and no relapse of the internal perception of the document is provided.

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Role of Information and Communication Technology in Applying Quality Control Procedures in Audit Offices in the Hashemite Kingdom of Jordan

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Abstract

The study aims to determine the impact of information technology on quality control elements and procedures, including vocational requirements, personal management procedures, client acceptance and continuance, audit performance, and following up and monitoring procedures used by auditing offices in Hashemite Kingdom of Jordan.

The researcher has used descriptive analytical approach for conducting relevant literature reviews. In addition, a questionnaire has been distributed to study sample (i.e audit offices) in order to identify to which extent information technology affects audit quality control.

The recent study has found that information technology affects highly quality control procedures and elements including vocational requirements, personal management procedures, client acceptance and continuance, plus audit performance in audit offices. In addition, it has concluded that information technology has a medium impact on following-up and monitoring procedures used by audit offices moreover, the study showed that using information technology has contributed to achieve quality control goals, desired.

Keywords: quality control, information technology, auditing, Jordan

1. Introduction

Auditing is an essential economic and social profession imposed by laws and legislations and guaranteed by various vocational, controlling and educational authorities in many countries of the world including Jordan. It, therefore, shall be applied according to international standards on auditing.

Audit quality concept is relatively recent and receives an academic and vocational attention. Audit profession has faced a lot of criticism because of lawsuits which were filed against the auditors and a failure of some international audit firms. As a result, various quality control standards and instructions governing audit process were developed by international organizations. Thus, this study has sought to identify the impact of information technology on quality control procedures applied by audit offices in the light of information technology used recently by various business and audit organizations.

Information technology is an effective and important tool that affects directly the methods organizing audit office works and quality control elements, thereby improving the performance of audit offices. These new perspectives of using information technology in audit and accounting processes have not been mentioned in accounting and auditing literature.

Important of the Study

Information Technology has been used in various life fields. Through using information technology, organizations' goals and purposes have been achieved and process costs have been decreased. This study, therefore, is importance since it identifies to which extent the auditor can use information technology in order to organize audit office works and apply quality control elements. In addition, it identifies to which extent using information technology improves audit profession.

Purposes of the Study

The study is to identify quality control importance and concept used by audit offices according to international

standards. It also aims at identifying the impact of information technology on quality control measurements. In addition, it clarifies the possibility of using information technology in order to apply quality control elements. Moreover, the recent study aims at surveying Jordanian auditors' opinions related to the use of information technology in order to demonstrate the impact of information technology on quality control procedures and elements, including personal management, client acceptance and continuance plus audit performance, following up and monitoring procedures in audit offices.

Problem of the Study

The study has been conducted due to rapid technological developments and massive use of information technology in various economic sectors. In addition, It helps identify the possibility of getting benefit of information technology in order to apply quality control procedure in audit offices. The study, therefore, seeks to answer the following research question:

What is the impact of using information technology on quality control elements and procedures including personal management, client acceptance and continuance, audit performance, plus following up and monitoring procedures applied by audit offices in the Hashemite Kingdom of Jordan?

Hypotheses of the Study

This study tests the following main hypothesis :

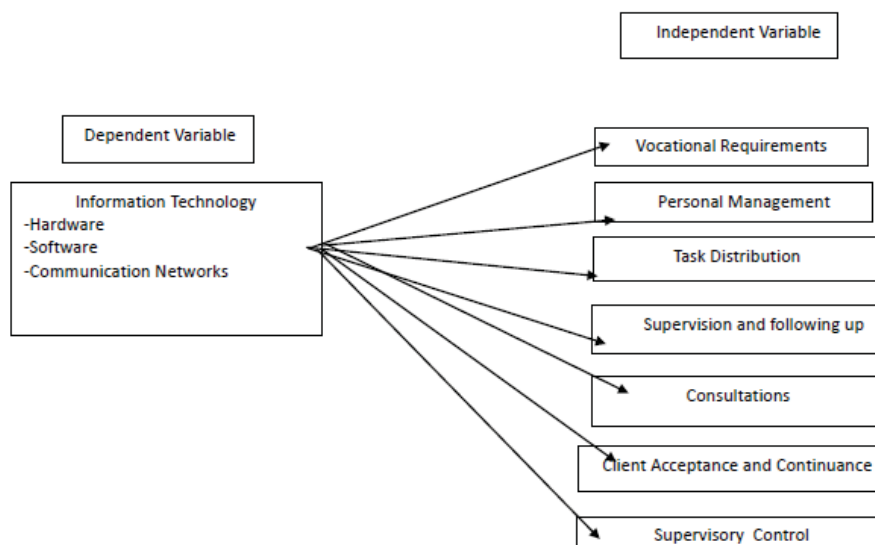
There is no statistically significant relationship between the use of information technology and quality control elements and procedures including personal management, client acceptance and continuance, audit performance plus following up and monitoring procedures applied by audit offices in the Hashemite Kingdom of Jordan.

The study also tests the following sub-hypotheses related to quality control elements :

- There is no statistically significant relationship between the use of information technology and the compliance with vocational requirements applied by audit offices in the Hashemite Kingdom of Jordan .
- There is no statistically significant relationship between the use of information technology and personal management applied by audit offices in the Hashemite Kingdom of Jordan .
- There is no statistically significant relationship between the use of information technology and client acceptance and continuance applied in audit offices in the Hashemite Kingdom of Jordan .
- There is no statistically significant relationship between the use of information technology and acceptance and the accuracy of audit performance in audit offices in the Hashemite Kingdom of Jordan .
- There is no statistically significant relationship between the use of information technology and the consultations in audit offices in the Hashemite Kingdom of Jordan .
- There is no statistically significant relationship between the use of information technology and following up and monitoring procedures applied by audit offices in the Hashemite Kingdom of Jordan .

Study Model

The following figure illustrates the relationship between study variables:



2. Theoretical Frame and Previous Studies

Various studies touched upon information technology and audit: some of these studies have been listed below:

-Helms, 2001 study entitled “Traditional and Modern Methods In E-Assurance” was to compare between traditional and modern methods used in E-assurance field linked to the development of company environment resulting from e-commerce and information technology. It also aimed at identifying the best methods of collecting sufficient evidences suitable for Introduction to the continuous audit which has gathered between the methods of collecting traditional and electronic evidences in the light of continuous audit processes. The researcher used theoretical approach. He reviewed accounting literatures and studied contemporary developments. The study identified the most significant methods of collecting computerized audit evidences, plus predefined audit programs, in addition to office management programs. It also illustrated security and monitoring programs, comparison programs, flow chart programs and phonographic documents .

-Liang 2001 study entitled "E-Auditing of E-Data Using Modern Information Technology aimed at discussing the requirements of applying computer assisted audit techniques (CAATS) with the support of the modern information technologies such as medium routing system, internet security technology and smart agents. In addition, it was to suggest introduction to new audit called E-auditing; auditor should perform electronically audit tasks via internet; all accounting system processes should be operated and saved in the company, the place of e-audit processes. The study was conducted in audit offices in order to examine loan and interest accounts and debtors at commercial banks in Taiwan. According to this study, e-audit model could be applied; it based on typical e-audit programs and modern information technologies mentioned previously. Accordingly, auditor could enter databases of credit section in the bank; he/ she could apply typical audit trail programs, prepare a report on exceptions and send the approvals via e-mail .

-Khadash and Siyam, 2003 study, entitled ‘The Extent to Which Auditors Accept the Use of Information Technology in Audit – A Field Study of the Largest audit Offices In Jordan’ aimed to highlight the importance of using information technology in audit processes. It also was to test the reality of using information technology; in addition, it aimed at illustrating the obstacles encountered by information technology. The study found that auditors in Jordan were convinced of the importance of using information technology in audit and they realized that using information technology has raised the precision of work, improved the efficiency and decreased the cost. However, the actual use of information technology did not meet the required level because of various obstacles such as manual accounting application in some companies subject to audit, a lack of experience and skills of some auditors, and the absence of binding legislations that has organized the use of information technology in accounting and audit .

-Al-Dnebat, 2002 study, entitled ‘The Extent and Effectiveness of The Use of Information Technology in Audit Process In Jordan’ aimed at identifying the fields of using information technology in audit and its impact on audit’s effectiveness. The study concluded that auditors in Jordan used information technology in the field of planning, documenting and recording audit processes. The average of using information technology in these fields has been low although it increased the efficiency of audit process, and decreased the time spent in calculation writing; it also lowered the number of employees working in audit offices plus audit costs. The study recommended that Jordanian Association of Auditors should hold training courses which have aimed at introducing the use of information technology in line with international trend towards computerization of education and services, among other. The researcher recommended that using information technology in audit has been a national demand which could improve audit service level and increase the competitiveness of profession members locally and globally .

-[Al-Juhar, Al-Aqdeh and Abu Sardineh, 2010 study, entitled ‘The Impact of Using Technology On Work Quality of External Auditor: A field Study in Some Jordanian Audit Offices’, aimed at highlighting the dimensions of the impact of information technology on audit and the risks it may face. It also identified to which extent these risks affect quality standards of auditor work. A questionnaire was distributed to audit office sample study working in Jordan in order to collect the data. The study found that the risk could be faced by audit office has been the exposure due to a lack of controlling procedures associated with the use of technology. It also showed that vocational quality standards highly affected by the risks of technology have been the competence and merit standards.

It can be said that this study is distinguished because it has touched upon the impact of technology on quality control procedures followed by audit offices. The recent study has also illustrated the possibility of using information technology in applying quality control elements. Other studies have identified to which extent information technology could be used for performing audit processes. They also outlined the possibility of

converting to electronic audit .

Theoretical Frame

Information Technology and Quality Control Procedures

This section discusses various topics in information technology; it also examined quality control concept. In addition, it illustrates the relation between the importance of using information technology and quality control procedures and elements applied in audit processes.

Information Technology Concept

It is worth mentioning that no specific scientific or practical definition of information technology is available at global, Arabic or local levels due to multiple environments and works created by information technology. The following is a set of various definitions of information technology environment :

It is the latest concept of technological development which overcomes time and distance barriers of transportation and communication between countries. Electronic means of voice communications and data transmission including e-mail, fax, internet and global speed telephone network are developed .

It is a performance model which consists of a compound dynamic combination of advanced technical equipment such as computers, internet, and laborers. This model aims at operating the data and conveying them as up-to-date as quickly as possible to the users all over the world (Abdelfattah, Sawsan, 2000).

It is a result of the convergence of the sciences of physics, logical, engineering and electronic mathematics. Thus, revolution of information technology i.e the mode of integration of triad (computers- software – networks) occurred. (Ali, Nabil, 2001).

The researcher believes that information technology includes the use of specialized software in computers for processing the data and conveying the information among business organizations via communications networks .

Quality Control concept in Audit Service Industry

Quality control concept is related to industrial sector; it refers to regular means and methods used for inspecting and testing the product after manufacturing in order to ensure the availability of predetermined specifications. In industrial sector, specific standards are used for creating an objective measurement tool which covers all sector including service sector. However, Vocational organizations develop and formulate specific quality standards of audit services due to the importance of audit field .

Accordingly, there is no agreement on a practical and unified definition of audit quality (Paul A. Copley and Mary S Doucet, P.8) because audit quality is characterized by the following features: (De Angelo, LE, 1981.p.113.(

- It is intangible; audit activities are services which cannot be valued and measured in advance.
- It is intangible; there is a massive variation of performing and providing services from time to time. For example, work team performance varies according to time and work pressure. In addition, a variation of opinions and needs of service beneficiaries is available. Finding a unified measurement of audit quality, therefore, becomes difficult.
- Evaluation of audit quality and service is more difficult than product quality evaluation due to a lack of experience .
- Audit quality can be identified when a comparison between beneficiaries' expectations and actual performance of provided service is conducted .
- Service quality is not only assessed by the results (the output) but also by the method and processes of service performance (the input).

Based on the above mentioned, the researcher believes that audit quality can be defined as the following:

It is a tool of ensuring that vocational performance complies with vocational standards; it includes various procedures and polices followed by audit offices in order to apply recognized audit standards and control work quality of offices as a whole.

Importance of Information Technology in Applying Quality Control Procedures

Importance and credibility of audit profession are closely related to service quality; daily work pressure, client requirements, and other factors make it easy for audit offices to throw caution to the wind, thereby providing a low level of work quality. Information technology has various advantages since it has been used in various

sectors and in the application of control quality in audit offices. The importance of information technology in applying audit quality can be summed by the following points :

- The use of information technology in applying quality control procedures contributes to improve the level of trust in audit profession in information technology environment .
- Documenting work papers is improved because certain documentation policies are followed and information technology is applied in office work documentation .
- Audit Assurances illustrating that office services are in line with vocational requirements are given .
- A view of community toward audit profession has improved .
- Customer relationships are improved since more accuracy and attention during work are expressed and information technology is used in order to contact the clients.
- Fertile ground is provided for attracting new clients and increasing market share in the light of competition conditions and advertising restrictions plus information technology development .
- Instructions and procedures of polices adopted by audit company are provided; these polices provide a reasonable level of audit assurance; and they forces audit offices to follow information technology environment standards. As a result, audit offices can avoid vocational and legal penalties .
- Operational costs of audit processes are decreased; efficiency and effectiveness of task performance are improved; time and effort exerted in re-working are reduced .

Audit Quality Control Elements in Audit and Information Technology Offices

International audit and assurance standards emphasize that audit offices shall have control system providing a reasonable level of audit assurance. Thus, such system clarifies that vocational work team of audit office follows recognized audit standards in general. Audit quality control elements are discussed below (International Arab Society Of Certified Accountants, 2003)

Vocational Requirements

According to vocational requirements, all partners and employees working in audit office shall commit to the principles of independence, objectivity, integrity, confidentiality and vocational conduct. Conducting a periodic survey pertaining to office clients is main step of procedures because it ensures that office is reasonably committed to the control elements. Then, this survey shall distributed to all office members and companies; they shall certify that they have no interests with the clients such as owing shares, working as a supplier, or board membership) and they have no relatives occupying sensitive jobs at client's premises. Information technology contributes to apply effectively quality control procedures through computerizing periodic survey lists and using modern software contributing to select audit team .

Personal Management

Based on personal management procedures, audit office management shall develop a set of policies and procedures because they ensure reasonably that all employees in audit office are qualified to perform vocational work with a high vocational competence. For example, vocational employees who obtain a minimum required average during undergraduate level shall be recruited; all employees shall participate in continuous vocational education and training programs which contribute to increase knowledge and carry out the required responsibilities to the fullest extent. All persons selected and promoted to greater responsibility positions in audit office shall have adequate and appropriate qualification such as merit, creativity, intelligence and seniority in order to meet their responsibilities. Information technology contributes to manage employee relations through using specialized programs and preparing continuous vocational training programs .

Task Distribution

Based on task distribution procedures, policies and procedures ensuring that vocational employees with a high level of technical training and required scientific and practical experience shall be available because they shall be able to perform audit process after audit requirements are taken into account. Work team is a significant element since it performs audit work. In addition, a balance between work team and individual skills, plus size and complexity of audit, person availability, and special experiences plus work time and training chance in work site shall be achieved. Using information technology, particularly data basis which includes knowledge skills, enables audit management to select adequate skillful auditor. Selection process can be computerized by using advanced electrical programs .

Supervision

According to supervision procedures, policies and procedures which aim at supervising and reviewing the works at all organizational levels shall be available because they ensure reasonably that the work performed is consistent with vocational standards plus quality control standards. Electronic means can be used for supervising audit processes and ensuring that audit process is performed in a timely manner.

Consultation

Based on consultation procedures, all persons shall be encouraged to ask helping from vocational skilful employees. The office shall perform a set of procedures. For example, the office shall identify the specialists and shall determine their responsibilities and powers in investment fields in order to avoid errors or problems with clients or legal accountability. Computerizing audit office works includes availability of files which contain names and addresses of persons. Thus, auditor can contact them easily .

Client Acceptance and Continuance

Based on client acceptance and continuance, current and prospective clients shall be evaluated periodically because audit has to determine if it shall associate with potential clients or it shall continue with current clients. But, independence of audit office, ability to provide clients with suitable services and client management reputation shall be taken into account. Office activities shall be limited to tasks the office can effectively and adequately perform within information technology environment. Modern software such as decision support systems contributes to make a decision of accepting or refusing the clients; modern software provides a possibility of assessing the risks of essential distortions in financial statements .

Supervisory Control

According to supervisory control procedures, a set of policies and procedures, ensuring that audit control elements mentioned previously are effectively applied by all office members, shall be available. To meet these procedures, peer review program, a tool of inspecting audit office performance, shall be applied; office procedures and policies are reviewed. Inspection team examines and assesses quality control system of office performance plus the policies and procedures. Information technology provides easily all information on quality control and contributes to exchange the policies via communication networks .

3. Methodology of the Study

Data Collection Methods

The researcher has used two methods in order to collect data :

- Inductive Method:
It depends on previous analysis and studies plus accounting literatures and vocational publications. It aims at identifying the impact of information technology on quality control procedures followed by audit offices .
- Practical Method:
The researcher has designed a questionnaire based on the theoretical frame; the questionnaire has been distributed to population study.

Study Population and Sample

Study population is audit offices in the Hashemite Kingdom of Jordan; study sample consists of (33) thirty three audit offices in Amman; 20 offices have been selected in order to provide a clear picture of quality control procedures in audit offices, plus office size, employee number and a variety of services audit which offices provide .

Validity and Reliability of Study Tool

Validity of Study Tool:

The questionnaire has been arbitrated by a group of academic professors specialized in the fields of accounting, audit, statistics in order to verify its validity; the paragraphs the questionnaire contains measure the ideas for which it has been designed. Arbitrators' observations have been taken into account. Some paragraphs of questionnaire, therefore, have been reformulated in a manner that achieves a balance and consistency of the paragraphs of the questionnaire.

Reliability of Study Tool

To test the validity of questionnaire results and the extent of availability of internal reliability among questionnaire's questions, Cronbach's alpha reliability coefficient has been used. Statistically accepted value of Cronbach's alpha has been 60% or more. Table 1 has identified that Cronbach's alpha value of respondents' answers to all questions of each field has been higher than a minimum accepted level of Cronach's alpha. Thus, a high degree of internal reliability is available among answers. Study tool, therefore, has a high value of reliability and its answers can be adopted in order to achieve study purposes. Table 1 outlines the results of Cronbach's alpha test.

Table 1. Reliability Coefficients extracted by Cronbach's Alpha of Study Fields

Field	Results		
	Number of Questions	Cronbach's Alpha	Results
Information technology and its impact on vocational requirements	4	87	Accepted
Information technology and personal management in audit offices	16	72	Accepted
Information technology and client acceptance and continuance	5	97	Accepted
Information technology and its impact on audit performance	7	86	Accepted
Information technology and consultations in audit offices	9	86	Accepted
Information technology and follow-up procedures in audit offices	4	82	Accepted

Descriptive Analysis of Sample Study's Answers

In this section, respondents' answers have been analyzed by using statistical package for social sciences (SPSS); each set of questions has been named as a field by the researcher according to the criteria of descriptive analysis of questionnaire in order to reflect study hypotheses. For the purposes of characterization of data and respondents' answers, each paragraph has been divided according to fifth Likert scale.

Category	Very high impact	High impact	Moderate impact	Very low impact	No impact at all
Coding	5	4	3	2	1

According to table mentioned above, moderate arithmetic mean has been 3; it has been extracted from total number of values. An approved ratio of impact is 3 divided by 5 (i.e 60%). Accordingly, values of arithmetic means which the study has reached will be processed in order to explain the data as follows :

1	2	3	4	5
No impact at all	Very low impact	moderate impact	High impact	Very high impact
1.79-1	2.59-1.80	3.39-2.60	4.19-3.40	5-4.20
Information technology has no impact on quality control at all	Information technology has a very low impact on quality control	Information technology has a moderate impact on quality control	Information technology has a high impact on quality control	Information technology has a very high impact on quality control

Based on the table above, the results of statistical analysis of the data are explained .

Characteristics of Study Sample

In order to identify the characteristics of study sample, questionnaire list has included a set of questions representing a general information of study sample. Table 2 outlines demographic characteristics of the respondents .

Table 2 shows the demographic characteristics of sample study as the following:

- **Number of employees in the office:** It is noted that the number of offices which hire more than 12 employees is 12 (i.e 60%). Thus, respondents' answers contribute to achieve the purposes of the study. So, the more the number of employees increases the more the size of audit office increases. Accordingly, applying quality control procedures and policies becomes necessary .
- **Number of auditors holding vocational certifications:** Table 2 shows that audit offices hire academic vocational and skilful employees; such matter is one of quality control requirements .

- **Existence of Department of Quality Control in Audit Office:** It is noted that 15% of audit offices have no department of quality control and 85 % of audit offices have department of quality control. Accordingly, respondents' answers contribute to achieve the purposes of the study .

Table 2. Frequencies and Percentages according to Study Variables

	Category	Frequency	Percentage
Number of Employees	Less than 3 persons	1	5
	From 3 to less than 12	7	35
	More than 12 persons	12	60
	Total	20	100
Number of auditors holding vocational certifications	Jordanian audit license	40	70
	Certified Public Auditor (CPA (14	25
	British Certified Public Auditor	3	5
	Total	57	100
Existence of Department of Quality Control in Audit Office	Yes	3	15
	No	17	85
	Total	20	100

Data Analysis and Hypothesis Testing

In this section, respondents' answers pertaining to the impact of information technology on quality control in audit offices are descriptively analyzed; the following is the descriptive analysis of each field :

First Hypothesis Testing

In order to validate this hypothesis, arithmetic means and standard deviations have been extracted; the relation between the impact of information technology and vocational requirements of quality control in audit offices has been measured. Table 3 outlines arithmetic means and standard deviations of vocational requirements of quality control in audit offices.

Table 3. Arithmetic Mean and Standard Deviation of Vocational Requirements of Quality Control in Audit Offices

Sentences	Arithmetic mean	Standard Deviation	Answer Orientation
Office employees use information technology and address the issues related to the vocational requirements by using information technology means	4	0.49	high impact
Information technology helps audit offices document and save the consultations	4.14	0.49	high impact
Information technology helps audit offices save an update list of client names	4.71	0.49	Very high impact
Information technology helps audit offices issue certain forms periodically in order to be filled by the employees; by filing these forms, the employees recognize that they know office policies and procedures of independency and do not perform finical or commercial transactions and relations forbidden by office policies of independency	4.71	0.49	Very high impact
Total	4.39	0.45	Very high impact

Answers of the questions of vocational requirements have showed that information technology has a very positive and high impact; the answers of study sample have indicated that they contribute to maintain vocational requirements; total calculated arithmetic mean is 4.39; it is higher than the default mean which is 3. The orientation of the answers has indicated that information technology has a very high impact .

In addition, arithmetic mean of the paragraphs which form first hypothesis has been compared with standard mark 3 - hypothesis acceptance standard- by using t-test as stated in table 4 .

Table 4. Arithmetic Means and Standard Deviations and T-test of Paragraphs which form first hypothesis

	Number	Arithmetic Mean	Standard Deviation	T-Value	Freedom Degree	Statistical Significance
Information technology and its impact on vocational requirements	20	4.39	45.	10.967	21	000.

Table 4 has indicated that there are statistical differences at ($\alpha=0.05$) between arithmetic mean and standard deviation 3; T-value has been 10.967; statistical significance has been 0.000. Thus, the hypothesis, stating that there is no statistically significant relationship between the use of information technology and the compliance with vocational requirements applied by audit offices in the Hashemite Kingdom of Jordan, has been rejected; alternative hypothesis, stating that there is statistically significant relationship between the use of information technology and the compliance with vocational requirements applied by audit offices in the Hashemite Kingdom of Jordan, has been accepted .

Second Hypothesis Testing

In order to validate this hypothesis, arithmetic means and standard deviations have been extracted; the relation between the impact of information technology and personal management in audit office has been measured. Table 3 outlines arithmetic means and standard deviations of vocational requirements of quality control in audit offices.

Table 5. Arithmetic means and Standard Deviations of the impact of information technology on Personal Management in Audit Offices

Sentences	Arithmetic mean	Standard Deviation	Answer Orientation
Personal management			
• Recruitment:			
The office uses information technology in order to express numerically the needs of skillful employees of information technology at all levels .	3.71	49	High impact
The office follows certain policies and procedures; they are implemented by the employees who have experience of information technology and have a responsibility to make decisions of recruitment	4.41	0.90	High impact
Information technology is a standard of evaluating the candidates for the job	4.71	0.49	Very high impact
• Vocational Development			
Information technology is used in the office in order to develop vocational development programs for the employees in the offices	4.71	0.49	Very high impact
Persons who are skillful in information technology review these programs in order to ensure their consistency and achievement of office goals	4.71	0.49	Very high impact
The office identifies vocational requirements by using information technology at all job levels in the office	4.14	0.9	High impact
The office updates electronic data of vocational qualification procedures in order to monitor the continuance of vocational qualification efforts	3.71	0.49	High impact
The office has an electronic record including the data of all office activities and employees	4.43	0.98	Very high impact
The office provides local and international books and publications on accounting, audit, information technology development and legal and legislative requirements, among other	4.29	0.49	Very high impact
The office develops training program for the employees by using information technology	4.57	0.53	Very high impact
• Promotion			
There is an electrical job description of works performed by the employee and the responsibilities undertaken by all employees at all job levels	4.71	0.49	Very high impact
Information technology is used for collecting and evaluating the information on employee achievements according to job levels	4.71	0.49	Very high impact
A part of job evaluation of employees is electronically and periodically conducted within a specific period of time .	5	0	Very high impact
Certain standards are taken into account when employee performance and capability are evaluated within information technology environment in term of technical knowledge of information technology	5	0	Very high impact
Certain standards including experience of information technology, capability, and achievements of information technology environment are taken into account when employees are promoted to higher job levels	5	0	Very high impact
Evaluation results are electronically documented in special file of the employee	5	0	Very high impact
Assessment and guidance system for the employees is periodically reviewed in order to ensure its effectivity and achievement of the desired goals within information technology environment	5	0	Very high impact
Total	4.43	0.18	Very high impact

Table 5 has showed that arithmetic mean is 4.43; it is higher than hypothetical mean which is 3. Answer orientation of study sample has indicated that information technology affects very highly personal management in audit offices; it affects the identification of the number of the employees which the office needs. In addition,

audit office management seeks to develop employees' skills through using information technology and computer because the importance of using information technology has increased and IT audit concept has appeared. Availability of specialized work team of IT audit, therefore, has become a necessity in the light of information technology .

In addition, arithmetic mean of the paragraphs which form second hypothesis has been compared with standard mark 3 - hypothesis acceptance standard- by using t-test as stated in table 6 .

Table 6. Arithmetic Means and Standard Deviations and T-test of Paragraphs which form second hypothesis

	Number	Arithmetic Mean	Standard Deviation	T-Value	Freedom Degree	Statistical Significance
Information technology and personal management in audit offices	20	4.43	18.	10.835	21	000.

Table 6 has indicated that there are statistical differences at ($\alpha=0.05$) between arithmetic means and standard deviation 3; T-value has been 10.835; statistical significance has been 0.000. Accordingly, this hypothesis is rejected; the alternative hypothesis, stating that there is statistically significant relationship between the use of information technology and personal management applied by audit offices in the Hashemite Kingdom of Jordan, is accepted.

Third Hypothesis Testing

In order to validate this hypothesis, arithmetic means and standard deviations have been extracted; the relation between the impact of information technology and client acceptance and continuance in audit office has been measured. Table 7 outlines arithmetic means and standard deviations of client acceptance and continuance

Table 7. Arithmetic means and Standard Deviations of the Impact of Information Technology on Client Acceptance and Continuance

Sentences	Arithmetic mean	Standard Deviation	Answer Orientation
Client Acceptance and Continuance			
Information technology helps audit offices assess the clients before accepting the task	4.14	1.25	Very high impact
Information technology helps audit offices assess the clients by electronically reviewing the financial statements and performing the required analysis	4.43	0.49	Very high impact
Data bank containing the necessary information of the clients shall be constructed	4.43	0.49	Very high impact
Risks-related audit process shall be identified	4.43	0.49	Very high impact
Information technology helps audit offices review and assess the current client; and they become able to identify client continuance when the determined time periods end .	4.43	0.82	Very high impact
Total	4.43	0.16	Very high impact

Table 7 has showed that total calculated arithmetic mean is 4.43; it is higher than the hypothetical mean which is 3. The orientation of the answers has indicated that information technology has a very high impact on client acceptance and continuance in audit offices; auditor shall study and understand client activity within information technology environment and used documents because he/she audits these documents in terms of id information technology risks pertaining to client acceptance and continuance. Accordingly, the hypothesis stating, that there is no statistically significant relationship between the use of information technology and client acceptance and continuance applied in audit offices in the Hashemite Kingdom of Jordan, is refused .

In addition, arithmetic mean of the paragraphs which form third hypothesis has been compared with standard mark 3- hypothesis acceptance standard- by using t-test as stated in table 8 .

Table 8. Arithmetic Means and Standard Deviations and T-test of Paragraphs which form third hypothesis

	Number	Arithmetic Mean	Standard Deviation	T-Value	Freedom Degree	Statistical Significance
Information technology and client acceptance and continuance	20	4.43	16.	9.485	21	000.

Table 8 indicated that there are statistical differences at ($\alpha=0.05$) between arithmetic mean and standard deviation 3; T-value has been 9.485; statistical significance has been 0.000. Accordingly, this hypothesis, stating that there is no statistically significant relationship between the use of information technology and client acceptance and continuance applied in audit offices in the Hashemite Kingdom of Jordan, is rejected and the

alternative hypothesis, stating that there is statistically significant relationship between the use of information technology and client acceptance and continuance applied in audit offices in the Hashemite Kingdom of Jordan, is accepted .

Fourth Hypothesis Testing

In order to validate this hypothesis, arithmetic means and standard deviations have been extracted; the relation between the impact of information technology and audit performance in audit office has been measured. Table 9 outlines arithmetic means and standard deviations of audit performance .

Table 9. Arithmetic means and Standard Deviations of the Impact of Information Technology on Audit Performance

Sentences	Arithmetic mean	Standard Deviation	Answer Orientation
• Distribution of the tasks to the employees			
Information technology helps audit offices plan the needs of employees	4.43	0.53	Very high impact
Information technology helps the office plan each individual audit task including employee requirements and audit agenda	4	0.0	High impact
Information technology helps the office distribute the works to the employees	4	0.0	High impact
• Authorization			
Information technology contributes to assign appropriately audit task	3.71	0.49	High impact
Information technology contributes to organize work documents and papers	4.29	0.49	Very high impact
Information technology helps audit office update previous information on audit task according to new circumstances, estimate the time required for performing the task and identify the needs of employees	3.71	0.49	High impact
Audit office provides special instructions and the content of work papers in the light of using information technology	4.29	0.49	Very high impact
Total	4.43	0.49	Very high impact

Table 9 has showed that total calculated arithmetic mean is 4.43; it is higher than the hypothetical mean which is 3. The orientation of answers has indicated that information technology has a very high impact on audit performance; it is noticed that information technology helps audit office perform audit process in terms of planning and distribution of responsibilities. Accordingly, the hypothesis, stating that there is no statistically significant relationship between the use of information technology and acceptance and the accuracy of audit performance in audit offices in the Hashemite Kingdom of Jordan, is refused .

In addition, arithmetic mean of the paragraphs which form fourth hypothesis has been compared with standard mark 3- hypothesis acceptance standard- by using t-test as stated in table 10 .

Table 10. Arithmetic Means and Standard Deviations and T-test of Paragraphs which form fourth hypothesis

	Number	Arithmetic Mean	Standard Deviation	T-Value	Freedom Degree	Statistical Significance
Information technology and its impact on audit performance	20	4.43	49.	10.835	21	000.

Table 10 has indicated that there are statistical differences at ($\alpha=0.05$) between arithmetic mean and standard deviation 3; T-value has been 10.835; statistical significance has been 0.000. Accordingly, this hypothesis is rejected and the alternative hypothesis, stating that there is statistically significant relationship between the use of information technology and acceptance and the accuracy of audit performance in audit offices in the Hashemite Kingdom of Jordan, is accepted .

Fifth Hypothesis Testing

In order to validate this hypothesis, arithmetic means and standard deviations have been extracted; the relation between the impact of information technology and consultations in audit office has been measured. Table 11 outlines arithmetic means and standard deviations of consultations in audit offices .

Table 11. Arithmetic means and Standard Deviations of the Impact of Information Technology on consultations in audit offices

Sentences	Arithmetic mean	Standard Deviation	Answer Orientation
• Consultations			
The office encourages the employees to consult on vocational matter and information technology	4.43	0.53	Very high impact
Audit office adopts policies and procedures of consultations on specialized information technology	4.14	0.53	High impact

The auditors of the office consult with (accredited) persons in the following matters:	3.71	0.9	High impact
-There is a suspicion of exiting errors or irregular matters in the light of using information technology			
Disputes related to information technology matters are not solved by task employees	3.71	0.9	High impact
Technical rules related to information technology issued recently are applied	3.71	0.9	High impact
The office saves a technical manual and issues technical instructions related to information technology used and applied by the office	4.43	0.9	Very high impact
The office consults unofficially with other certain audit offices or persons in order to address queries pertaining to information technology	4.14	0.49	High impact
The office depends on the opinions of internal consultants, particularly on legal and legislative matters in the light of using information technology	4.43	0.53	Very high impact
Electronic files of consultations are saved and they are used when needed	4.43	0.9	Very high impact
Total	4.43	0.96	Very high impact

According to Table 11, the orientation of answers has indicated that information technology has a very high impact on consultations; total calculated arithmetic mean is 4.43; it is higher than the hypothetical mean which is 3. Thus, due to the necessity of using information technology, auditors need technicians to explain the subjects of information technology .

In addition, arithmetic mean of the paragraphs which form fifth hypothesis has been compared with standard mark 3- hypothesis acceptance standard- by using t-test as stated in table 12 .

Table 12. Arithmetic Means and Standard Deviations and T-test of Paragraphs which form fifth hypothesis

	Number	Arithmetic Mean	Standard Deviation	T-Value	Freedom Degree	Statistical Significance
Information technology and consultations in audit offices	20	4.43	96.	10.855	21	000.

Table 12 indicated that there are statistical differences at ($\alpha=0.05$) between arithmetic mean and standard deviation 3; T-value has been 10.855; statistical significance has been 0.000. Accordingly, this hypothesis is rejected and the alternative hypothesis, stating that there is statistically significant relationship between the use of information technology and the consultations in audit offices in the Hashemite Kingdom of Jordan, is accepted .

Sixth Hypothesis Testing

In order to validate this hypothesis, arithmetic means and standard deviations have been extracted; the relation between the impact of information technology and follow up procedures applied by audit office has been measured. Table 13 outlines arithmetic means and standard deviations of follow up procedures followed by audit offices .

Table 13. Arithmetic means and Standard Deviations of the Impact of Information Technology on follow up procedures applied by audit offices

Sentences	Arithmetic mean	Standard Deviation	Answer Orientation
f. supervisory control (inspection)			
Audit office uses information technology in the procedures related to supervisory control; these procedures ensure that office's policies and procedures pertaining to audit quality work effectively.	3.35	0.53	Moderate impact
Supervisory control procedures and programs include tasks selection standards subjected to certain specifications related to information technology	3.37	0.53	Moderate impact
Electronic policies and procedures of supervisory control plus relevant information are amended	3.36	0.49	Moderate impact
Total	3.37	0.18	Moderate impact

Table 13 has indicated that total calculated arithmetic mean is 3.97; it is higher than the hypothetical mean which is 3 but it is not too high. It is noted that information technology has a moderate impact on inspection processes in audit offices .

In addition, arithmetic mean of the paragraphs which form sixth hypothesis has been compared with standard mark 3- hypothesis acceptance standard- by using t-test as stated in table 14 .

Table 14. Arithmetic Means and Standard Deviations and T-test of Paragraphs which form sixth hypothesis

	Number	Arithmetic Mean	Standard Deviation	T-Value	Freedom Degree	Statistical Significance
Information technology and follow up procedures applied by audit offices	20	3.37	18.	35.686	21	000.

Table 14 indicated that there are statistical differences at ($\alpha=0.05$) between arithmetic mean and standard deviation 3; T-value has been 35.686; statistical significance has been 0.000. Accordingly, this hypothesis is rejected.

4. Results and Recommendations

Results

Following results are identified by statistical analysis :

- There is statistically significant relationship between the use of information technology and the compliance with vocational requirements applied by audit offices in the Hashemite Kingdom of Jordan .
- There is statistically significant relationship between the use of information technology and personal management applied by audit offices in the Hashemite Kingdom of Jordan .
- There is statistically significant relationship between the use of information technology and client acceptance and continuance applied in audit offices in the Hashemite Kingdom of Jordan .
- There is statistically significant relationship between the use of information technology and acceptance and the accuracy of audit performance in audit offices in the Hashemite Kingdom of Jordan .
- There is statistically significant relationship between the use of information technology and the consultations in audit offices in the Hashemite Kingdom of Jordan .
- There is statistically significant relationship between the use of information technology and following up and monitoring procedures applied by audit offices in the Hashemite Kingdom of Jordan .

Recommendations

Based on relevant references and statistical results, the study has recommended the following points :

- Authorities shall organize audit profession in Jordan; quality control department shall be exist in each audit office because it plays an important role in improving a level of audit performance .
- Using information technology shall be expanded since it contributes to organize audit offices, perform vocational requirements, and prepare audit programs, document audit processes and exchange information between audit offices and clients.
- Educational bodies shall be encouraged to modify audit course plans; information technology shall be applied in audit process; nature of audit task plus documents supporting the processes within information technology environment can be changed .
- Audit quality shall be activated in the light of international developments; researchers, scholars, and organizations locating in Jordan shall monitor vocational performance of auditors.

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The Impact of Capital Structure Components on the Total Assets Turnover Evidence from Amman Stock Exchange

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Abstract

This research examines the effect of Capital Structure Components on the Total Assets Turnover. Using information of 62 industrial firms listed on Amman Stock Exchange from 2012 through 2017. The findings of the research revealed that Capital Structure components measured by Total Debt to Total Assets of showed a positive but insignificant effect on Total Assets Turnover. While the relationship is negative and significant between capital structures measured by Debt to Equity Ratio and Total Assets Turnover.

Keywords: capital structure, total assets turnover, debt to equity ratio, Amman

1. Introduction

The capital structure has an effective impact on the value of the company under assumptions in an ideal market where no taxes or costs are available for trading, in which individual and corporate investors borrow at a risk-free interest rate (Michelle and others, 2015) according to the traditional theory developed by Modigliani and Miller 1958). However, depending on the debt in full without specifying the extent of its use may threaten the company to bankruptcy and liquidation.

As many of the previous studies pointed to the importance of the components of the capital structure on the liquidity risk by investors in companies because of their impact on the improvement and development of investment, as the study (zurigate 2009)

The aim was to study the determinants of capital structure in the Jordanian market by focusing on the interpretation of Pecking order theory and the trade off theory. As each project has a specific objective and composition in the extent of liquidity risk and the degree to which the relationship exists between the capital structure and liquidity risk ratios (Nemat, Mohamed El Moataz , 2016).

The importance of the study is to study the components of the capital structure of the industrial companies and their successes in the industry, to know the data and indicators of the financial statements through the liquidity risks and to know the impact of them through the components of the financing structure, And knowledge of the results of the financial statements through the positive and negative effects on the use of different financing options (Nemat and Mohammad Al-Mu'taz 2016).

The study has agreed with the study (Ismail, 2016) and the study (Alani and Amiri, 2015) and study (strange, 2015) and the study of Osman, 2014) and study (Saadi, 2012). The AbWahab & Rami Study, 2014 and the Jensen Study, 2013 and the Akinyomi & Olagunju Study, 2013 Nilssen, 2014 In relation to the industrial companies subject to the study. It differed with some studies on the independent variable and dependent variable in determining the variables (return on assets, return on equity, and return on sales, sales growth, and market value of the company, capital structure, growth rate and profitability). The study also agreed with all studies on the use of the tool for the analysis of the financial statements.

The study aims to achieve many items by measuring the financing provided to the project by the funds of others, as well as measuring the extent of the administration's dependence on the funds of others in financing their needs, and measuring the adequacy of the group of assets in meeting the short-term obligations, The ability of an entity to settle its short-term liabilities without having to sell any asset that is difficult to sell without loss, and to measure the adequacy of the most liquid assets, cash to settle short-term liabilities.

The problem of this study is to clarify the internal and external financing of capital structure components on liquidity risk ratios. The study problem is illustrated by the following questions:

- What is the ratio of loans to total assets to the Total Assets Turnover?

in Jordanian industrial companies?

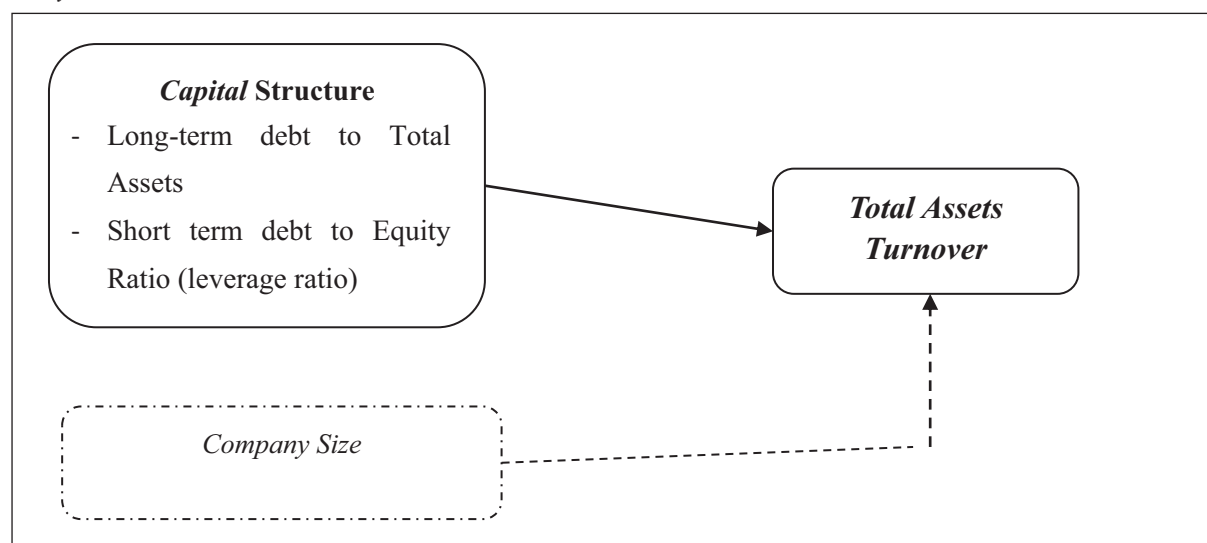
- What is the effect of the ratio of loans to equity on the Total Assets Turnover in Jordanian industrial companies?

2. Research Methodology

Population and Study Sample

The study population will be composed of 62 industrial Jordanian firms that are listed on the Amman Stock exchange from 2012 to 2017.

Study model



Hypotheses of the study

First Hypothesis: There is no Statistical effect of the total debt to total assets on the total of assets turnover.

Second Hypothesis: There is no Statistical effect of the debt to equity ratio on the total of assets turnover.

Diagnostic Analysis

Diagnostic checks are applied to determine if the study data suffer from any econometric problems. Under the assumptions of the panel data method, the diagnostic checks that are used in this study contain the multicollinearity, heteroscedasticity, and serial correlation tests (Baltagi, 2008; Gujarati & Porter, 2009; Baltagi, Jung, & Song, 2010). The current study uses Pearson correlation coefficients (correlation matrix) as the first indicator to check the multicollinearity problem and the variance inflation factor (VIF) and the inverse VIF, which is called tolerance (TOL, 1/VIF), as a second indicator. Table 4.2 presents the result of the Pearson correlation of the study variables, respectively. Gujarati (2004) Claimed that the multicollinearity problem appears when the correlation coefficient result between two variables is more than 0.8. All results are less than 0.80, implying that the regression models of this study do not suffer from the multicollinearity problem.

Table 1. Pearson Correlation Coefficients

Variables	TAT	EQ	LIA	Size
TAT	1.000			
EQ	-0.0784	1.000		
LIA	-0.1108	-0.0275	1.000	
Size	0.0251	-0.0140	-0.0409	1.000

Table 2. Variance Inflation Factor

Table 2 shows the VIF and TOL values for the all variables of the regression model applied in this study. The result proves that the multicollinearity problem does not exist in all of the study model because the VIF value for all variables is less than 10 and the TOL value for all variables is more than 10%.

Variables	VIF	1/VIF
EQ	1.00	0.997539
LIA	1.00	0.999015
Size	1.00	0.998099

Testing of Multicollinearity (VIF & Tolerance)

Table 3. Heteroscedasticity and Serial-Correlation Tests

Table 3 shows that the null hypothesis (H_0 : no heteroscedasticity problem exists in the study data) is rejected given that the modified Wald statistic test records a significant result at 0.01 for all models.

The Modified Wald Test for Group Wise Heteroscedasticity

Model	Modified Wald Test (Chi-Sq. Value)
TAT Model	632.743***

Notes. Significant level *** 1% and ** 5%

Table 4 presents that the null hypothesis (no serial correlation) is accepted because the Wooldridge test records an insignificant result for model. Thus, the models used in this study are free from the first-order autocorrelation.

Table 4. The Wooldridge Test for Autocorrelation

	Wooldridge Test F-value
TAT Model	82.112***

Regression Model Analysis

Table 5 lists the robust results of the fixed effect GLS regression (i.e., according to the indicated results of the Hausman and Breusch–Pagan Lagrange multiplier tests) by using the correcting Regression with Driscoll-Kraay standard errors method. Results indicate that the model is fit at a significant level of the F -statistic (11.32***). Furthermore, the independent variables in this model explain 0.1012 (overall $R^2 = 10.12\%$) of the variations in the TAT. The consistent term ($_{Cons}$) of this model is positive and significant at p -value < 0.01 .

Table 5. The regression result of the TAT - model (fixed-effect)

Variables	$TAT_{it} = \alpha + \beta_1 EQ_{it} + \beta_2 LIA_{it} + \beta_3 size_{it} + (\varepsilon_i + v_{it})$		
	Coefficients	(t-static)	$P > t $
EQ	0.0105	0.4895	0.625
LIA	-0.736	-2.837	0.005***
Size	0.244	4.751	0.000***
Con-	-3.51234	-4.089	0.000***
R -sq overall	.1012		
(F -value)	11.3182***		

*, **, *** = p -value $< .10, .05, .01$

Total debt to total assets is leverage ratio that measure of the firm's assets that are financed by debt, rather than equity. The result indicates that the leverage ratio does not have an impact on the assets turnover. On the other hand, the findings indicate that the relationship between capital structure component measured by Debt and Equity Ratio is significant but negative. This result imply that the debt to equity ratio which shows the percentage of company financing that comes from creditors and investors are inversely proportional to the assets turnover.

3. Conclusion

In this paper the impact of capital structure components is shown on assets turnover of industrial firms in Jordan. Results show that there is a significant negative impact of long term debts on assets turnover ratio. Thus, the study suggests that percentage of company financing that comes from creditors and investors do not have the ability to generate or maximize the sales. Moreover, the results suggest that although leverage ratio has a positive but is insignificant. Thus, the firms in Jordan should seek to find another capital structure component that enhances the efficiency of assets to maximize the production level and maximize the sales.

Furthermore, the results of this paper can be considered as helpful for managers and decision-makers in Jordan

who are anxious to develop financial description quality and practices of performance of capital structure, and may help the decision-makers to formulate clear policies for the industrial sector in Jordan that may develop the decision-making. Thus, the future studies may be extended by including all Jordanian listed companies in Amman Stock Exchange from all sectors and add other factors of capital structure that may have an effect on assets turnover.

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Inventory Management and Operational Performance of Manufacturing Firms in South-East Nigeria

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Abstract

This study aims to ascertain the relationship between inventory management and operational performance of quoted manufacturing firms in the south-east; one of the geographic regions with high industrialization prospects in Nigeria. To achieve this, operational performance of manufacturing firms and their association with components of inventory management; inventory cost, just-in-time approach, materials requirement planning and strategic supplier partnership, was examined through a questionnaire. Three hundred and seventy-one copies of a questionnaire issued to five hundred and thirty-eight sampled respondents of four quoted manufacturing firms in the south-east region of Nigeria were properly filled and found relevant to the study. The study used SPSS and Excel-based descriptive statistics to analyze the data collected. Regression analysis was used to test the hypotheses of the study. Study results conclude that there is a positive significant relationship between; inventory cost, just in time approach, materials requirement planning and strategic supplier partnership and operational performance of quoted manufacturing firms in the south-east region, Nigeria. The study recommends among others that, manufacturing firms in south-east Nigeria should adopt inventory practices such as strategic supplier partnership, just-in-time approach, materials requirement planning and inventory cost control due to the significant effect these practices have on operational performance.

Keywords: inventory, management, operational performance, manufacturing, firms, Nigeria

1. Introduction

1.1 Introduction to the Study

The success of companies in this contemporary competitive business environment requires them to improve production considerably, minimize cost in their supply chains and provide efficient customer service to ensure customer satisfaction. This could be achieved through efficient inventory management. As such, efficient inventory management ensures large profit and retention of the available customer base. The achievement of better customer service drives companies to structure their inventory management. At every stage of production in manufacturing firms, there ought to be a balance in the level of inventory; not too high and not too low, so as to reduce the cost of operating the firm and losses. (Hugo, Fettermann, Tortorella, & Testoni, 2016).

Providing the right quantity and quality of raw materials is one of the major goals of managing inventory efficiently. However, one mitigation to achieving this goal is knowing when to order, the quantity to order and frequency of ordering so that the organization always maintains the right level of raw material and finished product at minimum inventory total costs (Wangari & Kagiri, 2015) without also having shortage or excess of materials.

The process of quantifying the efficiency and effectiveness of inventory management could be mirrored by the operational performance of firms. While a manufacturing firm's ability to meet customer demands by adequately supplying quality finished goods, eliminating waste and reducing lead time reflects a good operational performance. Based on the foregoing, this research explored on inventory management and operational performance of quoted manufacturing firms in the south-east geopolitical zone of Nigeria.

1.2 The Study Problem

The application of taking inventory in real-life business scenarios, ought to influence the company's operational performance, despite the shortcomings of the techniques used; periodic review, continuous review, materials requirements planning systems (MRP), Just-In-Time (JIT) and enterprise resource planning (ERP). It is for this reason that this study examines to ascertain how significant the relationship between inventory management and operational performance of selected manufacturing firms in the south-east geographic region of Nigeria is. The south-east region of Nigeria is chosen for this study because of the industrialization prospects of this region through manufacturing firms and entrepreneurial ventures. The region also boasts of a conducive environment for business and investment. In this study, profound and clearer variables and analysis on the relationship between inventory management and operational performance of quoted companies in Nigeria are presented.

This research work will be significant to manufacturing companies in developing policy frameworks that will facilitate faster implementation of the best inventory management practices.

The elements of the study problem are illustrated by answering the following questions:

1. How significant is the relationship between inventory cost and the operational performance of quoted manufacturing firms?
2. To what degree is the relationship between just-in-time approach and the operational performance of quoted manufacturing firms significant?
3. To what extent is the relationship between material requirement planning and the operational performance of quoted manufacturing firms significant?
4. How significant is the relationship between strategic supplier partnership and the operational performance of quoted manufacturing firms?

1.3 Objectives of the Study

The study aims at examining the relationship between inventory management and the operational performance of quoted manufacturing firms in the south-east geo-political zone of Nigeria. The specific objectives include:

1. Determine the extent of the relationship between inventory cost and the operational performance of quoted manufacturing firms.
2. Ascertain the degree of the relationship between the just-in-time approach and the operational performance of quoted manufacturing firms.
3. Investigate the degree of the relationship between materials requirement planning and the operational performance of quoted manufacturing firms.
4. Determine the extent of the relationship between strategic supplier partnership and the operational performance of quoted manufacturing firms.

1.4 Hypotheses

The study consists of the following hypotheses stated in null form:

Ho₁: Inventory cost has no significant relationship with the operational performance of quoted manufacturing firms.

Ho₂: Just-in-time approach has no significant relationship with the operational performance of quoted manufacturing firms.

Ho₃: Materials requirement planning has no significant relationship with the operational performance of quoted manufacturing firms.

Ho₄: Strategic supplier partnership has no significant relationship with the operational performance of quoted manufacturing firms.

1.5 Limitations and Originality

In course of the study, there were limited existing research conducted in the present study area available for review. Thus, this study adds to existing research by ascertaining the effect of inventory management on the operational performance of manufacturing firms in the south-east, Nigeria.

2. Literature Review

Inventory management and performance have attracted much attention in academic research. For instance, (Shin, Ennis, & Spurlin, 2015) examined the effect of inventory management efficiency on the profitability of

manufacturing firms in the US. The manufacturing firms in the US studied were established from the *Compustat* database using North America industry classification system (NAICS) code. 1280 manufacturing firms were sampled for a 3 years interval from 2005-2008 in what made up the first of the two datasets used for this study, while 959 firms were sampled in an 8 years interval from 2005-2012 in what made up the second dataset. The study used a profit margin as evaluation metrics to measure firms' profitability while inventory selection ratio was used as evaluation metrics for inventory management efficiency. Evaluation of profitability and inventory management efficiency was done in two different analytical domains in this study. In the first domain, the dataset was classified based on the size of the firm into three groups while in the second domain, the dataset used was classified based on firms' level of assets. Result of the study shows that a positive relationship between profitability and inventory management exists, with a higher significant impact of inventory efficiency on profitability based on the firm size as compared to the impact of inventory efficiency on profitability based on assets size.

In (Naliaka & Namusonge, 2015), the role of inventory management on the competitive advantage of Unga group limited, Kenya, was investigated. To do justice to this, the effect of inventory lead time, inventory control/practices on the competitive advantage of the quoted manufacturing was determined. Furthermore, the extent of adoption of information technology in inventory management of Unga limited was assessed. Based on stratified and simple random sampling technique, 30 respondents issued a questionnaire instrument for the study were selected from all 289 employees of the quoted manufacturing firm. A statistical package for analysis (SPSS) based descriptive statistics were used to analyze the collected data. From the study, it could be deduced that the competitive advantage of manufacturing firms in Kenya is dependent on information technology, inventory control systems/practices and inventory lead time.

The study by (Munyao, Omulo, Mwithiga, & Chepkulei, 2015) was most specifically objective in finding out the inventory management techniques used by textile, rolling mills and food beverage manufacturing firms in Mombasa county, Kenya. A sample size of 45 manufacturing firms from 150 was adopted based on the stratified random sampling technique. Copies of the questionnaire were used as the major instrument for data collection. Result of the study showed that action level methods, just-in-time, periodic review technique, material requirement planning 1 and economic order quantity are the most frequently adopted inventory management technique with action level being the most adopted method notwithstanding the efficiency of material requirement planning 1 in production performance.

(Mukopi & Iravo, 2015) examined effect of four inventory management components; lean inventory system, strategic supplier partnerships, information technology in inventory management, and legal policies on the performance of the procurement function of sugar manufacturing companies in the Western Kenya Sugar Belt. This examination was carried out through copies of a questionnaire issued to 30 procurement personnel selected from 100 personnel of the four quoted sugar manufacturing companies in Kenya. In this study, the four inventory management components were employed as the independent variables while the performance of the procurement function was employed as the dependent variable. Result of the study based on descriptive statistics and regression analysis showed a very significant relationship between the independent variables and the effect of inventory management on the performance of the procurement function of sugar manufacturing companies in the western sugar belt.

(Otundo & Bichanga, 2015) in their study sought to objectively evaluate the effects of different inventory management practices; forecasting practices, inventory categorization practices and vendor managed inventory on the operational performance of Kisii County Government, Kenya. A sample of 38 respondents was selected for the study. Descriptive statistics were employed in analyzing the data. The study established that the effect of forecasting practice on operational performance is dependent on the level of supply and supply request of the various units responsible for quality services to customers. The study also revealed that the positive effect of forecasting practice on operational performance would be very much enabled by efficient inventory policies. Furthermore, it was noted that the quality of services to customers is the most effective of inventory categorization on operational performance.

(Oballah, Waiganjo, & Wachiuri, 2015) investigated the effect of four variables of inventory management practices; inventory shrinkage, inventory investment, inventory turnover, and inventory records accuracy on organizational performance of Kenyatta National Hospital, Kenya. 74 respondents from the category of pharmacists; stores and supply officers; store managers, assistants and clerk; and stock controllers were issued copies of the questionnaire from which data for the study was generated. From a descriptive study design perspective adopted by the study, the study revealed a negative effect of inventory shrinkage on organizational performance and a positive effect of inventory investment and inventory records accuracy on organizational

performance of the quoted national hospital.

Studies on the inventory management and performance relationship of firms have produced mixed results. In (Panigrahi, 2013), a significant negative linear relationship between inventory conversion period and profitability was obtained. (Folinas & Shen, 2014) found no link between inventory turnover and financial performance. (Onchoke & Wanyoike, 2016) found a significant positive influence of internal inventory security procedural practices, inventory auditing and computerized inventory control, on procurement performance. In (Lwiki et al., 2013), the study result revealed that there a positive correlation between inventory management and return on sales exists. These varying results show the different relationships that exist between inventory management and performance of different firms. Thus, this study is based on the reality of inventory management and performance of firms, which contribute greatly to the growth of Nigeria's economy. In today's competitive market place where companies face a dilemma of whether to hold or not to hold inventory due to; perceived high inventory cost, excess materials and products and incompetent information technology infrastructure, it is important to look at the affinity between inventory management and operational performance of manufacturing firms so as to come up with policy frameworks that would enhance implementation of balanced inventory management practices for greater productivity.

3. Study Methods

3.1 Population and Sample

The survey research design was employed in this study. The study location is South-east region of Nigeria. Four quoted manufacturing firms; Nigeria Breweries Plc. Enugu, PZ Cusson, Aba, Seven-up Bottling Company, Aba and Cutix Cable Industry, Nnewi was studied. The target population of the study consisted of staff from human resource, procurement, marketing, production and finance departments of the companies. A sample size of 538 was mathematically determined from 5223 target population using Godden's (2004) formula. Simple random sampling technique was employed to select the staff from the various departments for the study. The reason for using simple random sampling technique was to give every individual equal opportunity of being selected for the study.

The study used copies of a structured questionnaire to elicit information from the sampled respondents. The copies of the questionnaire contained questions that utilize the 5-points Likert rating scale (Strongly agree, agree, undecided, strongly disagreed and disagreed).

A total of five hundred and thirty-eight copies (538) of questionnaires were distributed to the respondents, out of which three hundred and seventy-one were properly filled and found relevant to the study. Descriptive statistics, correlation analysis and multiple regression analysis were employed in analyzing the data.

Table 1. Characteristics of the study sample

	Frequency	Percentage
GENDER		
Male	224	60.4
Female	147	39.6
Total	371	100.0
AGE		
18-30 years	178	48.0
31-40 years	94	25.3
41-50 years	63	17.0
51years and above	36	9.7
Total	371	100.0
MARITAL STATUS		
Married	176	47.4
Single	290	44.5
Separated/divorced	30	8.1
Total	371	100.0
EDUCATIONAL QUALIFICATION		
O'LEVEL	160	43.1
OND/NCE	154	41.5
B.Sc./HND	41	11.1
M.Sc./MBA	6	1.6
PhD/Others	10	2.7
Total	371	100.0

3.2 Sources of Data Collection

Data for the survey conducted was sourced from primary sources. Primary data was obtained from the study sample of selected staff of the quoted manufacturing firms in the south-east region of Nigeria, using questionnaire

3.3 Measure of Variables of the Study

The study variables consist of one dependent variable and four independent variables:

(1) Independent variables:

The independent variables are components of inventory management, which include: Inventory Cost, Just-in-Time Approach (JITA), Material Requirement Planning (MRP) and Strategic Supply Partnership (SSP).

(2) Dependent variable: operational performance of manufacturing firms (OPMF)

Relationship between inventory management and operational performance of manufacturing firms was evaluated using multiple regression analysis. The regression model used is represented as;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_n X_n + \epsilon \quad (1)$$

Where:

Y = Operational performance of manufacturing firms (OPMF)

α = Constant Term

β = Beta coefficients

X_1 = Inventory Cost

X_2 = Just-in-Time Approach (JITA)

X_3 = Material Requirement Planning (MRP)

X_4 = Strategic Supply Partnership (SSP).

ϵ = Error Term

3.4 Statistical Methods

The researchers used the SPSS program to analyze the study data collected from the questionnaire to test hypotheses and achieve the objectives of the study. It gave means, standard deviations and correlations of each independent and dependent variable. The statistical methods include frequencies, the mean, standard deviations and simple regression.

3.5 Reliability of the Instrument

The questionnaire was pre-tested through a pilot study to ascertain their effectiveness in getting the information needed. The research instruments were test-retested on a sample of ten respondents drawn from other manufacturing firms not used in the study. Cronbach-Alpha test was used to verify the stability and internal consistency in the questions in the questionnaire. The result of the alpha coefficient value was 0.751, which shows that there is a high degree of consistency for all questions.

4. The Results

SPSS and EXCEL were used to analyze the study data and to identify the descriptive characteristics of the dependent and independent study variables and the results of the hypothesis test. Table (2) presents the descriptive statistics of the variables of the study. Each hypothesis and descriptive statistics of their variables are shown in table 2 and table 3:

4.1 Statistics of the Variables of the Study

Table 2. Descriptive statistics of the variables of the study

	N	Min	Max	Mean	Std. dev.
Inventory cost	371	9	30	21.20	4.301
JITA	371	11	30	20.22	4.086
MRP	371	10	30	20.14	4.275
SSP	371	8	29	19.26	4.002
OP	371	11	30	22.54	3.208
Valid N	371				

Table 2 provides information about the mean and standard deviation of the variables used in the study. Low values of standard deviation for each of the variables indicate a consensus on statements associated with each of

the variables.

4.2 Hypotheses Testing and Result in Discussion

Table 3. Regression analysis of study hypotheses

Hypotheses	T	T.Sig.	Result of Ho	Result of H1
HO1	2.614	.040	rejected	accepted
HO2	2.191	.005	rejected	accepted
HO3	2.484	.013	rejected	accepted
HO4	2.288	.023	rejected	accepted

HO1: Inventory cost has no significant relationship with the operational performance of quoted manufacturing firms.

The operational performance of firms was measured using the MRA method, where the relationship between inventory cost and OPMF was measured by questions 1 to 5 in the questionnaire. Table 3 shows the result of the relationship between inventory cost and OP, where the value of P-value sig. = 0.040, which is less than the significant level $\alpha = 0.05$, thus rejecting the null hypothesis and accepting the alternative hypothesis, that is, Inventory cost has a significant relationship with the operational performance of quoted manufacturing firms.

HO2: Just-in-time approach has no significant relationship with the operational performance of quoted manufacturing firms. The operational performance of firms was measured using the MRA method, where the relationship between JITA and OP was measured by questions 6 to 10 in the questionnaire. Table 3 shows the result of the relationship between JITA and OP, where the value of P-value sig. = 0.005, which is less than the significant level $\alpha = 0.05$, thus rejecting the null hypothesis and accepting the alternative hypothesis, that is, Just-in-time approach has a significant relationship with the operational performance of quoted manufacturing firms.

HO3: Materials requirement planning has no significant relationship with the operational performance of quoted manufacturing firms. The operational performance of firms was measured using the MRA method, where the relationship between MRP and OP was measured by questions 11 to 15 in the questionnaire. Table 3 shows the result of the relationship between MRP and OP, where the value of P-value sig.= 0.013, which is less than the significant level $\alpha = 0.05$, thus rejecting the null hypothesis and accepting the alternative hypothesis, that is, Materials requirement planning has no significant relationship with the operational performance of quoted manufacturing firms.

HO4: Strategic supplier partnership has no significant relationship with the operational performance of quoted manufacturing firms. The operational performance of firms was measured using the MRA method, where the relationship between SSP and OP was measured by questions 16 to 20 in the questionnaire. Table 3 shows the result of the relationship between SSP and OP, where the value of P-value sig. = 0.023, which is less than the significant level $\alpha = 0.05$, thus rejecting the null hypothesis and accepting the alternative hypothesis, that is, Strategic supplier partnership has no significant relationship with the operational performance of quoted manufacturing firms.

5. Conclusions and Recommendations

5.1 Conclusions

This work examined inventory management and operational performance of quoted manufacturing firms in South-East Nigeria. Data were sourced from the employees and management of four quoted manufacturing companies. The data generated were analyzed and the following was discovered. The study found that inventory cost, just in time approach, materials requirement planning, and strategic supplier partnership have a significant relationship with operational performance. The study, therefore, concludes that inventory management has a significant positive relationship with the operational performance of the sampled quoted companies in South East Nigeria.

5.2 Recommendations

The study recommends that manufacturing firms in Nigeria should adopt inventory management practices such as strategic supplier partnership, just-in-time approach, materials requirement planning and inventory cost control as they were found to have a significant effect on operational performance. Also, manufacturing firms should adopt long-term relationships with suppliers and customers. This can be done by strategic supplier/customer partnership to improve the overall operational performance of the firm.

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Strategy: Can a Research Methodology Be Proposed from Islamic Sources of Knowledge?

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Abstract

The study has attempted to propose a research methodology for the subject of strategy from an Islamic perspective. It employed qualitative research methodologies to explore and analyze the content taken from the texts of the Quran and the Hadith; the Islamic Law contained in these texts; interpretation of this law via Islamic Jurisprudence. It has argued to extend this law into multiple layers of the research methodology ensuring whole research cycle takes place within the Tawhidic Paradigm propounded in the texts of the Quran and the Hadith. In doing so, it adopted the model of the research methodology as developed in the Jeudo-Christian or the Western cultural context and tried to replace the research philosophy(es) and reasoning approaches with the Islamic Law and Islamic Logic, enabling the whole methodology to operate within the framework of revelation and human reason at each and every layer and every aspect.

This study is a part of the efforts which are being made to explore alternate perspectives in order to overcome the prevailing issues emerging in the classical management theory and practice, including those related to strategy. While works of scholars from cultural contexts different from the western cultures are surfacing in this area, it seems to be useful to also explore the Islamic sources of knowledge for the very purpose. It is to highlight a crucial point that this study should not be considered a way of negating or rejecting the existing body of knowledge, but it is an attempt to bring something which may complement it or provide a new way of looking into the subject of strategy.

Keywords: civilization, culture, Jeudo-Christian, Islamic, jurisprudence, worldview, theory, strategy, methodology, revelation, reason

1. Introduction

1.1 *The Study and Its Objective*

The study is aimed at exploring the Islamic sources of knowledge and seeking the possibility of existence of a research methodology for the subject of strategy from an Islamic perspective. While a huge knowledge bank explaining multitude of aspects about Islam and its principles etc. is available with all the ease, it is acknowledged here that the way it is presented to the world seems to be incompatible with the contemporary world of human thought and practice. But is it really incompatible in its essence? This is the question that has driven the need for current study. This is the first of its kind as no previous literature of the similar sort could be found, as focused on the research methodology for the subject of strategy, even after employing the best efforts, especially in English language. Being so, it looks into the Islamic sources of knowledge and explores how a Tawhidic Paradigm gives birth to an Islamic culture or civilization comprising of various layers, i.e., belief system and laws etc. that operate to drive an Islamic culture. Knowledge and production of knowledge is the spirit of a society that keeps it alive and moving. Same is the case with the Islamic society and culture. The study seeks the Tawhidic Paradigm as presented in the Islamic sources of knowledge and traces its impact, or spirit so to speak, operating down the layers of a research methodology such as the research philosophy(ies), approach(es) till the practical design and its execution etc. In this pursuit, it dives into Islamic sources of knowledge and then leverages the prevailing body of knowledge in the Western realm to propose a research methodology for this specific area of social sciences, i.e., strategy. Also, it sets certain conditions which should be met by the new research methodology in order to stay within the framework of the Islamic Laws as entailed in the revealed texts on one hand while being robust enough to be

accepted as a valid methodology by researchers and practitioners.

1.2 Significance of the Study

Kazmi (2003; 2005) realized the need for alternative approaches, other than those born and brought up in Judeo-Christian cultural contexts, to management research and practice; and presented a research direction in order to explore management concepts from an Islamic perspective and to investigate if they are workable? He suggested to focus on investigating into the paradigms of conventional management, and for comparing and contrasting them with what the Islamic approach to management has to offer. The purpose being not to criticize the conventional approach(es), but to offer new insights into what could possibly be wrong with those approaches and how those could be corrected, i.e., a complementation attempts rather than confrontation among the conventional and alternative approaches. This approach could lead to address the universal concern for utilizing human ingenuity in order to manage organizations effectively.

Kazmi (2003) fully understands the need of availability of purposeful qualitative work which could become a fountainhead of meaningful quantitative research but which is missing at present. The available work is descriptive and not analytical, thus does not propagate further research work. He points to a superficial stream of behavior among Muslim scholars who keep trying to tell the world that existing conventional theories or postulates are nothing new and that these were already there in the Islamic realm of knowledge. Such approaches may console Muslims; however, it poses a dangerous threat of diversion from what should actually be done. And it is very true that less attempts have been made to link the teachings of Islam to the modern management practices, including strategy, employing analytical tools and techniques. To fill this gap, Kazmi encourages the management researchers to explore the field of management from an Islamic perspective and provides them with an extensive and comprehensive proposal for research that is comprised of four streams, i.e., “*dig the gold*”, “*chinks in the armor*”, “*delve deeper*” and “*hands-on*” approaches. This proposal can be considered as an important milestone towards viewing the management concepts from an Islamic perspective as it insists on a wider and deeper theoretical and empirical study on which he himself has embarked on (Kazmi and Ahmed, 2006). This is something quite different from existing practices that prevail among Muslim scholarship, as already mentioned.

Recently, Zandi et al. (2015) responded to this need and proposed an extensive empirical research plan which is aimed at finding the strategies of Muhammad PBUH that he adopted during his lifetime, especially those adopted during wars or battles, to see how they are being employed in current day business as well the outcome of the implementation of these strategies. This research is intended to be conducted in selected organizations in Malaysia. It seems to be an important step, if taken, towards research in this area from an Islamic perspective. Gul (2016) considered it to be valuable if an effort is made to first identify the concept of ‘Strategy’ within the Islamic sources of knowledge, comprehend it within the Islamic world-view, make comparisons with the same concept available in other world-views and then proceed for further theoretical and empirical research.

Current study is one such effort to explore the research methodology for strategy and the possibility of theory building and testing in this domain. Such study does not seem to exist after best effort was employed to search for that. The study, thus, is an attempt to fill this gap while adopting one of the four approaches proposed by Kazmi (2003), i.e., the “*dig the gold approach*”. This approach means a straightforward manner of looking into the Islamic sources of knowledge and their interpretations etc. for nuggets of wisdom to be brought to light through individual or collective effort and is taken up by current study.

Other approaches are not touched here at all. This study, together with other studies, is expected to help avoid the same wrong which Muslim scholars have been committing of superficially announcing different terminologies and concepts to be similar to those emanating from Islamic sources without going deeper into the world-views, these come from and their implications in the philosophical and practical worlds.

1.3 Scope of the Study

The research methodology of a subject is an overall framework of principles which a researcher follows to investigate into the truth of concepts, theories and basic principles of reasoning of that specific subject. Current study provides an introduction to the research methodology for strategy as it prevails in the Western or the Judeo-Christian cultural realm, reviews Islamic sources of knowledge and tries to see if there exists or may exist some sort of research methodology from Islamic perspective as well? In this pursuit, the study delves into a variety of sources such as the concept of strategy as it springs from the Western cultural context; the cultural context itself; philosophies which prevail in these cultures; and its underlying assumptions as core values that drive organization and management practices (e.g., strategy, strategy formulation and implementation, and strategic decision making process etc.); and then the research methodology for the subject of strategy. Taking

into account that the concept of strategy exists in Islamic sources of knowledge (Gul, 2016), current study embarks to bring to fore the architecture of an Islamic cultural context; the themes that shape such a culture; and the assumptions as well as the core values that should drive theory and practice in the field of organization and management. Finally, it discusses the viability of the methodology for the subject of strategy from Islamic perspective and then makes conclusions for further elaborations, testing and implementations of the methodology in real time scenarios.

This study contents itself to introducing briefly the methodology for strategy in the Western context to let the reader have a review of the theme. It then proposes the methodology from Islamic perspective. It doesn't touch aspects such as comparisons between methodologies coming from different cultural contexts such as Indian, Chinese or any other civilizational or cultural contexts. Practical implementation of the proposed methodology and its testing is left for a separate study. Also, it doesn't delve yet on how effective or ineffective the proposed methodology of strategy could be, if one may exist at all. Lastly, the probable conditions such as the presence of an Islamic state is left for further research.

Since the intention is only to provide a new view of theory building, theory testing and model building; the study avoids as much criticism of existing methodologies as possible and focuses only on providing an introduction of a methodology from the Western perspective and then moves forward to propose one from Islamic perspective. Put, simply, this study is dominantly of a descriptive nature prescribing a new way of looking into the subject matter.

2. Literature Review

2.1 The Concept of Strategy and Research Methodology

The concept of strategy has been conceived in numerous ways by different researcher and practitioners (Gul,2016). Seemingly, the concept of strategy emerges in the shape of a coherent combination of objectives (ends, purposes, goals, competitive priorities, etc.) and actions (means, policies, plans, activities, etc.) required to achieve those objectives. Objectives relate to how an organization intends achieving these ends. This was realized by Kazmi (2008) who attempted to conceive strategy in a quite simple but comprehensive manner. He states:

“The term ‘strategy’ is derived from a Greek word *strategos*, which means generalship---the actual direction of military force, as distinct from the policy governing its deployment. Literally, therefore, the word ‘strategy’ means the art of the general. In business parlance, there is no definite meaning assigned to strategy. It is often used loosely to mean a number of things.

- A strategy could be a plan or course of action or a set of decision rules making a pattern or creating a common thread;
- The pattern or common thread related to the organization's activities which are derived from the policies, objectives and goals;
- Related to pursuing those activities which move an organization from its current position to a desired future state;
- Concerned with the resources necessary for implementing a plan or following a course of action;
- Connected to the strategic positioning of a firm, making trade-offs between its different activities and creating a fit among these activities; and
- The planned or actual coordination of the firm's major goals and actions, in time and space that continuously co-align the firm with its environment.

In simplified terms, a strategy is the means to achieve objectives. In complex terms, it may possess all the characteristics mentioned above. With so many different interpretations of a term, it is really difficult to fathom what strategy really means. This is understandable. Yet we need to consider all these interpretations at once. This diversity of interpretations gives us valuable insights into what thinkers and writers have proposed from time to time. With the wealth of understanding we have at our command, thanks to the intellectuals who have contributed to creating it, we can broaden our thinking.”

Having conceived ‘strategy’ as a concept, next is to introduce what is research methodology prevailing in this important area of organization and management.

‘Strategy’ as body of knowledge, or a social science to be a more specific, was developed in the Western cultural context and has captured the attention of organization and management researchers since its inception. Those

interested in this area are suggested to review the works of Kuhn (1962), Burrell and Morgan (1979), Sutton and Staw (1995), Weick (1996), March (2007), Miller (2008). Like other areas of organization and management, the research in this area has the same purpose when it comes to the methodology, i.e., to understand organizational phenomena and developing recommendations for managerial action (Ketchen Jr., Boyed, Bergh, 2007). Methodology investigates into the truth of concepts, theories and basic principles of reasoning in a specific subject area under consideration. In simple terms, it deals with the source(s), nature and development of knowledge in order to determine the roadmap towards understanding certain phenomenon. It accomplishes so through defining ways in which data is collected, analyzed and used. Moreover, it also sets standards for the acceptability of evidence and determines the role of reason in the investigation within a certain paradigm or philosophical framework.

Like almost every other area of social research, there could be a wide difference of opinions on the methodology for strategy as well. These differences may arise at any level of the methodology, i.e., the paradigm, the philosophy, the approach, choice of methods down to the data collection and data analysis levels as represented in the Research Onion (Saunders et. al., 2009) as shown in figure below:

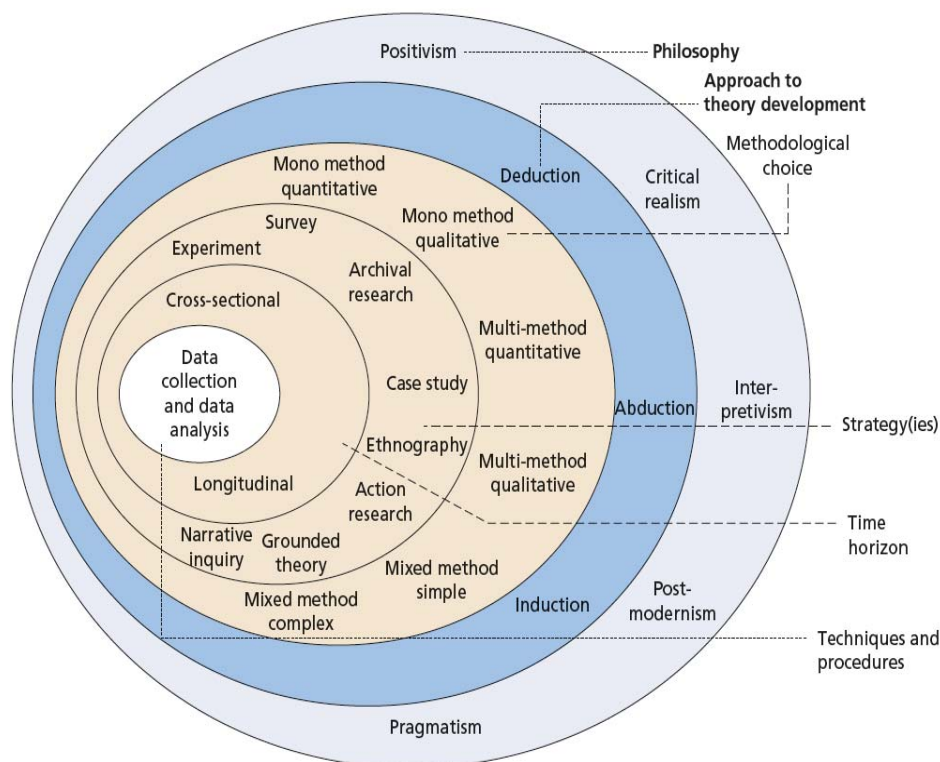


Figure 1. The Research Onion in Western Cultural Context

Researchers have taken varying positions in their choices at every layer of the research onion, and often heated debates have ensued as a result. Methodology is necessary to lay down the foundations of a specific body of knowledge and to develop it over time. Without a clear methodology, data and information may not be taken a serious affair (Crotty, 1998). It is notable that all these different layers of methodology are, in different ways and to different extents, connected with each other and the choices made at one layer would arguably impact the choices at the other layers. These layers operate in a coherent and synchronized manner to let the research activity reach some conclusions.

It is important to mention here that the researchers are keen to build theories, reach the truth of the existing theories, model building, implementations, probable outcomes or relevance to the real-world scenarios etc. Additionally, and interestingly, each methodological approach would claim to reach the truth in a surer manner as compared to others. This is indicative from the variety of perspectives about almost every concept in the realm of organization and management, and also for the concept of strategy. Man is, in fact, keen to reach the truth in every possible domain of knowledge and the debate on methodology is an inborn human trait which is reflected at times. In this whole discussion, there should arise an extremely important question: What paradigms or philosophies drive research methodology in the Western cultures?

In order to answer this crucial question, it is imperative to understand what constitutes a cultural fabric? how these constituents interact with each other? how and to what extent these impact the overall fabric? how a paradigm or philosophy is oriented in the culture? How these paradigms and philosophies drive the research activity in various areas of social sciences? etc. Nieto (1999) has provided a very good view on this. He states the important role of the system of values, traditions, social and political relationships, and world views created and shared by a group of people bound together by a combination of factors that can include shared history, geographic location, language, social class, and/or religion, and how these are transformed by those who share them. In everyday social setting, we use culture to express and give meaning to our identity which in turn is used to construct affiliations with and boundaries between other individuals and groups. The Western cultures exhibit the same anatomy, essentially impacted by various streams of Greek and Roman philosophies, the psychological impacts of the Dark Ages, the Renaissance, the Reformation, the Enlightenment and, of course, Christian and Jewish religious texts and practices etc. There are certain paradigms and philosophies operating in these cultures that emerged over time, most dominant of which are the Liberalism, the Secularism etc. which serve as paradigm of thought and action to cope with the most part of the living issues in those cultures. The research philosophies such as the Empiricism, the Realism, the Post-modernism etc. are hosted in these cultures which, together with the paradigms, drive the research activity in natural as well as social sciences including the subject of strategy. Researchers engaged in the area of strategy follow, in general, the same set of ontological, epistemological and axiological assumptions as suggested by such paradigms and philosophies.

From the Research Onion as provided in Figure 1, it is apparent that a standard research methodology should have:

- A paradigm or research philosophy (to set fundamental assumptions)
- An approach to theory development (logic and reasoning used for argument)
- Methodological choice (selection of adequate type of method)
- Strategies (choice of research execution strategy)
- Time horizon (the choice of depth and breadth of investigation)
- Techniques and procedures (tools and techniques employed for calculations)

Having mentioned that there exists a structured research methodology for strategy from the Western cultural context, it is also acknowledged that the author couldn't find any such methodology for the subject area of strategy from an Islamic perspective. Though works could be found in the areas of social sciences such as economics, law, history, sociology, political science and to some extent management etc. but a structured research methodology for strategy couldn't be found. While reviewing Islamic literature, only the teachings, laws and principles about various affairs of life could be spotted. It is argued that the positive aspect of such teachings, laws, principles is that there is a possibility to synthesize and extend these in order to propose a research methodology in a specific area of social sciences.

3. Methodology

3.1 Data Collection

Documents have been used as sources of data since the nature of study benefits from a number of knowledge streams. The term 'document' covers a very wide range of different documents entailing data available for acquiring, analyzing and assembling. It includes the Quran, the books of the Hadith, Islamic Jurisprudence etc., literature on the Western philosophy and culture, organization and management (specifically the subject of strategy) etc. Bryman and Bell (2007) recommend the criteria of acceptable documents with the certain traits, i.e., can be read, has not been produced specifically for the purpose of research, is preserved to be available for analysis and is relevant to the concerns of the researchers in the business realm. It is argued, here, that Islamic sources of knowledge and the knowledge obtained from these do qualify these criteria. Rest of the data, i.e., about the Western culture or civilization, the philosophies, the economics and strategy qualify for the same.

Qualitative data includes literature on the concept of strategy highlighting the variety of standpoints about it, the methodologies involved, the architecture of the Western culture from which this methodology (or methodologies) springs out, and the paradigms which govern the respective methodologies etc. The data extends to include literature from Islamic perspective to assess and analyze, step by step, and see if there exists (or may exist) a methodology for strategy from an Islamic perspective.

3.2 Methodology Used

Choice of methodology plays vital role in research design. It is the overall configuration of a piece of research involving questions about what kind of evidence is gathered and from where, and how such evidence is

interpreted in order to provide good answers to the initial research question, adoption of adequate research strategies and methods, data collection and analysis etc. (Easterby-Smith et al., 2012).

Due to conceptual nature of the study, inductive approach has been adopted within largely an interpretivist philosophical paradigm. For this purpose, a combination of qualitative methods recommended by 'Grounded Theory' and 'Narrative Inquiry' is employed. The goal is to avoid as much pre-judgement or bias as possible, and to go in with an open mind to see what emerges/is grounded in the data alone, i.e., it has not been informed in any way by pre-existing hypothesis. The concept of 'Hermeneutics', 'Phenomenologists', 'Symbolic Interactionism' operate in current study since it looks into the data sources (documents, lived experiences, emerging patterns etc.) and leads to an understanding of social worlds and contexts. Complying with the requirements of such study, a good study of various sources, i.e., the Western as well as the Islamic, was conducted. This helped to identify certain patterns of cultural architecture in both the contexts and also the respective underlying assumptions that operate in those cultures and shape activities at group level (institutions, organizations, firms etc.). Seeing that a research methodology for strategy emerges from Western cultural context, an attempt has been made to propose possibility of a methodology in the Islamic cultural context as well. Apparently, it seems similar to 'Pattern Matching' approach but it turns out to be different if seen carefully as it doesn't make any presumptions or hypothesis before embarking on the study or analysis which are a necessary part of the pattern matching approach.

To ensure the study stays within reasonable limits of length and breadth of time, while trying to go into a good level of depth, references to Western philosophy have been made and presented very briefly, though concisely. It is notable that due to the descriptive nature of the data, only concepts can be derived from the emerging patterns and not necessarily the numbers. Validity has been ensured by introducing a coherent and synchronized presentation of the concepts as these emerge from their respective sources and synthesize to produce some legitimate outcome.

4. Findings and Discussion

It is useful to move from known to unknown while delving into something new. A research onion was introduced in section 2.1 which provides information about how a research methodology from the Western perspective works when employed in a certain subject area. The fact of the matter is that the research methodology for strategy is a well mature art or science; it operates on well-defined paradigms and philosophies; it is driven by specific assumptions; the choice of approaches is fully known and so on with every layer of the research onion. Author of this study considers to follow the same model to propose a new methodology instead of reinventing the wheel. However, it is done introducing the concept from the Islamic sources of knowledge as the basis for research methodology and a research onion that operates on the principles laid down in these sources.

Thus, the study has tried to bring to fore the concept of strategy, the methodology for strategy, and a brief introduction to the fact that these took birth and grew up in organization and management realm of the Western cultures, as they operate on the paradigms and philosophies prevailing in those cultures. It is time now to provide the findings from the study of Islamic sources of knowledge (the Islamic Law; its interpretation and extension) to explain if a research methodology could be proposed from the Islamic sources of knowledge as well?

4.1 Some Basic Themes

It might be useful to provide scholars, especially the non-Muslim ones, with some basic introduction to the themes and the terms related to this study:

- From an Islamic perspective, the divine revelation is the source of all knowledge (Azram, 2011). This revelation is the Quran (*Al-Quran*) which was revealed to Muhammad PBUH who, under the guidance of the God, practically modelled the principles of the Quran. This practical modelling of the Quranic principles by Muhammad PBUH is called the Way or the Sunnah (*Al-Sunnah*). Thus, the two primary sources of knowledge in Islam are the Quran and the Sunnah of Muhammad PBUH.
- Muslims use the word the God (*Allah*) for the supreme being Who is the Creator (*Al-Khaliq*), the Absolute Authority (*Al-Malik*), the Omnipotent (*Al-Qadir*), the Omniscient (Al-Knowing) etc.
- Quran is divided, based on different topics, into 114 Chapters (Surah) of unequal size where each chapter is comprised of multiple Verses (*Ayat*). The Sciences of the Quran (*Ulum al Quran*) refers to the knowledge necessary for the interpretation, known as exegesis, of the words/verses in Quran (Denffer, 1994).
- The reports about the statements, the acts or the silence about a matter by Muhammad PBUH are called the Hadith (*Al-Hadith*), narrated by his Companions and transmitted through generations. Hadith, when studied

by employing a specific technical knowledge, called the Sciences of the Hadith (*Ulum al Hadith*), provides information of the Sunnah of Muhammad PBUH (Philips, 2007).

- Islamic sources of knowledge entail the Islamic Law (*Shariah*) in the form of texts. This law springs out of the Quran and the Sunnah and shapes a specific world-view known as the 'Islamic World-View', i.e., how Muslims should see the world inside and around them? How should they deal with the different affairs of individual and collective life? What are the obligations and rights, good and bad, right and wrong, permission and prohibitions, rewards and punishments etc. The knowledge of the Islamic Law is covered under the name of the Islamic Jurisprudence (*Fiqh*), the principles applied to understand this law as '*Usul al Fiqh*' and the efforts applied for this purpose are termed as '*Ijtihad*'. The one who conducts *Ijtihad* is the jurist (*Mujtahid*) and the one who follows him is known as the follower (*Muqallid*). When the term Islamic Jurisprudence is used, it actually means Islamic texts and the law contained in these text.
- Muslims use PBUH (Peace Be Upon Him) for every prophet to show respect without any discrimination, hence they use it for Adam, Noah, Solomon, David, Abraham etc., also they do the same for Muhammad PBUH. The plural to this term is PBUT (Peace Be Upon Them).

4.2 Architecture of an Islamic Culture

Maududi in one of his classics "*Islamic Civilization: Its Foundational Beliefs and Principles*" provides a simple, but extraordinarily comprehensive, manner about what Islamic beliefs and principles are, and how they operate in individual as well as collective spheres of human life to shape an Islamic society which, in turn, exhibits an overall culture or civilization. With the aid of the two other very important works of Nyazee "*Islamic Jurisprudence*" and "*The Theories of Islamic Law*", his ideas can be summarized in a layered hierarchical model as below:

- 1- Islam reminds humans about the existence of one true God (*Allah*) Who is *Al-Khaliq* and created whatever humans know or they don't. He is *Al-Malik* Who owns everything and that every being has to return to Him after spending certain span of time in this world and face Him on the day of the judgement (*Al-Akhirah*) for the accountability of whatever they did in their lives on earth. He is *Al-Alim* Who has the knowledge of each and every thing, e.g., the past, the present and the future; what's good or bad; what's right or wrong for His creatures including human race. This forms first and the most important layer in the hierarchy of Islam and is termed as the Oneness of God (*Tawhid*) or the Tawhidic Paradigm.
- 2- The true and the exact knowledge about Allah is passed on to humans via the Messengers (*Rusl; sing: Rasool*) i.e., chosen ones from humankind. These chosen ones received revelation from Allah, during their lifetime on earth, through the Angel Gabriel and guided humankind in the light of the revelation (*Wahy*). Together with belief in Allah and the day of judgement (*Akhirah*), belief in the Messengers, the Angels and the Books form five fundamental beliefs of Islam. This set of beliefs is the offspring of the Tawhidic Paradigm.
- 3- This Towhidic Paradigm leads, by operationalizing the fundamental beliefs, to establish a specific world-view known as the Islamic World-view, i.e., how Muslims should see the world inside and around them? How should they deal with the different affairs of individual and collective life? What are the obligations and rights, good and bad, right and wrong, permitted and prohibited, rewards and punishments etc. This worldview is an arbitration of the Islamic Law (*Shariah*).
- 4- Muslims when come together to form a society, their world-view is reflected in their individual and collective life generating a particular set of beliefs and values. They are required to theorize various concepts, build theories and design models, and then based on these theories and models realize and utilize various systems, e.g., political, educational, economic, judicial, healthcare systems etc. This is aimed at enablement of the society in a pattern desired by Allah and guided by His Messenger, Muhammad (PBUH), being the final one in the chain of the messengers initiating from Adam and extending from Noah, Abraham, David, Moses, Jesus (PBUT) to mention a few among many, the knowns as well as the unknowns.
- 5- These systems, rooted in the same paradigm or sources, operate in coherence and synchronization with each other to achieve the same ultimate objectives, generally known as Higher Order Objectives of Shariah or simply the purpose of Islamic Law (*Maqasid al-Shariah*) as well as employing the idea of the interest (*Maslahah*) in varied time-space-people situations requiring varied interpretations of the law. These objectives, at high level, include the protection and growth of belief, life, intellect, race, wealth of those who constitute the Islamic society.

It is essential to understand that ideally each and every layer is connected with each and every other layer above and

below itself, affecting each other positively or negatively, depending upon the accuracy or inaccuracy of the thought or actions or the operational conduct (somehow similar to the cogs of a machine). Thus, it is impossible to see these layers in an isolated stand-alone status. This means the Tawhidic Paradigm drives the whole machine by providing a framework of operation, i.e., the Islamic Law interpreted through the Islamic Jurisprudence. This framework operates on two planes, i.e., a Fixed Plane and a Variable Plane (To be discussed in next section). A society in which Tawhidic Paradigm is the engine is called an Islamic Society and its ultimate manifestation occurs in the form of an Islamic Civilization. Any culture with Islamic civilization as its core is termed as an Islamic Culture.

This is to say that there exists a very clear and well-structured architecture of an Islamic culture. One may think if this Tawhidic Paradigm is the only engine which moves the overall Islamic culture or civilization? What about other factors such as race, language, customs etc.? In fact, all these factors also play a very important role in shaping an Islamic culture, however these should always remain sub-servient to the Tawhidic Paradigm.

Now is the time to argue that if a methodology is proposed in such a cultural context, it will take its basic assumptions from Islamic sources of knowledge and operate to reach the reality.

4.3 Proposing a Research Methodology for Strategy from Islamic Perspective

Considering the architecture of an Islamic culture as explained in section 4.2, the research methodology should also be hosted by the same layered model like any other activity in an Islamic culture. Thus, it is argued here that:

- The Tawhidic Paradigm, as manifested in the Quran and the Sunnah, serves as the research paradigm and the Islamic Law as the research framework or research philosophy.
- The approach to theory development, i.e., logic and reasoning stay subservient to the Tawhidic paradigm and is moderated by Islamic Law through Islamic Jurisprudence.
- Then subsequent layers of the research onion should operate in tandem with the layers above them.

In fact, these are the most important layers, i.e., research philosophy and approach(es) to theory development. Subsequent layers are moderated or orchestrated by these two layers. Therefore, the first and the foremost requirement being the availability of a research paradigm; a world-view or a philosophy (or philosophies) and a set of approaches is fulfilled by the Tawhidic paradigm or Islamic Law and Islamic logic to build a new methodology.

According to this argument, the proposed Research Onion would look like as drawn below:

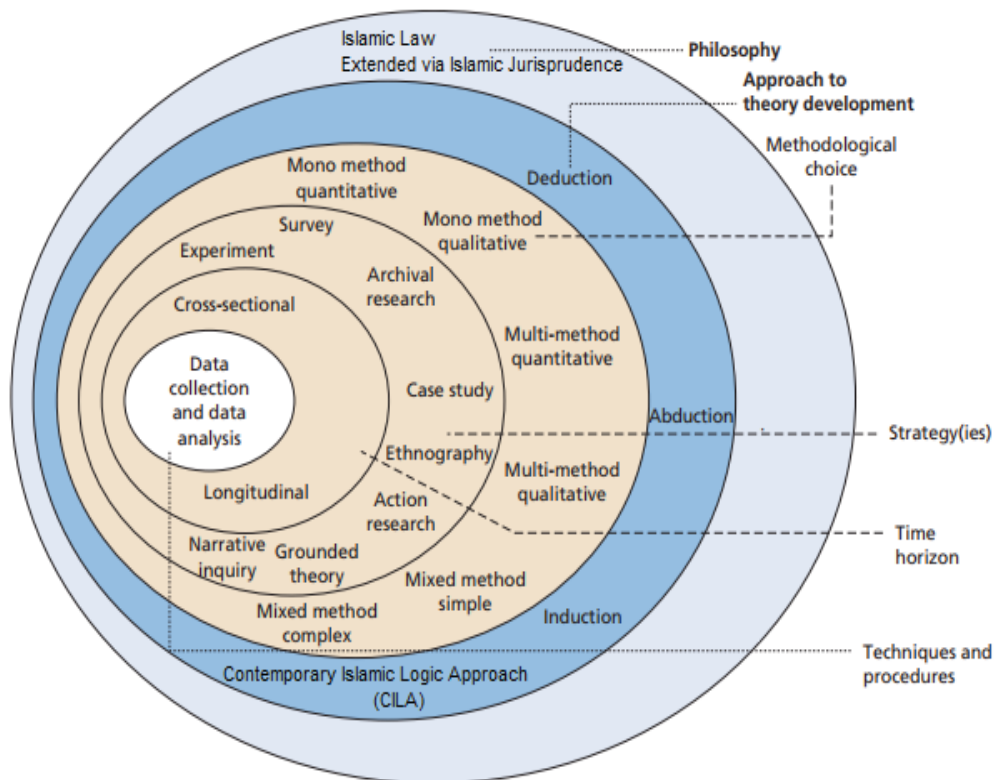


Figure 2. The Research Onion from Islamic Perspective

But how this paradigm and the philosophy would operate in a social science such as strategy to build or test theories and to design models?

To proceed and answer this question, it is imperative to provide again a brief introduction to an extremely crucial area of technical knowledge, termed as the Islamic Jurisprudence:

Islamic sources of knowledge entail Islamic Law (*Shariah*) in the form of texts. This law springs out of the Quran and the Sunnah and shapes a specific world-view known as the Islamic World-view, i.e., how Muslims should see the world inside and around them? How should they deal with the different affairs of individual and collective life? What are the obligations and rights, good and bad, right and wrong, permissions and prohibitions, rewards and punishments etc. The knowledge or the understanding (*Fahm*) of the Islamic Law is covered under the name of Islamic Jurisprudence (*Fiqh*), the principles applied to understand this law as *Usul al Fiqh* and the efforts applied for this purpose are termed as *Ijtihad*. The one who conducts *Ijtihad* is the jurist (*Mujtahid*) and the one who follows him is known as the follower (*Muqallid*). The jurist identifies the law, applies it to the known situations and extends it to the situations which are not covered previously but are similar to the previous ones employing specific techniques known as Analogy (*Qayyas*). In conclusion, the jurist provides a framework to deal with the real-life experiences which operates according to a defined set of rules or theories keeping in consideration the Higher Order Objectives of Shariah (*Maqasid al Shariah*) as well as employing the idea of the interest (*Maslahah*) in varied time-space-people situations requiring new interpretations of the law. It is this technical area of which requires to be operationalized in a manner that it serves, practically, to orchestrate different layers of the research onion.

It is argued that the Tawhidic paradigm or Islamic Law, interpreted and extended via Islamic Jurisprudence, would enable the research methodology. However, the question arises how this methodology could be operationalized? To answer this, current study has borrowed the argument of Khan (1987) who explain the same thing in another area of social sciences much related to strategy in the business realm, i.e., economics. According to him, this methodology should commit to a certain set of conditions so that it may be accepted as a valid research methodology for strategy. A sizable mention of these conditions is provided. First two conditions are the main focus here as they are related to the paradigm or philosophical layers of the research onion, while rest of the conditions have been introduced only from the perspective of practical utility of the proposed methodology. The number and the types of conditions is not limited to those as provided here. Author humbly acknowledges intellectual shortcomings on his part and believes that other researchers and intellectuals may come up with various ways of seeing the same thing but from different perspectives and suggest newer dimensions. Below is an account of those conditions which require the proposed methodology to commit to:

- It Should Operate Within the Framework of Revelation and Employ Human Reason:

The Islamic Law provides principles and a framework for human affairs in every domain of life. This includes rituals as well as everyday affairs. To act according to this framework, Islamic Jurisprudence is enacted to interpret and explain the Islamic Law and provide guidance on the practical ways. Islamic Jurisprudence extends the same framework of Islamic Law to the realm of the social sciences, the subject of strategy to be more specific here.

This framework would operate over two plans, i.e., the fixed plane and the variable plane. The basic function of methodology is to set an approach to reach the truth. In this pursuit, the proposed methodology should, as earlier said, always look into the fundamental sources of knowledge in Islam, i.e. the Quran and the Sunnah. Being divine in nature, the postulates from these sources are true and there arise no question of their truth or falsity. They require no verification, e.g., guidelines about good and bad, rights and obligations, permissions and prohibitions, recommendations and abominations in variety of real-life situations, descriptions of natural and human phenomena etc. From these sources, the jurists discover general principles and then apply those for verifying specific situations. Moreover, they develop a framework of guidelines which help everyone who encounters real life situations and tries to act within such framework. These sources, the principles and the framework that springs out of these are accepted as true and belong to the 'fixed plane' of the research methodology.

At the same time, these sources, the principles and the framework are the criteria for testing theories propounded by human beings. Any theory put forward by a human being is tested on these criteria and if there is a clear and undeniable contradiction, the theory is rejected straight away without any further examination. In some cases, it may be possible that those testing the theory are not able somehow to grasp the exact meaning of the given text. So further investigation and findings may change the existing standpoint.

A delicate but extremely important distinction must be kept in mind. Texts are divine but the human interpretation of these text is not divine, especially in those areas where affairs of life change with time-space-people domain changes. The human interpretation of these texts is open to examination and criticism and is the subject of discussion falling under certain set of principles in the field of Jurisprudence known as the principles of jurisprudence (*Usul al Fiqh*) and the legal maxims (*Qawaid Fiqhiyyah*) to derive inferences from these texts and their judgments. The methodology would always take these established principles in considerations in the process of theory building, testing and implementing the theory etc. This is the 'variable' or 'flexible plane' of the Islamic Law.

It is important to emphasize the importance of reviewing the body of literature of Islamic Jurisprudence, especially that which is concerned with collective spheres of human life, that has been developed and accumulated over centuries and let the *Ijtihad* be performed to see what aspects of the existing literature may need to be updated or upgraded to cope with the challenges that have arose over time-space-people changes. This can be done to what extent? It is a topic of hot debate among scholars of Islamic Jurisprudence but we leave this for the sake of focusing on current study. Those interested in this aspect may look into the works of Codd (1999) and Tueni (2015) etc. for a better understanding of the subject matter.

The fixed aspect of the methodology operates in limited amplitude in response to certain questions or situations. The dominant part of the methodology requires application of human reason and intellect within the over-all divine framework. The question of methodology becomes imminent mainly in the area where human reason is applied. In this area the general principle is that if a theory does not contradict any divine text it would be open for criticism. The criticism would be on two planes: rational plane as well as empirical plane. A theory must satisfy both the criteria. It should be true on rational grounds and should also be confirmed by empirical evidence. The confirmation is sought by Popperian thesis of falsification. It means that a theory would be tested on the criterion of falsifiability. The theories which are not falsified by these two criteria would be accepted. It further implies that the hypotheses, of methodology in Islamic context, must be stated in a form that they can be falsified. In other words, the hypothesis must make clear its conditions and predictions. A hypothesis would merit consideration only if it tells the situation in which it would not hold or if it specifies the conditions which would falsify.

- It Should Benefit from Inductive, Deductive and Abductive Approaches:

Methodology should be able to benefit from inductive, deductive, abductive reasoning instead of binding itself to one specific method.

Muslims are the inventors of the inductive reasoning as acknowledged by Draper (1875). In the pre-Islamic history, different cultures produced some great systems of philosophy but they were based on abstract speculative reasoning. The Quran invited people to observe, to look and see, to ponder. It argued on the evidence of such natural phenomena as sun, moon, day, night, rainfall, seasons, differences of colors and tongues, human creation etc. This ignited a spirit of inquiry which led to the discovery of inductive method in research. The Quran cites the example of Prophet Abraham PBUH who asked for an empirical evidence for life after death. Allah has used the experimental method to establish validity of metaphysical truths at times. It shows that for physical reality, it would be still more preferable to hold on to this method. Therefore, the inductive approach is embedded into the Muslim tradition and should be taken as a continuation of this tradition in present times. The concept of *a priori* argues that it is not possible to derive any scientific conclusions merely by inductive methods and claims that the real source of knowledge is the human intellect and not necessarily the observation itself. This argument bears good weightage but it is not all encompassing. It should be noted that in addition to human intellect there are other sources of knowledge as well, e.g., revelation and intuition etc. Also, human mind is capable of receiving flashes of brilliant ideas which do not have any visible linkages in the empirical world or which are not result of systematic observation. The point to make here is that the source of a theorem may be inductive or *a priori*; but the methodology tests it on multiple criteria of Islamic Law, reason and empirical-evidence.

In regard to deductive reasoning, empiricist question the validity of the assumption of perfect knowledge as exhibited by the deductive reasoning. The assumption of perfect knowledge cannot be accepted as it clashes with one of the fundamental beliefs of Islam. Perfect knowledge of the future is only with Allah and man has only an imperfect knowledge. Therefore, the method of abstract deductions on the assumption of perfect knowledge cannot be acceptable. To summarize the whole argument, it can be said that: From Islamic perspective, human intellect is accepted as a valid source of knowledge but model building is not accepted on the basis of mere deductive reasoning. This is because model building involves a chain of deductions

from initial premises which presumes perfect knowledge of the future. A serious question arises then: how may a methodology proceed to model building? A possible way to cope with this question could be to modify the theme entailed within the cause-effect relation from 'definitive' to 'probable' assumption on both sides of the logical arguments; and once a result is arrived at, it should be tested by quantitative and qualitative data and techniques. Another alternative could be to understand human behavior at individual and group levels in the historical and institutional settings and then hypothesize something on the basis of actual existing knowledge. This would require adoption of unusual research methods borrowed from such disciplines as sociology, marketing, social psychology, social anthropology, history, economics, and industrial relations and even neuro sciences, chemical processes, genetics etc. because all these have a role in shaping complex human behavior in individual and in group settings.

There is another approach known as abductive reasoning. According to Suddaby (2006) an abductive approach moves back and forth, combining deduction and induction while differs from both the induction (data to theory) and deduction (theory to data). It's quite common among researches and practitioners. It begins with the observation of a 'surprising fact'; it then works out a plausible theory of how this could have occurred. Van Maanen et al. (2007) noted that some plausible theories can account for what is observed better than others and it is these theories that will help uncover more 'surprising facts'. These surprises, they argue, can occur at any stage in the research process. Van Maanen et al. also stress that deduction and induction complement abduction as logics for testing plausible theories. If this approach is employed, arguably, it has the potential to overcome the contradiction (claim of the perfect knowledge) which deduction offers when one operates in a setting proposed by methodology from Islamic perspective.

The study argues that incorporating these approaches into research methodology from Islamic perspective is a challenging objective and needs to be dealt with extreme care. This is because the adopted approach(es) would be acting at behalf of the Islamic Law through Islamic Jurisprudence and weaving the whole fabric to ensure that the whole methodology is operating in a homogeneous and coherent manner (Hassan, 2016). On one side it would be receiving its legitimacy from the Islamic Law, and on the other hand it would be moderating and orchestrating the other organs of the research methodology such as data collection, data analysis etc. And at the same time, making the flow of Islamic value system throughout this fabric.

- It Should Focus on Problem-Solving

The concept of strategy has always existed in the Islamic sources of knowledge (Gul, 2016) and in the Islamic cultures with different names, however, it never existed as a separate subject area for research. This came to fore, as a social science, from the Western cultural contexts to cope with the organizational and management issues. While an attempt is being made to propose a methodology for this concept from an Islamic perspective, it is emphasized that proposed methodology should also be able to focus on real issues of the strategy in theoretical as well as practical realms. It should be able to contribute to resolving issues popping-up in theory testing and model building. Also, it should serve to solve the organizational and management issues on ground. In doing so it should focus to understand the strategy, strategy formulation and implementation, and strategic decision-making process etc. It should be able to correlate human behavior, work process, technology, atmosphere, i.e., maximum number of phenomena or variables. This will help generate theories and models for the ultimate interest of owners, employees, participants, clients, citizens and the society at large, however, within the paradigm in which it operates.

- It Should be Internally Consistent and Coherent:

There should not exist a disconnect among the layers of the Research Onion as proposed from Islamic perspective. It should be internally consistent and coherent while operating to find the truth both ways, i.e. from the fundamental paradigm and world-view down the path to the data collection and analysis techniques. If this consistency and coherence is missed, then the proposed methodology won't qualify to be a valid methodology, rather it would be just like welding different metals with each other without going through real chemical reaction to produce a deemed homogenous product.

- It Should Be Open for Criticism:

This methodology would be open to examination by anyone, i.e., Muslims and non-Muslims alike. It is ultimately the weight of its arguments and the rigor of its analysis that would fetch merit. Therefore, it should avoid to being in a closed cell. It should devote greater attention to the analysis and solution of the present-day problems rather than recount the glory of Islam which it once was. It does not mean that it should discard historical perspective but it only means that historical data needs be used to learn lessons for the present rather than to merely rejoice in the trance of glorification.

4.4 Final Comments

It can be safely argued now that a methodology could be proposed which appears to be similar in structure to the one as developed in the Western cultures, however, with different paradigm and philosophy. In present case, the Tawhidic paradigm and the Islamic Law (Interpreted and extended through Islamic Jurisprudence) would serve as the research philosophy while Islamic logic approach as the research approach(es). When this methodology would intrinsically exhibit the characteristics as prescribed in the previous section, staying within the framework defined by Islamic Law, meets the criteria of reason and empirical validity, then it may be referred to as research methodology for strategy. A methodology that springs from Islamic sources of knowledge or put simply, methodology from Islamic perspective. A methodology which stands to be testified in real organization and management scenarios, e.g., corporate strategy, communication strategy, human resource development strategy etc.

5. Conclusions, Limitations and Future Research

- Like other areas of knowledge and practice, the field of strategy is developing itself with newer ways to cope with the problems that arise in organization and management realm. Research methodology from Islamic perspective, provided it passes the qualifications to be a methodology, may offer its contributions to enrich this area further to overcome such problems.
- If this could lead to plausible solutions to issues, it would be accepted by the world, whatever its method of inquiry be. For the business world in general, it is not the method of inquiry that is important, it is the contribution that this methodology can make in terms of the weight of its arguments and the rigor of its analysis.
- This methodology needs not be confined to any one method. Rather it should remain open to all methods provided the inquiry remains within the basic framework as prescribed by Islamic Law and it is satisfying, at least, the twin criteria of reason and empirical validity.
- Author admits incapability to choose a specific name for the proposed methodology and contents to use the phrase 'research methodology from an Islamic perspective'. At the same time, author considers to let it be open for examination by anyone whatever be the religious or cultural background of the researcher.
- This methodology should focus on analysis of the problems and their solutions instead of merely claiming that 'this already exists in Islam'.
- This methodology has yet to be tested and verified. It may be accepted or rejected fully or partially. Moreover, its comparison with the one in Western cultural context is also a subject of a separate study.
- Another aspect which needs to be considered is the condition of presence of an Islamic state for the successful implementation of such a methodology.

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Application of RBV Concepts in Implementing Strategy of Jordanian Higher Education

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Abstract

This study chose Porter's (1980) conceptualization of competitive strategy, since this conceptualization is academically well accepted and internally consistent (Dess and Davis, 1984). Porter (1980) identified two generic ways in which an organization can gain sustainable competitive advantage over other firms in the industry: 'low cost' and 'differentiation'. A 'low-cost' strategy emphasizes the need to be the low-cost producer in the industry. A 'differentiation' strategy is based on creating and offering a product that is perceived industry-wide as unique

Keywords: high education, competitive strategy, strategic resources, marketing completion

1. Introduction

The focus of universities on the RBV approach to CA is evident in the work of Dyson (2004) who linked resource-based planning to SWOT analysis techniques, embedding it the competitive strategic planning processes at the University of Warwick, and illustrating it as an iterative process rather than a linear one. Also proponents of the RBV approach stressed the importance of a location asset in attracting postgraduate students; Hicks (2012) outlined the current value and inherent pitfalls of property investments of higher education institutions; Rood (2006) discussed elements of recruitment of top academic researchers in building brand image; and Lane (2006) observed the growing presence of universities in bond markets.

In conclusion, it can be observed that there is an increasing systematic adaptation of strategic management and competitive strategy more specifically by universities all over the world, and this stems from the realization that both domestic and global influence of globalization has increased the rate of direct and indirect competition among universities locally and internationally. The next section of the research work will detail the methodology which will form the basis for observing and analyzing the competitive strategies employed by Jordanian universities in relation to their foreign counterparts- the main focus of this thesis work.

1.1 Problem Statement

There is lack of prior research focused on understanding the patterns and types of competitive strategies which universities in Jordan use to cope with the intensifying rate of local and global competition in the higher education sector; as prior research has only focused on studying this phenomenon in the higher education sectors.

1.2 Objectives of the Study

The major aim of this research is to study the underlying implications of increasing competition, on Jordanian universities and to understand the repertoire of competitive strategies they have adopted over the years, from a resource based view perspective and the relationship between these strategies and the observable performance of the universities under study. More specifically, the research aims (a) to examine, identify and evaluate the repertoire of strategies developed by universities in their response to the increasing competitive nature of the environment; and (b) to understand which concept-based framework is best suited for competitive strategy formulation and implementation among private universities in Jordan.

1.3 Significance of the Study

Evidence pointing to the significance of this study mostly lies in the increasing degree of importance, relevance

and attention given to issues of competition as contained in the strategic statements of universities. A review of the mission and vision statements of these universities reveal a lot of concern for their competitive positions relative to domestic and international competitors in the education sector.

The above excerpt is proof of the increasing attention being paid to competition among the private universities operating in Jordan and the Middle Eastern region in general. Thus it is clear that existing private universities have been able to operate effectively through the formulation and adoption of certain distinct strategies. According to Cooper & Wade, (2005) these strategies generally describe the encompassing direction in which the institution is headed, determines appropriate resource allocation, as well as the provision of the underlying logic for the effective integration of the core interests of the different academic, and administrative units within the institutions.

In his study of the higher education market, Pick (2006) noticed that “universities are currently becoming business competitors in a global higher education market. Complex forces of government policies and broader social and economic events have combined to create a difficult terrain through which universities must now plot a course”. In its aim of understanding the existing competitive strategies of the private universities operating in the Jordanian higher education sector, this research relies upon previous studies and investigations carried out on university competitive strategy, its management and strategic decision-making. Some of these previous research works includes but are not limited to the works of Anderson et al. (1999) whose work examined the contents of the publicly available strategic plans of universities to assess their development, application, and to suggest best practices. Also we rely on the work of Coaldrake and Stedman (1998) whose work analyzed and evaluated the existing circumstances of the higher education environment both competition wise and other wise, at the end of the 20th century and they concluded that most universities were still finding it difficult to adapt to an environment that has witnessed and is witnessing a lot of changes. Also the works of Marginson and Considine (2000) revealed the existence of an immense inadequacy in the common occurrences and in the existing governance models which were supposed to have come about in a bid to enable universities survive and exist in the current higher education environment. Finally, we rely on the work of Meek and Wood (2001) whose work evaluated the existing governance and management practices in the ever increasingly competitive higher education industry.

the higher education sector has recorded significant increases in numbers as well as diversity of programs offered; with the government taking the lead in this vital sector. In fact the government owned and subsidized all universities in Jordan up until the late 80s. The advent of private universities was mainly due to the rapid increase in the number of students enrolling into the existing government universities, and the resulting decline in quality of education offered by those universities due to lack of sufficient government funding. Thus the entrepreneurial establishment of private universities on the one hand relieved the government of the burden of providing education to the teeming number of students and making profit in the process on the other hand.

1.4 Research Questions

Now that it is clear that there is and has been an increasing rate of higher education competition both domestically and internationally, as stated earlier on, this research work aims to understand the competitive strategies which private universities in Jordan has adapted in the past and present, to survive in their peculiar environment (from a resource based view perspective). To achieve this, this proposed thesis poses two research questions. They are:

Research Question 1: What individual competitive strategies have the private universities in Jordan adopted to meet the increasing rate of competition within the domestic and global higher education sector?

Research Question 2: What strategy formulation framework is suitable for the formulation and implementation of competitive strategies by Jordanian private universities?

1.5 Scope and Limitation

Difficulties encountered in administering the questionnaire:

Ease of Accessing Respondents: While carrying out the study it was difficult to find personnel at most of the private universities in the study who were willing to participate in the survey. This may be due to the sensitivity of the questions in the survey and due to the potential respondent's need to maintain a neutral stand.

Dishonest Respondents: Secondly, respondents who participated in the study were not honest with some of their responses. This was noticed in just a few responses and it may imply that such respondents were suspicious of the research intentions even after repeatedly assuring them that their privacy will be respected and even after excluding their personal details from the study.

Difficulties and limitations during the research process:

Limitations based on sample size: only 5 private universities were included in this study and the reliability of small sample sizes may limit the potential for generalizing the findings.

Sample population limitations: only top level managers were included in the in the survey and results could be limited due to the vested interests of these individuals in protecting the reputation and the image of their universities

2. Methodology

This section comprises a description of the methods by which the studies will be undertaken. The section describes documents (data) which will be used in this study, and procedures through which they were obtained, verified, and analyzed.

The objectives of this Study are to confirm (or refute) findings of a content analysis of published strategic plans of universities, and to extend insights into current competitive strategy of both universities as a precursor to the development of a model to guide competitive behavior in the higher education sector. Case studies are presented and interpreted, and findings outlined and assessed.

the content of the three major strategic documents of Jordanian private universities which participated in this study and which represents Jordan's private universities. However, A review reveals issues of long term and short term, to private universities. A total of 50 strategic issues were identified in the strategic statements of universities combined. Due to the fact that some of these issues reoccurred or were common to the individual strategic statements of both universities, I sifted through them and was able to isolate a total of 30 independent strategic issues. In line with the objective of this study, we analyzed the occurrence of competition related issues, to estimate the level of awareness and of commitment to improving their local and international competitive position. In doing so we were able to isolate only 8 strategic issues related to competition. A summary of these issues are presented below.

Summary of Competition Related Strategic Issues Contained Statements Reviewed

Competition Related Strategic Issues Contained in the Strategic Statements	
1.	The provision of quality education
2.	Commitment to scientific research
3.	The achievement of quality standards and accreditations
4.	The improvement of infrastructure and Facilities that meets international standards, in order to attract regional and international students
5.	To attain local prominence
6.	To adhere to international standards on curricula and teaching
7.	To diversify the universities financial resources
8.	To develop its human resources.

3. Previous Study

The role of heads of department in the strategic management of educational institutions has attracted the attention of educational researchers only comparatively recently (e.g. Floyd and Wooldridge, 1996, Gold, 1998).

One key choice in strategic planning is the decision whether the central plan is created and translated into more localized planning in departments or whether strategic planning is an amalgam of subunit development plans

Although disparaged by some influential critics – especially Mintzberg (1994) who contended that the very term strategic planning was oxymoronic in that strategy must be crafted during operations rather than planned before them, and that business managers needed to be flexible enough to change their business strategies quickly in response to changing circumstances in the business environment – strategic management and planning practices have been widely adopted by private sector organizations since the early 1970s. Proponents claim that the practice of strategic management encourages management to think ahead systematically, forces the company to sharpen its objectives and policies, leads to better coordination of company efforts, and provides clearer performance standards for control Kotler (2000).

Although universities and related institutions were generally slower than other sectors of the economy in the adoption of strategic management and planning practices, they now widely accepted them in the institutional sector (Katz, 1999b; Scott, 1999, 2003). While Anderson et al. (1999) pointed out that it was unreasonable to expect universities to adopt planning practices developed for the private sector uncritically - in as much as universities are unique institutions composed of faculties and schools with differing intellectual traditions, roles and objectives - strategic management and planning have been warmly embraced by institutions in the higher education sector for over 25 years (Howell et al., 2003; Legge, 2002; Schafer et al., 2005). In increasingly

challenging environments, universities have looked to private models in strategic management, albeit with appropriate adaptation, to guide strategy development (Coaldrake & Stillman, 1997; Katz et al., 1999a; Malony, 2000; Marginson & Considine, 2000).

More than three decades ago, Doyle and Lynch (1976) argued that strategic management and planning by institutions of higher education was a planned response to the needs of students within a competitive environment. Urging universities to become more outward-looking, Thomas (1980) recommended that universities establish long-term review bodies to reconcile and optimize the diversities of strengths and interests of academics with those of communities they serve, to develop and sustain these processes by involving staff and students in future developments, and to not only monitor external environments but to influence them by continual advice and interaction. Defining strategic management as the process of developing and maintaining a strategic fit between organizations and their ever-changing marketing opportunities, Kotler and Murphy (1981) maintained that universities, usually efficient in areas of budgeting, scheduling and other short-range tactics, paid too little attention to long-range planning. Shirley (1983) suggested that strategic planning in universities should be concerned with six variables: mission, target groups of clientele, institutional goals and objectives, programs and services offered, geographical scope of operations, and the comparative advantage sought over institutions engaged in similar activities. Contending that universities have been slow to adapt to environmental changes.

More recently, Petrides (2003) argued that implementation of strategic planning processes in higher education institutions can break down information silos, increase collaboration among units, streamline work processes, and provide greater access to both academic and operational information. Howell et al. (2003) identified trends that affect distance learning programs, urging that these be taken into account in strategic planning processes in higher education settings. Arguing that managerial approaches are more likely to create highly insecure environments, Allen (2003) concluded that more sophisticated approaches to strategic planning were required in higher education institutions. Rowley and Sherman (2001, 2004) contended that in this new age of globally available real-time information, strategic planning has become increasingly more essential for institutions of higher education.

The role of heads of department in the strategic management of educational institutions has attracted the attention of educational researchers only comparatively recently (e.g. Floyd and Wooldridge, 1996, Gold, 1998).

One key choice in strategic planning is the decision whether the central plan is created and translated into more localized planning in departments or whether strategic planning is an amalgam of subunit development plans

4. Hypothesis Development

It is important to note the role of generic strategy formulation among firms. Generic strategies- a concept developed by Porter (1980) states that all firms irrespective of industry will develop strategies which falls into any of these three categories: cost leadership, differentiation and focus strategies. As the name implies, cost leadership strategy is one in which the adopting firm aims to be the leading organization which provides customers with quality products or services at the cheapest rate in the market. This kind of firm does this by focusing on production or service efficiencies which enable it reduce cost of production and eventually the price offered to customers. Differentiation strategy is one in which the adopting firm seeks to present itself as a provider of unique products or services in certain areas which provide customers with high value and for which they (customers) are willing to pay a premium price (Johnson, Whittington & Scholes, 2012). Focus strategies on the other hand, is a type of strategy which targets just a niche group of customers within a larger market population, providing them only the mix of products or services which members of that niche demand and excluding services or products which they do not demand (Porter, 1980). According to Johnson, Whittington & Scholes, (2012) two variants of focus strategies exist: cost-focus strategy and differentiation-focus strategy, implying that a particular firm's focus strategy may be based on meeting the price needs of a particular segment of the larger market or its differentiation needs but not both. In line with the above discussion, the first hypothesis I pose here in relation to

4.1 Hypothesis 1

The most suitable strategy formulation framework for private universities will be one which meets Shirley's (1983) six variables listed above.

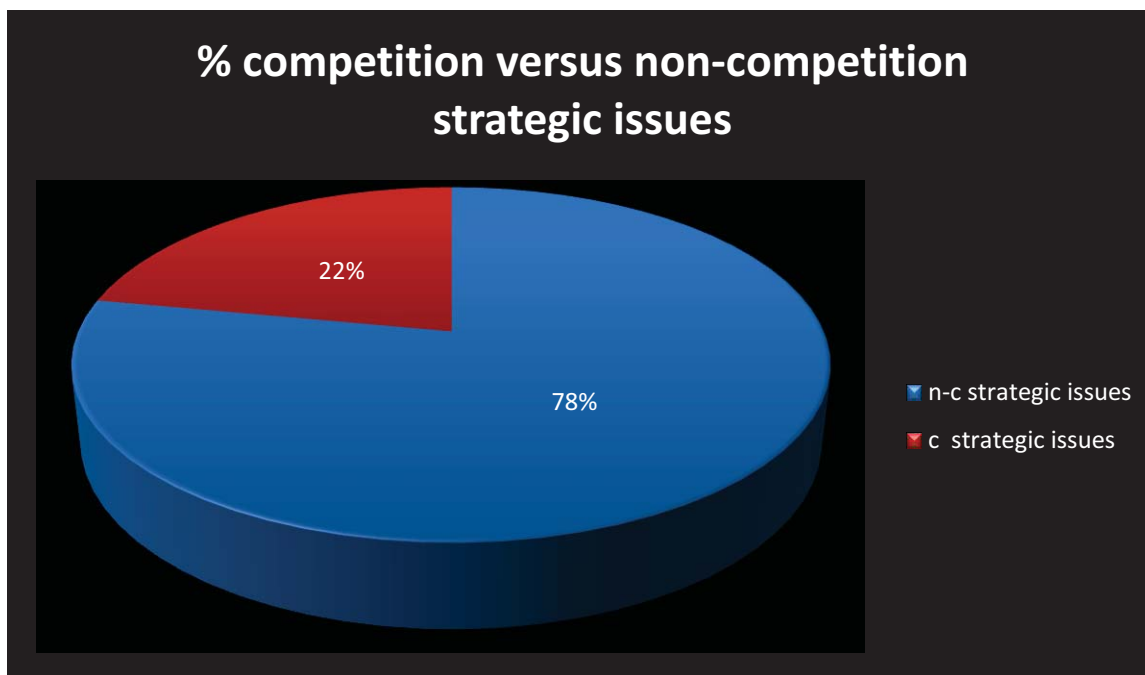
Also, with regard to research question 2, Petrides (2003) noted that the most appropriate strategy implementation framework for universities is one which allows for easy communication and collaboration among units, allowing the streamlining of work processes, self-management and accountability. In line with this, I propose the forth hypothesis thus:

4.2 Hypothesis 2

The most suitable strategy implementation framework for private universities in Jordan, will be ones which allows for easy communications and collaborations on one hand and allows for the streamlining of work processes, self-management and accountability on the other.

5. Summary

In section four we present the research methodology where a brief explanation on how these hypotheses will be tested will be made.



From the above table and chart, it can be seen that very little attention is paid by Jordanian private universities to issues of competition. 28% of all strategic issues contained in their strategic statements are competition related, while 72% are not competition related. This by itself tells very little, until we examine the nature of the competition related strategic issues themselves in the prior table. It shows that all of the competition related issues are ones which are general in nature- with no clear cut pattern for their attainment, and secondly, most of them are aimed at conforming to internationally accepted best-practices and standards. None of them is however novel or radical in nature, in that none of them seems to have targeted a niche market, nor adopted any of the generic strategies of service differentiation, cost leadership or focus strategy. It is clear at this stage that Jordan's private universities may be ill equipped to compete favorably with their regional and international counterparts in the ever increasing competitive global higher education sector.

Findings:

H1: *The most suitable strategy formulation framework for private universities will be one which meets Shirley's (1983) six variables.*

In all of the brief and extended strategic statements of the both universities analyzed, none showed any hint as to the actual strategy formulation procedure used during the crafting of their individual strategies. This may be as a result of owner interference in the strategy formulation process, adhoc and impromptu decision making processes or a simple case of the non-existence of such procedures. All in all study finds no support for hypothesis 1.

the study reveal that with regard to the suggestions for a suitable strategy formulation framework, only one of the recommended items in hypothesis 1 was recorded .Out of the six variables mentioned in this hypothesis .only the variable which recommended the participation of all relevant staff in the strategy formulation process was supported. In particular, content 13 (participation of employees in formulating and executing strategies) and content 12 (selecting leaders able to prepare and execute strategy); were the only two response categories which supported hypothesis 1. Thus like the study finds no support for hypothesis 1.

To summarize, this study find no support for hypothesis. Based on these findings, I reject hypothesis 1 and accept its null hypothesis.

H2: *The most suitable strategy implementation framework for both universities in Jordan, will be ones which allows for easy communications and collaborations on one hand and allows for the streamlining of work processes, self-management and accountability on the other.*

As with hypothesis 1, the study found no provisions for a systematic implementation of strategies developed in the entire brief and extensive strategy statements analyzed. Thus much like hypothesis 1, the study finds no support for hypothesis 2.

The study found mention of important strategy implementation variables mentioned in hypothesis 2. For example in response to part 6 question 1 of the questionnaire administered, the managers mentioned that a suitable strategy implementation framework must enable the adoption of accountability (content 3), the empowerment of the academic leadership at the universities (content 7), providing continuous feedback on the execution of strategies (content 11); and the enhancement of creativity (content 18). Although it seems that these responses meet most of the criteria listed in the hypothesis, it was however noted that only two out of the five universities (40%) mentioned contents 3 and 7; while only one out of the five universities (20%) each mentioned contents 11 and 18. Thus all in all these and other criteria listed in hypothesis 2 were only present in at most 40% of the sample and was absent from the response of 60% of the sample studied. Thus I conclude that this study finds a very weak support for hypothesis 2.

To summarize, the non-existence of any form of support for hypothesis 2 in this study which I conclude that all in all, find insignificant support for hypothesis 2, and I thus reject hypothesis 4 and accept its null hypothesis.

6. Result

In this subsection, I present a very brief summary of other findings not directly related to the four hypothesis posed above, but of equal importance and worthy of highlighting. With regard to the preparedness and commitment of private universities in Jordan to meet the rising trend of competition in the higher education sector all around the world, study showed that they were not prepared as very little attention was paid to strategic issues related to competition. It was noted that of all the 29 strategic issue categories isolated from the content analysis of their strategic statements only 28% (8) of them were competitive strategy issues. This is a worrisome development and it means that Jordanian private universities are ill equipped to meet present and future challenges in the global higher education market. This may also explain the collective low performance of Jordan's private universities not only in Jordan and the Arab region, but when compared to other international universities around the world.

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Tourism-Led Growth and Risk of the Dutch Disease: Dutch Disease in Turkey

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Abstract

The Dutch disease phenomenon refers to the adverse effects of the supply of natural resources and production in the tradable sectors specifically the manufacturing sector. Corden and Neary (1982) and Corden (1984) developed the core model of the Dutch disease that it explains a large amount of foreign money to inside the country will appreciate real exchange rate and cause both the spending and reallocation of resources between non-tradable and tradable sectors that it will lead the country to de-industrialisation

The Dutch disease is generally related to the export of natural resources; however, it can be caused by any factors that increase the flow of foreign currency into a country. According to Copeland (1991), the tourism sector is one of the most important sectors that can be the cause of the Dutch disease. Holzner (2010) called the effect of the Dutch disease on tourism-dependent countries the “Beach Disease”.

The aim of this study is to investigate whether the growing tourism sector in Turkey has caused resource movement and a spending effect that have led the Turkish economy to experience the Dutch disease. The Turkish economy is one of the emerging markets that in the past few decades has experienced noticeable growth in the tourism sector, to the extent that, according to the World Travel and Tourism Council (WTTC, 2017), travel and tourism’s contribution to GDP in Turkey was 12.5% in 2016. By using several methods, such as non-linear and linear ARDL bounds tests and structural VAR, this study aims to investigate whether the Turkish economy experienced Beach Disease over the period from 1976 to 2017. Empirical evidence demonstrates that due to the growth of the tourism sector, the Turkish economy is suffering from symptoms of Beach Disease, such as de-industrialisation and resource allocation to non-tradable sectors. The results show that the Turkish economy has suffered from the Dutch disease due to a growing tourism sector, which has led to de-industrialisation and unstable long-term growth.

Keywords: Dutch Disease in Turkey, Beach Disease, ARDL, Non-ARDL, Structural VAR

1. Introduction

From an economic viewpoint, services performed in tourism sectors are classified as exports which have an important contribution to a country’s balance of payments. Balassa (1978) in the “new growth theory” explain that exports generate economic growth by increasing efficiency in the allocation of the production’s factors and also by growing their volume. The Tourism-led growth Hypothesis (TLGH) was directly derived from the export-led growth hypothesis (ELGH) that it can generate economic growth by increasing the amount of capital and labour within the economy, and also by expanding exports (Brida and Pulina, 2010). Also Following the empirical perspective, there are wide well-documented researches in favour of positive effect of tourism on economic development such as Balaguer and Cantavella-Jorda (2002) for Spanish, Dritsakis (2004) for Greece, Dubarry (2004) in case of Mauritius, Gunduz and Hatemi-J (2005) for Turkey, Nowak et al. (2007) for Spanish economy; Brida et al. (2008) for Colombia, in case of Mexico Carrera et al. (2008) that emphasis positive role of tourism in long-run economic growth. While, there are some critical views against TLGH. For example Copeland (1991) and Chao at al. (2006) discuss despite tourism increases consumption of Non-tradable goods and improve the term of trade; it can be decrease accumulation of capital in manufacturing sector. According Parrilla et al. (2005) out of hundreds of research about the role of tourism on economic growth by considering all the literature, just very few researchers were considered a clear analyzing with the long-run growth consequences of specializing in tourism-led growth. On the other hand, tourism sector is non-technology

intensive sectors. Solow (1956), Lucas (1988), Romer (1990), and Sachs and J.W. McArthur (2002) stress on capital accumulation from high technology and innovation as necessary factors to long-run growth. Tourism sector makes countries - where to have tourism-led policy- sensitive to the Dutch Disease because of inflows foreign money (Sintes-Inchausti, 2015). Tourism-led growth policy or growth generated by tourism supporter must consider explaining following four ideas (Sintes-Inchausti, 2015) : The First one, Does the strength of tourism as a no-technology –intensive sector is alone able to promote long-run growth?, Does the capacity of tourism is able to give enough guarantee to capital inflows to capital accumulation? Third idea is related to Efficiency improving with increasing international competition in the tourism enterprises and the last one the promotion of increasing returns to scale.

Growth in the service sector does not provide as much economic development as in the manufacturing sector, because while the service sector is labour-intensive, the manufacturing sector is capital-intensive and learning base sector that it has multiple positive effects on economics, technology, and education. Thus, it will support long-term economic growth, accumulation of knowledge and development.

In the economic literature, the conditions that detract from the industrial sector's international competitiveness are termed the Dutch disease. Although some sources of foreign money have some short-term benefits, such sources do not support sustainable growth and economic development in the long term. Therefore, the main aim of this paper is to analyse whether Turkey is suffering from the Dutch disease due to the growth in its tourism sector over the last 40 years, and whether the tourism sector has changed the structure of the Turkish economy from one that is industry-based to one that is dependent on the service or non-tradable sector.

1.1 The Dutch Disease

The term 'Dutch disease' was used for the first time by The Economist in November, 1977. The Economist analysed the discovery of natural gas in the Netherlands in 1959 and its macroeconomic effects. Before 1959, the Netherlands had imported all of its gas. Then, after discovering gas, the country became a gas exporter, and received a great influx of foreign currency. This meant that the real exchange rate and prices in the Netherlands—especially the price of non-tradable goods—increased, which had a negative effect on the country's industrial sector. Thus, the Netherlands lost its competitiveness in the industrial sector and its growth declined.

One of the first researches about the negative effect of export of natural sources on economy was carried out by Meade and Russell (1957) for Australia's economy. According to this study the impact of international demand for raw material at the begging was positive effect on the Australian's balance of payment but net effect in the long run was negative.

Theoretically, the first research about the Dutch Disease was carried out by Corden and Neary (1982) and Corden (1984). Corden and Neary offered a theory which so – called "The Core Model of Dutch Disease".

According Corden (1984), an economy can be divided into three sectors booming, lagged sector, and non-tradable sectors. According to the Core Model, The hypothesis of Dutch Disease as considered in small open economy under full employment, free labor movement, restricted capital movement and absent of monetary policy, Discovering a new sources or any sources that can be give rise to a sharp foreign income inflow will appreciate exchange rate, therefore price of commodities and services abroad for import become relatively cheaper and production of manufacturing and agriculture sector (tradable sector) become uncompetitive that might disappear. And also decreasing the competitiveness of the traditional sector lets export to decline.

Under positive income elasticity, a possible shock (such as the discovery of new gas sources or a boom in tourism) can increase the relative prices of booming and lagged sectors and the demand for capital in the non-tradable sector (the spending effect). However, the growth of booming sectors can also increase the demand for labour. Firms that are active in the non-tradable sector will offer high wages to attract and employ workers. High wages in the non-tradable sector then encourage workers to move from the tradable sector to the non-tradable sector (the movement effect). As a result of the movement of resources, the output of the tradable sector decreases, which exposes the economy to the process of de-industrialisation.

1.2 Tourism Sector and Dutch Disease (Beach Disease)

Tourism is an important export factor in 83% of developing countries. The tourism sector is the main export factor in one third of this 83%. In the least developed 49 countries (LDC), tourism is an important growth factor. Tourism increased by 45% in the 1990-2000 period and by approximately 20% in developing countries (World Travel Origination (UNWTO, 2002).

Tourism sector can be cause to kind of Dutch Disease that Holzner (2011) called "Beach Disease". Beach

Disease refers to moving of employer and capital from manufacture sector to tourism (service) sector that it is cause of decreasing employment and production in the industrial sector that has not desirable effect at the long run (Holzner, 2011, p.923).

The idea of Beach Disease for first time was issued by Copeland (1991). Copeland (1991) explains that under especial condition, the appreciation of the real exchange rate is the only mechanism by which tourism can increase domestic welfare (in the absence of taxation and distortions such as unemployment). It can be hold by direct effect, which is the increase of the price of services, holding domestic spending constant, and an indirect spending effect, which is due to the change in domestic spending on services induced by the real income change. With international factor mobility the benefits of a tourism boom are even smaller as the price of nontradable sector is less responsive to demand shocks. According to Copeland (1991), if fixed factors in the non-tradable sector, such as land, are owned by foreign, rents will leave the country. Therefore, the country may end up worse off than before the tourist boom. But by the presence of domestic commodity taxes and optimal taxes policy can increase the benefits of tourism, since they allow for some rents from the unpriced natural amenities (Holzner, 2010, p.1).

Growth of the export related with tourism or natural sectors booming initially will fall the production of traditional tradable goods and increase in the production of non-tradable goods, public services and construction that this process will be cause of reallocation of resources that workers will leave their jobs and move to services sectors to yield more income that production of traditional and industry sectors such as manufacturing and agriculture sectors will fall. Figure 1 summarizes the process (Parrilla et al. 2005, p.5);

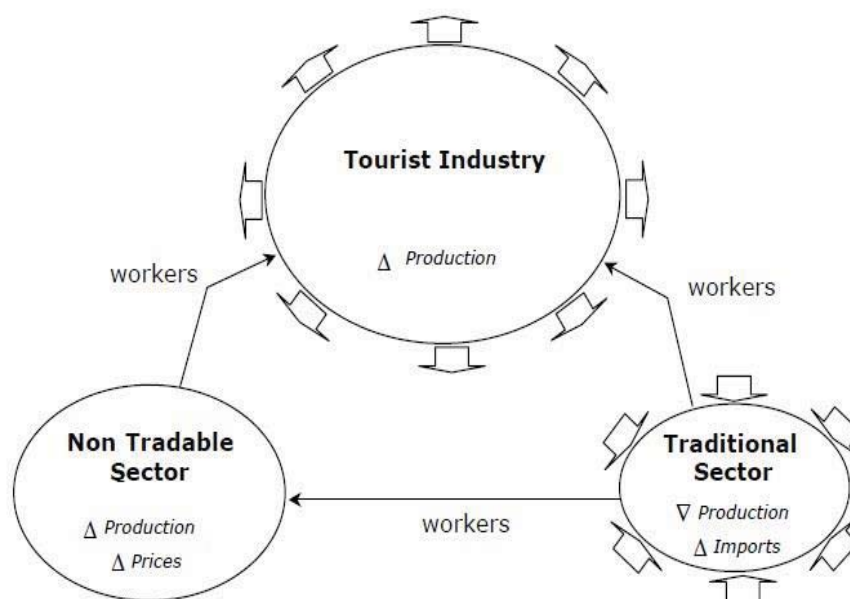


Figure 1. The effects of Dutch disease in a tourism economy

The manufacturing sector and especially the production of investment commodities are knowledge-intensive and offer a great potential for learning effects, innovations to produce new goods and find a new market that it will guarantee long-run growth and reduce unemployment. But tourism (service) sector is labor-intensive which is not knowledge-intensive, do not proper any learning effects, no accumulation of knowledge and whose products and services have low price elasticity (Kropp and Brussels, 2010, p.4-5).

2. Literature

As discussed above, the Dutch disease is generally associated with discovering and exporting natural resources; however, it can be caused by any factors that increase the flow of foreign currency into a country. With regard to the formal or classical approach to the mechanisms of the Dutch disease, there are six main factors that explain its causes.

The first is known as the core model of the Dutch disease, which explains the resource boom effect on other sectors, and especially on the manufacturing sector. The theory of the core model of the Dutch disease was provided by Corden and Neary (1982) and contributed to by Bruno and Sachs (1982), Buiter and Purvis (1983),

Corden (1984), and Edwards (1984). The main ideas of the core model focus on the negative effect of booms in natural resources on lagged (industrial) sectors and the positive effect on the non-tradable sector. Following theoretical research, there are various studies into the effect exporting booming resources, especially for oil exporting countries. For example, many studies have focused on countries in the Persian Gulf to investigate the possible causality between oil exporting and the Dutch disease.

The second factor is remittances and money transferring. Although remittances are purported to be an important source of foreign currency, especially for developing countries, it can lead to a sudden increase in a country's exchange rate and a decrease in its competitiveness (and thus, to the Dutch disease). For example, studies by Pablo et al. (2007) on El Salvador, Bayangos and Jansen (2011) on the Philippines, and Makhoul and Mughal (2013) on Pakistan, etc., have emphasised the macroeconomic effects of remittances and money transferring on the real exchange rate and competitiveness, and in reducing poverty and inequality, which leads a country's economy to experience the Dutch disease.

The third factor is tourism, which is the focus of this research. Tourism as a factor in the Dutch disease has mainly been researched by Copeland (1991), but other studies are notable, such as Ojaghlu (2019) on Turkey and Kenell (2008) on Thailand. In addition, Nowak and Sahli (2007) used general equilibrium model to study island economies; Balaguer and Cantavella-Jorda (2000) used the Johansen Cointegration Test to study Spain; Ghali and Fidrmuc (2015) used regression testing for 133 countries; Sintés-Inchausti (2015) used GE for Spain; and Holzner (2010) used regression testing for 134 countries. Finally, Kropp and Brussels (2010) studied Greece and Mieirol, et al (2012) focused on Macau.

The fourth factor is foreign aid. From an economic perspective, the similarity between increased income from natural resources and the flow of foreign aid into a country has been indicated by Van Wijnbergen (1986) and Edwards and Van Wijnbergen (1989). Furthermore, studies such as the one by the World Bank (1984) on sub-Saharan countries in Africa, and by Van Wijnbergen (1986) and Ouattara and Strobl (2004) on various African countries, etc., have concerned the relationship between foreign aid and the Dutch disease.

The fifth factor is agriculture sector. Booms in export of agricultural products can increase the real exchange rate and reduce international competitiveness, which can lead a country into de-industrialisation. Notable examples of research into this factor are on the effect of exporting coffee in Colombia by Kamas (1986), Alicia and Constantino's (2013) study on the soy sector in Argentina, and the export of bananas between 1910 and 1950 in Columbia, as studied by Roca (1998).

The last factor is foreign direct investment (FDI). Betta et al.'s (2016) study on Colombia after 2011 is considered as an example of an alternative source of the Dutch disease.

3. Turkish Economy and Tourism Sector

The Turkish economy is one of the emerging markets that in the three-decade have experienced noticeable growth in tourism revenue. According to Turkish Statistical Institute in 2015, 2016 and 2017 respectively, almost 41, 31 and 39 million persons have visited Turkey. According to UNWTO, Turkey has taken among the top 10 most popular tourist arrivals in the world. According to Action Plan for Tourism Strategy prepared by Turkish Ministry of Culture and Tourism (2007)¹; Turkey has plan to be a world brand in tourism and a major destination in the list of the top five countries receiving the highest number of tourism and highest tourism revenues by 2023.

Travel and tourism's contribution to GDP in Turkey has increased from 7.8 percent in 1995 to 12 percent in 2017 (World Bank Data base, 2018). According to World Travel & Tourism Council report in 2017 (WTTC) this rate in 2016 is 12.5 and Also total 2,197,600 jobs (8.1% of total employment in Turkey) were employed in Travel and Tourism sector in Turkey. Figure 2 shows Contribution of Travel and Tourism to Turkey's %GDP in Turkey (World Bank Indicators (2018)).

¹Action Plan for Tourism Strategy prepared by Turkish Ministry of Culture and Tourism (2007), report.

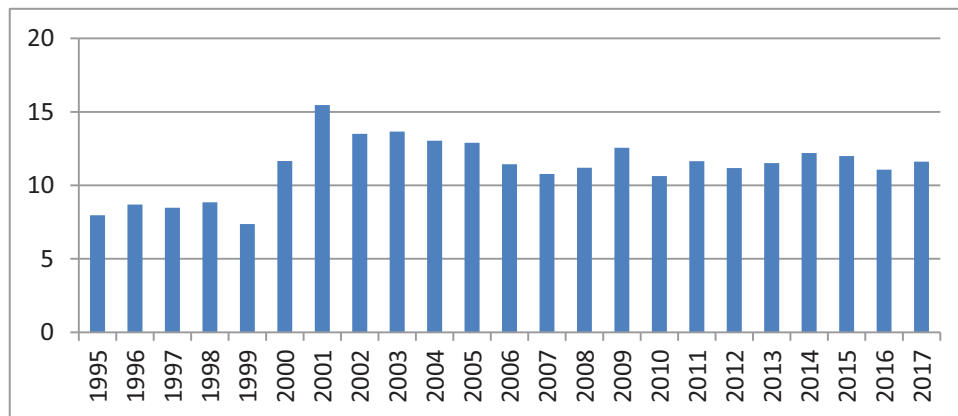


Figure 2. Contribution of Travel and Tourism to Turkey's %GDP

Figure 3, shows the size of the Manufacturing and travel and tourism revenue as a share of Turkish GDP. During the last 2 decades the relationship of Manufacturing and travel and tourism revenue was generally in opposite site (World Bank Database 2018);

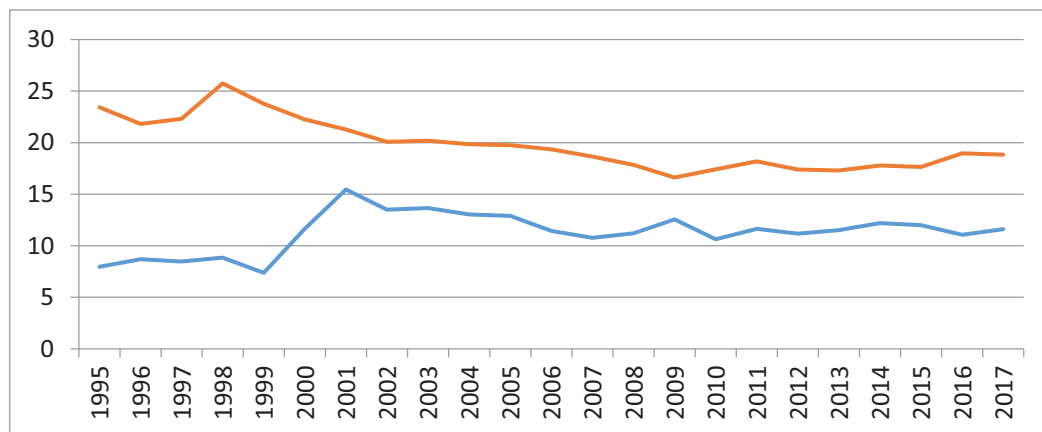


Figure 3. Manufacturing Vs. Travel and Tourism Revenue as Share of GDP

4. Methodology and Data

The analysis covers the period from 1976 to 2017 annual data Holzner (2010) used share of travel services exports in % of GDP ,Figini and Vici (2007) and Ghalia and Fidrmuc (2015) used share of receipts from international tourism in GDP as proxy for tourism capital. But because of lack of official data share of travel services exports in % of GDP and also international tourism in GDP for selected period in Turkey, following Ojaghrou (2019), we use travel services as share of service exports and also tourism income as share of GNP. To set up other variable we follow Ghalia and Fidrmuc (2015), Holzner (2010), Holzner (2011) Figini and Vici (2007). As proxy for growth we use % GDP growth, as proxy of human capital (h) we use gross secondary school enrolment ratio². As a proxy of physical capital (k), we use Gross fixed capital formation % of GDP. Real exchange rate (RER) and for manufacturing, we use Manufacturing value added as % of GDP, and finally proxy for the tax we use net taxes on products as % of GDP.

²Missing data(1985,1996,1997,1998,1999)points were interpolated by arithmetic mean

Table 1. Variables

Variables	Describe	Source
Tourism Capital I	Travel services as share of service exports	World Bank
Tourism Capital II	Tourism income as share of GNP	Türsab (Association of Turkish Travel Agencies)
Human capital (h)	Gross secondary school enrolment ratio	World Bank
Physical capital (K)	Gross fixed capital formation % of GDP	World Bank
Real exchange rate (RER)	Real exchange rate	Federal Rezerv Bankası (st.louis)
Manufacturing	Manufacturing value added as % of GDP	World Bank
Taxes	Taxes on products as % of GDP	Turkish Statistical Institute

Following Holzner (2011) and Ghalia and Fidrmuc (2015), we consider a growth model to analysis tourism effect on Turkey economic growth . This models has resulted from a Neoclassical growth model similar to the Solow (1956) with Cobb-Douglas production, Barron (1991), Barro and Martin (1990) growth model. These research lead to following baseline equation:

$$g = f(y_0, k, h, X) \quad (1)$$

Where \mathcal{G} refers the growth of output per labor, y_0 initial output per labor, k refers to physical and h for human capital. Following aim of this research for analyzing the relationship between tourism and growth, the x should be a variable of tourism dependency of a country which can be considered as tourism capital. Holzner (2011) consider tourism as the variable which can represent some capital such as natural amenities, climate, and scenery, cultural heritage, and the hospitality of the local population. On the other hand, those factors can be a subset of the human capital variable. For example Ghalia and Fidrmuc (2015) by following above researcher and also Mankiw et al. (1992) and Sachs and Warner (1999) added some additional factor of growth augmenting the productivity of labor and capital that according to the author we can see most of the variable as falling within the labor coefficient in the Cobb-Douglas model. The testable version of equation (1) can be written as follow as:

$$g_i = \alpha_0 + \alpha_1 y_{0i} + \alpha_2 k_i + \alpha_3 h_i + \alpha_4 x_i + \epsilon_i \quad (2)$$

But we also consider common models which have used in related literature. For our purpose, we applied The Autoregressive Distributed Lag (ARDL) bounds which have introduced by Pesaran and Shin (1999) and Pesaran et al. (2001). We first estimate the linear ARDL model outlined by equation (1) and then estimate the nonlinear ARDL model to recognize how taking asymmetric behaviors into account would change the result and uncover existence of long-run equilibrium relationships from tourism capital to other macroeconomics variables such as real exchange rate, growth and manufacturing sector. Estimating both these models help testing our hypothesis which is whether a more flexible and asymmetric model can capture long-run relationships between variables better than common more restrictive symmetric models.

The asymmetric ARDL model advanced by Greenwood-Nimmo et al. (2011) and Shin et al (2014) which it combines a nonlinear long run (cointegrating) relationship with nonlinear error correction by use of constructed partial sum decompositions. Consider the asymmetric long-run relationship:

$$y_t = \beta^+ x_t^+ + \beta^- x_t^- + u_t$$

Where x_t is a $k \times 1$ vector of regressors decomposed as

$$x_t = x_0 + x_t^+ + x_t^-$$

Where x_t^+ and x_t^- are partial sum processes of positive and negative changes in x_t defined by

$$x_t^+ = \sum_{j=1}^t \Delta x_j^+ = \sum_{j=1}^t \max(\Delta x_j, 0), x_t^- = \sum_{j=1}^t \Delta x_j^- = \sum_{j=1}^t \min(\Delta x_j, 0)$$

And β^+ , β^- are the associated asymmetric long-run parameters. The model can be written in error-correction form as follows:

$$\Delta y_t = \rho y_{t-1} + \theta^+ x_{t-1}^+ + \theta^- x_{t-1}^- + \sum_{j=1}^{p-1} \gamma_j \Delta y_{t-j} + \sum_{j=0}^q (\pi_j^+ \Delta x_{t-j}^+ + \pi_j^- \Delta x_{t-j}^-) + \varepsilon_t, \text{ null hypothesis } \rho = \theta^+ = \theta^- = 0$$

The traverse between short-run disequilibrium and the new long-run steady state of the system can be written as follows by the asymmetric cumulative dynamic multipliers:

$$m_h^+ = \sum_{j=0}^h \frac{\partial y_{t+j}}{\partial x_t^+} \quad h=0, 1, 2, \dots$$

$$m_h^- = \sum_{j=0}^h \frac{\partial y_{t+j}}{\partial x_t^-}$$

where m_h^+ and m_h^- tend toward the respective asymmetric long-run coefficients $\beta^+ = \theta^+ / -\rho$ and $\beta^- = \theta^- / -\rho$, respectively, as $h \rightarrow \infty$.

In our case NARDL and ARDL:

Model 1: $\Delta Growth_t = \alpha_0$

$$= \alpha_0 + \sum_{q=1}^{p1} \alpha_{1q} \Delta Growth_{i,t-q} + \sum_{q=0}^{p2} \alpha_{2q} \Delta y_{i,t-q} + \sum_{q=0}^{p3} \alpha_{3q} \Delta k_{i,t-q} + \sum_{q=0}^{p4} \alpha_{4q} \Delta h_{i,t-q} + \sum_{q=0}^{p5} \alpha_{5q} \Delta Tour(I)_{i,t-q}$$

$$+ \beta_1 Growth_{i,t-1} + \beta_2 y_{i,t-1} + \beta_3 k_{i,t-1} + \beta_4 h_{i,t-1} + \beta_5 Tour(I)_{i,t-1} + \varepsilon_t$$

Model 2: $\Delta Growth_t = \alpha_0$

$$+ \sum_{q=1}^{p1} \alpha_{1q} \Delta Growth_{i,t-q} + \sum_{q=0}^{p2} \alpha_{2q} \Delta y_{i,t-q} + \sum_{q=0}^{p3} \alpha_{3q} \Delta k_{i,t-q} + \sum_{q=0}^{p4} \alpha_{4q} \Delta h_{i,t-q} + \sum_{q=0}^{p5} \alpha_{5q} \Delta Tour(I)^{pos}_{i,t-q} + \sum_{q=0}^{p6} \alpha_{6q} \Delta Tour(I)^{neg}_{i,t-q}$$

$$+ \beta_1 Growth_{i,t-1} + \beta_2 y_{i,t-1} + \beta_3 k_{i,t-1} + \beta_4 h_{i,t-1} + \beta_5 Tour(I)^{pos}_{i,t-1} + \beta_6 Tour(I)^{neg}_{i,t-1} + \varepsilon_t$$

Model 3: $\Delta Growth_t = \alpha_0$

$$= \alpha_0 + \sum_{q=1}^{p1} \alpha_{1q} \Delta Growth_{i,t-q} + \sum_{q=0}^{p2} \alpha_{2q} \Delta y_{i,t-q} + \sum_{q=0}^{p3} \alpha_{3q} \Delta k_{i,t-q} + \sum_{q=0}^{p4} \alpha_{4q} \Delta h_{i,t-q} + \sum_{q=0}^{p5} \alpha_{5q} \Delta Tour(II)_{i,t-q}$$

$$+ \beta_1 Growth_{i,t-1} + \beta_2 y_{i,t-1} + \beta_3 k_{i,t-1} + \beta_4 h_{i,t-1} + \beta_5 Tour(II)_{i,t-1} + \varepsilon_t$$

Model 4: $\Delta Growth_t = \alpha_0$

$$\begin{aligned}
 & + \sum_{q=1}^{p1} \alpha_{1q} \Delta Growth_{i,t-q} + \sum_{q=0}^{p2} \alpha_{2q} \Delta y_{i,t-q} + \sum_{q=0}^{p3} \alpha_{3q} \Delta k_{i,t-q} + \sum_{q=0}^{p4} \alpha_{4q} \Delta h_{i,t-q} + \sum_{q=0}^{p5} \alpha_{5q} \Delta Tour(II)^{pos}_{i,t-q} + \sum_{q=0}^{p6} \alpha_{6q} \Delta Tour(II)^{neg}_{i,t-q} \\
 & + \beta_1 Growth_{i,t-1} + \beta_2 y_{i,t-1} + \beta_3 k_{i,t-1} + \beta_4 h_{i,t-1} + \beta_5 Tour(II)^{pos}_{i,t-1} + \beta_6 Tour(II)^{neg}_{i,t-1} + \epsilon_t
 \end{aligned}$$

ARDL Bound Test is applicable to any time series as long as it is not I(2). In other words, it can be applied to I(0) variables or I(1) variables or even a combination of I(0) and I(1) variables. Table 2 shows result of unit root test:

Table 2. Unit Roots Test:

methods	Augmented Dickey Fuller (ADF)				Phillips Perron (PP)			
	level	Frist differences			level	Frist differences		
Variable	Constant	Constant and Trend	Constant	Constant and Trend	Constant	Constant and Trend	Constant	Constant and Trend
Growth	-6.12(0)** *	-6.16(0)** *	-6.88(1)** *	-6.78(1)** *	-6.1(3)** *	-6.2(4)** *	-14.(5)***	-14.06(5)** *
GDP Per Capital	2.01(0)	-0.68(0)	-5.33(0)** *	-6.13(0)** *	3.9(5)	-0.68(3)	-5.35(2)** *	-6.38(5)***
Manufacturing	-1.87(0)	-2.10(0)	-7.24(0)** *	-7.3(0)***	1.76(2)	2.01(0)	-7.3(2)***	-7.89(5)***
Human Capital	-0.29(0)	-2.58(0)	-7.24(0)** *	-7.3(0)***	1.76(2)	2.01(0)	-7.3(2)***	-7.89(5)***
RER	-1.9(0)	-1.8(0)	-7.29(0)** *	-7.6(0)***	1.88(2)	1.69(1)	-7.3(2)***	-7.23(3)***
Taxes	-0.29(0)	-1.67(0)	-6.59(0)** *	-6.5(0)***	-0.44(4)	1.75(3)	-6.6(4)***	-6.51(4)***
Physical Capital	-2.20(0)	-2.13(0)	-5.7(0)***	-5.6(0)***	2.33(1)	-2.28(1)	-5.6(4)***	-5.5(5)***
TOUR I	-1.52(0)	-2.15(0)	-6.07(0)** *	-6.1(0)***	-2.12(5)	-3.8(0)**	-6.1(2)***	-6.12(2)***
TOUR II	-2.34(0)	-3.79(0)**	-6.01(1)** *	-5.9(1)***	-1.53(0)	2.2(0)	8.4(29)***	-6.9(16)***

Note. The sighs **, * and *** following the t-statistics represen 10%, 5%, and less that 1% significance level, respectively and parantes shows optimul lag.

As Table 2 shows; all variables are I(1) or I(0). As expected growth series is I (0), Tourism capital as share of GNP also can be considered as I(0) and the other variables are I(1). Table 3, shows the estimation of classical growth models for both NARDL and ARDL models.

Table 3. Long Run Coefficients of Classical Growth Model ³

Dependent variables	MODEL 1	MODEL 2	MODEL 3	MODEL 4
	Growth ARDL (4,1,1,1,3)	Growth Non-linear ARDL (4,3,0,2,3,1)	Growth ARDL (4,0,1,1,2)	Growth Non-linear ARDL (1,4,4,4,2,2)
C	5.67***	5.16***	4.28***	2.20
GDP Per Capital	-0.00**	-0.00***	-0.00	-0.00
Physical Capital	-0.01	-0.046	0.02	0.12
Human Capital	0.04*	-0.00	-0.01	0.09
Tourism Capital I	-0.05**	-	-	-
Tourism Capital (I) ^{POS}	-	-0.02*	-	-
Tourism Capital (I) ^{NEG}	-	-0.06***	-	-
Tourism Capital (II)	-	-	0.18	-
Tourism Capital (II) ^{POS}	-	-	-	-2.48*
Tourism Capital (II) ^{NEG}	-	-	-	-2.70
F-Bounds	116.7***	11.71***	64.2***	4.15***
EC _{t-1}	-1.02***	-1.28***	-1.06***	-0.85***
Serial Correlation LM (Breusch-Godfrey)	F=0.72 (0.49)	F=0.84 (0.44)	F=0.05 (0.95)	F=2.4 (0.15)

Note. The sighs **, * and *** following the t-statistics represen 10%, 5%, and less that 1% significance level,

³ For the stability of all models, CUSUM and CUSUM Squares is tested and there is no problem of stability for the all models.

respectively and parantes shows probubility .

Within the significant coefficients; in the Model 1 and 2, the estimated coefficient of the GDP per capita has a negative sign (same as Holzner (2011)'s finding), coefficient of the human capital is positive and significant in the model 1. All The estimated coefficient of tourism capitals in all models are negative and also all significant excepted model 3 and model 4 (negative coefficient of NARDL) are significant. Therefore tourism has negative effect on economic growth in the long run. All models are cointegrated 1% level and sigh of coefficient of ECT-1 is negative and significant⁴. There is no problem of serial correlation in all models.

One of the most important variables in the Dutch disease theory is the real exchange rate. According to theory of Dutch Disease, large inflow of foreign capital (tourism capital) leads to an appreciation of the real exchange rate and thus it leads country to lost its international competitiveness of the tradable sector (manufacturing and classic tradable sector). Therefore, in the table 4, long run relationship between real exchange rate and tourism capitals and also long run relationship between manufacturing rate and tourism capitals is investigated.

Table 4. Effect of Tourism Capitals to Manufacturing and RER

MODELS	Method	Independent variable Long run coefficient	Serial Correlation LM (Breusch-Godfrey) F-stat	Heteroskedasticity Test: ARCH, F-stat	F bound
MODEL 5 (RER=f(Tourism I))	ARDL (5,3) ECT: -0.41***	1.02*** (t.stat:3.77)	0.09 (prob: 0.91)	0.332 (prob: 0.56)	7.70***
MODEL 6 (RER=f(Tourism II))	ARDL (2,3) ECT: -0.16**	14.2 (t.stat:1.43)	1.01 (prob: 0.37)	0.003 (prob:0.95)	4.53**
MODEL 7 (Manufacturing=f(Tourism II))	ARDL(1,0) ECT: -0.15**	-0.72 (t.stat: -0.73)	1.19 (prob: 0.32)	0.055 (prob: 0.81)	1.4
MODEL 8 (Manufacturing =f(Tourism I))	ARDL (1,3) ECT: -0.215***	-0.213*** (t.stat: -0.3.11)	0.68 (prob: 0.51)	1.11 (prob: 0.29)	4.57***

Note. The sighs *, ** and *** following the t-statistics represen 10%, 5%, and less that 1% significance level, respectively and parantes shows probubility .

As table 4 shows, the model 5, 6 and 8 are cointegrated (model 7 is not cointegrated). In model 5 and 6 shows tourism capitals has positive long run effect on real exchange rate. The coefficient of model 6 is not statistically significant. Although coefficient of the tourism in the model 7 is not statistically significant, as model 7 and 8 show, tourism capitals have negative long run effect on manufacturing sector. There is no problem of Serial Correlation and stability in models. Therefore by considering the results of table 3 and 4, we can say there are symptoms of Dutch Disease because of tourism sector in Turkey. Because tourism capital appreciates the real exchange rate that it will cause of spending and resource movement effect. For clear understanding of effect of tourism capital to real exchange rate and growth we test asymmetric effect of tourism on these variables. The Figure 4, shows Multiplier Non-Liner ARDL Effect of Tourism on real exchange rate and growth. The results are almost same with table 4 and 3. The differences of Tourism Capital^{POS}, Tourism Capital^{NEG} have overall negative effect on growth and also differences of Tourism Capital(I)^{POS}, Tourism Capital(I)^{NEG} have generally positive effect on real exchange rate. Although The effect of differences of Tourism Capital(II)^{POS} and Tourism Capital (II)^{POS} are negative, it's get positive effect after half of the period.

⁴In the simple case of ARDL(1,1):

$$Y = \alpha + \beta Y(-1) + \gamma X + \delta X(-1)$$

the coefficient of the ECM term in the error correction representation is: -(1-beta)

And in that case if (beta < 0) then -(1-beta) can be below -1 but not below -2. Of course when beta > 0 then the coefficient cannot go below -1. For more information refer to worked out from equation (21.168) in the Microfit 5 manual Witten by Bahram Pesaran and M. Hashem Pesaran.

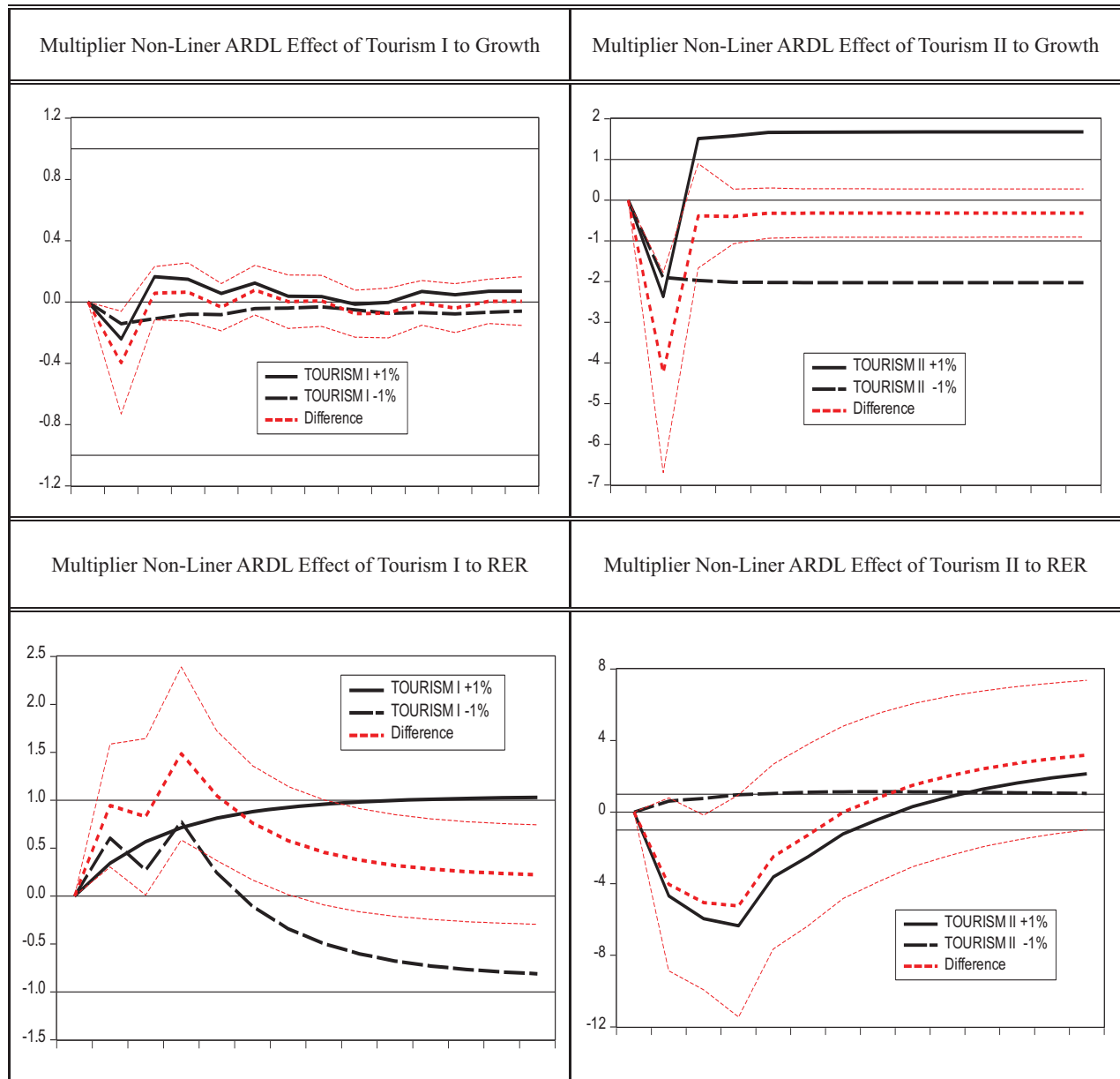


Figure 4. Multiplier Non-Linear ARDL Effect of Tourism on Real Exchange Rate and Growth

Following Holzner (2011), the direct effect of tourism on growth will be tested by using Non ARDL Method via two models in the table 5. The results show the all tourism capitals have negative effect on growth and all are statistically significant (except Tourism(I)^{pos}).

Model 9: $\Delta Growth_t = \alpha_0$

$$\begin{aligned}
 & + \sum_{q=1}^{p1} \alpha_{1q} \Delta Growth_{i,t-q} + \sum_{q=0}^{p2} \alpha_{2q} \Delta y_{i,t-q} + \sum_{q=0}^{p3} \alpha_{3q} \Delta k_{i,t-q} + \sum_{q=0}^{p4} \alpha_{4q} \Delta h_{i,t-q} + \sum_{q=0}^{p5} \alpha_{5q} \Delta RER_{i,t-q} \\
 & + \sum_{q=0}^{p6} \alpha_{6q} \Delta tax_{i,t-q} + \sum_{q=0}^{p7} \alpha_{7q} \Delta manu_{i,t-q} + \sum_{q=0}^{p8} \alpha_{8q} \Delta Tour(I)^{pos}_{i,t-q} + \sum_{q=0}^{p9} \alpha_{9q} \Delta Tour(I)^{neg}_{i,t-q} \\
 & + \beta_1 Growth_{i,t-1} + \beta_2 y_{i,t-1} + \beta_3 k_{i,t-1} + \beta_4 h_{i,t-1} + \beta_5 RER_{i,t-1} + \beta_6 tax_{i,t-1} + \beta_7 manu_{i,t-1} + \beta_8 Tour(I)^{pos}_{i,t-1} \\
 & + \beta_9 Tour(I)^{neg}_{i,t-1} + \varepsilon_t
 \end{aligned}$$

Model 10: $\Delta Growth_t = \alpha_0$

$$\begin{aligned}
 & + \sum_{q=1}^{p1} \alpha_{1q} \Delta Growth_{i,t-q} + \sum_{q=0}^{p2} \alpha_{2q} \Delta y_{i,t-q} + \sum_{q=0}^{p3} \alpha_{3q} \Delta k_{i,t-q} + \sum_{q=0}^{p4} \alpha_{4q} \Delta h_{i,t-q} + \sum_{q=0}^{p5} \alpha_{5q} \Delta RER_{i,t-q} \\
 & + \sum_{q=0}^{p6} \alpha_{6q} \Delta tax_{i,t-q} + \sum_{q=0}^{p7} \alpha_{7q} \Delta manu_{i,t-q} + \sum_{q=0}^{p8} \alpha_{8q} \Delta Tour(II)^{pos}_{i,t-q} + \sum_{q=0}^{p9} \alpha_{9q} \Delta Tour(II)^{neg}_{i,t-q} \\
 & + \beta_1 Growth_{i,t-1} + \beta_2 y_{i,t-1} + \beta_3 k_{i,t-1} + \beta_4 h_{i,t-1} + \beta_5 RER_{i,t-1} + \beta_6 tax_{i,t-1} + \beta_7 manu_{i,t-1} + \beta_8 Tour(II)^{pos}_{i,t-1} \\
 & + \beta_9 Tour(II)^{neg}_{i,t-1} + \epsilon_t
 \end{aligned}$$

Table 5. Direct effect of tourism on growth

Variables	Growth	Growth
	Non Liner ARDL (3,2,2,2,3,3,3,2)	Non Liner ARDL (3,3,3,3,3,3,3,3)
C	34.15	32.24
GDP per capital	-0.00**	-0.00*
Physical capital	-0.15	-0.00
Human capital	0.2	0.18
Real Exchange Rate	-0.04	-0.11**
Taxes	-1.002	-0.132
Manufacturing	-1.01	-0.77
Tourism ^{pos} I	-0.027	-
Tourism ^{neg} I	-0.059*	-
Tourism ^{pos} II	-	-2.56**
Tourism ^{neg} II	-	-2.85*
F-Bounds	13.35***	6.004***
EC _{t-1}	-1.05***	-1.95***
Serial Correlation LM (Breusch-Godfrey)	F=4.82 (0.089)	F=0.59 (0.52)

Note. The sighs *,** and *** following the t-statistics represen 10%, 5%, and less that 1% significance level, respectively and parantes shows probubility.

4.1 Interactive Production Function Estimates

Holzner (2011) following Canning and Bennathan (2000) allows the Cobb-Douglas production function to take more complex functional form given by:

$$f(k_{it}, h_{it}, x_{it}) = \alpha_1 k_{it} + \beta_1 h + \gamma_1 x_{it} + \alpha_2 k_{it}^2 + \beta_2 h_{it}^2 + \gamma_2 x_{it}^2 + \psi_{kh} k_{it} h_{it} + \psi_{kx} k_{it} x_{it} + \psi_{hx} h_{it} x_{it}$$

This form of the trans-log production function allows for different degrees of substitutability and complementarily between the different types of capital (Canning and Bennathan, 2000). The test able version of above equation can be written following form;

$$y_{it} = Y_t + \alpha y_{it-1} + \alpha_1 k_{it} + \beta_1 h + \gamma_1 x_{it} + \alpha_2 k_{it}^2 + \beta_2 h_{it}^2 + \gamma_2 x_{it}^2 + \psi_{kh} k_{it} h_{it} + \psi_{kx} k_{it} x_{it} + \psi_{hx} h_{it} x_{it}$$

Holzner (2011) and Canning and Bennathan (2000) use panel data in their studies. While, we use time series in our study that there is high collinearity between variables. Therefore we use growth as proxy for y_{it} and also Ghalia and Fidrmuc (2015) used growth as depended variable with interactive between trade and tourism without logarithms. The result is in Table 6.

Table 6. Estimation of Interactive production function

Dependent variables	MODEL 11	MODEL 12
	Growth ARDL (1,0,1,1,0,1,0,1,0,0,1)	Growth ARDL (2,0,2,0,0,2,0,0,1,0,2)
C	13.00	94.73**
Lagged GDP Per Capital	-0.003***	-0.003***
Physical Capital	-1.21	-11.42**
Human Capital	-2.85***	-2.30***
Tourism Capital I	0.52	2.12
Physical Capital* Physical Capital	-0.23***	0.00
Human Capital* Human Capital	0.01***	0.01
Tourism Capital I* Tourism Capital I	-0.01**	-0.91
Human Capital* Physical Capital	0.19***	0.19***
Physical Capital *Tourism Capital I	-0.02*	-0.24
Human Capital *Tourism Capital I	0.01**	0.11*
F-Bounds	13.71***	9.05***
EC _{t-1}	-1.15***	-0.88***
Serial Correlation LM (Breusch-Godfrey)	F=0.50 (0.61)	F=1.45 (0.24)

Note. The signs *, ** and *** following the t-statistics represent 10%, 5%, and less than 1% significance level, respectively and parentheses shows probability.

The important results to analyze in models are the coefficients of the squared and the interactive terms. In model 11 among the squared terms human capital coefficient is significant and positive. But the squared terms physical capital coefficient is negative and significant. This implies that investment in human capital has increasing returns and investment in physical capital has decreasing returns. Regarding the interactive terms, the interaction effects between tourism and human capital are positive and significant but interaction effects between tourism and physical capital are negative and significant. In model 12 only interaction effects between tourism and human capital are positive and significant. Therefore investment in traditional physical capital, such as an airport, museum, or other touristic places has negative effect on long run growth but investment in human capital has positive effect on long run growth in Turkey.

4.2 Transmission Channel from Tourism Capital

Christiano et al. (1999) and Breitung (1997) emphasize on advantages of SVAR method for transmission channel. Therefore SVAR method has been used for transmission channel. Rubio-Ramirez et al. (2010) describe three types of (A-B, S; short run and F; long run) matrix for Structural VAR system. Our analyses focus on long run effect of tourism on Turkey economy so we consider F (long run Restriction matrix). The identifying restriction and relationship between A, B and F matrix:

$$A^* e = B^* u$$

$$e = S^* u$$

$$\phi^* e = F^* u$$

and short run S model is following type:

$$e_t = S^* u_t$$

$$\sum e = S^* S^*$$

$$(I - A_1 - A_2 - \dots - A_p)^{-1} e_t = \phi^* e_t = F^* u_t$$

$$\sum e = \phi^{-1} F F^* \phi^{-1} \dots \tag{15}$$

$$\phi = (I - A_1 - A_2 - \dots - A_p)^{-1}$$

for 3*3 model: $A = \begin{pmatrix} 1 & 0 & 0 \\ \gamma_1 & 1 & 0 \\ \gamma_2 & \gamma_3 & 1 \end{pmatrix}$, $B = \begin{pmatrix} \tau_1 & 0 & 0 \\ 0 & \tau_2 & 0 \\ 0 & 0 & \tau_3 \end{pmatrix}$ and $F = \begin{pmatrix} \vartheta_1 & 0 & 0 \\ \vartheta_2 & \vartheta_3 & 0 \\ \vartheta_4 & \vartheta_5 & \vartheta_6 \end{pmatrix}$

According to Ashley and Verbrugge (2009) modeling VAR in levels models are appropriate in the context of impulse response function confidence interval estimation. Also Peersman (2005), Sousa and Zaghini (2004), Ruffer and Stracca (2006) use I(0) instead of instable (I(1)) data for impulse response function. Therefore we estimate F long run tringle matrix of impulse response function of SVAR. The result summarized Figure 5:

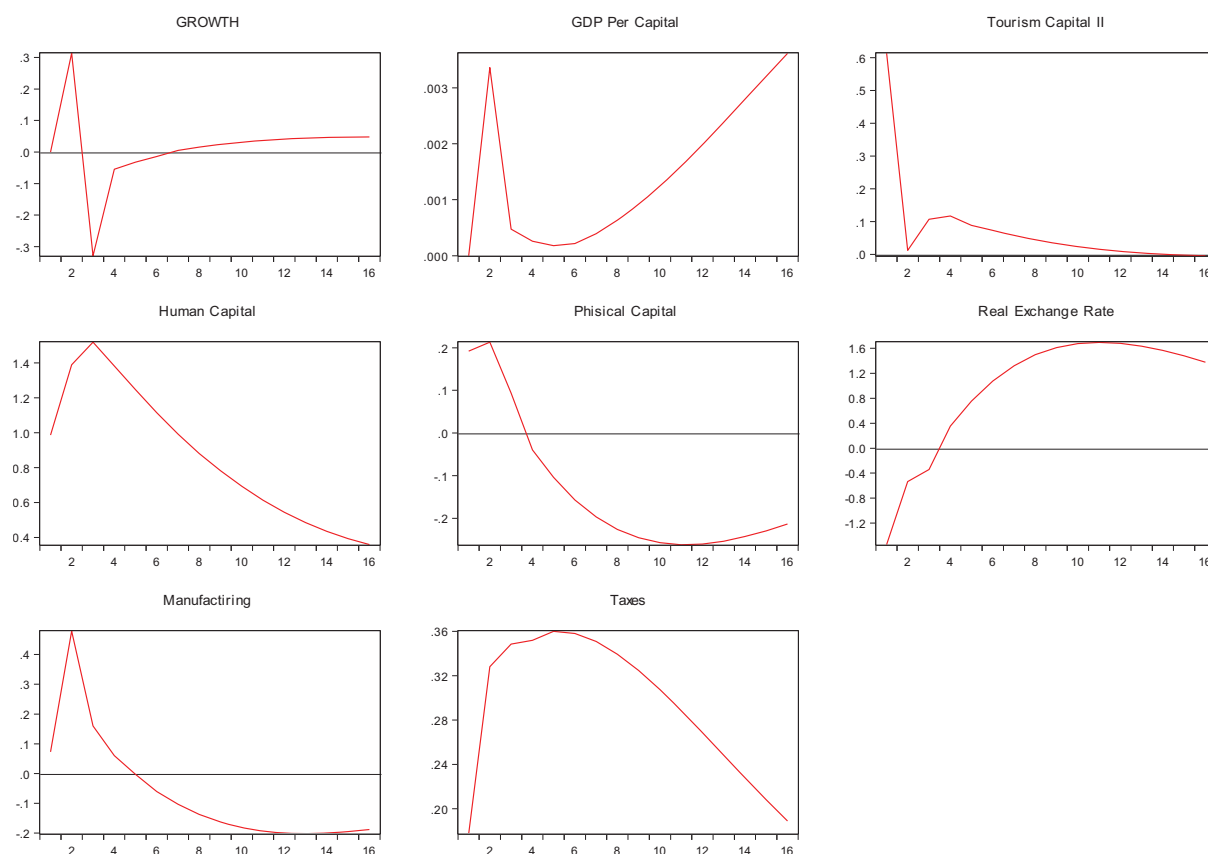


Figure 5. Long run response of Variables to Tourism Capital II

Following a one shock to the long-term tourism capital, growth appears to rise sharply. It falls immediately to negative area till period 6 and then it gets ineffective. GDP per capital, human capital and taxes respond positively in all periods. Respond of Real exchange rate appears to increase but in first four periods negative and then respond positively. It confirms previous result which duo to shock to tourism capital II, spending and resource movement effect happens. So that as long as real exchange rate is negative manufacturing sector respond positive, when real exchange rate become positive, manufacturing starts responding negatively.

Table 7. SVAR, LM (serial correlation) Test and VAR Residual Heteroskedasticity Tests

Lag	LM (Autocorrelation)		Heteroskedasticity
	LRE*	Rao F	
1	79.67(0.089)	1.30 (0.116)	579.80 (0.44)
2	66.76 (0.38)	1.03(0.42)	

In response to a one shock to the long-term tourism capital I, as same Figure 5, growth appears to rise sharply and falls immediately to negative and become positive again and then it gets ineffective. GDP per capital appears both positive and negative. Human and physical capital and taxes first respond positively and then negatively. Respond of Real exchange rate appears to increase and positive which It confirms previous result again that duo to shock to tourism capital II, spending and resource movement effect happens. So that manufacturing sector respond generally negative. Both of SVAR models have no Serial Correlation in 5% level of significant.

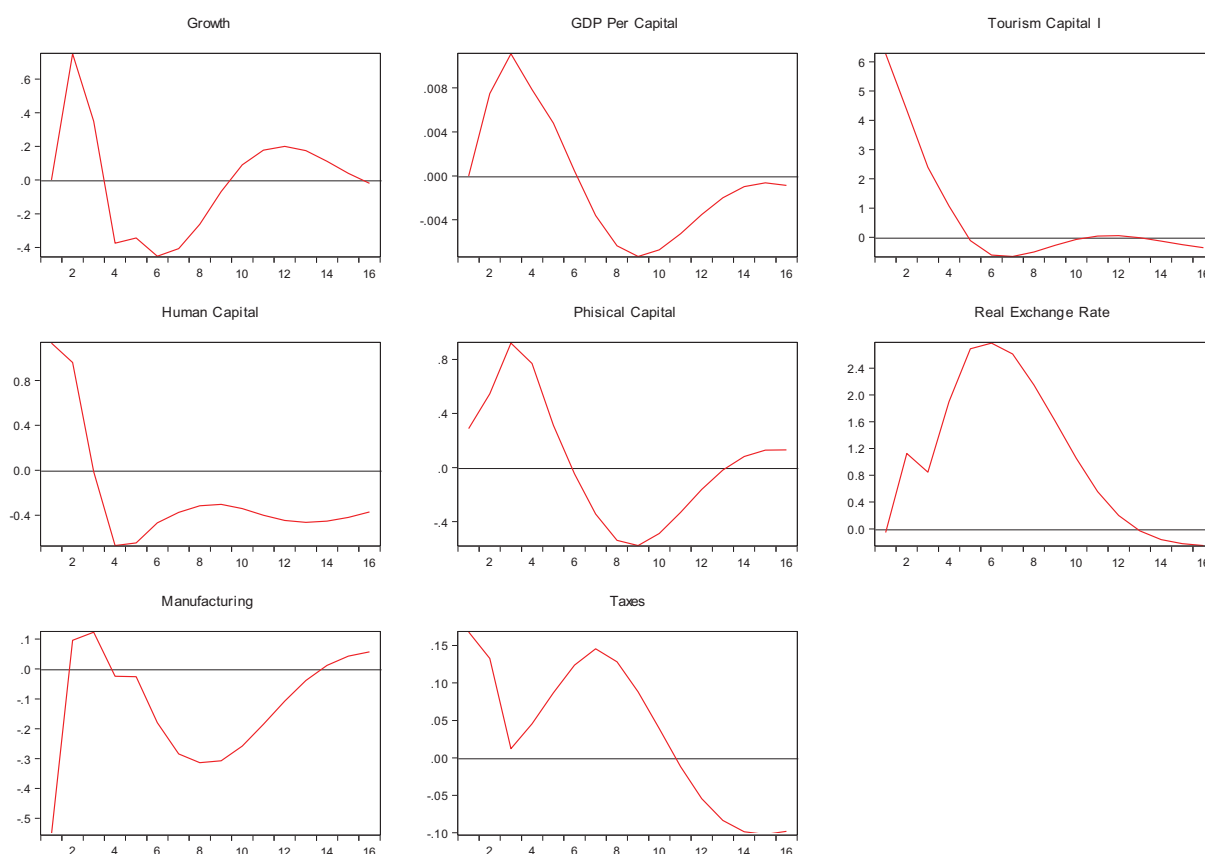


Figure 6. Long rung respond of Variables to Tourism Capital I

Table 8. SVAR, LM (Serial correlation) Test and VAR Residual Heteroskedasticity Tests

Lag	LM (Autocorrelation)		Heteroskedasticity
	LRE*	Rao F	χ^2
1	86.72(0.078)	1.49 (0.088)	1183.05 (0.25)
2	61.27 (0.57)	0.88(0.67)	

5. Results and Discussion

The first objective of the study was to determine whether rapid growth in the tourism sector has led the Turkish economy to experience the Dutch disease. The results highlight that the tourism sector in Turkey has a high potential to increase the real exchange rate, resource movement and spending effect that has led the Turkish economy into the process of de-industrialisation known as the Dutch disease. This result corresponds with the theories and previous studies conducted by Copelend (1991), Parrilla et al. (2005), Kenell (2008), Kropp and Brussels (2010), Mieiro, et al (2012), etc. By comparing the results with those of Holzner (2010), there are some differences, especially in the potential risk of experiencing the Dutch disease. Holzner (2010) used cross-country analysis and concluded that tourism does not seem to lead to a contraction in the manufacturing sector. However, Holzner (2010) recommended that revenue from the tourism sector in developing countries with a potential for tourism can be invested both in the tourism sector and by the manufacturing sector.

Due to the lack of official data on tourism revenue as a share of GDP for a selected period, we decided to use two proxies: tourism revenue as a share of GNP and travel services as a share of service exports. One concern about the findings is about management of the tourism income. Money gained from tourism should be used to develop the infrastructure not only services sector, roads and airports but also should use for developing the other sectors especially manufacturing sector. Although we followed related studies, literature on the effect of the tourism sector on the Dutch disease is limited, and thus identifies a deficiency in research on the topic, especially with regard to tourism-oriented countries.

6. Conclusions and Policy Implications

The purpose of this study was to investigate the Beach Disease effect or the Dutch disease effect of the flow of foreign currency from tourism into Turkey. In other words, we analysed whether the growing tourism sector in Turkey has caused symptoms of the Dutch disease to emerge, such as the reallocation of resources between different sectors (moving production factors to non-tradable sectors), decreasing production in the tradable sector, decreasing international competitiveness, and consequently de-industrialisation and decreasing long-term growth. Beach Disease is a term that was used for the first time by Holzner (2011) to describe the danger of the Dutch disease as a result of rapid growth in the tourism sector. Following Copeland (1991), Chao et al. (2006), Holzner (2010), Hozland (2011), Ghalia and Fidrmuc (2015), we applied various econometrics models based on ARDL, non-ARDL and a structural VAR approach to investigate the effect of tourism revenue on Turkey's long-term growth using yearly time series over the period from 1976 to 2017.

According to our findings, the growing tourism sector and its revenue have had the same effect as the natural revenue effect, and have the potential to lead Turkey's economy to experience the Dutch disease.

According to estimation of growth model, the relationship between tourism and the manufacturing production is negative. A booming tourism sector increases the real exchange rate due to the diminishing competitiveness of tradable sectors, and in particular, production in the manufacturing sector decreases, and also increasing in tourism sector as a part of the non-tradable sector in Turkey, has reallocated production factor to moving labour and other factors toward the non-tradable sectors that it has negative effect on manufacturing sectors.

These results demonstrate that the effect of the interaction between tourism and physical capital on economic growth is negative. This means that investments in building new hotels, roads, airports, etc., have a negative effect on long-term growth. Conversely, interaction between human capital and tourism has a positive effect on economic growth, which means that investment in training workers in the tourism sector will have a positive effect on Turkey's long-term growth. In addition, the result of SVAR indicates that tourism capital increases the real exchange rate and decreases manufacturing production, which is a symptom of the Dutch disease in Turkey.

In conclusion, with regard to the results of the tourism-led growth policy, especially in the last two decades, the Turkish economy has suffered from the Dutch disease due to growth in the tourism sector, which caused de-industrialisation and unstable long-term growth. Therefore, Turkish authorities should consider managing income from tourism.

As Van Wijnbergen⁵ stated, 'To refer to a vast, valuable energy resource as the source of a "disease" sounds rather ungrateful'; the main problem related to the Dutch disease is not the export of energy, but the mismanagement of resources. In our case, if tourism income is spent on improving the supply side, such as investments in infrastructure (especially in the manufacturing sector), education, government institutions and health care, then there will be productivity benefits for the whole economy. These could offset any lack of balance in exchange rates and loss of competitiveness from the Beach Disease (Dutch disease) effect.

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⁵The Economic Journal Vol. 94, No. 373 (Mar., 1984), pp. 41-55 (15 pages)

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Determinants of Barriers to Knowledge Sharing in the Jordanian Hospitality Industry

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Abstract

As well as to examine the differences in attitude of respondents in regard to their demographic characteristic, the purpose of this research is to identify the main barriers to Knowledge Sharing (KS) within the Jordanian hospitality industry; a quantitative approach has been adopted in order to achieve these research objectives, the data being collected via the questionnaire. The sample of this research consisted of 273 managers and employees within ten top hotels in Jordan and the researcher implemented the Statistical Analysis Package (SPSS) so as to analyse the data, the descriptive statistics, mathematical averages, and standard deviations being used to identify the main barriers of KS within the Jordanian hospitality industry. The T-test and One-way ANOVA test were additionally used to examine the hypotheses, the study showcasing that individual and organisational barriers were the main barriers to KS within the Jordanian hospitality industry; meanwhile, technology and knowledge nature were not considered as barriers to KS. The results additionally indicated that there were no statistically significant differences between the responses of the sample members at the level of $\alpha \leq 0.05$ on the barriers to sharing knowledge from the employees at hospitality industry attributed to the following variables: gender; job; age; years of experiences; qualifications.

Keywords: barriers to knowledge sharing, knowledge management, knowledge sharing, hospitality industry

1. Introduction

Intense competition is currently being faced by service organisations—particularly the hospitality industry—, such organisations focusing on how to enhance their long-term relationships with their customers in order to retain them and attract new customers; according to Hu, Horng, and Sun (2009), Knowledge Sharing (KS) is being increasingly considered to be the most optimal approach when it comes to meeting this challenge within the hospitality industry. A main organisation type within the hospitality industry is that of Jordanian hotels, which are amongst the country's best organisations when it comes to tapping into Knowledge Management, recognising the significance behind KS within daily practices (Dinçer & Alrawadieh, 2017).

Notably, KS has become a critical aspect of knowledge management within traditional organisations (as well as virtual organisations), and so KS is even more significant than other factors regarding how they impact competitive advantages within new organisations, turning them from classical face-to-face relationships to virtual relationships (Chung, Cooke, Fry, & Hung, 2015).

Despite the significance of KS within organisations, considering the fact that employees are still not participating to a satisfactory degree in the process of KS—as well as the fact that there are many barriers to KS within organisations—, it continues to be a problem for a number of them (Ford, Myrden, & Jones, 2015).

Coupled with its developing nature, Jordan's service-oriented economy signifies an excellent research environment for exploring the phenomenon of KS barriers; most studies of this nature have been undergone within developed countries, resulting in a lack of research conducted within the context of developing countries (e.g., Jordan). Because of this, this study is expected to contribute to knowledge management literature and, particularly that concerning the Jordanian context considering there is an urgent need for more research to be conducted within such a country (Al Hawamdeh, 2018; Al Hawamdeh & Hackney, 2018).

Some significant gaps have been pinpointed after reflection of the KS-related Literature Review, this identification being considered as a motivation to conduct more empirical research in order to achieve a firmer

grasp on KS barriers in the specific context of the Jordanian hospitality industry. The current study, thus, attempts to identify the main barriers to KS within Jordanian hotels.

2. Literature Review

2.1 Knowledge Management (KM)

Representing a critical asset within organisations in today's economy, knowledge is acknowledged to be one of the most important resources within organisations (Nonaka & Toyama 2005); saying this, one of the most widely adopted perspectives to knowledge management is that of considering it as a process. KM focuses on knowledge flows, linking the process of knowledge to creation, sharing, and the wider breadth and depth of distributing knowledge (Alavi & Leidner, 2001).

According to currently existing literature concerning Knowledge Management (KM), knowledge is composed of both tacit and explicit knowledge (explained in more depth below), these two dimensions relying on the nature of knowledge; this classification of knowledge has been deemed as the most common within KM literature thus far (Alavi & Leidner, 2001; Hawryszkiewicz, 2009). The latter form of knowledge can be expressed via any language, writing, or means of communication, and is frequently found in books, documents, and databases (Goh, 2002); it is additionally tangible, visible, formalised, and structured, and can be easily shared/transferred between individuals and organisations (Nonaka, Toyama, & Konno, 2000). Meanwhile, the former is extremely personal and difficult to formalise, residing in the human mind and being rooted in actions, routines, and experience more than in words (Nonaka et al., 2000); it is additionally difficult to define and codify, and is contextual and sticky (Davenport & Prusak, 1998; Busch, 2008), only able to be transferred/shared via experience/social interactions (Nonaka, 1994; Hau, Kim, Lee, & Kim, 2013), considering knowledge consists of habits and behaviours that we do not always notice (Kim, Suh, & Jun, 2011). Individuals often try to hoard tacit knowledge due to the fact that, to them, it is valuable and significant (Yang & Farn, 2009).

In order to ensure the objectives and goals of the organisation are achieved in the long term, the main role of KM centres on maintaining and retaining the body of knowledge (Wiig, 1997); further, one of the most widely adopted perspectives of KM considers it to be a process, explaining that its focus is on knowledge flows, linking the processes of knowledge to creation, sharing, and, on the wider breadth, to the depth of knowledge distribution (Swan, Newell, Scarbrough, & Hislop, 1999; Alavi & Leidner, 2001).

De Long & Fahey (2000) suggested that knowledge exists within an organisation at three different levels: individual, group, and organisational level; saying this, the most important level for KS and creation is that of the individual level. This is due to the fact that it is recognised as connecting the chain between other knowledge levels, as well as possessing a significant impact on the overall process of knowledge creation (Ipe, 2003).

2.2 Knowledge Sharing (KS)

Knowledge Sharing (KS) is recognised to be a knowledge management dilemma; saying this, there are two approaches based on the management of KS within organisations due to the nature of the KS processes, which is very complex: the engineering approach—focusing on how management leads KS—, and the emergent approach—focusing on social nature (van den Hooff & Huysman, 2009).

Furthermore, according to Ipe (2003), knowledge itself can be divided into two types—organisational knowledge and individual knowledge—, and so the main purpose of knowledge management is to turn employee knowledge into organisational knowledge (Chow & Chan, 2008); saying this, considering it can help the firm to enhance performance via the transferring of knowledge between employees, thus creating new knowledge, KS is considered as one of the most critical processes amongst the knowledge management processes (Zhang, de Pablos, & Xu, 2014). Notably, due to the fact that it comprises of a set of behaviours and that knowledge is embedded within the human mind, KS is a very complex process (Chow & Chan, 2008), as well as a huge concept, incorporating the sharing of both tacit and explicit knowledge at an individual, group, and organisational level.

Thus, KS is a major component of knowledge management (Small & Sage 2006), and it has received amassed attention from researchers and practitioners in the context of it being a tool for enhancing organisations' innovative performance (Calantone, Cavusgil, & Zhao, 2002). Further, it is also recognised as an important factor of employee performance.

KS can be defined as 'the communication of all types of knowledge, which includes explicit knowledge or information, the "knowhow" and "know-who", which are types of knowledge that can be documented and captured as information, and tacit knowledge in the form of skills and competencies' (Al-Hawamdeh, 2003, p. 81), whilst KS within a virtual context is more difficult owing to the dependence placed on information

communication technology (Staples & Webster, 2008).

As a way to pinpoint the possible shortcomings within the extant literature, a systematic literature review has been undergone; saying this, this paper seeks to contribute to KS literature by providing a review of barriers to KS within the hospitality industry.

Polanyi states, 'I shall reconsider human knowledge by starting from the fact that we can know more than we can tell' (Polanyi, 2009: 4); we have come to realise through these words that the biggest problem with knowledge management is that of the sharing of tacit knowledge. Saying this, tacit and explicit knowledge are not separate from one another, but are complementary, whereby explicit knowledge is linked with know-that, whilst tacit knowledge is linked with know-how; moreover, whilst explicit knowledge is knowledge that can be codified tacit knowledge, tacit knowledge is very difficult to communicate to others via words and symbols (Nonaka, 1994). However, tacit and explicit knowledge are very important to the theory of organisational knowledge creation and to KS as a whole. Notably, within the SECI model, which is composed of four different stages of knowledge conversion (socialisation, externalisation, combination, and internalisation), the interaction and conversion of tacit and explicit knowledge is detailed. On this note, socialisation focuses on the conversion of tacit knowledge to tacit knowledge, whilst externalisation is concerned with the conversion of tacit knowledge to explicit knowledge; combination focuses on the conversion of explicit knowledge to explicit knowledge, and internalisation focuses on the conversion of explicit knowledge to tacit knowledge (Nonaka & Takeuchi, 1995). KS is one of the most compound processes within the organisation—especially between individuals within an organisation—and it is wholly dependent on the relationship between the individuals (Ipe, 2003), the facilitation of KS being a vital element in increasing productivity (Pan *et al.*, 2015). Notably, there are various KS barriers within organisations, which can be divided into three groups: the organisation group, the individual group, and the technological group (Riege, 2005).

2.3 Knowledge Sharing Barriers

The impact of KS within organisations is highly complex, this difficulty stemming from a number of causes, i.e., the construct of KS, which consists of a group of factors impacting KS as well as one another (Yang & Wu, 2008).

Wang and Noe (2010) conducted a systematic review of KS, in the process identifying five areas of KS research: the organisational context, the interpersonal and team characteristics, the cultural characteristics, the individual characteristics, and the motivational factors; further, prior research has suggested that numerous factors affect KS. Saying this, a number of authors have focused on the organisational culture as the significant factor impacting KS (e.g., Kim & Lee, 2006; Lin, 2008; Seba & Rowley, 2010; Seba, Rowley, & Delbridge, 2012), whilst others have focused on the national culture (e.g., Wei, Stankosky, Calabrese, & Lu, 2008; Kivrak, Arslan, Tuncan, & Birgonul, 2014) and the organisational structure (e.g., Kim & Lee, 2006; Al-Alawi, Al-Marzooqi, & Mohammed, 2007; Chen & Huang, 2007; Lin, 2008; Seba *et al.*, 2012) as significant factors. Despite this, other studies have discussed the organisational climate (e.g., Taylor & Wright, 2004; Chen & Huang, 2007; Amayah, 2013), such studies being concerned with the impact of social capital dimensions on KS (e.g., Chow & Chan, 2008; Hau *et al.*, 2013). Additionally, there are researchers who have centred their analyses on the influence of top management support (e.g., Lin, 2007; Fey & Furu, 2008).

Various studies grounded on KS literature have focused on the factors impacting KS behaviours, such as that of Lin (2007), who identified the three main factors affecting KS: organisational factors, individual factors, and technology factors; further, some authors have suggested that there are three main groups of factors that foster KS within an organisation: the organisational, the individual, and the knowledge levels (Yang & Wu, 2008).

Ipe (2003) identified four main factors affecting KS individuals within organisations, these factors additionally influencing one another due to them all being interconnected:

1. Knowledge nature: There are two types of knowledge: tacit knowledge and explicit knowledge; saying this, individuals face a number of problems when sharing tacit or explicit knowledge. However, when sharing tacit knowledge, such problems are clearer due to the nature of tacit knowledge. Further, because of that fact that when individuals realise the value of such knowledge they tend to hoard it, the value of knowledge is crucial for KS.
2. Motivation to share: Individuals, by nature, are not likely to share their knowledge without robust motivation to do, and so from this, there are two types of motivation for sharing knowledge at an individual level:

- Internal motivation factors (e.g., considering knowledge to be power and reciprocity between individuals);
 - External motivation factors (e.g., relationships with recipients and the rewards for sharing).
3. Opportunities to share: There are two channels for sharing knowledge: formal instruction and informal instruction; saying this, knowledge that is shared using the formal channel is usually explicit knowledge, whilst tacit knowledge is usually shared via an informal channel.
 4. Culture of the work environment: The organisational culture is considered to be the most significant factor impacting KS at the individual level; further, by defining the type of knowledge to share and how it should be shared, the organisational culture impacts KS, the organisational culture also being known to impact the social interactions between the individuals within the organisation.

KS literature has revealed that, as a process, KS faces many barriers that prevent the dissemination of knowledge; indeed, some studies have argued that there are four sets of barriers known to inhibit KS or transferring: the nature of the knowledge, the nature of the sender, the nature of the recipient, and the nature of the context in which the knowledge takes place (Szulanski, 1996); furthermore, Hendriks (1999) suggested that the barriers to KS can be categorised into three main barriers: temporal distance, physical distance, and social distance, whilst Szulanski (1996) argues that there are three major factors posing a barrier to KS: the weakness of the recipient's ability to absorb knowledge, casual ambiguity concerning the knowledge itself, and a difficult relationship between the knowledge sender and the knowledge recipient.

Despite this, Disterer (2001) argues that there are two sources of KS barriers within organisations: individual barriers, and social barriers, whilst on the other hand, Riege (2005) claims that KS practices occasionally fail to obtain their objective during the delivering of the right knowledge from the right sender to the right recipient at the right time due to the three main groups of barriers: organisational barriers, individual barriers, and technology barriers (the majority of which coming from individual barriers). Many of the barriers are not separate from one another, instead being predominately interlinked with other barriers (Kukko, 2013).

3. Research Questions and Hypotheses

This research strives to answer the following research questions in light of the literature review discussed above:

- RQ1: What are the main barriers of KS within the Jordanian hospitality industry?
- RQ2: Are there statistically significant differences between the responses of the sample members at the level of $\alpha \leq 0.05$ concerning the barriers of sharing knowledge from the employees at hospitality industry attributed to the variables gender, job, age, years of experience, and qualifications?

To answer this question, the following hypotheses were formulated:

- H1: There are no statistically significant differences between the responses of the sample members at the level of $\alpha \leq 0.05$ on the barriers to sharing knowledge from the employees within the hospitality industry attributed to the gender variable.
- H2: There are no statistically significant differences between the responses of the sample members at the level of $\alpha \leq 0.05$ on the barriers to sharing knowledge from the employees within the hospitality industry attributed to the job variable.
- H3: There are no statistically significant differences between the responses of the sample members at the level of $\alpha \leq 0.05$ on the barriers to sharing knowledge from the employees within the hospitality industry attributed to the age.
- H4: There are no statistically significant differences between the responses of the sample members at the level of $\alpha \leq 0.05$ on the barriers to sharing knowledge from the employees within the hospitality industry attributed to the years of experience variable.
- H5: There are no statistically significant differences between the responses of the sample members at the level of $\alpha \leq 0.05$ on the barriers to sharing knowledge from the employees within the hospitality industry attributed to the qualifications variable.

4. Methodology

4.1 Study Design

In order to achieve the objective of this research, the quantitative research design has been selected for implementation, as well as the descriptive analytical method; Creswell & Creswell (2017) have pinpointed the

fact that the nature of the research question is the most important determinant when selecting which method should be adopted within the given research. Since the objective of the current study is to identify the main barriers to Knowledge Sharing (KS) within the Jordanian hospitality industry; the quantitative approach, thus, has been deemed to be the most suitable.

4.2 Questionnaire Design

Considering it provides an efficient means of collecting responses from a large sample before quantitative analysis, questionnaires are very commonly used as a data collection method for descriptive or explanatory research (Saunders, Lewis, & Thornhill, 2009). As shown in Table 1, based on a review of KS literature, we developed research questionnaires comprising of four groups for barriers; this questionnaire was presented to five experts to evaluate and consider their comments before implementing it, and a 22-item questionnaire with a five-point Likert-type scale was used to collect data (1 signifying 'strongly disagree', 5 signifying 'strongly agree').

Table 1. The Source of Measurement Items

Variable	Items	Reference
Individual	8	Riege, 2005, Seba et al. (2012), Sandhu, M., Jain, K., & Ahmad, I. (2011), Bloice & Burnett, 2016, Razmerita, Kirchner, & Nielsen,(2016).
Organisational	7	Riege (2005); Sandhu <i>et al.</i> (2011); Kukko (2013), Amayah (2013).
Information Technology	3	Riege (2005); Lin (2007); Seba <i>et al.</i> (2012); Sandhu <i>et al.</i> (2011).
Knowledge Nature	3	Ipe (2003); Wang (2015).

4.3 Data Collection Procedures

The target population of the survey was managers and employees from the top 10 hotels within Jordan; after the top management approved within each hotel of their participation within this research, 350 questionnaires were distributed to hotels in Amman, Human Resources (HR) managers also being asked to spread the questionnaires to their employees and to collect them after completion; questionnaires were distributed to the manager and employees within each hotel as the convenience sampling method for selecting hotels was implemented, and so data analysis was based on a sample of 273 valid questionnaires. The response rate was 78% (as shown in Table 2), and the data was analysed via SPSS, including descriptive analysis, T-test, and one way (ANOVA).

Table 2. Profiles of Respondents

Demographic characteristics	Number of responses	Percentage
Gender:		
Male	210	77%
Female	63	23%
Age:		
20-29	79	29%
30-39	104	38%
40 and Up	90	33%
Work experience:		
5 years	95	35%
5-9 years	118	43%
10+ years	60	22%
Job titles:		
Manager	41	15%
Employee	232	85%
Education level:		
Secondary School+	33	12%
Undergraduate	210	77%
Postgraduate	30	11%

5. Results

We implemented SPSS (Version 25) to analyse research data, Table 3 showing barriers to sharing knowledge item means and standard deviations.

Table 3. Descriptive Statistics (KS Barriers Categories)

Category	Mean	SD	Cronbach's Alpha
Individual	2.37	0.73	0.83
Organisational	4.33	0.25	0.72
Technology	3	1.03	0.77
Knowledge nature	2.38	0.88	0.84
Total	3.03	0.53	0.86

Responses will be based on a Likert scale of around 1-5 points, the magnitude of the interval additionally being determined as follows: Maximum score - Minimum score / Maximum score: $(5-1)/5=0.8$, as shown in Table 4.

Table 4. Respondents Interval Answers

Range	Interpretation	Range	Interpretation
1-1.8	Very low	3.41-4.20	High
1.81-2.60	low	4.21-5	Very high
2.61-3.40	Average		

To answer the first research question, the mean and the standard deviation of the responses to the questionnaire were calculated as shown within the following tables.

Table 5. Individual Barriers

Question	Mean	SD	Degree
1 Lack of time during the work inhibit Knowledge Sharing in organisation.	4.6923	0.91184	Very high
2 Lack of awareness amongst employees about the value of their knowledge to others inhibit Knowledge Sharing in organisation.	3.2088	1.24425	Average
3 Lack of confidence to participate in KS activities inhibit Knowledge Sharing in organisation.	4.0220	1.21853	High
4 Lack of trust between employees inhibit Knowledge Sharing in organisation.	3.5751	0.97903	High
5 Large differences in experiences levels between employees inhibit Knowledge Sharing in organisation.	2.3297	0.94388	Low
6 Large differences in education levels between employees inhibit Knowledge Sharing in the organisation.	2.1868	1.04578	Low
7 Lack of social networks inhibit Knowledge Sharing in organisation.	3.7949	1.12543	High
8 Lack of courage to express oneself act as a barrier to Knowledge Sharing.	2.1685	1.14122	Low

Table 5 indicates the fact that the means of items are greater than the virtual means; 3 indicated that individuals' barriers are considered, whilst conversely, items 5, 6, and 8 have the lowest mean values, reflecting that the differences between employees (e.g., experiences and education) do not prevent KS.

Table 6 details the means of the organisational barriers' items, also indicating the fact that the means of all the items of the organisational barriers are greater than the 4. There is agreement that the organisational barriers are the main reasons for hindering the sharing of knowledge.

Table 6. Organisational Barriers

Question	Mean	SD	Degree
9 Lack of moral reward when an employee shares his knowledge hinders Knowledge Sharing in an organisation.	4.3150	0.46538	Very high
10 Hierarchical organisation structure inhibits/slows Knowledge Sharing within an organisation.	4.3040	0.46084	Very high
11 Internal competitiveness within business units and organisations inhibit Knowledge Sharing within organisations.	4.3553	0.47949	Very high
12 Lack of a transparent rewards and recognition systems inhibit Knowledge Sharing within organisations.	4.2711	0.44532	Very high
13 Lack of financial reward when an employee shares his knowledge hinders Knowledge Sharing in an organisation.	4.4029	0.49139	Very high
14 Lack of organisational support hinders Knowledge Sharing in an organisation.	4.2564	0.43745	Very high
15 A high degree of centralisation and formalisation inhibits/slows Knowledge Sharing within the organisation.	4.4103	0.49278	Very high

Table 7 shows the means of technology barriers items, indicating that the technology barriers to KS are 'Average', only one item being 'Low'.

Table 7. Technology Barriers

Question	Mean	SD	Degree
16 Lack of information technology in organisations inhibit Knowledge Sharing.	3.3297	1.49550	Average
17 Lack of information technology that is easy to use will inhibit Knowledge Sharing.	3.1502	1.32682	Average
18 Lack of sophisticated information technology helping to capture and store knowledge inhibit Knowledge Sharing within the organisation.	2.5201	1.28358	Low

Table 8 presents the means of knowledge nature barriers items, reporting that all the means of these items are below three, being a low degree.

Table 8. Knowledge Nature Barriers

	Question	Mean	SD	Degree
19	It is very difficult to share knowledge that's not explicit.	2.4103	1.21880	Low
20	It is very difficult to capture knowledge that's not explicit.	2.4542	1.17523	Low
21	The knowledge with high degrees of tacit are considered to be barrier to sharing knowledge.	2.2857	1.05321	Low

6. Hypothesis Testing

- H1-1: There are no statistically significant differences between the responses of the sample members at the level of $\alpha \leq 0.05$ on the barriers to sharing knowledge from the employees within the hospitality industry attributed to the gender variable.

An independent samples t-test was conducted to test this hypothesis, Table 9 demonstrating the founded result, which supports this hypothesis; thus, there are, indeed, no differences between males and females with respect to the barriers to KS within the hospitality industry.

Table 9. T-test Result (Gender)

Gender	N	Mean	Std. Deviation	Std. Error Mean	Equal variances	Sig. (2-tailed)	Mean Difference	t	F
Individual Barriers	Male	210	2.4018	0.76340	0.05268	assumed	0.12798	1.210	4.442
	Female	63	2.2738	0.63772	0.08034	not assumed	0.12798	1.332	
Organisational Barriers	Male	210	4.3422	0.26666	0.01840	assumed	0.04966	1.347	6.627
	Female	63	4.2925	0.21986	0.02770	not assumed	0.04966	1.493	
Technological Barriers	Male	210	2.9762	1.05155	0.07256	assumed	-0.10317	-0.692	0.751
	Female	63	3.0794	0.99229	0.12502	not assumed	-0.10317	-0.714	
Knowledge Nature Barriers	Male	210	2.3683	0.90356	0.06235	assumed	-0.06561	-0.514	1.125
	Female	63	2.4339	0.83523	0.10523	not assumed	-0.06561	-0.536	
Total	Male	210	3.4490	0.26097	0.01801	assumed	-0.00302	-0.082	1.009
	Female	63	3.4520	0.24712	0.03113	not assumed	-0.00302	-0.084	

- H2: There are no statistically significant differences between the responses of the sample members at the level of $\alpha \leq 0.05$ on the barriers to sharing knowledge from the employees within the hospitality industry attributed to the job variable.

An independent samples t-test was conducted to test this hypothesis, Table 10 detailing the result, which supports this hypothesis; thus, there are, indeed, no differences between manager and employee concerning the barriers to KS within the hospitality industry.

Table 10. T-test Result (Job)

Job	N	Mean	Std. Deviation	Std. Error Mean	Equal variances	Sig. (2-tailed)	Mean Difference	t	F
Individual Barriers	Manager	41	2.3140	0.74221	0.11591	Assumed	-0.06852	-0.548	0.006
	Employee	232	2.3825	0.73741	0.04841	Not assumed	-0.06852	-0.545	
Organisational Barriers	Manager	41	4.2857	0.23690	0.03700	Assumed	-0.05296	-1.217	1.501
	Employee	232	4.3387	0.26016	0.01708	Not assumed	-0.05296	-1.300	
Technological Barriers	Manager	41	3.0325	1.07705	0.16821	Assumed	0.03827	0.217	0.012
	Employee	232	2.9943	1.03241	0.06778	Not assumed	0.03827	0.211	
Knowledge Nature Barriers	Manager	41	2.4309	0.97822	0.15277	Assumed	0.05589	0.371	0.850
	Employee	232	2.3750	0.87215	0.05726	Not assumed	0.05589	0.343	
Total	Manager	41	3.4472	0.26872	0.04197	Assumed	-0.00297	-0.068	0.092
	Employee	232	3.4501	0.25595	0.01680	Not assumed	-0.00297	-0.066	

- H4: There are no statistically significant differences between the responses of the sample members at the level of $\alpha \leq 0.05$ on the barriers to sharing knowledge from the employees within the hospitality industry attributed to the years of experience variable.

The one-way analysis of variance (ANOVA) has been used to test this hypothesis, Table 11 detailing the output of the ANOVA analysis, from which we can see that the significance values are above 0.05; this supports this hypothesis and, thus, there are, indeed, no differences concerning the barriers to KS within the hospitality industry concerning the experiences of the sample members.

Table 11. One-way ANOVA Result (Experience)

Experience		Sum of Squares	df	Mean Square	F	Sig.
Individual Barriers	Between Groups	1.056	2	0.528	0.971	0.380
	Within Groups	146.755	270	0.544		
	Total	147.810	272			
Organisational Barriers	Between Groups	0.098	2	0.049	0.743	0.477
	Within Groups	17.879	270	0.066		
	Total	17.978	272			
Technological Barriers	Between Groups	0.002	2	0.001	0.001	0.999
	Within Groups	292.665	270	1.084		
	Total	292.667	272			
Knowledge Nature Barriers	Between Groups	2.655	2	1.327	1.695	0.186
	Within Groups	211.439	270	0.783		
	Total	214.094	272			
Total	Between Groups	0.053	2	0.027	0.399	0.671
	Within Groups	17.968	270	0.067		
	Total	18.021	272			

- H3: There are no statistically significant differences between the responses of the sample members at the level of $\alpha \leq 0.05$ on the barriers to sharing knowledge from the employees within the hospitality industry attributed to the age variable.

To test the hypothesis, one-way analysis of variance (ANOVA) has been used; Table 12 shows the output of the ANOVA analysis, from which we can see that the significance values are above 0.05 within organisational, technological, and knowledge nature barriers, whilst the significance was below 0.05 for the individual barriers (0.016).

Table 12. One-way ANOVA Result (Age)

Age		Sum of Squares	df	Mean Square	F	Sig.
Individual Barriers	Between Groups	4.459	2	2.230	4.200	0.016
	Within Groups	143.351	270	0.531		
	Total	147.810	272			
Organisational Barriers	Between Groups	6.278	2	3.139	2.959	0.054
	Within Groups	286.389	270	1.061		
	Total	292.667	272			
Technological Barriers	Between Groups	0.082	2	0.041	0.620	0.539
	Within Groups	17.896	270	0.066		
	Total	17.978	272			
Knowledge Nature Barriers	Between Groups	0.060	2	0.030	0.038	0.963
	Within Groups	214.034	270	0.793		
	Total	214.094	272			
Total	Between Groups	0.093	2	0.046	0.699	0.498
	Within Groups	17.928	270	0.066		
	Total	18.021	272			

Moreover, a Scheffe post hoc test revealed that the difference was between age (20-29) and (30-39) in favour of age (30-39) (see Table 13).

Table 13. Scheffe Result

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Individual Barriers	20-29	30-39	-.29036*	0.10875	0.030	-0.5580	-0.0227
		40 and UP	-0.05930	0.11234	0.870	-0.3358	0.2172
		30-39	20-29	.29036*	0.10875	0.030	0.0227
	40 and UP	40 and UP	0.23106	0.10490	0.090	-0.0271	0.4893
		20-29	0.05930	0.11234	0.870	-0.2172	0.3358
		30-39	-0.23106	0.10490	0.090	-0.4893	0.0271

- H5: There are no statistically significant differences between the responses of the sample members at the level of $\alpha \leq 0.05$ on the barriers to sharing knowledge from the employees within the hospitality industry attributed to the qualifications variable.

The one-way analysis of variance (ANOVA) has been used to test this hypothesis; Table 14 details the output of the ANOVA analysis, and from it we can see that the significance values are above 0.05, thus supporting this hypothesis. Therefore, there are no differences concerning the barriers to KS within the hospitality industry concerning the qualifications of sample members.

Table 14. One-way ANOVA Result (Qualification)

Qualification		Sum of Squares	df	Mean Square	F	Sig.
Individual Barriers	Between Groups	0.139	2	0.070	0.268	0.765
	Within Groups	70.267	270	0.260		
	Total	70.406	272			
Organisational Barriers	Between Groups	2.704	2	1.352	2.998	0.052
	Within Groups	121.755	270	0.451		
	Total	124.459	272			
Technological Barriers	Between Groups	0.775	2	0.387	1.883	0.154
	Within Groups	55.551	270	0.206		
	Total	56.326	272			
Knowledge Nature Barriers	Between Groups	0.388	2	0.194	0.445	0.641
	Within Groups	117.662	270	0.436		
	Total	118.050	272			
Total	Between Groups	0.644	2	0.322	1.334	0.265
	Within Groups	65.120	270	0.241		
	Total	65.764	272			

7. Discussion and Conclusion

This investigation developed a tool based on an extensive literature review for measuring barriers to KS considering this research primarily aimed to investigate and identify the main barriers in KS within the Jordanian hospitality industry; moreover, barriers to KS were measured by four components, including individual barriers, organisational barriers, technology barriers, and knowledge nature barriers.

These findings correlate with several previous studies that have considered barriers to KS (e.g., individuals and organisational barriers) (e.g., Szulanski, 1996; Riege, 2005; Kukko, 2013); further, the empirical findings of this research correlate with KS literature, which has shed light on the significant impact of the nature of knowledge on the success of KS. For instance, Ipe (2003) proposed that the nature of both tacit and explicit knowledge forms a significant factor influencing KS between employees within the organisation.

Notably, the findings of this research match with those of Amayah (2013), who indicated that the organisational structure impacted KS within the public sector; it was within this study that the organisation's structural characteristics (formalisation and centralisation) were also deemed to be significant barriers to KS. Our findings additionally correlate with those of Lin (2008), who discovered that there are three factors impacting KS amongst organisation units: organisational structure characteristics, organisational culture, and interunit interaction.

Prior studies have suggested that low awareness of the value of possessed knowledge comprises one of the main barriers for KS within the organisation (e.g., Riege, 2005; Kukko, 2013).

These findings agree with many previously conducted studies, which have considered the lack of time to be a barrier for KS, whether collecting or donating knowledge (e.g. Szulanski, 1996; Riege, 2005; Kukko, 2013).

These findings provide additional support for any past studies that have proposed a reward system for encouraging employees to share their knowledge (e.g., Bartol & Srivastava, 2002; Ipe, 2003; Cabrera, Collins, & Salgado, 2006; Al-Alawi et al., 2007; Lin, Hung, & Chen, 2009); meanwhile, these findings are additionally in line with various prior studies that have considered lack of organisational rewards to be barriers impeding employees when it comes to contributing their organisational knowledge (e.g., Riege, 2005; Lee & Ahn, 2007; Sandhu et al., 2011).

These results signify that there are generally no statistically significant differences between the responses of the sample members at the level of $\alpha \leq 0.05$ on the barriers to sharing knowledge from the employees within the hospitality industry attributed to the variables gender, job, age, years of experience, qualifications.

The findings of this study propose several practical contributions to the Jordanian hospitality industry in terms of what factors act as main barriers to KS within such industries; the findings of this study additionally provide a roadmap for the Jordanian hospitality industry to overcome such barriers via understanding the main source of these barriers.

8. Limitation and Future Researches

The main limitation of this study concerns the generalisability of these results. This study was conducted in Jordan as a rich developing country context and in particular in the hospitality industry as a type of service organisation. Although this context might undermine the generalisability of this research, it allowed for controlling for cultural and industrial differences in the analysis. Therefore, conducting future research in other service organisations or public organisations in Jordan or other countries might lead to a more comprehensive understanding of the phenomenon KS.

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Relationship Marketing as an Orientation to Customer Retention: Evidence from Banks of Pakistan

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Abstract

This study aims to underpin the relationship marketing as an orientation to customer retention. Further, this study undertakes the case study of banking sector from Sindh province, Pakistan. The reason of conducting this study was to analyze the impact of relationship marketing on customer's retention in the banking sector. Relationship marketing is getting more attention and popularity around the world and helps in developing customers satisfaction and loyalty. Quantitative research approach was used to measure the response of the sample. A field survey was conducted from customers of 20 banks operating in Larkana. An adopted questionnaire was used with five variables, four independent (Trust, commitment, communication and conflict handling) to predict one dependent variable (Customer retention) at 5-point Likert scale. The response was collected through close-ended questionnaire. The study has found that all the independent variables are positive and significant predictors of dependent variable with a good fit between their reliability and sample size adequacy. The major contribution of this study for the managers of banks particularly in Pakistani context is to take serious efforts to implement CRM effectively for customer retention in challenging marketing landscape due to technological and business extensions. The study has self-report nature so it cannot be generalized in all aspects. Research has left a gap for future research in the same set as well.

Keywords: relationship marketing, trust, commitment, communication, conflict handling, customer retention

1. Introduction

During the early 1990s era where the traditional marketing was done through transactional marketing but as so far world was moving into a millionaire 20th century, the scenario was changed. New advancements in technology brought revolution in the field of service marketing which has rapidly grown over time.

Relationship marketing as a subject support strongly in today's rivalry environment resulted as a major weapon in strengthening the customer relationship management. In addition to basic concepts of marketing, relationship marketing is also said to be as advanced marketing concept. When the marketing moved from product concept to selling concept than to marketing concept, the relationship marketing has filled the gap between marketer and customers in strong customer relationship building (Chan, 2004). Relationship Marketing not only used as marketing orientation but also considered to be an as effective tool for updating customer information system (Abela, 2008).

Relationship marketing ultimately leads to modern business success (Webster, 2002). Thus, relationship marketing help marketer to update their marketing intelligence because it provides a base to the marketer to view latest customers related information (Ndubisi, 2004). It is notably identified by various studies that the in-service industry marketers can achieve external marketing success and high rate of value capturing from customers as customer retention, in this regard relationship marketing not only touches the customer retention but as well as long-lasting customer loyalty (Smith, 2000). Customer retention has supported optimizing marketers in effective

implementation of relationship marketing orientation. The profitability level of companies can be easily increased with the effective customer retention by cutting off in taking new customers (Ahmad, 2001). The fruitful Customer retention leads to “reduce deficiencies” of best customers, so that customer’s stir should be minimized. Customer’s retention helps marketer in losing profitable customers (Farquhar, 2004). As so far, relationship marketing and customer retention in the banking sector, the customers with heavy deposits and having a healthy attitude towards banks can better retain by the banks.

According to Gronroos (1989), the business philosophy changed its way of doing marketing from a production orientation to selling orientation; meanwhile, service marketing had also got too much importance as arising in the field of marketing. The traditional marketing orientations were found in achieving only short-term marketing objectives but the relationship marketing had generated a new vitalize not only for achieving marketing objectives but also for creating and maintaining the long-run customer relations. Relationship marketing has got birth with the birth of service marketing (Sin, 2015).

The concept of relationship marketing had started from the early 1980s but formally shaped by Berry, Zeithaml and Parasuraman (1993). Who defined it as Relationship marketing is a philosophy of building and maintaining the customer relationship. Gronroos (1991) determined that relationship marketing not only used for building and maintaining customer relationship but also can be used as an effective strategy to build relationships with other key stakeholders of a company like suppliers, partners, service agencies. Harker (1999) explored the concept of relationship marketing that it is mutually beneficial for the companies.

Marketing literature highlights the relationship marketing as follows. Important contribution found in the field of relationship marketing comes from the research on guanxi which means “relationship” in English. Guanxi is a Chinese word used to make the relationship between two persons (Lawrence Ang, 2006). The personal selling literature witnesses that the relationship marketing is a bridge between front-line employees and the customers. According to Zeithaml, Berry and Parasuraman (1993), service industry cannot survive a single day without relationship marketing because service industry performance totally relies on the service performance attached to the service provider. The marketing channel literature also found evidence of the importance of relationship marketing. Service industry can better deliver the value to the final consumer if they are in a position to build and maintain fruitful relations with the intermediate channels (Ndubisi, 2005). Customer retention considered to be an interaction between manufacturers and the customers to bring together at one platform (Fang, 2008).

The banking sector is the largest service sector in Pakistan. The sector considered as major social force. Banks are currently facing significant environmental, social and economic challenges. There is intense competition among banks for a profitable share of customers. So there is an acute need of strong marketing strategy to hold the customer share in the shape of high customer retention. Therefore, relationship marketing can help the banks in better management of firm-customer relationship and in achieving high level of loyalty among customers. On the basis of past studies conducted on relationship marketing, this study reported relationship marketing as an orientation of customer retention. Therefore, the current was conducted with intention to examine the impact of relationship marketing on customers retention. Thus in this research the relationship marketing characterized is as; four-dimension; Trust, Commitment, Communication and Conflict Handling as an orientation of customer retention.

2. Literature Review

2.1 Relationship Marketing

Kotler (1992) said that companies have to shift from traditional marketing to relationship marketing to meet the market changes. According to Kotler the marketers are unable to cope up with modern challenges and are reluctant to adopt change then they will have the difficulties to survive. Kotler further suggested that relationship marketing can be very useful in developing the long term relationship. Current scenario of the market suggests that marketers should change their mindset from transaction marketing to relationship marketing because of rapid competition among service sectors (Johnston, 2001). Relationship marketing in the field of service marketing is considered to be the major customer-driven strategy (Wong, 2003). Relationship marketing is a way to complete the marketing process. By keeping in view relationship marketing, a marketer can be able to successfully formulate and implement other segmenting, targeting and positioning strategy (Lindgreen., 2004). According to relationship marketing is also used to control the effects of the microenvironment. Relationship marketing is a step to create, value delivery to the loyal customers and also suggests ways to be effectively captured from customers (Berry, 2002). Relationship marketing also provides a path for the strategic alliance by developing relations with the key actors of the company (Mintzberg, Daniel, McCarthay & Markides, 2000).

Various studies have contributed towards the conceptualization of relationship marketing literature; trust (Ahmed,

Husain, 2015; Morgan, 1994), commitment (Morgan & Hunt, 1994; Ndubisi, 2004), conflict handling (Dwyer, Paul, Schurr, & OH., 1987; Chan, 2004), and communication or sharing of secrets (Crosby, Evans, & Cowles, 1990; Morgan & Hunt, 1994). One of the major components of relationship marketing is trust on each other; it can be best defined as “the willingness towards accepting the exchange partner”. Trust leads to shared values; ability to fulfill the promise is so-called trust. Trust creates obligations for the customers over marketers (O’Malley, 2014). In addition to trust, commitment is considered an important outcome of relationship marketing for effective customer relationship management and also increases firm reputation, a committed client becomes a source of information for affecting consumer behavior (Doorn, 2010). Communication is considered as the main pillar to create a relation between marketer and customer (Anderson, 2002). Communication is a way to perform marketing functions from pre-selling to ultimate final consumption. Communication is used to build strong trust in customers’ mind; it supports marketers’ promises made to customers for creating and delivering customer value (Smith, 2000). Communication is the process of exchanging valuable and timely information for achieving the desired objective.

2.2 Customer’s Retention

Customer is a key stakeholder for every kind of organization. Customer is considered as a king and customer satisfaction is a prime concern for many organizations. The organization has to satisfy the customers at any cost (Nguyen, Nguyen, Nguyen, & Phan, 2018). In this challenging environment, customer loyalty has become a key issue for many firms and business. Because a customer can be loyal if the service performance satisfies the customer’s needs and wants. Customer loyalty is not only considered as the source of revenue for the marketer but customer loyalty is a strong source of attracting new customers towards organizational success which encourages banks to retain customers through relationship marketing (Teng, 2018).

2.3 Relationship Marketing and Customer’s Retention

The relationship marketing concept was first given by (Berry, Zeithaml, & Parasuraman, 1993). He defined relationship marketing as a multidimensional philosophy used to build and maintain effective customer relationship management. Furthermore, this concept was acknowledged by authors (Parasuraman, Berry, & Zeithaml, 1993; Gronroos, 1999; Ahmed, Rafiq, & Saad, 2003). Prior studies have found a positive significant relationship between trust, continuous commitment and customer retention. Continuous commitment of service delivery creates trust in customer minds to be motivated (Ercis, Unal, Candan, & Yildirim, 2012). Dimensions of relationship marketing found significantly related with customer retention while measuring in different contexts, these dimensions had promoted the behavioral aspect of loyalty which leads to ultimate retention (Putra & Putri, 2019). Relationship marketing helps banks to achieve long-term gains from customers and increased market share by devoting retained service delivery (Nyadzayo & Khajehzadeh, 2016). The basic theme of relationship marketing in the field of service marketing is to strengthen the customer relationship management. The marketing literature provided an idea of relationship marketing. Therefore, on the basis of past literature, most common dimensions of relationship marketing were chosen under this study and for further analysis hypotheses were set to investigate among banks of Larkana City. The hypotheses are as follows.

H1: Trust has a significant positive effect on customer retention (CR).

H2: Commitment has a significant positive effect on customer retention (CR).

H3: Communication has a significant positive effect on customer retention (CR).

H4: Conflict Handling has a significant negative effect on customer retention (CR).

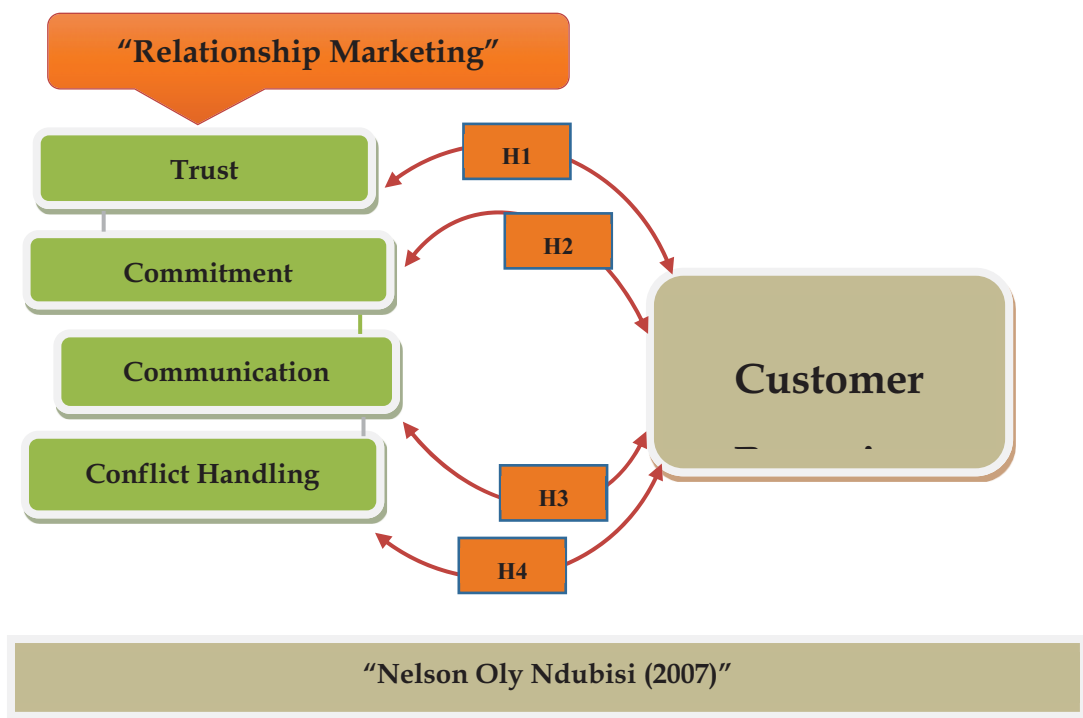


Figure 1. Research Model

3. Research Methodology

Based on the research objectives, the authors of this paper employed the quantitative research approach. Primary data was obtained through survey questionnaire on five-point Likert scale was administrated in the field among the respondents. As so far, Trust was measured by using Churchill and Surprenant (1982), communication by Morgan (1994), “commitment and conflict handling” measured by (Bloemer, De Ruyter, & Wetzels, 1999) customer retention by measuring the scale of (Wright & Riebe, 2010). Total 20 banks were selected data collection. Round about six hundred questionnaires were distributed among customers from whom four hundred fully filled questionnaires were returned. Daniel (1999) proposed the sample size determination method, it is applied to set a particular limit for sample of customers.

4. Findings

4.1 Validity and Reliability Test

Table 1. Reliability and Validity Results

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Trust	0.952	0.954	0.958	0.640
Commitment	0.876	0.878	0.910	0.670
Communication	0.918	0.920	0.933	0.635
Conflict Handling	0.849	0.851	0.855	0.590
Customer Retention	0.809	0.811	0.824	0.613

For considering internal consistency the cronabch’s alphas should be greater than 0.70 (Nunlay, 1978). Specifically, all the five variables have cronbach’s alphas value greater than the its critical value 0.70, supporting the internal consistency evidence. Trust and communication has greater than 0.90, commitment, conflict handling and customer retention has greater than 0.80. Advocating that the collected response is enough consistent in nature for further analysis. The convegent validity of scale was measured with the help of AVE value. As shown in table the AVE values are greater than 0.50 which evident as the scale is validatedted to processed ahead (Yap, 2012). See Table 1.

The technique Kaiser- Mayer-Olkin measures the sample size adequacy with the support of Bartlett’s Sphere city level. If the KMO value is 0.6 or above, then the study can be carried forward. The outcomes describe that KMO values are greater than the standard required thus it meets the level of sample size adequacy. For further details, see Table 2.

Table 2. Results of Sample Adequacy Test

Factor Analysis		
Variable Names	KMO Measure of Sampling Adequacy	Bartlett's Test of Sphericity
Trust	.812	.00
Commitment	.816	.00
Communication	.815	.00
Conflict Handling	.723	.00
Customer Retention	.762	.00

4.2 Hypothesis Testing

Table 3. Results of Hypotheses Testing

Path	Total Effects				Decision
	Std. beta	Std. error	t. values	p. values	
Trust -> Customer Retention	0.435	0.049	8.790	0.000	Supported
Commitment -> Customer Retention	0.364	0.042	8.711	0.000	Supported
Communication -> Customer Retention	0.389	0.055	7.120	0.000	Supported
Conflict Handling -> Customer Retention	0.171	0.057	2.988	0.001	Supported

Note: Centered on one tailed test with the 1000 bootstrapping at $p < 0.05$.

4.2.1 Hypothesis 1 Trust Has Significant Positive Relationship with Customer Retention (CR)

The results indicate the fitness of model and hypotheses test, from above it was concluded that the H1, was found supported because the IV(Trust) found positive impact on DV (Customer Retention), and thus Trust is predicting 66% customer retention at $p=0.000$ significant level. Details are given in Table 3.

4.2.2 Hypothesis 2 Commitment Has Significant Positive Relationship with Customer Retention (CR)

The results of Hypothesis 2 put an empirical evidence from customers of banks. As results suggest that the Commitment has predicted customer retention 72% with the positive Beta value by meeting the significant level as well thus hypothesis was found supported. Go to Table 3.

4.2.3 Hypothesis 3 Communication Has Significant Positive Relationship with Customer Retention (CR)

The disclosure of findings of variable concludes that Communication has "significant positive impact on customer retention. The results show that the model is fit and significant at " $p=0.05$ ". Independent variable is 64% predicted. Find details in Table 3.

4.2.4 Hypothesis 4 Conflict Handling Has Significant Negative Relationship with Customer Retention (CR)

The results quantify that the conflict handling is sufficient predictor of customer retention because responses elaborated the positive and significant relationship between these subsequent variables. The table illustrates the conflict handling is 78% predicting the customer retention with a positive Beta value that is at all a good sign for managers. See Table 3.

5. Discussion

The results of this study exert an insight in the field of relationship marketing in banking sectors. The rapid development of the banking sector has generated a challenge for bankers to retain the customers but it's relationship marketing that enables bankers to hold the minds of customers with them. The study has investigated a lot for managers to think and implement relationship marketing. As results suggest that all the trust, commitment, communication and conflict handling ability is enough for customers' retention in today's challenging landscape. In meantime, this study encouraged the managers to analyze the theory and practice in customer retention in current market challenges. In particular, this study is much valuable because it covers all the aspects of employee analysis from the customers' point of view. The customers have shown their response for their dealings with the employees. How well employees are treating them for building and maintain long-lasting relations. Thus, this study can put a step towards to effective customer relationship management. As

now marketing tends to be converted towards CRM. The study pointed to the proper justification for both managers and customers because in multi-transactional customers' bank holds is a critical situation at all. Thus customer retention in banking sector found a challenge. The results of this study invite bank managers to be more trustworthy, well committed in service delivery, efficient communicators in information sharing and should be leadership skills to handle all the conflicts created by customers and employees.

The practice of customer retention to be found effective in the banking sector with the help of relationship marketing can be best underpinned by the literature and concepts provided in the framework. The responses have also major contributors to support managers to formulate strategies for customer retention. Therefore, on the basis of given responses, it was found fair to conclude that the customers of banks in Larkana tend to be loyal and retained if they got fruit from managers' relationship marketing applications. When the customers have found employees trustworthy, committed, sophisticated in communication and able to resolve the conflict they tend to be loyal and retained.

The estimates show positive results that the higher the implications of these strategies, higher the degree of customer retention. Outcomes best conclude that the higher the customer trusts the bank, the commitment will increase more trustworthy and timely its interactions and the more suitably it resolves conflict, the more devoted its customers will have a tendency to be. Thus, this study has created a belief for bankers of Pakistan that the way they are looking forward for organizational success only possible with loyal customers, retained customers with banks through relations they developed and maintained. Banks should deliver at a great importance to satisfy customers as the customers become their advocates in given market place.

6. Implications

This study will help the banks to develop their growth strategies in relation to customer relationship management and customer loyalty. If the banks, consider the customer relations as their key success factor though it will help them to retain fruitful return from customers.

Theoretically, research outcomes provide empirical evidence for the orientation on customer retention of four dimensions of relationship marketing: "trust, commitment, communication and conflict handling". It will be used to motivate other customers as well and may even expand their own interests. Retainers can also be sources of product development. Customer-centered-relationship marketing theoretically replacing the concept of four Ps in marketing literature as the relationship marketing found as emerging paradigm.

7. Limitations of Study & Future Research Directions

In fact, the current study has covered major theories and applications regarding relationship marketing approaches used for customer retention, but still there are several limitations relating to this study due to researcher capacity.

First, the research has only focused banking sectors and the nature of retention is longitudinal so these results cannot be applicable to other financial service providers or other organizations. Second, the sample was limited only in Larkana City so these cannot reflect the response at the general. Third, the sector selected for study has very unique characteristics, so the conclusions may be applicable to the banking sector only. Fourth, this study has captured the one-sided response from customers by ignoring the employees' perspective. Finally, limited literature and techniques were used.

Explanatory research used in this study put way for future research; the future researcher may longitude this study in other financial service sectors or other service providers. Population and sample size may be enhanced for getting more analyzed results. Advanced research techniques should be incorporated to analyze the results. Different research approaches may be used to explore the new insights in the field of relationship marketing. Model and survey instrument was adopted in this study; future researchers may develop their own. The focus of this study only limited to one marketing approach it may be elaborated with the help of other emerging marketing fields.

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Strategy to Build a Transshipment Port as a Catalyst to Achieving Critical Mass for Sabah's Economic Growth

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Abstract

Digital transformation has led to a new era of port development at an unprecedented pace. China represents a large percentage of total global trades, navigating the maritime silk-road to various global and regional ports. In Malaysia, the lack of concrete justifications for the issue of transshipment port strategy leads to a debatable framework. Hence, the aim of the paper is to critically discuss the strategy to build a transshipment port as a catalyst to achieving critical mass for economic growth in Sabah. The study draws heavily on existing literature on the theoretical evidence and the possible factors that shape strategy to build transshipment port in Sabah. Based on reviewed literature, various resultant strategies adopted to stand for their interest are discussed. In this way, this paper provides not only theoretical insights, but also strategically guides managers of organisations in Sabah, government, and businesses values towards building a transshipment port in Sabah to effectively retire cabotage policy to reduce cost, enhance port throughput, develop hinterland for critical mass, enhance ports-economic clusters connectivity, eliminate capacity bottleneck, unlock natural resources export potential, align port service towards regional port users' needs and to give regional port powers a run for their money.

Keywords: transshipment port strategy, port cost, availability, operational efficiency, service quality, economic growth, Malaysia

1. Introduction

1.1 Background of Study

This paper conceptualizes a refined framework of variables by discovery approach. For research strategy, it employs qualitative approach for in-depth information and wider insight into the transshipment port strategy as a way of ensuring its prominence and efficacy. All the relevant information gained from the secondary data sources. It means that this study uses the most updated secondary sources available to see whether a new trend occurs to build a transshipment port and to ascertain whether there is any variation in the outcomes compared to prior studies.

Transshipment ports were established with the sole purpose of linking interior business hubs with international companies. For example, Palau was considered a petroleum super port in the 1970s (Gurpreet & Richa, 2018). The policy implementation of the Panamanian sea-level canal demonstrated the changes that have been implemented in transshipment ports towards enhancing accessibility from the international sectors (Bonney, 2016).

Cluster theory explains the strategy to build a transshipment port in Sabah is contingent on value-adding production chain, which helps achieve horizontal integration by linking the activities of the firm with customer needs. It reflects the interdependencies of the firms through shared input, alliance formation, and co-location, such as borrowing empty containers from partners to reduce cost and congestion by minimizing empty container movement (Chhetri, Butcher, & Corbitt, 2014; Kuzmicz & Pesch, 2018). Transshipment ready ports specifically in Sabah showed an increase in volume of cargo in Sabah; this has placed pressure on handling capacity of the port (Wai, 2008). With direct calls, consolidation of direct and transshipment cargo was made possible. Economic development and industrial development in Sabah mean that the logistic costs reported can be reduced drastically; but the increase in volume of cargo has meant that there is a plan to expand Sapangar Bay container port (Business Standard, 2018; SEDIA. (2016).

State and federal governments should look into building a transshipment port in Sabah because Sabah state has demonstrated its growing ability to be the hub of economic activities in Malaysia with the availability of agricultural products in the region (Sabah Development Corridor, 2016). Sabah is the center of tourist attraction in Malaysia, and the attractiveness of the port is dependent on the infrastructural development and reduction in logistic processes or procedures for the tourists (Vega, Cantillo, & Arellana, 2019). Sabah needed to have a transshipment port in Sabah because the state has demonstrated strong economic progress with the GDP of the region growing from 2.7% in 2011 to 8.2% in 2017. Sabah also contributed 5.8% of total GDP to Malaysia and 75% of total palm oil exports are from Sabah (Sabah Development Corridor, 2016). Moreover, a transshipment port can further eliminate bottleneck for the Sabah tourism sector, as it is evident that the expenditure per tourist in Sabah is RM 1,810; this is the highest among all states in Malaysia (The Malaysian Insight, 2018).

The benefits of forming a strategy to build a transshipment port in Sabah include growth in tourism within the region and will improve the reported revenue outlay in Malaysia (Lu, Lin, & Lee, 2010). Moreover, agricultural products, such as palm oil, can be exported to different economies across the globe (Kim, Kang, & Dinwoodie, 2016). However, the disadvantages of forming a strategy to build transshipment port in Sabah include an increase in the cost of financing for the development of the project. This can affect the stability of both Sabah and Malaysia (Kim, Kang, & Dinwoodie, 2016). Also, the success of the project can be influenced by the challenge of procuring the needed resources by project management (Wang & Yang, 2014).

The opportunity to form a strategy to build a transshipment port in Sabah includes the potential for capturing the highest economic value for its activities; this will enhance economic growth and development of Sabah (Sumner & Rudan, 2018; Jiang et al., 2014). Another opportunity is to handle higher port throughput in terms of volume to take advantage of the existing maritime Silk Road (Duchatel & Duplaix, 2018). The threats to form a strategy to build a transshipment port in Sabah include lack of technological advancement to build a modern and sophisticated port infrastructure; which, influences the port activities because MLO and other port users rely on a sophisticated and innovative mode of transportation (Sumner & Rudan, 2018; Darayi, Barker, & Santos; 2017). Moreover, laws and regulations by the federal government of Malaysia that do not recognize the need Sabah has to build a transshipment port, can impact the influx of economic activities in both Sabah and Malaysia (Duchatel & Duplaix, 2018).

Contradictions about forming strategy to build transshipment port in Sabah include many ports being developed in the global port industry, and Sabah's inability to recoup the cost incurred in the construction of the port (Chhetri, Butcher, & Corbitt, 2014). However, socio-cultural practices in Sabah can also influence the completion of this transshipment port project. Most of the businesses in Sabah, the federal government of Malaysia, MLO, and other port users are not interested in the port activities of Sabah (Kim, Kang, & Dinwoodie, 2016). Chhetri, Butcher, & Corbitt (2014) supported a strategy to build a transshipment port in Sabah through the economic perspective; whereby, focusing on sharing technologies and increasing customer-supplier relations can contribute to distribution networks. In contrast, Yang et al. (2017) supported a strategy to build a transshipment port in Sabah by assessing the socio-cultural practices, which is influential in integrating the different components of port management in Sabah.

The contributions from this research to establish a comprehensive background of this issue include a greater understanding of the logistical issues that can impact the development and implementation of a transshipment port towards realizing economic growth in both Sabah and Malaysia (SEDIA, 2016) understanding the role of technology and innovation in facilitating the development of the transshipment port (Chou, 2014; Antara News, 2018).

1.2 Developing Strategy to Build Transshipment Port in Sabah

Successful milestones and critical mass of the Sabah port industry include continued growth in cargo volume, which increased by 180% from 2005 to 2013 and is expected to increase in the future (SEDIA, 2016). A minimal amount of effort from the government by removing non-tariff barriers has resulted in an increase in participation by small players within the industry, which has increased international trading activities (Idris & Idris, 2017). Such minimal amount of effort from the government has initiated huge improvement in cooperation between local and international players, which enhances the efficiency of the Sabah port industry (Huo, Zhang, & Chen, 2018; Merkel, 2017).

The political environment that affects the strategy to build a transshipment port in Sabah includes improvement of security for operators as a result of the government's commitment to curbing piracy (Mak, 2017). Also, there is an increase in access to the market, as a result of the partial removal of the cabotage policy that promoted monopoly. Total removal of the cabotage policy is still under review stage by the state and federal governments

of Malaysia. Such a policy will affect seafarers' income tax and the ship owner's corporate tax (Suffian, Rosline, & Karim, 2015; Daily Express, 2018).

The economic environment that affects the strategy to build a transshipment port in Sabah includes the economic performance of Sabah in 2016 which has made a profit of RM 66.38 million. Sabah, being a surplus state, has managed to make more money than it has spent. This made Sabah the second highest profitable state of all states in Malaysia (Tan, 2018). Moreover, the fiscal health of Malaysia has increased to 82.4%, thanks to Sabah for having profitable economic activities and being able to meet its financial and service obligations (The Heritage Foundation, 2019). Therefore, it is essential to highlight this issue since a role of transshipment port in fulfilling its operational function and enhancing the service quality benchmarking business values performance as well as the growth of Malaysian economy (Khalid, 2005a; Sahu et al., 2014).

1.3 Focal Issue

A minimal financial resource of RM 1.02 billion from the Malaysian federal government has initiated fast expansion of Sapangar Bay Container Port (SBCP), which has fully utilized the port's maximum handling capacity at about 280,000 20-footer containers annually, and the port expansion is predicted to be more than 1.25 million TEUs by 2030 (Ascutia, 2016). However, the federal government has yet to allocate the required funds of RM 1.8 billion to initiate further expansion of SBCP into a transshipment hub of the East (Press Reader, 2017). Also, there is a lack of transparent administrative procedures to enhance quality workforce to improve the port information system, this has hindered business values expansion in positioning Sabah as the leading economic region in Asia, this is when the logistics sector in Sabah is lack of international connectivity, slow internet services, and poor service delivery (Felder, 2018). There is a lack of efficient connectivity to international markets in Sabah. Port is an important part of local economic growth. For a port to accommodate mega containership of 5th-generation Panamax vessels and above and expand local economy requires competitive advantages. No international port for direct shipment, no international air freight logistic hub and no highway or railway connectivity to major cities has led to a small niche market of Sabah (Sabah Development Corridor, 2018; Daily FT, 2018a). There is high logistics and operation cost in Sabah, inefficient inland transport and inland connectivity, lack of hinterland developments, and complex procedures have led to inefficient port handling in Sabah (Su, Hsieh, & Tai, 2016; Martin, Salvador, & Sauri, 2014). High handling cost charges and transportation cost per container and storage cost and inbound/outbound cost in Sabah are affected by lack of good road and railway connectivity to major cities town and industrial area (Jeevan, Salleh, & Othman, 2018). Sabah has shown a low response to port users' needs evidently in slow port clearance and lack of service differentiation has meant Sabah port did not meet port users' needs and expectations. Low service quality has adversely affected customer loyalty and referral intention, the national conference on "economic corridors challenges and prospects" pointed out that there has been a problem of low internet speed of 2 to 30 Mbps, this has affected shipment safety and security, application of information technology (IT) in operations, and congestion in SBCP (Antara News, 2018; Heilig & Voß, 2017).

The remainder of the paper proceeds as follows. The following section expounds the literature review pertaining to the theories, the factors that shape strategy to build transshipment port in Sabah, conceptual framework, knowledge gaps and research outcomes as well as contribution of the study. The paper ends with the concluding remarks.

2. Literature Review

In order to analyse the strategy to build a transshipment port as a catalyst to achieve economic growth within the context of Sabah, this section introduces the theoretical foundation of the research and offers overview of each strand of the literature.

2.1 Theories

2.1.1 Cluster Theory

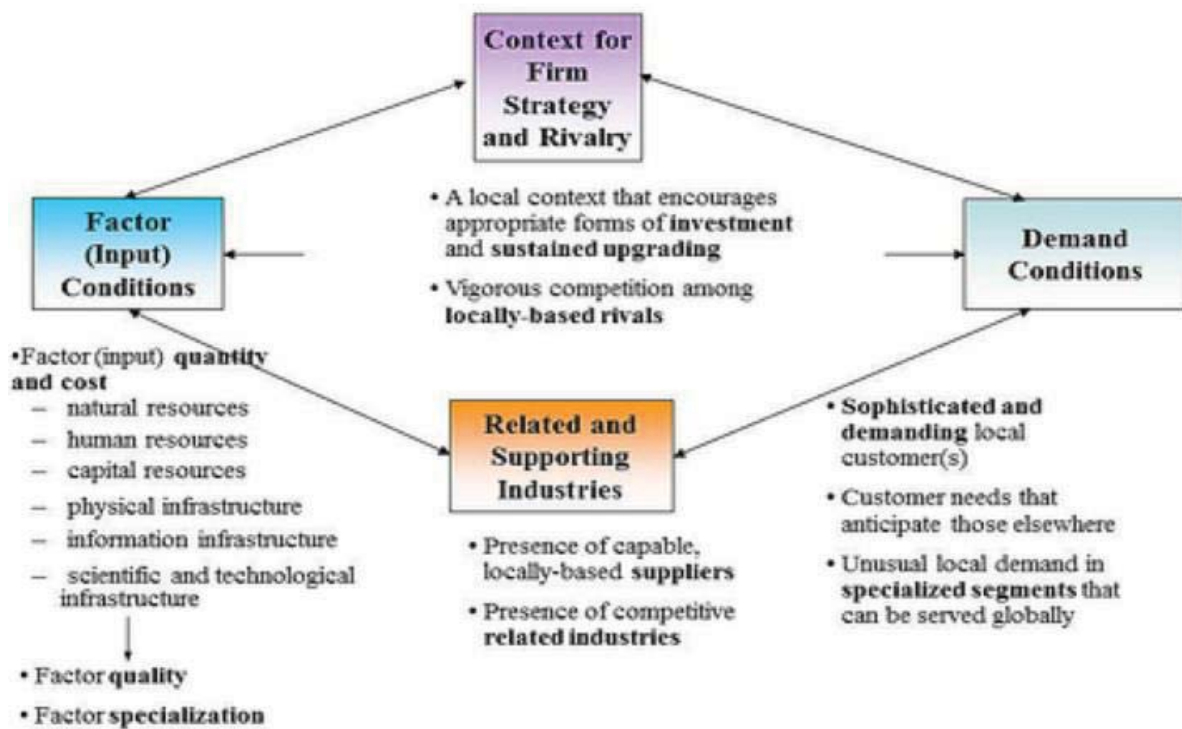


Figure 1. Cluster Theory

Source: Seguir (2011)

Cluster theory, as shown in Figure 1, analyses the strategy for building a transshipment port as a catalyst to achieving critical mass for Sabah's economic growth. Cluster theory focuses on externalities, linkages, heightened demand, productivity, and innovation. Strong clusters generally attract more firms and clusters with strong innovative records pose benefits in attaining more innovation and higher productivity (Chhetri, Butcher, & Corbitt, 2014). The value-adding production chain concept leads to more productivity through the integration of different firms, as well as consumers. In addition, this enhances efficiency through co-location, alliance formation, and shared inputs (South China Morning Post, 2019; Woo, 2019). Other variables in cluster theory are commonalities and complementariness. Commonalities and complementariness are aspects that make it possible for firms to create a sole cluster. They include products, services, inputs, technologies, and output activities (Lexicon, 2019). Cluster theory focuses on the concentration of specialized industries in particular localities to create the benefits of less competitive occurrence, higher profits gained by the firms, a stronger unchanging customer base, a steady presence of suppliers, and better personable relations that lead to better business values in all manners (The Economist, 2009).

The intellectual antecedents of clusters date back to 1890 and are defined as a group of firms with a common premise to create business advantages (Neale, 2017). Evolution of the Cluster theory is from externalities and agglomeration, later to innovation milieu, and more recently as industrial districts (Iammarino & McCann, 2014). Basically, the cluster theory is a theory of strategy that focuses on the characteristics of clusters as a concentration of specialized industries in specific localities known as industrial districts (Sforzi, 2015). Further research on Cluster theory is beneficial because clusters are not static entities. They evolve over time and through various life cycles which paves the way to conduct a study on the evolutionary approaches to cluster mapping and modelling based on the timelines of cluster development from a methodological perspective (Charoen, 2016).

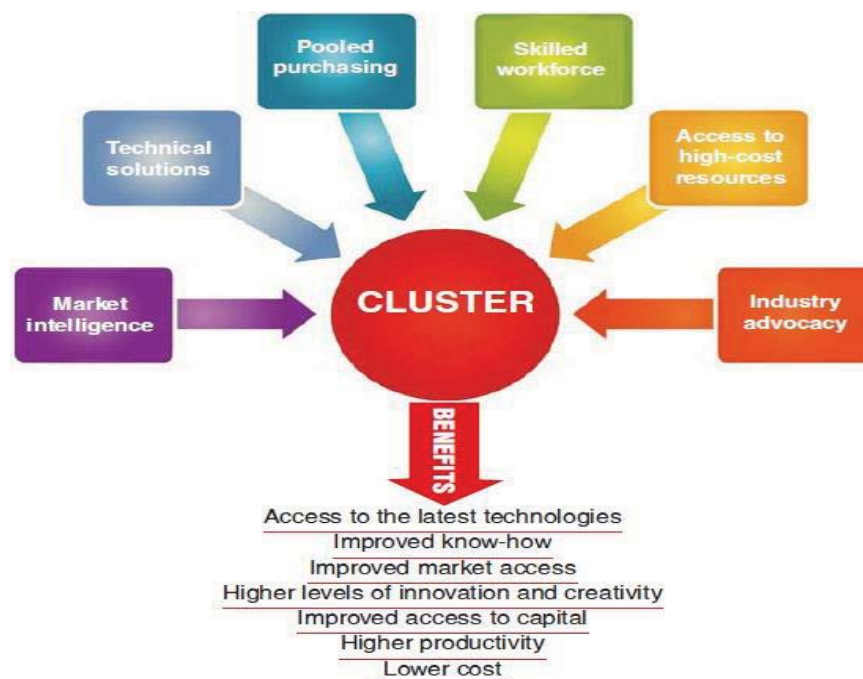


Figure 2. Extended Framework on Cluster Theory

Source: Alan M. Field (2019)

Figure 2 showed that extended theoretical framework on Cluster theory should explore the benefits of cluster formation. This includes improved know-how, availability, access to latest technologies, improved operational efficiency, lower cost, higher productivity, and service quality. Cluster theory relates to this research by exploring the various benefits of forming clusters which are less of a competitive occurrence. This allows for higher profits and business values, a strong customer base, steady presence of suppliers leading to low costs for the firms, and better personable relations. In return, that will lead to better business in all manners which will reflect on the proposed variables of availability, operational efficiency, port cost, service quality, and strategy to build a transshipment port in Sabah.

The main structure of Cluster theory entails four phases which are the context for firm strategy and rivalry, factor (input) conditions, related supporting industries, and demand conditions (Chhetri, Butcher, & Corbitt, 2014). Cluster theory is generally practised in industrial relationship management to explore the benefits of formation of industrial districts based on geographic concentration of firms. This stimulates the inter-regional and international competition (Lund, Lindgreen, & Vanhamme, 2016). Cluster theory is also practised by government authorities to enhance knowledge and innovation in the territorial perspective of software clusters through new industrial spaces, as well as milieu innovation (Hwang, 2018).

Evolutionary stages that created the Cluster theory include the industrial revolution and progresses to the adoption of policies concerning regional and international development that formed industrial districts (Konzelmann & Wilkinson, 2016). Alfred Marshal used the cluster theory to refer to the concentration of specialized industries in specific localities as “thickly peopled industrial district” due to the ongoing shifts in industry and trade. Subsequently, it is related to locally developing division of labour, competences and knowledge sharing (Gudrun & Jenny, 2017). Cluster theory is not applicable when firms forming a trading partnership are not concentrating on particular localities, but rather on distant outsourcing (Bhawsar & Chattopadhyay, 2018).

Cluster Theory

-Scope of Physical Clusters:

- Type I: Industrial Complexes
- Type II: R&D Zones, Science Parks
- Type III: R&D Zones

- Type IV: Free Economic Zones

-Components of Innovative Clusters:

- Enterprise (MNEs and SMEs, but not only)
- Universities
- Research institutes
- Efficient administration

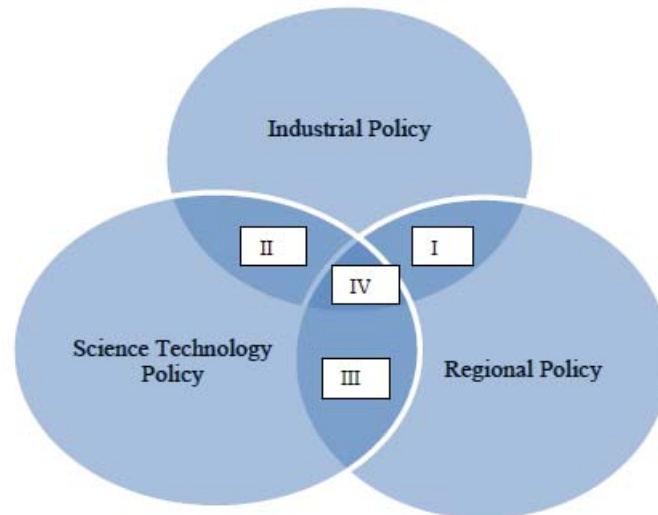


Figure 3. First Model that Studied on Cluster Theory

Source: Goldstein (2014)

Figure 3 showed (Goldstein, 2014) has proposed own model to study on factors affecting Cluster theory, which are industrial policy, science, and technology policy and regional policy and other components of innovation clusters which are enterprises, universities, research initiatives and efficient administration.

Core-gate model to identify and pursue green clusters

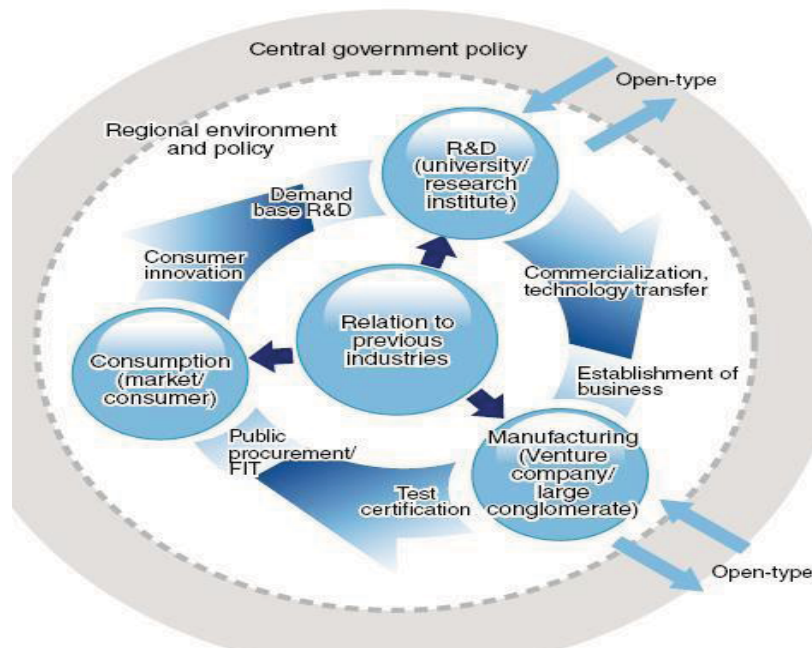


Figure 4. Second Model that Studied on Cluster Theory

Source: Yoon-Jun (2010)

Yoon-Jun (2010) has also proposed own model to study on factors affecting Cluster theory, which are regional environment and policy, central government policy, commercialization technology transfer, relation to previous industries, consumer market, demand base, research institutions, and consumer innovation. The similarity in proposed models between Goldstein (2014) & Yoon-Jun (2010) is science and technology policies, which have a key role in the establishment of businesses that integrate to form a cluster. Due to the advancement of business values in technology and science innovation, technical aspects are vital variables in formation of corporate clusters in any particular region of the globe. However, the proposed model by Goldstein (2014) is dependent on industrial policy in physical clusters which shape the formation of clusters within a particular geographical locality; in contrast, proposed model by Yoon-Jun (2010) is dependant on central government policy which has a vital role in the formation of business clusters within a particular geographical locality.

2.1.2 Game Theory

		Firm A	
		High Price	Low Price
Firm B	High Price	(Collusion) (A) £8m, (B) £8m	(A) £1m, (B) £10m
	Low price	(A) £10m, (B) £1m	(Non-Collusion) (A) £3m, (B) £3m

Figure 5. Game Theory

Source: Tejvan (2019)

Game theory as shown in Figure 5 analyses on the strategies for port managerial decisions Hidalgo, Nunez, & Coto (2017). Game theory focuses on investments, price policies, ownership on profits, social welfare, competitive position and performance, each of these factors has a vital role in ensuring the benefits of cluster formation are explored in a strategic point of view, these factors enhance the possibility to theoretically analyze the effects of port management decisions. This can be better explained in the amount of capital to be invested to maximize realization of capital profits and enhance business values performance through investment decision planning and implementation (Byung & Hokey, 2011).

Game theory focuses on mathematical equilibriums, utility maximizing and rational choice (Caputo & Ling, 2017). Rationality is a significant assumption of Game theory, however, there were no explanations for various forms of rational or irrational decision. This means that the rational choice theory, as well as the player's general knowledge, was ideal in predicting utility maximizing decisions (Liu et al., 2018). Game theory focuses on determining the most beneficial choice of all players in a game as it sought to pinpoint the decisions players should make without emphasizing why such decisions were made (Aumann, 2017). Therefore, rationality decisions of the player and common knowledge were used in predicting utility maximizing decisions.

Evolution of Game theory from zero-sum games branches out to study of mathematical models of strategic interaction between rational decision makers and other fields of social science, logic, and computer science (Podimata & Yannopoulos, 2015). In contemporary times, game theory focuses on behavioural relations of the logical making of decisions in humans, computers, and animals (Yang et al., 2017). Further research needed on Game theory because most research focuses on how groups of people interact but do not focus on the reasons behind formation of these groups (Webster, 2018). Therefore, there is an explicit need to carry out further research on the relationship between decisions for formation of such groups and the process of people interaction and how rivals decide involving strategic interaction.

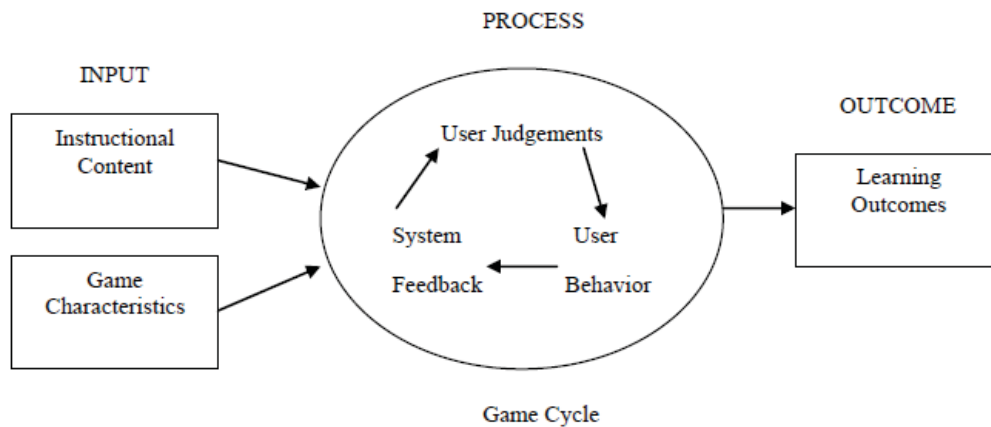


Figure 6. Extended Framework on Game Theory

Source: Bulander (2010)

Figure 6 showed that extended theoretical framework on Game theory should explore the inputs, the process, and outcomes of making a strategic decision which fits into modern informative theories. Such strategies include containerization, privatization, market liberalization, capacity investment and hinterland infrastructure investments, which affects port managerial decision-making and promote healthy competition (Su, Hsieh, & Tai, 2016; Morley, 2018; Tu et al., 2018; Cheon, Dowall, & Song, 2010).

Assumptions from the theoretical framework of the Game theory are rationality and maximization. Game theory is generally practised in social sciences, logic, and computer science to study the mathematical models of strategic interaction between two players as strategic decision makers as well as optimal decision-making of independent or competing players in a strategic environment (Thibaut, 2017). Game theory is also practised in political science in overlapping areas of fair division, political economy, public choice and war bargaining, as the application of game theory is to find effective solutions to ongoing political issues (Munck, 2018).

Evolutionary stages that created Game theory are the ideas about the existence of mixed-strategy equilibria in two-person zero-sum games, followed by the rise of modern mathematical concepts (Geiger, Knebel, & Frey, 2018). In addition, the discovery of the law of development of organic nature by Darwin led to the biological application of the game theory. Lastly, the technology revolution in the past half a century has led to adaptation of game theory in computer science (Xing & Huang, 2018). Game theory is not applicable when there is independent decision-making that lies at the heart of the interaction between businesses values in a competitive market. If the players have incomplete information about the others' intentions, a bargaining game should be considered instead (Song & Wen, 2015; Zheng et al., 2017).

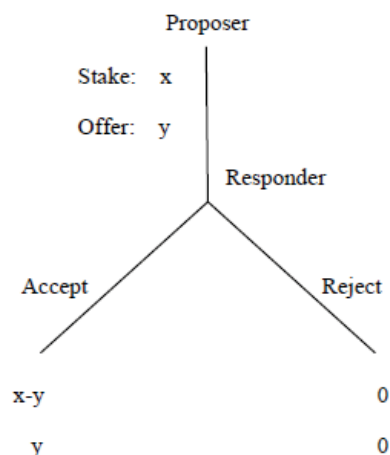


Figure 7. First Model that Studied on Game Theory

Source: Wang et al. (2015)

Figure 7 showed that Wang et al. (2015) have proposed own model to study factors affecting Game theory to study strategic bargaining bahvaior and the trust game in economic transactions, which are investor, stake, trustee, non-trust, prosper, offer and responder. In spite of the theoretical predictions, this model is regarded as two social-interaction behaviours that have consequential social and economic scenarios.

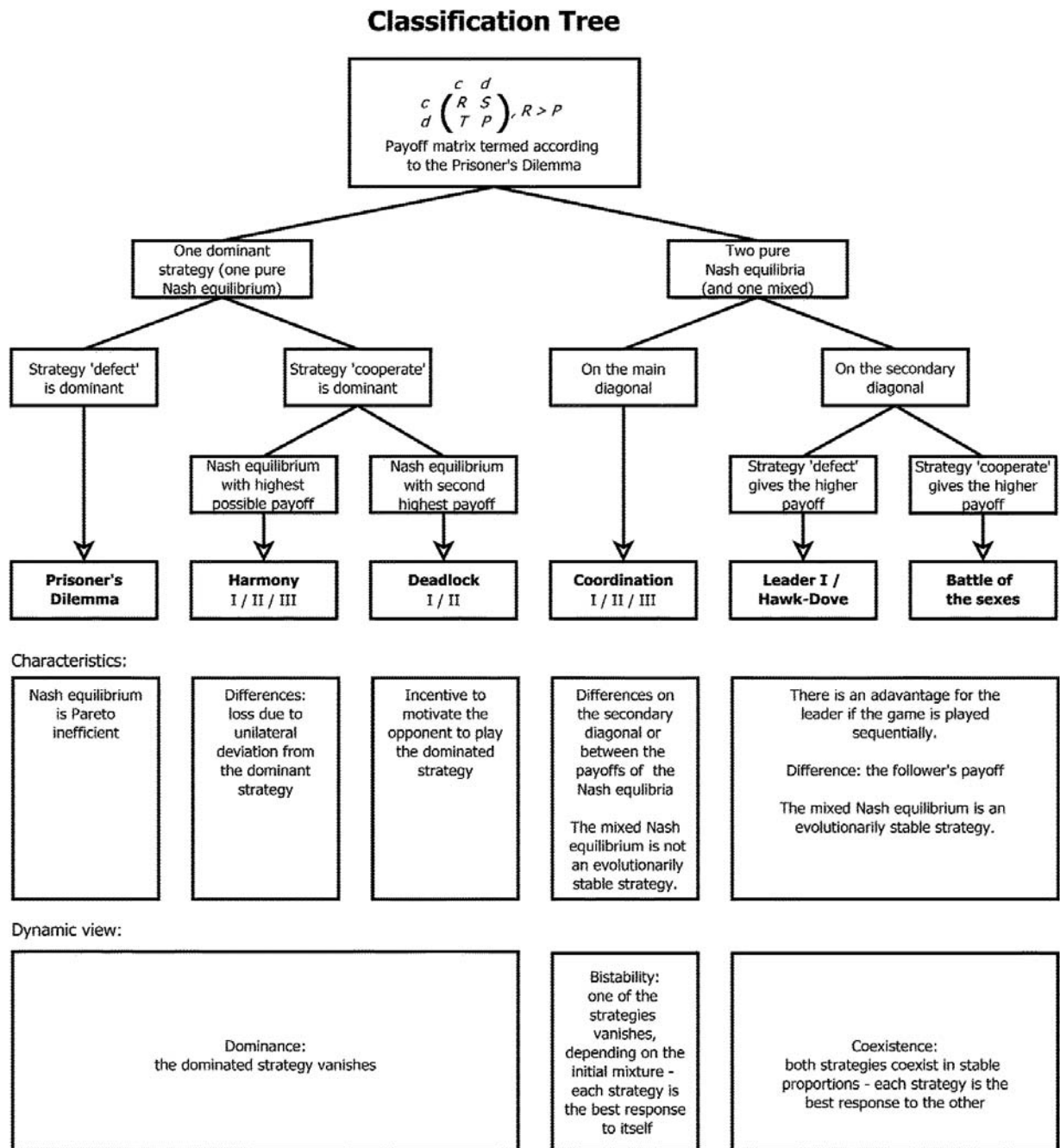


Figure 8. Second Model that Studied on Game Theory

Source: Hummert et al. (2014)

Game-theoretical model properties are summarised with the classification tree as shown in Figure 8. Figure 8 showed that Hummert et al. (2014) has also proposed their model to study on factors affecting Game theory, which are coordination, harmony, deadlock, and leader (Hawk-Dove, Battle of the sexes). The similarity in their proposed models between Wang et al. (2015) and Hummert et al. (2014) is that both researchers focused on corporate strategy and strategy defect. This shows how the interaction between the two players decides their payoffs and how mutually cooperating brings a modest payoff to both players. While mutual defection yields lesser amounts of payoffs.

2.1.3 Transaction Cost Economics Theory

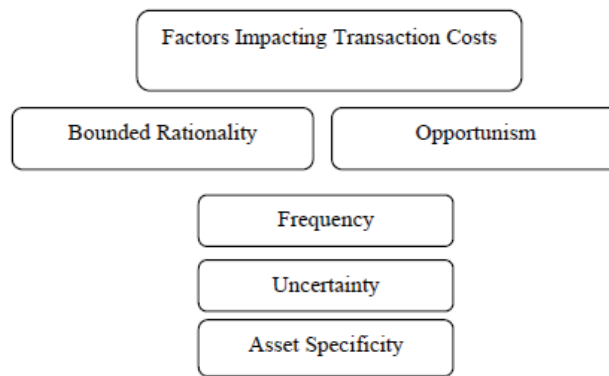


Figure 9. Transaction Cost Economics Theory

Source: Accounting College (2016)

Transaction cost economics (TCE) theory as shown in Figure 9 examines effective and efficient boundaries between markets and organizations. It postulates that firms and markets are different governance structures which differ only in transactional cost (Cho, 2014). TCE theory focuses on asset specificity, uncertainty and frequency. These variables decide whether an organization will produce internally or outsource services from external markets. TCE theory entails conducting a cost-benefit analysis to understand the viability of projects. Organization investment requires intensive capital to kickstart and implement, most of these products and is irreversible in nature. TCE practices are tailored to ensure meagre substitutes when structuring efficient transactions in case a market fails (Bandara & Nguyen, 2016).

Evolution of TCE theory can be traced from the 1970s with Oliver Williamson. With Herbert Simon, they tried to reconcile the neoclassical approach to enhance cognitive turn in economics. Up to late 1980s, the development of TCE theory was marked by treating firms as sole avoider of negative frictions (Lubell et al., 2017). During 1900, further evolution occurred such as the literature on modularity which stressed firms as the creator of positive business value. As a result, firms are now viewed as the creator of value through investment of resources in risky projects. Further research on transaction economic theory is beneficial because of the changing nature of business and markets that result in more risks and uncertainties. The lack of which threatens firms with the loss of opportunities in the market. As a result, entities are paying uncertain cost, which makes them incur loss instead of creating business values (Hanley, 2016). In addition, technological advancements which are causing turbulence shifts in market transactions necessitate managers to conduct further research on TCE theory.

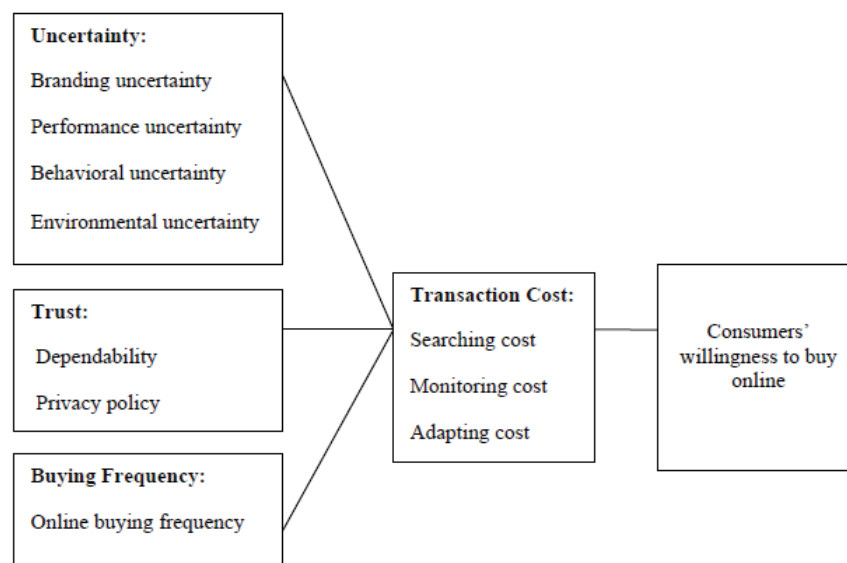


Figure 10. Extended Framework on Transaction Cost Economics Theory

Source: Teo & Yu (2005)

Figure 10 showed that risk and uncertainties are common in markets due to the changing nature of the business. Thus, TCE theory is relevant since it establishes a framework to minimize maritime uncertainties, leading to the advancement of business values. As a result, firms embracing this theory can optimize their profit margins in the long run. TCE theory relates to research problems on strategy to build a transshipment port in Sabah by emphasizing the cost-benefit analysis in port projects. As a result, firms will be able to hedge against such risks thus enabling them to generate sustainable value in the long run.

Assumptions from the theoretical framework of TCE theory are that the economic transactions are handicapped by incomplete contracts. The theory assumes that opportunism by the people as they try to take advantage of the opportunities that are available for exploitation; hence they opt to use methods that reduce the transactional cost (Hansen Henten & Maria Windekilde, 2016). The main structure of TCE theory is determined by transactions that are affected by the two human factors of rationality and opportunism; and three environmental factors, which include frequency, uncertainty and asset specificity/trust (Kaplan Financial Limited, 2012; Clark, Gertler, & Whiteman, 2017). TCE theory is generally seen in the decisions made by the organization on whether to produce commodities internally or by acquiring them over the market. The organization is able to pick the option that is cheaper and more convenient (Zimmermann & Rentrop, 2014). On the emergence of shadow IT-a transaction cost-based approach.

TCE theory is also practised in the manufacturing of Boeing 787 Dreamliner where different parts are outsourced to different companies across the world with the aim of reducing uncertainty, the time taken to complete the work, and the cost of production (Tsay, 2014). Evolutionary stages that created TCE theory are as follows; informal stage, pre-formal stage, semi-formal stage and finally fully formal stage. The earliest stage of the theory started from 1920 to the late 1970s. Transaction cost economics selectively combines economics, organization theory and law and is the product of the contributions of some of the finest minds in those three fields (Valentinov & Chatalova, 2014). TCE theory is not applicable when a transaction does not involve uncertainty. When the price of a commodity is certain to be the cheapest and best price, there is no need for the organization to consider alternative sources since the cost is already the lowest available in the market, example of area that TCE theory is not applicable is procurement of security assets, as quality is the only aspect that to be considered. This means that according to TCE theory, external sources will be given priority, as long as the external sources provide high cost efficiency at low cost and high quality of business values (Tsay, 2014).

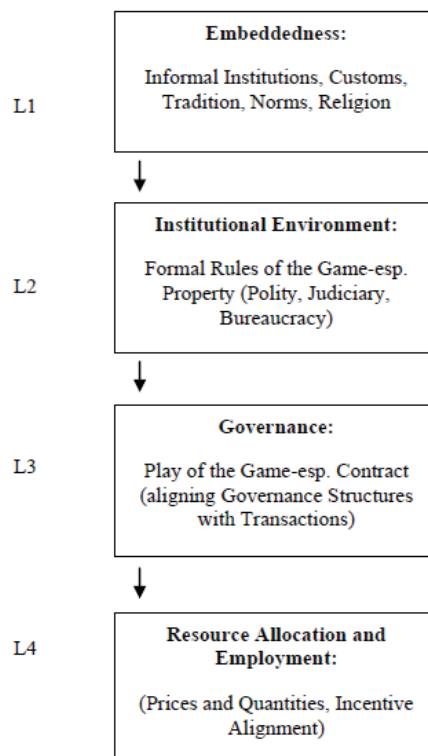


Figure 11. First Model that Studied on Transaction Cost Economics Theory

Source: Popov (2014)

Figure 11 showed that Popov (2014) has proposed a model to study factors affecting TCE theory. These factors are embeddedness, institutional environment, governance and resource allocation, and employment. The researcher notes that an organization's decisions on whether to produce internally or outsource their production are influenced by how controlling their government is or is not.

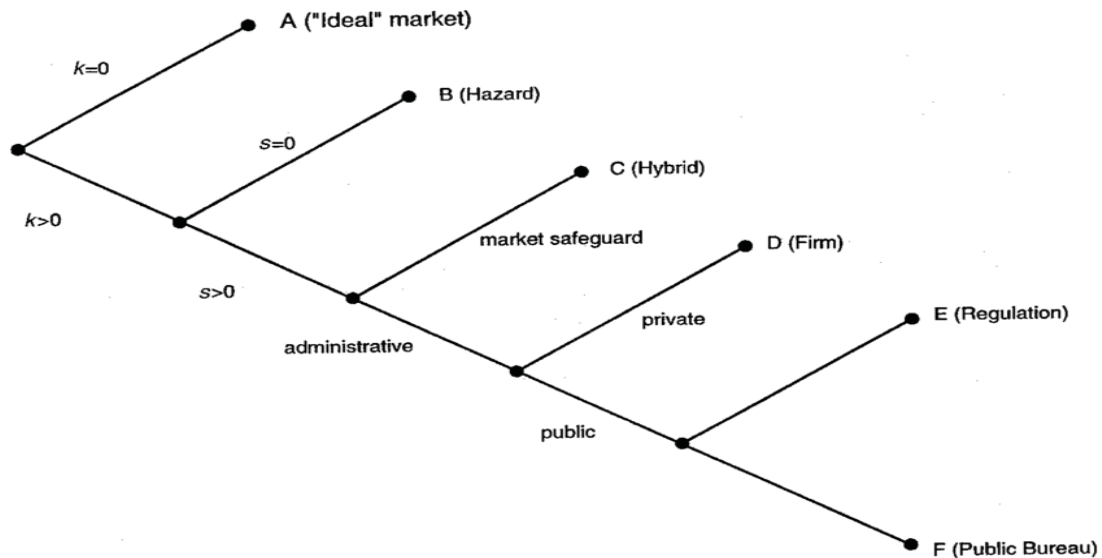


Figure 12. Second Model that Studied on Transaction Cost Economics Theory

Source: Nicita & Vatiero (2014)

Figure 12 showed that Nicita & Vatiero (2014) have also proposed their own model to study the factors affecting TCE theory. These include administrative regulations, the nature of the organization, market safeguards, and the nature of commodities.

Similarly, proposed models by Popov (2014) and Nicita & Vatiero (2014) are that they have both considered the administration and regulations as factors that explain the transactional cost and method used to regulate transactional costs. Both researchers agreed that the governance and policies of an organization stipulate whether an organization should outsource or make products internally. However, the proposed model by Popov (2014) emphasized that transactional cost depends on institutional customs and practices. The researcher argued that the purchasing policy depends on the practices of the organization. In contrast, the proposed model by Nicita & Vatiero (2014) showed that the transactional cost depends on the nature of the organization in terms of whether it is private or public. Private organizations are seen to be good in internal development while public organizations mainly outsource products.

The extant literature shows that the present issue is an under-researched area in terms of transshipment port particularly in Sabah. Theoretically, the outcome of this research would help in enriching the current body of knowledge on the issue of transshipment port strategy as an economic catalyst for future growth of business values. By exploring this issue, appropriate strategy responses can be initiated.

2.2 The Factors that Shape Strategy to Build Transshipment Port in Sabah

The strategy to build a transshipment port in Sabah through enhancing offshore shipping function with Mainland China will ensure improvement and greater importance to networking of agents with geographic proximity. That is, there will be a strong link between customers in Mainland China and agents in transshipment port in Sabah (Daily FT, 2018b; Lu, Lin, & Lee (2010). Facilitating employee training and knowledge will lead to efficient operations, therefore, increasing business values performance as well as reliable customer service delivery. Conducting task-related training activities will make sure employees are empowered by adequate knowledge on how to serve customers (Jayaram & Xu, 2016). Also, through improvement of port information systems, based on customer-supplier relations, will lead to vigorous competition with other locally-based rivals and will strengthen the distribution networks (Antara News, 2018; Wu & Lin, 2015).

Through the development of service routes between Hong Kong and Mainland China, the Sabah port will enhance infrastructure investments, and become a viable solution to overcapacity in other ports (Morley, 2018; Wu & Lin, 2015). Encouraging private-sector equity participation in the port will lead to increased cargo

movements and industrial competition (Wilmsmeier & Sanchez, 2017; Lu, Lin, & Lee, 2010). While management reorganization will make it possible to examine the effects of decisions made on investments, price policies, and ownership on profits (Tejvan, 2019). Strategies to build a transshipment port in Sabah need to include a flexible rate to respond to market changes, as the consequences of not correctly adapting to market uncertainty may lead to higher opportunity costs (Cho, 2014). Establishing free trade zones marketing and shipping in the transshipment port will enhance port capabilities. This, in turn, will lead to an increase in traffic volumes and a decrease in logistics costs in container ports (AJOT, 2018). Also, by providing incentives for local cargo to use the Sabah Port, transactional costs will be lower. This will increase the frequency of using the port as well as lower opportunity costs when the market changes (Accounting College, 2016).

Building a transshipment port in Sabah is possible since the Malaysian federal government has already allocated RM 1.02 billion in 2016 to the state government of Sabah through the Sabah Economic Development and Investment Authority to transform the Sapangar Bay Container Port (SBCP) into the transshipment hub of the East (Press Reader, 2017). The expansion project was predicted to raise the port's yearly capacity to more than 1.25 million TEUs by 2030 (Ascutia, 2016). However, the federal government has yet to allocate the required funds of RM 1.8 billion, hence limiting the port's handling capacity to about 280,000 20-footer containers annually for the moment. Presently, vessels calling on bigger ports have higher volume. The lack of a capacious port of a transshipment class has undermined the business values opportunity for Sabah's port. The forecast is an expansion in the manufacturing industry from 7.5% to 30% of the state's total GDP (Patrick, 2018).

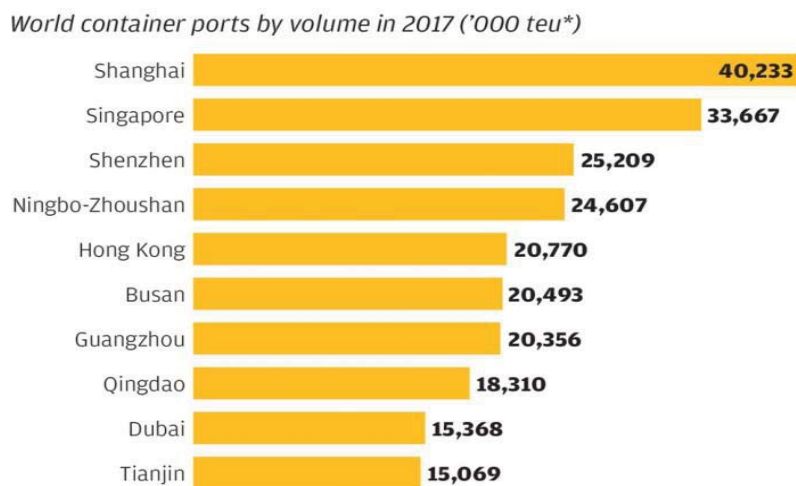


Figure 13. Shanghai has Served More Than 40.2 million TEU and Singapore has Served More Than 33.6 million TEU

Source: Wong (2018)

Figure 13 showed that current ports in Sabah are far below the world's top ten container ports by volume. Causes of these challenges include the federal government of Malaysia holding the required funds for the project on strategy to build transshipment port in Sabah that cost RM 1.8 billion, as only RM 1.02 billion were allocated, hence causing issues of financing to develop Sabah port industry (Patrick, 2018). The high logistics and operation cost, as well as lack of efficient connectivity to global markets, are the critical causes to inefficient logistic infrastructure and support, which are affecting formulation of strategy to build transshipment port in Sabah (Ferreira, Marques, & Pedro, 2018). International competitiveness intensification for port market across international markets and lack of cargo liability regulation acts, FDIs and economic development plans are also the causes of ineffective and integrated government policy on the strategy to build transshipment port in Sabah (World Shipping Council, 2019). Moreover, delaying of funding from the federal government has led to the challenge of mobilizing the strategy to build a transshipment port in Sabah on the stipulated cost (Cedillo, Lizarraga, & Martner, 2017).

The first main reason that is affecting the formulation of a strategy to build a transshipment port in Sabah is availability. Availability affects formulation because adapting to the changing market will eliminate the possibilities of facing opportunity costs as a result of increased market uncertainty. This will enhance proximity

to the export area and in the market niche, as the capacity to have the available flexible rate at the onset of market uncertainty leads to increased financial performance (Cho, 2014; Kim, Kang, & Dinwoodie, 2016). If Sabah port can find its available capability strategies to increase traffic volume and decrease logistics costs through utilizing its facilities or infrastructures which in turn will enhance offshore shipping with Mainland China, therefore decreased logistics and operational costs mean that there will be an increased flow of shipping activities between the Sabah port and Mainland China (Sabah Development Corridor, 2016; SEDIA, 2016). The process of producing internally or acquiring over the market by a particular company depends on the availability of the lowest transaction costs. If the cost of producing internally is too high, then the firm will want to acquire over the market. By contrast, if the transactional costs of acquiring over the market are too high, the company will turn to internal production (Wiesner, 2017).

The second main reason affecting the formulation of a strategy to build a transshipment port in Sabah is operational efficiency because localization of firms that compete and collaborate to achieving efficiency through supply chain corporation will enhance offshore shipping function with Mainland China (Chhetri, Butcher, & Corbitt, 2014). An indicator of the benefits of forming industrial districts by firms in the same geographical location includes a reduction in operational and logistics costs, as well as serving a large customer base (Ng, 2013; Tadic, Zecevic, & Krstic, 2014). The presence of research centers and educational institutions within or near the port location will lead to enhancing employee training and knowledge ideal for efficient cargo handling; thus, increasing cargo handling speed (Liu et al., 2018). Having experienced and knowledgeable employees will increase the overall productivity of the port through increased terminal productivity and effective cargo handling procedures (Borsch-Supan & Weiss, 2016). Also, sharing technologies, labour resources, and consumer networks, will lead to increased hinterland development, which in turn strengthens the port's reputation towards its marketing and promotion activities (Su, Hsieh, & Tai, 2016). The factor inputs are based on quantity and cost of resources such as natural resources, human resources, capital resources, capital infrastructure (Seguir, 2011).

As containerization and privatization lead to increased cargo movements and competitions, there will be a significant impact on terminal productivity. Through the encouragement of private-sector equity participation in port, the terminal productivity will increase as more goods are exported or imported by private investors (Cho, Lee, & Moon, 2018). Analyzing the port competition and the strategies behind port managerial decisions are crucial for managers to attain the success of the firm while carrying out the operational activities in the port. It is the responsibility of the managers to come up with simplified procedures and decisions on investments, pricing policy, and social welfare that will ensure efficient operations and management reorganization around the port (Bridge & Dodds, 2018). Specialization as a solution to overcapacity enhances increased cargo handling speed by providing incentives for local cargo carriers to use the port. Therefore, there will be more available spaces in ground slots or stack slots; which will attract larger ships to call. Consequently, since there is no congestion in the port, cargo handling will be efficient (Hidalgo, Nunez, & Coto, 2017; Kim, Kang, & Dinwoodie, 2016).

As decreasing logistics cost in container ports and increasing traffic volumes through enhancing free trade zones marketing lead to high terminal productivity. Since firms incur fewer logistics costs in the established free trade zones, there is an incentive to increase their port operations (AJOT, 2018; Accounting College, 2016). The transaction costs, whether from internal resources or external resources, has a huge impact on the success of operations. If the transaction costs are high, this could be an indication of poor operational efficiency. However, if the transaction costs are low, this is an indication of good operational efficiency; thus, more terminal productivity (Cho, 2014; Zant, 2018). Adapting to the changing market conditions would lower the risk of opportunity costs. This will lead to an increased hinterland development as more capital is available for development activities, management reorganization as well strategies to improve port information systems; therefore, ensuring better operational efficiency (Jeevan, Chen, & Lee, 2015).

The third main reason affecting such a formulation of a strategy is because there are multiple cost-generating demands associated with the high reliance of maritime environment for its resources and trade. Yet, the current SBCP port is in close proximity with those of other nations. This includes 218 ports in Indonesia, 127 ports in the Philippines, 63 ports in Vietnam, 37 Thailand, 13 ports in Singapore, 5 ports in Brunei (Jeevan, Chen, & Lee, 2015; Ports.com., 2019). The port in Sabah faces the need to stay competitive while it sets aside funds for upgrading and repair its facilities. At the same time, maintaining favourable charges to stay competitive within the cluster of international ports around it by reducing transshipment costs, port service costs, and port charges. This will increase the strength of economic activities and geographical separation from other international ports (Bandara & Nguyen, 2016). Port cost affects strategies in administrative procedures, personnel training, multiple stakeholder's engagements, flexibility, and provision of incentives. Investing in modern information technology while promoting integration focuses on the need for building this transshipment port (Antara News, 2018).

As the port authorities face the imperative to increase its port charges with the goal to increase the returns on investment. This strategy would, however, be counter-productive as other nations that stand to lose from the increase in charges will change their trading routes in response (Hidalgo, Nunez, & Coto, 2017). Malaysia will have to spend more on training its human resources so as to increase its capacity to handle technical aspects of operations. However, a cost-benefit analysis refutes this claim as other nations are also improving their already experienced workers (Kim, Kang, & Dinwoodie, 2016). Strategic planning has to be moderated to factor in the counter-measures that other competitors will design for the purposes of eliminating unprofitable expenditures (Heilig & Voß, 2017).

Transshipment involves frequent transactional costs. Loading and unloading of cargo require an investment in automated port facilities. Port costs have a significant effect on the level of inter-regional trade and competitiveness because port users will opt to use gateways that are cost friendly and provide minimal transit time loss while transitioning between sea and land transport channels (Cho, 2014). Port costs are the major influencers of strategy. These costs raise decision-making problems with regards to the quality of administration, level of investment in cargo handling facilities, and offering incentives to promote the use of the port (Liu et al., 2018).

The fourth main reason affecting formulation of a strategy is service quality because of its spatial proximity to many other national ports. This means that there are many activities done on a daily basis, hence port users would be engaging with the stakeholders that are adding value to their supply chain only (Heilig & Voß, 2017). Given the wide scope of activities emanating from the geographical proximity and the heavy reliance of the marine environment to drive the economy, quality of services and safety issues will arise. The port's management has to focus on reliable services and safety, such as prompt loading and offloading of goods (Kim, Kang, & Dinwoodie, 2016). To address service quality and safety issues, strategic planning ought to consider the use of information technology software to monitor the progress and completion of activities within the supply chain to guarantee reliable service delivery (Rancourt, Bellavance, & Goentzel, 2014).

Service quality can also affect the formulation of a strategy to build a transshipment port because a fixed number of port users use various ports throughout the ASEAN economies. Many countries have invested in quality services to attract port users. There will be a decrease in the returns of port users for countries that have poor services (Homosombat, Ng, & Fu, 2016). At the moment, the port in Sabah is relatively small but handles many operations ranging from offloading, loading, and dispatching of goods; however, to stay competitive, there is a need to train employees on how to transition merchandise in the shortest amount of time to counter the rapidly increasing skill set of other neighboring ports and economies (Yang & Chen, 2016; Su, Hsieh, & Tai, 2016). It is crucial to continually investigate and compare competitive ports. Comparing port management decisions on managing employees' performance will affect reliability of service performance provided to port users. This way, strategies can be laid out for improved offerings over competitors (Hidalgo, Nunez, & Coto, (2017).

Technologies deployed in ports and the shipping industry changes rapidly. Facilities required to provide quality services also change rapidly. Higher transactional cost can also be incurred through the failure to upgrade internally or externally as per the changing needs of customers and market conditions (Cho, 2014). Past researchers have studied and determined the metrics for port quality services have a very wide range. Their correlation with customer satisfaction varies and is not always defined in the same way. Other volatile market forces, such as a change in the political environment of one country, affects another country's incurred cost as well as quality of the services provided to meet the needs of port users (Lopez et al., 2014). Transactional costs highly affect the provisions of service delivery, profitability, and even survival of the port operators; hence, there is a need to constantly adjust measures and share information. This helps to establish that the equipment and operations that will effectively meet the needs of port users while avoiding cost of idle resources (Tse & Gong, 2009; Scott, 2015; Hu & Sheng, 2014).

2.3 Conceptual Framework

The conceptual framework guides the path of research and places it firmly in theoretical constructs in order to offer the foundation for establishing its credibility. It provides the structure in showing all the major variables, relationships, concepts, constructs and the direction of study as proposed by past research (Hesse-Biber & Leavy, 2011). The conceptual model of this study (Figure 14) originated from the prior literatures by different authors. The author has consolidated all these works into the conceptual model for this study. There are three levels of variables contained in the conceptual framework of the present study, which are the antecedent variables of transshipment port strategy, transaction cost as a mediating variable and advancement of business values as well as economic growth for transshipment port in Sabah as implication variable. The study attempts to shed light on

what state and federal governments of Malaysia should do in order to become more economic sustainable for transshipment port development.

2.3.1 The Justification for Using Teo & Yu's (2005) and Cho's (2014) Framework

The justification for using this model is for several reasons:

First, transshipment port strategy has become more prominent in the boardroom discussion even though it was not just for the immense benefits from the implementation but also meeting the needs to achieve environmental sustainability as well as economic growth. Unfortunately, most research that tried to link transshipment port to economic growth did not distinguish between the different factors for transshipment port clearly. Second, previous studies that use transshipment port to link with economic performance encounter difficulty in finding causal interdependencies. Therefore, this study needs a theoretical framework to examine such relationship in detail using transaction cost as a mediating variable before the link can be evaluated effectively.

And finally, the truth of the importance of advancement of business values as an enduring asset cannot be falsified. It is fundamental for organizations to build up strategy for a transshipment port as a catalyst to achieving critical mass for economic growth in Sabah. This research framework has ultimately able to examine advancement of business values as well as economic growth as the ultimate output of conducting transshipment port initiatives.

Conceptual Framework Based on Constructs Developed

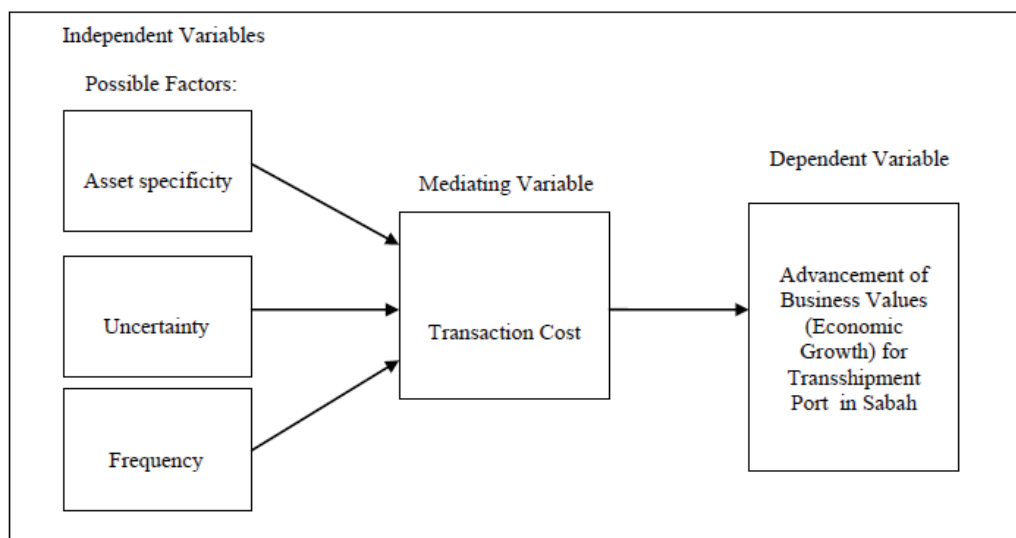


Figure 14. The Refined Conceptual Model

Source: Adapted from Teo & Yu (2005) and Cho (2014)

The study would be able to postulate that advancement of business values may form a feedback loop that can be seen as contributing to better economic growth in Sabah. Though a lot of studies have been done to conclude advancement of business values as well as economic growth as implication variable there is still a vast margin of researches to be conducted in different spheres of this construct. Hence, this study intends to verify the relationship and add on to the previous studies that only had confirmed part of the relationship, as stipulated in the research framework above (Teo & Yu; Cho, 2014). This is the 'gap' that this research intends to address in the context of maritime industry in Malaysia specifically in Sabah.

2.4 Contribution of Study

Managers of organizations in Sabah rely on a strategy to build a transshipment port in Sabah because they need to expand their operations while continuing to operate optimally with low costs and improved service quality (Business Standard, 2018). This will, in turn, create a competitive advantage that increases the capacity by local organizations while providing them with the ability to compete at the global level via enhanced operation efficiency; especially when importing and exporting large volumes of goods and services (Beard, 2018; Mooney, 2018). According to Wiegman et al. (2009), building a transshipment port will enable mass container handling operations that will create a competitive advantage for the port. In turn support demand-oriented mass production of goods and services among the organizations in this area.

The government of Malaysia relies on the strategy to build a transshipment port in Sabah because they need to enhance the economic growth in this area as well as to create more yield for the government to enable support for its development agenda. According to Lu, Lin, & Lee (2010), the transshipment port will afford incentives for local cargo to use the port, encourage long-term berth leasing agreement, set up hub-and-spoke contracts with MLO carriers, provide flexible rate to respond to market change, improve port information systems, simplify administrative procedures, as well as enhance the services of direct shipping. This is crucial for the growth of the economy within the state. This also encourages both local and foreign investments to be made in this area; hence improving its economic growth rate by making the port area a multi-functional business center (Kim, Kang, & Dinwoodie, 2016; Egyptian, 2018; Jacobs, Ducruet, & De Langen, 2010). As the economy grows, government revenues will improve from tax revenues, including custom's duty and levy tax.

Sabah and its people rely on the strategy to build a transshipment port in Sabah because they need to accelerate investments while creating employment opportunities that will promote improvement to the standards of living, as well as a social welfare support system in the state. This is because transshipment will increase mixed development, both from residential perspectives as well as commercial perspectives. According to Chhetri et al. (2014), enhancing transshipment creation or expansion leads to an increase in employment within the logistics sector, as well as jobs in other sectors. This includes air and space transport, postal services, and road freight; which is beneficial for the unemployed but skilled workforce that can work in these sectors.

The theoretical research framework was refined from the model developed by Teo & Yu (2005) and Cho (2014). The study found this model to be useful in achieving the research objective and filling in the knowledge gap of the literature. The study has offered some insights for the adaptation of model in the maritime industry, where research on transshipment port topic was found to be lacking. The model was developed to assimilate with the economic environment to form a theoretical foundation with relevant data sources for other researchers to carry out further in-depth studies in the maritime industry in other countries.

This study provides valuable ideas, facts, and figures that can be used by management practitioners and consultants in understanding the resultant effects and the dynamics of such relationships. Meanwhile, the proposed strategic conceptual framework in this study can be utilised as a decision-making instrument in planning and enhancing Sabah economic growth. Overall, this research is significant as it contributes very much to the knowledge and practice for future research. The current study also discussed a detailed discussion on the theoretical foundations as well as the possible factors that shape strategy to build transshipment port in Sabah which become a noteworthy basis for the establishment of future research.

2.5 Knowledge Gaps and Research Outcomes

In the literature review, a gap of study has been identified and explored, with sufficient evidence signalling the need to study the strategy to build a transshipment port as a catalyst to achieving critical mass for economic growth in Sabah. The study will take this research a step further to evaluate the theory captured in the literature review together with research practice to lend support and complete substantiation. Study in this area is highly relevant as the knowledge in this study is useful for the transshipment port in Sabah to acknowledge in their operations and its implications towards economic growth in Sabah.

Due to lack of knowledge and awareness of the transshipment port development, reporting on strategy to build a transshipment port as a catalyst to achieving critical mass for economic growth in Sabah is still being debated. The study aims to fill this gap. Moreover, there is also limited empirical research on the strategy to build a transshipment port in Maritime industry in Malaysia, which is important for developing economies. As there are no standard definition or universally-used indicators of transshipment port strategy, the extended framework on transaction cost economics theory (Teo & Yu, 2005; Cho, 2014) is adopted in this study to investigate if asset specificity, uncertainty and frequency with transaction cost as mediating factor could impact advancement of business values as well as economic growth for a transshipment port in Sabah. In essence, it is of great importance to undergo such study to bridge the gap that exists in Teo & Yu's and Cho previous researches.

As enunciated earlier, the strategy to build a transshipment port as a catalyst to achieving critical mass for economic growth in Sabah has not been largely studied, although transshipment port is becoming increasingly significant in maritime industry from a practical as well as theoretical point of view. The study also hopes to fulfil other research gaps highlighted by previous researches should be conducted in specific industry settings and in this case: the maritime industry. Instead of just focusing on the input side of its involvement in an economic cause, the researcher hopes to generate useful outcome to evaluate the benefits from the output side of its transshipment port endeavour, that is, the economic impact, or the actual benefits that have accrued (or will accrue) toward the advancement of business values for a transshipment port in Sabah. The study aims to fill this

gap in the knowledge by underpinning the research framework developed by Teo & Yu and Cho's model in Sabah context. The lack of research, particularly its acceptance and ideology within Teo & Yu and Cho's conceptualisation approach rationalises this study.

Potential outcomes of the research can be illustrated in this study. First, the conceptual framework contributes to how asset specificity, uncertainty and frequency with transaction cost as mediating factor influence advancement of business values for a transshipment port in Sabah, by applying maritime industry lens to study the perceived transshipment port role towards economic growth in Sabah. Seeking the relationship between asset specificity, uncertainty and frequency with transaction cost as mediating factor and advancement of business values for a transshipment port in Sabah, provides a well-founded conceptual framework for this study. The outcomes will also assist the state and federal governments of Malaysia to chart strategies to address contributions to societies' economic progress more effectively. Second, because transshipment port development has been receiving inefficient attention, this paper intends to develop theoretical evidence based on literature review which is applicable to the maritime industry. The outcome of the study may be regarded as adequate eye-opening veracity of the Malaysian maritime industry especially transshipment port in Sabah.

3. Conclusion

3.1 Overview of the Study

Difficulties in justifying the availability, operational efficiency, port cost, service quality are due to gaps not covered in past research conducted on the strategy to build a transshipment port in Sabah. This lack of information has created challenges on formulating the strategy needed to build a transshipment port as a catalyst to achieve critical mass for Sabah's economic growth (Kim, Kang, & Dinwoodie, 2016). Besides that, the current strategy to build a transshipment port as a catalyst to achieving critical mass for economic growth in Sabah is still in its infancy and not strategic as there is no specific approach to carry out transshipment port initiatives that the maritime industry could rely on. The established models have indicated that all the key variables identified were considered to have significant effect of the advancement of business values as well as economic growth for transshipment port in Sabah. Moreover, so far there are no research articles that explore the potentials of the Sabah port industry on the state's total GDP in Malaysia (Patrick, 2018). As we know that Sabah port industry is poised to record greater volume of cargos on the back of the positive projection of the nation's economic and trade growth. It is necessary to conduct this research due to the lack of a comprehensive discussion on this issue. Designating a transshipment port should fall to a port that enjoys clear competitive advantage. It is most important that Sabah take measures by initiating collaborative and complementary actions to handle more transshipment port in the region.

3.2 Implications and Recommendations

In terms of theoretical implications, this study is focused on the conceptualisation of the proposed framework which was guided by a wide review of literature and relevant theoretical construct. A comprehensive framework that investigates the relationship between asset specificity, uncertainty and frequency with transaction cost as mediating factor could impact advancement of business values, as well as economic growth for a transshipment port in Sabah, is still at its infancy. The conceptual framework used in this study, therefore, offers a platform for future work. In addition, the set of the key variables proposed for this study were generalised. These characteristics have contributed to the novelty of this study. This study further discovers the prior studies on various theories and offers an important contribution in comprehending this issue. It is hoped that the outcomes can be a valuable guide for future improvement of the research model. For practical implications, this study is capable of providing the maritime industry in Malaysia with information on the implementation of transshipment port. It is important to emphasize on similar research in the future may gain insight from this study and use it as a platform by possibly adding other variables into the study. Besides that, a more focus and collaborative approach in planning for transshipment port within the maritime industry that is characterised by flexibility and an ongoing ability to exploit foreseen and unforeseen opportunities with the information provided by this study.

Cluster theory supported the influences of availability, operational efficiency, and port cost, as well as the service quality of the formulation. By reflecting the interdependencies among industries, increasing alliances and networking have aided the increase in port capacity and reduction in total transport needs and cost per container (Alexandra, 2011). Regionally agglomeration of inter-firm networks creates a distinct competitive advantage for the clustered firms and regions where they are located. This is achieved through the encouragement of private sector equity participation in port; which, in turn, enhances operational efficiency and service availability. Game theory supported the influences of availability, operational efficiency, port cost, and service quality by exploring influences of port management decisions such as investments, price policies and ownership on profits, social

welfare and on competitive ports. Also, containerization and privatization lead to increased cargo movements and competition, thus enhancing low congestion in a port, and produces an increase in terminal productivity and cargo handling speed. TCE theory also supported the influences of availability, operational efficiency, port cost, and service quality by emphasizing that the Sabah port operator can correctly adapt to market uncertainty to eliminate the risk of incurring opportunity costs. Decreasing port costs, such as cargo handling charges and port service costs, and thus, encouraging more direct shipping with Mainland China. In turn, enhances availability, operational efficiency, port cost, and service quality of the port in Sabah. Moreover, decreasing the logistics cost in container ports enhances operational efficiency and increases in traffic volumes; therefore, developing service routes with Hong Kong and Mainland China to resolve overcapacity issue.

Improving port availability as a strategy by ensuring there is an increase in local volume cargo to attract external firms. This will lead to more economic development in Mainland China; also providing incentives for local cargo to use Taichung Port. Increasing the port's physical capacity to accommodate more volumes while increasing the amount of cargo handled annually will attract larger cargo ships. An increase in local volume cargo and port physical capacity will enhance proximity to the market and to the export/import area. Overall, this will bring a noticeable increase in the availability of local and international cargo. The managers in Sabah organizations will improve operational efficiency by simplifying procedures for port customs to enhance the services of direct shipping with Mainland China and free trade zones. Enhancing terminal productivity through increased cargo handling speed allows more operational efficiency as more cargo can be handled with refined procedures. This, in turn, enhances the flow of cargo in and out of the port and benefits the supply chain cooperation with Mainland China and Hong Kong through the development of service routes. The after effect will be an increase in operational efficiency and will contribute to an increased hinterland development.

The managers in Sabah organizations will be able to improve service quality by ensuring reliability of service performance strategies that will lead to increased quality of services delivered. The enhancement of security around the port through the engagement of security services and use of remote tracking devices to check the cargo movement will cut congestion in the port through containerization and privatization. With proper security, the enhancement of cargo movements and competition can be achieved while developing service routes with Hong Kong and Mainland China. Not only will this enhance cargo flow but will also deal with overcapacity. The state and federal governments of Malaysia can improve availability by increasing economic size of the transshipment port, which refers to making the port capacious and increasing its ability to handle the busy inflows of vessels and other operations at lower costs. Improving proximity refers to strategic placement of the transshipment facility in an easily accessible location for port users. This involves the reduced distance between the import and export facilities in the shipping area. Improving market niche refers to the identification of a certain market area that the state government of Sabah intends to serve.

The state and federal governments of Malaysia can improve operational efficiency by improving terminal productivity; this refers to the level of goods and services that a terminal can handle for a given amount of time. It is important for the Malaysian government to promote collaboration among stakeholders and the availability of the right machinery and equipment to boost terminal productivity. Improving cargo handling speed refers to the handling rate of ship-to-shore cranes, gantry cranes, ridge stackers, prime movers, forklifts and other machinery at the yard. Having modern equipment like the Internet of Things (IoT) technology and well-trained personnel will also enhance cargo handling speed. The state and federal governments of Malaysia can also improve port cost by reducing port charges or by providing better harbour facilities at lower rates. Reducing cargo handling charges for the handling of the cargo that port users deliver, use of modern cargo-handling techniques at the port may cut cargo handling charges. Another avenue could be through the reduction of port service costs that are incurred in the servicing port, or by having quality equipment and qualified operators at a reduced port service fee.

Another recommendation for the state and federal governments of Malaysia on how they can improve service quality would be to improve upon the reliability of services and performance provided at the port. Referring to the provisioning of services that meet or exceed customer expectations. Such quality of services will enable the state and federal governments of Malaysia to enhance the services delivered in the transshipment force. Improving safety and security itself from internal and external threats, more shipping companies will be willing to use the facility when they are assured of their safety. Improving on the application of information technology (IT) and exploring innovations like the Internet of Things (IoT) and Data Architecture and Analytics will aid in the automation of services and communication at the transshipment port; boosting its operations.

Further study needs to consider a moderating variable appropriate for the maritime industry perhaps worth exploring as a supplementary study to this framework. The proposed hypothetical model can be extended to take

the above rationale into consideration and to conclude with an exploration of what implications exist. This will enable clearer and more robust conclusions to be drawn in order to further comprehend the vital attributes of transshipment port aspects, to increase the precision of outcome and finally to enable firmer conclusions to be drawn.

Apparently, the outcomes will not remain valid if the key variables or possible factors for transshipment port change rapidly in the near future; rapid changes and development are now occurring in the maritime industry environment. These changes and development will definitely affect the aspects of transshipment port involved and the business values as well as economic growth in Sabah. Some significant factors might be disappearing due to the new innovation, while the other factors related to the environmental factor might also become more critical. As a consequence, future values of the proposed framework may decline and its applicability for the future will be limited.

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“Today having power means knowing what to ignore.” ~ Harari, 2015

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