



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

International Business Research

Vol. 11, No. 12, December 2018

Canadian Center of Science and Education®

INTERNATIONAL BUSINESS RESEARCH

An International Peer-reviewed and Open Access Journal for Business Research

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The Impact of Information Technology Management, Training and Strategy Management on Organizational Performance of Sharjah Police

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Received: October 2, 2018

Accepted: November 1, 2018

Online Published: November 2, 2018

doi:10.5539/ibr.v11n12p1

URL: <https://doi.org/10.5539/ibr.v11n12p1>

Abstract

The study mainly aims at investigating the impact that happens to the organizational performance as an impact of utilizing both information technology management and training. In-depth investigation of literature indicates the necessity of the proposal of the current research. The current study has utilized various theories including Knowledge Based View (KBV) and Resource Based View of the firm (RBV) so as to achieve the main purpose of the research. It also aimed at examining the impact of IT management and training on the performance of the organization. The study used a questionnaire as a tool. The researcher distributed a number of 341 questionnaires randomly on some department of the police in Sharjah. When the questionnaires were filled, the researcher used SPSS system in order to accurately analyze the results. The study concluded that the organizational performance of the Sharjah police has been positively affected by using information technology management. In addition, the research shows that it is essential to utilize on information technology management, training and strategy management on order to affect the performance of the organization successfully.

Keywords: information technology, training, strategy, performance

1. Introduction

1.1 Overview of Sharjah Police

It was till the year 1967 that the Sharjah Police was first begun as General Security Police force in the emirate of Sharjah. The decree of establishing the Sharjah Police was issued by his highness the late Sheikh Khalid Bin Mohammed Al Qasimi. Initially, it was established as a local organization to keep safety and security in the emirate. It was supervised by the general security chief and it had affiliations with the ruler of Sharjah. Two of the qualified Citizens in Sharjah were appointed; Colonel Abdullah juma Al-Saree and Mr. Burner from Oman British Coast to train and supervise the force. The Sharjah Police was integrated in the United Arab Federal Police system in 1971 based on the decree of his highness Sheikh Dr. Sultan Bin Mohammed Al-Qasimi to be in the federal system. Currently, there are some various departments in the General Directorate of the Sharjah Police. The departments are specialized in numerous police and security fields and other units in co-operation with the police directorate in the east region.

According to the reports issued by the police in Sharjah, the decision number 3 of 1995 was issued to support the Sharjah Police to include a number of 9 departments and become a general directorate. The ministerial decision number (298) was issued in 1996 and it rearranged the Sharjah police and established its headquarters. As a result, the police organization in Sharjah was qualitatively transformed and its performance became more modern and worked in a long with the present changes in order to maintain more safety and security in the emirate. It is the responsibility of the police to implement the most suitable styles that are appropriate to overcome any type of crime.

2. Organizational Performance

Due to the importance of the organizational performance in incurring development in the organization as well as their effectiveness and competitiveness, research has focused mainly on the field of humanity. For example, it

was noted that the most basic variable that most studies focused on is the organizational performance (Combs, Crook, Shook, David, Ketchen, 2005). In addition, both academics and practitioners have studied the aspect of organizational behavior to examine the antecedents and processes for enhancing the outcomes of the organization and its performance levels ((Jing & Avery, 2008). Furthermore, according to Hart (1991), not many organizations have formal processes to handle the succession of management. For example, both Davis and Nosal, (2009) state that it was reported in 2008 by the National Association of Corporate Directors that about 42 percent of the surveyed companies could not generate the plan of the CEO succession.

In addition, it was also stated that ((Carroll, 1984; Haveman, 1993; Haveman & Khairi, 2004) the transitions of management has been used to optimize the performance of the organization, breach the interpersonal relationships inside the organization (Grusky, 1963) and also breach the strategy of the organization (Virany et al., 1992; Wiersema, 1992).

2.1 Performance of Public Organization

According to Osborne and Gaebler, (1992), there has been consistent focus by the public sector on both effectiveness and efficiency. The basic goal is to enhance the performance of the organization and achieve its objectives. It also places clarity on the resources to improve the management accessibility as well as information and quality content (De Waal, 2010). It also aims at aligning the resources with the budget cycle.

In addition, according to Ashour (2004), it is clear that the governments are always exerting effort to obtain maximum performance regarding the use of the public resources, co-operation of the citizens, the satisfaction of the customers, the outcomes of the initiatives, accountability, the prevention of corruption, integrity and transparency. These aspects are effective in protecting and supporting the role of the government and the public sector to provide the main development and services.

Kanji and Sa (2007), state that the measurement of the performance of the organization lies mainly in the core of the processes of management that require to assess whether the strategic objectives are achieved and also whether it is possible to employ solutions to the issues. Moreover, previous studies (Morgan & Murgatroyd, 1994) show that currently performance measurements are used by the public organizations so as to achieve value for money and also facilitate the quality of service.

2.2 The Definition of Organizational Performance

Sink and Tuttle (1989) indicate that Innovation, effectiveness, productivity, efficiency, profitability and quality are the six different performance conditions that are related to the performance of the organization. In spite of the various studies that were carried out to examine the performance of the organization, the exact definition of it has not yet been reached and as Ford & Schllenberg, 1982; Johannesen, Olaisen & Olsen, 1999 indicate, there should be a consensus to reach its universal definition among the authors and researchers.

The performance of companies was examined in some studies (Bergh & Lim, 2008; Tsai, 2001; Yeoh, 2009) focusing mainly on the performance of the organization and the absorptive capacity. The studies found out that there was a significant relationship between the absorptive capacity and the performance of the organization. The study model shows that both financial performance and innovative performance in the light of transfer of knowledge among companies and their competitive advantage.

2.3 Organizational Performance Measurement

As indicated by many studies (Demirbag, Tatoglu, Tekinkus & Zaim, 2006), the measurement of the organizational performance is essential as it is used to enhance the effectiveness of the organizational management. Other studies (Kanji & Sa, 2006) also stress its importance for promoting and communicating the awareness of the employees to make the organizational performance much better.

Deming (1986) illustrates that it is important to measure a thing in order to improve it and is what exactly applies to measuring the performance of the organization. Some studies (Gadenne & Sharma, 2002; Madu, Kuei & Jacob, 1996) also show that the measurement of the organizational performance is a necessity to find out how effective are the level of the resources in business management. In addition, what is more important is that traditional financial measurement indicators were used to measure the organizational performance. Some studies (Demirbag, Koh, Tatoglu & Zaim, 2006) also indicate that the financial indicators had some weaknesses and it is much better to use both financial and non-financial indicators to measure the organizational performance. As previously discussed, the use of the traditional performance measurement was mainly built on the financial measurement indicators that include many aspects such as return on investment, debit, profit and sales. However, in the present dynamic business environment, these indicators are considered insufficient. This also points out the requirement for using non-financial measures for organizational performance as indicated by some previous

studies (Johnson, 1983; Kaplan, 1984). Moreover, Burns (1998) show that financial measures are not enough for the firm to generate its profit and increase its capability and ability.

3. Training

The skills and the knowledge of the employees working in any organization are essential and they improve the competitiveness of the organizational performance. In addition, the contribution of HRM department in improving the performance of the organization is evident.

In any organization, the knowledge and skills of the employees are increasing in importance in terms of performance competitiveness. Some studies (Salas & Cannon-Bowers, 2001) that both practitioners and scholars appreciate the role of HRM department in improving the performance of the organization. This makes it a priority for the organizations to invest and focus on the training of its employees because this will positively contribute to the organizational performance. In addition, in the present world, it has been a solid fact that human resources are a significant source of competitive advantage and it plays an effective role in the knowledge-based economy that is going through a shift. Furthermore, HRM has an evident impact on other factors in the organization such as corporate financial performance and productivity. For example, many studies Huselid (1995), Delery and Doty (1996), Boselie, Dietz and boon (2005) and Combs, Liu, Hall & Ketchen (2006) stress the importance of these factors for the improvement of the organization. However, these studies the focus of these studies was on the field of manufacturing in the West (the U.K and the United States of America). Although it is true that there is a positive relationship between the organizational performance and HRM, there is still a need for some empirical studies (Gerhart (2005), Ericksen & Dyer, 2005; Wright, Gardner & Moynihan, 2003) to point out this relationship. In the service sector, the need for highlighting this relationship is pronounced, but some studies (Sisson, 1993; Lucas, 1996; Hoque, 1999a) indicate that it is highly neglected in the HRM research because it is heterogeneous and it constitutes of hospitality businesses, retailing firms and retailing transport.

However, Ng & Cardie, 2003; Nigam & Ghani, 2000; Zhang (2004), indicate that better performance can be produced by random feature splitting even if it is compared to self-training in the classification of the topic text field and the NPL. Many studies (Aguinis & Kraiger, 2009; Noe, 2008; Saks & Belcourt, 2006; van Eerde, Tang & Talbot, 2008) show that training is considered one of the top ways that can motivate the human capital. Wright, Dunford & Snell (2001) illustrate that training is important in aligning the competencies of the individuals and the strategies that are required in an organization. The current study views professional training as support activities of formal training and initiatives that are created by the organization in order to increase the opportunity for the preparation and also the development of HR. These opportunities contribute positively to the improvement of skills, practices, the disposition and the knowledge of the employees. Russ-Eft et al., (2010) show that the process of training transfer involves knowledge, practices and skills that workers learn during their training.

3.1 Training Definition

There are also other definitions to training. Beardwell and Holden (2001) define training as the process that is planned in order to modify skills, behavior, knowledge and attitudes of the employees through the use of experience. The main goal of training is to achieve effective performance of an activity as a whole. The main goal is to improve the abilities of the workers to fulfill the requirements of the organization. This exact definition highlights the relationship that exists between planning process and training. Training is regarded as a planning activity that helps to modify the skills of the employee through learning and experience.

It is evidenced by Savage, Forestier, Withers, Tien and Pannell (2011), Savage et al. (2015), Tien, Jung, Rizoli, Acharya & Mac Donald (2008) that during the process of training, it is essential to analyze the acquisition of the skills based on the performance of combat casualty care skills. The use of simulators (SIM) and live tissue (LT) are used in training. However, there is little information about how the acquisition of skills is affected by the training morality. In addition, Flippo (1984) describes training as the process of optimizing the skills of the employees on a performing task as well as attitudes, rules, concepts and systematic acquisition of skills that lead to better performance in a different environment of work. Chiaburu and Tekleab (2005) define training as a kind of intervention that is used in order to improve the performance determinants of the job.

3.2 Objectives of Training

Firstly, an objective links the capabilities of skills that employees have and what they have acquired after receiving the training. Mainly, the objective of training is decided prior training in order to determine what the employees are going to learn. There are different topics that generally cover the objectives:

- It is expected that the trainees will be able to provide full description of the requirements of control strategy and an explanation of precursor control process after they receive the training.
- It is also expected that after training they will licit or elicit the uses of precursors as indicated in Tables I and II of U.N. Convention, 1988.
- They trainees will also have the ability to use precursor identification field test kit in order to examine suspect substances.
- The trainees will also be able to determine and prevent cases of diversion of precursor chemicals for illicit use purposes, after they complete their training.

The productivity of the employees and their performance is greatly improved after they complete their training. That is why; the companies make use of training as an effective tool to manage risks that can result from the new products, technologies and markets. Regarding this, training is also used and invested by nations that are developing. Blandy et al., (2000), states that the performance of companies is significantly improved by the use of training. This shows the importance of training for the improvement of the employees and stresses the importance of increasing the daily hours of training as a kind of investment in the companies.

3.3 Key Strategies of Training

Kelley (2011) refers to Key Strategies Rating Questionnaire (KSRQ) as the measurements that gauges the acquisition of the individuals of intermediate psychotherapy intervention strategies. In addition, Workman and Lee (2004) had a look into the lack or the existence of changes and cultural differences in the spatial professional capabilities after the employees receive their training. They carried out interviews with the participants and stressed the importance of keeping in mind the strategies when they give answers.

Motivation is considered as a very important factor in the performance of the employees and training is one of the elements that have an effect on motivating the employees. It is also found out that training affects the engagement of the employees in the achievement of the entire organization goals.

Lemaire and Lecacheur (2010) carried out a study to find out the importance of training. They examined used trials involving instruction to switch and voluntary switching to examine the use of varying arithmetic strategies. In both cases, it was found out that the employees preferred switching strategies. In addition, with the simple tasks, the performance dipped. In addition, a study by Xetal showed that the respondents had the chance to select the most preferable strategies using the same strategies in two problems that follow each other.

3.4 Adopting Feedback Specificity during Training

Previous research (Pea, 2004; Reiser, 2004) revealed that there can be a gradual change in the suitability of the feedback content. It means that providing feedback at relevant times may to an enhanced and better performance. Using adaptive feedback in SBT can be used as an example to show that change on an effective manner. Test scores, error rates, success rates and domain-specific knowledge tests are some of the strategies that can be used to measure the competency of the individual performance. It depends on the person and his experience of personalized feedback when taking the adaptive feedback.

3.5 Training and Organizational Performance

Many authors have examined the relationship of performance and the training organizations. They used Ubeda-Garcia, Marco-Lajara, Sabater-Sempere and Garcia-Lillo (2013). The study used a quantitative method and it focused mainly on the relationship between training and performance in the case of Spanish firms. The findings of these studies found a positive relationship between the performance of the firms and the training that employees receive.

Four different ways, including Morley, Slavic, Poor and Berber (2016), were used to find the effect of training on performance. The measurement of training consisted of absolute measures that focused on the training that the employees received, content measures which involves the type of training that the employees received, the emphasis measure which focuses on the significance of training and the absolute measures which included the level of training that the employees received.

3.6 Training in Middle East/UAE

Overall, the huge amounts of petrol led to the increase in the training levels in the countries and it contributed to the improvement in the infrastructure of the region. These huge amounts of money led to the rise in the investment and numerous numbers of companies to do business and invest. These companies included both private and public organizations. In addition, these organizations have implemented the best practices and this

contributed to the significant development in the whole region. The period of the 80s was the decade of the administrative development (Zoubi, 1982).

4. Strategy Management

4.1 Strategy of Business

Outram (2013) revealed that the shift in the business context had resulted in changes over the past decade to tackle the changes in the role of management. In addition, Christensen (1997) showed that although the organizations adopted strategies that are in alignment to the market, there is still a lack to the new technologies that emerged or were adopted.

4.2 Definition of Strategy

Bruce and Langdon (2000) define the word strategy as the art of planning military activities and operations during the war. Matloff (1996) defines the word Strategy as a word that comes from the Greek word, 'stratos'. This Greek word means a person who is an army leader. The origin of the word goes back to the 18th century. In addition, Kaplan and Norton (2004) describe strategy as a group of activities that organizations use in order to make a niche in the market. MC Keown (2012) consider strategy as a future shaper.

4.3 Concept of Strategy

Porter (2008) explains that there are five forces including new entrants, substitutes, powerful suppliers, strong rivals and savvy customers that are used in the creation of strategy in a dynamic environment. In a more specific way, the customers are always in a search of low prices and top deals.

On the other hand, Nivern (2006) has proposed four main factors that are obstacles to the execution of an effective strategy and hinder resources, management, people and even the right vision. The strength of the barrier will be higher and more intense when the employees are unable to understand the strategy well.

5. Information Technology Management

In 1988, there was an emphasis by the network of the schools of public policy, affairs and Administration (NASPAA) to train the graduate students on information systems during the programs in public management. The main aim of doing this was to implement a shift in the outcome and the mission without minimizing the importance of IT training in the public administration curricula. Dawes (2004) states that the effect of It on the government requires the managers to work in the IS processes and to be over encompassing.

Dhar and Sundararajan (2007) state that the sustained increase in the capability of tackling the complexity is the technological variant which makes use of the modular layers on technology. It is also essential that public managers can understand how such ability can support models of organizations and also generate capabilities that were not existing before.

Candice, Sandra and John, 1998; Sife, Lwonga and Sanga, (2007) illustrate that learning and education is enhanced and supported by the use of It in e-learning and it also provides different strategies of learning and applications for the acquisitions of skills and exchange of information. Although there is a range of existing technologies, instructors still use training in the classrooms. However, new collaborative training systems, simulations, virtual training and self-paced e learning are used and planned by the organizations. The reality is that about 38 % of the firms have been using e learning and virtual system use. There are seven common elements that E-learning definition comprises through different taxonomies. These seven common elements are communication, information collection, IT Use, resources and tools, programing and taking on a more expensive view and network use. Russel and Sellman (2007) to compare the measures of Cyber and IT carried out a comparison. They compared them against several technical criteria and also their definition. It was found out that neither of them covered the whole aspects of the previously working conditions

5.1 Definition of Technology

Hew and Brush (2007) stated that education does not have clear definition of technology that is integrated in education. They pointed out that other previous studies gave definition to technology in education. These three perspectives are relating to the development of pupil's skills, relating to efficiency and quality assurance of the activities and relating to the ways in which new ICT can be used by the teaching in school activities.

However, Mergel (2011) shows that extensive use of It in public firms, the public values and combination of technologies advancement require urgently IT conceptualization. This will lead to the improvement of performance through the use of IT.

5.2 Competence and IT Competence

The concept of competence appeared in the 1970 (McClelland, 1973) and it was used to refer to the sets of qualities or skills that the individuals have and can be manipulated by the field of psychology as an indicator that shows the levels of job performance. Macaulay & Lawton (2006) state that there is currently a stress on the competence that combines both management development and moral psychology. Currently, most of the public agencies have been working on developing competencies that are job-related in order to offer guidance, evaluation of the employees' performance, hiring and training. Bowman, West & Beck (2014) and Virtanen, (2000). As explained in the previous studies, there is an ethical element in the competence which reflects the qualities of morality and virtue.

5.3 IT Competence for Public IT Managers

The core competence of the IT managers is their attributes, knowledge and skills. However, this is not the only basic difference in their IT competence. In many cases, there is a rotation in the senior level of management in several functional departments in the organizations. One of the examples is in South Korea. Bassilier et al, (2001) and Layne and Lee (2001) revealed that this was useful to the managers to consider organizations that are close to a group of processes that help in understanding the power of transformation in IT.

5.4 Advantage and Disadvantage of Technology

There are many advantages to the use of technology, especially in the field of education. Skinner (1984) showed that using technology in instruction helps as twice as instruction without using Computer assisted instruction. Another close study by Papert (1972) predicted that there would be more stages of development in learning for pupils when they move from formal and strict environment of learning to a computer-assisted learning environment.

At the same time, using technology and IT in instruction provides the students with many cognitive abilities, which are:

- Accurate mental operations and discipline of optimum thinking as well as effective expression and good explanation of sentences that have similarity to the language of the computer.
- Development of overall concepts such as variable transforming function, hypothetical-deductive rationale and formal proceeding.
- Solving problems from any area through making use of the heuristic strategies.

6. Theoretical Background

Garavan and Morely (2006) state that training contribution has some underlying ongoing ambiguities. Nevertheless, Ortlieb and Hirt (2012) called on for the potential outcomes of a performance and strategic orientation. Ortlieb (2012) points out that trainings can help effectively in achieving competitive advantage through the development of competencies, specific skill sets and knowledge creation if they are planned in a strategic way. (Grossman & Salas, 2011) also state that the employees have to develop their own skills and adapt to the changes of work in order to improve their performance. Hence, training is essential for successful business processes because it is an enabling component that leads to acquisition of knowledge.

6.1 Key Strategies Training for Individual Psychotherapy

Norcross (2005) states that this theory of integration includes the establishment of a conceptual framework that leads to the top and the optimum elements of two or more approaches of theory. The theoretical framework is based on the existence of a relationship between seven theories of psychotherapy (Brooks-Harris, 2008). It also concentrates on theories of behavioral therapies, emotion –focused and cognition.

6.2 Resource-Based View Theory

Galbreath (2005) states that one of the most widely discussed theories in literature in the past few years is the RBV theory and this theory can be traced back to Wenerfelt (1984) who stated that the success of the theory is due to the internal resources of the firm.

Barney (1991) the theory entails that it includes a number of resources, which contribute differently to the value of the firm. Barney (1991) states that the resources include the firm's brand name, capital equipment, reputation of the firm workers, knowledge and skills. It was also found out that the resources of the firm work as the most essential factor in accomplishing the sustainable competitive advantage of the firm.

Moreover, the resource-based View theory emphasizes the relationship between the firm capabilities and the present opportunities. The theory is described by Makadok (2011) as one that takes into consideration the

complete use and utilization of the resources of the firm for the development of the core competencies and finally to carry out and achieve the competitive advantage of the firm. As a result, Barney, 1986; Russo and Fouts, 1997 state that the competitors will be away behind the performance of the firm if many factors exert work towards the use of the information resources, human abilities and internal strategies. Thus, organizations have to strengthen and maintain the relationship between the internal capabilities of the firm and its external environment to overcome the competitors and achieve the competitive advantage.

Other similar studies examined the topic and showed that technology is one of the most essential resources of the companies that contribute effectively to the achievement of the competitive advantage and creating a positive relationship with the performance of the firms. Many other studies stated that both training and technology have a positive effect on the performance of the firms.

Overall, previous studies revealed that the selected study variables are regarded as the resources of competitive advantage and thus the most suitable underpinning theory that can be used and employed is the RBV theory.

7. Knowledge-Based View Theory

The rise of knowledge perspective on several strategic topics occurred in the past several decades. These strategic topics of research included transfer of capabilities, alliances, acquisitions and product development. Knowledge-based view theory is one of these strategies and it is the main focus of the current study. Grant (1996) states that knowledge is considered one of the strategic resources of the company.

In addition, more research in literature shows that Knowledge-based view theory is described as the resources based thinking view as the resource used are related to both knowledge-based resources and the intangible assets. However, there are other studies that emphasize on the usefulness of the theory in extending the theory and learning of the organization to the strategy used. Spender (1996) states that knowledge is defined as the continuous social development, unlike to a resource. In brief, the knowledge based theory can be utilized as the current study taking into consideration the purpose and the variables of the study. The purpose of the study is to examine the how the strategy control plays a vital role in the improvement of the performance of the organization. Consequently, training, technology and SM can be used. Kogut and Zander (1992) Knowledge-based View theory is an extension organizational learning to strategy. This views knowledge as the most important resource of the company. It is essential because it helps to understand the alliances and the strategy of the company. In addition, Reus et al.'s (2009) states that it is suitable to think of the internal knowledge in case of the external knowledge that is related to the environment of the company to improve its performance as KBV theory implies. Hence, it is suitable to use the KBV theory in examining the variables of this study.

8. Framework Development

The current study was carried out through reviewing literature and previous studies to propose and develop some hypotheses. The proposed hypotheses are about the existing relationship between it management, strategy management and training on one side and the organizational performance on the other side. It was found out that the three variables assisted the organizational performance. To explain more, IT management, strategy management and training proved to have a positive impact on the overall performance of the organizations. The framework of the study included IT management, strategy management and training on the organizational performance. The hypotheses that are used in the study are as follows:

- H1: Organizational performance is positively affected by training.
- H2: Organizational performance is positively and significantly affected by strategy management.
- H3: Organizational performance is positively and significantly affected by strategy management.

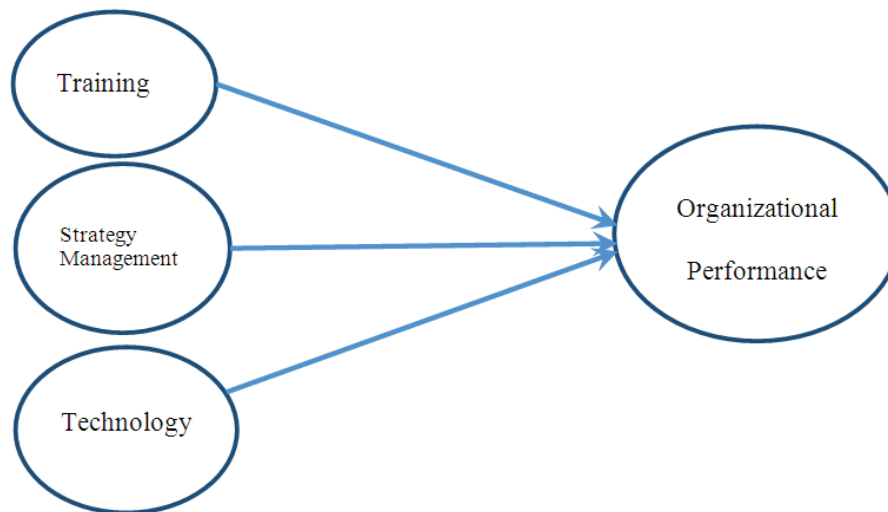


Figure 1. Research Framework

9. Methodology

The aim of the current study is to examine the effect of the variables on the organizational performance. The framework of the study is to measure the impact of information technology and training on the performance of an organization in the Sharjah Police department in the UAE.

There are five departments in the Sharjah Police. These five departments are Deputy Commander in Chief , general Administration resources and support services, general Commander, general directorate of central operations , General Directorate of Police Operations. The mentioned departments were later divided into 21 main departments that included 255 branches and 86 head sections. Each section is led by a head section officer that leads the employees and is responsible for carrying out certain tasks.

Zikmund (2003) stated that the four main research methods for the descriptive and casual studies included observation, secondary data m survey and experiment. The study focused on collecting data through survey method that makes use of interview or survey questionnaire from the participants through the internet, mail, personal / self-administered questionnaire, and the telephone.

The main aim of the current study is to provide a valid and dependable framework for the relationship between the organizational performance and IT management, strategy management and training in the case of the Sharjah Police in the UAE.

9.1 Variables and Instrumentation Measurement

The current study used the literature review to gauge the variables of the study and it used items to be in context with the study sample and the local setting. Organizational excellence is the dependent variable in the study and the independent variables are the customer focus and the strategic planning. Organizational culture is one of the main factors that was considered in the study.

9.1.1 Measurement of Training

The study used a 5-point likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) and adopted Ubeda-Garcia, Maro-Lajara, Sabater-Sempere and Garcia-Lillo (2013).

According to (Kaplan & Norton, 1996), BSC stands for the balanced Score Card and it functions as a management system that is new and it is used in the business strategy to reduce the gap implementation and strategy development. The items used in this study are taken from previous studies studies by Cragg, Mills and Suraweera (2013). These previous studies used a 5-point Likert scale ranging from 1 to 5. The main goal of the study is the organizational performance. The current study the dependent variable is the organizational performance and how it is affected by the training and It management.

10. Data Analysis

The researcher entered the data collected from the Sharjah Police in SPSS program to analyze the data and obtain the results. The main outcomes of this study are explained in the following tables.

In the first table (table 1), the descriptive analysis of the study is provided. The table contains the descriptive analysis that was used to describe it management, training and performance of the organization from the answers provided by the participants.

As shown in Table 1, 1.00 was the minimum value of all the constructs whereas 5.00 was the maximum value that represents the Likert scale. In addition, the maximum mean value was 3.927 with the lowest standard deviation at 0.687. The results of the study show that training was one of the main priorities of the head sections in all the departments of the Sharjah police to improve the organizational performance and reach its highest levels. The study also showed that the mean and the standard deviation of the IT management were 3.420 and 1.002. The standard deviation is regarded as the highest. The results of the data collected stressed the importance of it management. As for the organizational performance the standard deviation was 0.885 and the mean value was 3.493.

Table 1. Descriptive Statistics of the Constructs

Construct	N	Minimum	Maximum	Mean	Std. Deviation
Training	245	1	5	3.927	0.687
Strategy Management	245	1	5	3.602	0.823
IT Management	245	1	5	3.420	1.002
Organizational Performance	245	1	5	3.493	0.885

Correlation Analysis

The statistical method that is used to provide definition of the direction and the strength of the linear relationship between the two variables is the correlation analysis. It measures both the importance of the variables relationship and the strength of the correlation analysis. The researcher deployed bivariate association to obtain this level of correlation and it used Pearson's coefficient of correlation. This technique involved a value that ranges from -1 to +1 that shows the correlation strength between the two variables of the study.

The significant correlation that existed the two variables is confirmed in the correlation analysis. The level of the strong correlation is 0.01. The value of correlation between strategy management and training was tabulated in table 5.4 and it is indicated at 0.793. It also indicates 79 % of the relationship between the variables of the study.

Table 2. Correlation of variables

Construct		Training	Strategy Management	IT Management	Organizational Performance
Training	Pearson Correlation	1			
Strategy Management	Pearson Correlation	.793**	1		
IT Management	Pearson Correlation	.697**	.806**	1	
Organizational Performance	Pearson Correlation	.656**	.830**	.727**	1

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

Regression Analysis

Multiple regression analysis is used to find out the correlations between the several independent variables and the constant dependent one. The study made use of several approaches in the multiple regression analysis and this included stepwise regression, hierarchical or sequential regression and standard regression (Pallant, 2001). In order to provide its outcomes, the study used multiple regressions to enhance the results and the answers that are collected and also to test the hypotheses that are proposed in the study.

It is clear in table 3 that that correlation between the variables is 0.534. This is considered a high correlation. This shows the reliability and the consistency that exists between the variables in order to achieve the objectives of the study.

Table 3. Analysis of Direct Hypotheses

Hypothesis	Relationship	Path	SE	T-value	P-value	Decision
H1	Training -----> OP	-0.041	0.076	-0.547	0.585	Not Supported
H2	Strategy Management -----> OP	0.77	0.077	10.063	0.000	Supported
H3	IT Management -----> OP	0.152	0.053	2.844	0.005	Supported

*:p<0.05; **:p<0.01; ***:p<0.001

11. Discussion and Conclusion

The purpose of the current study was to examine the impact of both information technology management and training on the performance of the organization. The previous sections explained the relationship that exists between the variables of the study.

Strategy Management Effect on Organizational Performance

The study concluded that there is a relationship between the variables of the study. The results showed significant and positive effect ($\beta = 0.770$; $t = 10.063$; $p < 0.01$), that is in alignment with the results of previous studies of the same caliber (e.g., Nilsson & Olve, 2001; Thomas, 2007; Bourne et al., 2000; Kaplan & Norton, 2007).

IT Management Effect on Organizational Performance

The study showed that there is a significant and positive correlation between the two variables of the study ($\beta = 0.152$; $t = 2.844$; $p > 0.5$) and this result supports the previous studies that indicated the same finding of the study (e.g., Cantoni, Cellario & Ports, 2004; Kumar & Suneja, 2011).

Overall, the Police department of Sharjah is considered one of the main priorities in the development of the UAE. Hence, the Sharjah Police department contributes effectively in realizing the objectives and the goals of the UAE. According to the previous studies, IT management, strategy management and training are three main factors and effective strategies that effectively improve the performance of the organization and enhances the competitive advantage of the firms.

The results of the study supported the hypotheses of the study and they were either rejected or confirmed regarding the performance of the organization and how it is affected by IT management, strategy management and training.

Eventually, the results of the study and its findings were collected from the Sharjah Police and particularly from the units of its head sections. The data was collected from the top personnel because they have enough experience and knowledge regarding the impact of the variables of the study on the organizational performance. Regarding this, in the future other studies can follow a different perspective through getting relevant data from the concerned employees and other customers.

References

- Barney, J. (1986). Organizational culture: can it be a source of sustained competitive advantage? *Academy of Management Review*, 11, 656-665. <https://doi.org/10.5465/amr.1986.4306261>
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120. <https://doi.org/10.1177/014920639101700108>
- Berg, G. V., & Pietersma, P. (2014). *The 8 Steps to Strategic Success: unleashing the power of engagement*. London, UK: Kogan Page
- Li Boselie, P., Dietz, G., & Boon, C. (2005).
- Bergh, D. D., & Lim, E. N. K. (2008). Learning how to restructure: absorptive capacity and improvisational views of restructuring actions and performance. *Strategic Management Journal*, 29(6), 593-616. <https://doi.org/10.1002/smj.676>
- Brush T. (2007). Integrating technology into K-12 teaching and learning: current knowledge gaps and recommendations for future research. *Education Tech Research Dev*, 55, 223-252. <https://doi.org/10.1007/s11423-006-9022-5>
- Burns, B. D., & Holyoak, K. J. (1996). The impact of goal specificity on strategy use and the acquisition of problem structure. *Cognitive Science*, 20, 75-100. https://doi.org/10.1207/s15516709cog2001_3
- Campbell, J. (1971). Personnel training and development. *Annual Review of Psychology*, 22(1), 565-602. <https://doi.org/10.1146/annurev.ps.22.020171.003025>
- Carroll, G. (1984). "Dynamics of publisher succession in newspaper organizations". *Administrative Science Quarterly*, 29(1), 93-113. <https://doi.org/10.2307/2393082>
- Chi, M. T. H. (2006). Two approaches to the study of experts' characteristics. In K. A. Ericsson, N. Charness, R. R. Hoffman, & P. J. Feltovich (Eds.), *Cambridge handbook of expertise and expert performance* (pp. 21-30). Cambridge, England: Cambridge University Press. <https://doi.org/10.1017/CBO9780511816796.002>
- David, F. R. (2007). *Strategic management: Concepts & cases*. Prentice Hall. New York. 11 th Edition.
- De Waal, A. D. (2010). Achieving high Performance in the Public Sector What needs to be Done? *Public Performance & Management Review*, 34(1), 81-103. <https://doi.org/10.2753/PMR1530-9576340105>

- De Waal, A., & Kerklaan, I. (2004). De result aatgerichte overheid. Op weg naar de prestatiegedreven overheidsorganisatie [the results-oriented government. toward performance-driven government organization].
- Demirbag, M., Koh, S. C., Tatoglu, E., & Zaim, S. (2006). TQM and market orientation's impact on SMEs' performance. *Industrial Management & Data System*, 106(8), 1206-1228. <https://doi.org/10.1108/02635570610710836>
- Dewberry, C. (2001). Performance disparities between whites and ethnic minorities: Real differences or assessment bias? *Journal of Occupational and Organizational Psychology*, 74, 659-673. <https://doi.org/10.1348/096317901167578>
- Galbreath, J. (2005). Which resources matter the most to firm success? An exploratory study of resource-based theory? *Technovation*, 25, 979-987. <https://doi.org/10.1016/j.technovation.2004.02.008>
- Grusky, O. (1963). "Managerial succession and organizational effectiveness". *American Journal of Sociology*, 69(1), 21-31. <https://doi.org/10.1086/223507>
- Jing, F. F., & Avery, G. C. (2008). Missing Links in Understanding the Relationship between Leadership and Organizational Performance. *International Business & Economics Research Journal*, 7(5), 67-78.
- Johnson, G., Whittington, R., & Scholes, K. (2011). Exploring Strategy (Ninth ed.). London, UK: Pearson.
- Johnson, H. (1983). The search for gain in markets and firms: a review of the historical emergence of management accounting systems. *Accounting, Organizations and Society*, 2(3), 139-184. [https://doi.org/10.1016/0361-3682\(83\)90021-1](https://doi.org/10.1016/0361-3682(83)90021-1)
- Kanji, G., & Sá, P. (2007). Performance measurement and business excellence: the reinforcing link for the public sector. *Total Quality Management & Business Excellence*, 18(1-2), 49-56. <https://doi.org/10.1080/14783360601043096>
- Kaplan, R. S., & Norton, D. P. (1992). The Balanced Scorecard – Measures that Drive Performance. *Harvard Business Review*, 70-79.
- Koch, R. (2011). Strategy: How to create, Pursue and deliver a winning strategy (Fourth ed.). Edinburgh Gate, UK: Pearson Education Ltd.
- Kraiger, K. (2003). Perspectives on training and development. John Wiley & Sons, Inc. <https://doi.org/10.1002/0471264385.wei1208>
- Kraiger, K., McLinden, D., & Casper, W. (2004). Collaborative planning for training impact. *Human Resource Management*, 43, 337-351. <https://doi.org/10.1002/hrm.20028>
- Matloff, M. (1996). AMERICAN MILITARY HISTORY - Volume 1: 1775-1902. United Kingdom: Combined Books Pennsylvania. Mckeown, M. (2012). The Strategy Book. Edinburgh Gate: Pearson Education Limited.
- Niven, P. R. (2006). Balanced Scorecard Step by Step: Maximizing Performance and maintaining results (Second ed.). New Jersey: John Wiley @ Sons.
- Norton, D. P. (1992). The Balanced Scorecard – Measures that Drive Performance. *Harvard Business Review*, 70-79.
- Norton, D. P. (2004). Strategy Map : converting intangible assets into tangible outcomes. Boston, US: Harvard Business School Publishing Corporation.
- Outram, C. (2013). Making your strategy work: how to go from paper to people. Edinburgh Gate, UK: Pearson Education Limited
- Ptacek, J. (ed) (2010). Restorative justice and violence against women. New York, N.Y.: Oxford University Press.
- Sink, D., & Tuttle, T. (1989). Planning and measurement in your organization of the future. Norcross: GA: Industrial Engineering and Management Press.
- Sisson, K. (1993). In search of HRM. *British Journal of Industrial Relations*, 31(2), 201-210. <https://doi.org/10.1111/j.1467-8543.1993.tb00389.x>

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Moderating Effect of Ethnicity on the Purchase Decisions of Females in the Beauty Care Product Market of Sri Lanka

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Received: October 2, 2018

Accepted: October 25, 2018

Online Published: November 2, 2018

doi:10.5539/ibr.v11n12p12

URL: <https://doi.org/10.5539/ibr.v11n12p12>

Abstract

The main focal point in the eye of any marketer should be to satisfy the customer to the best possible level, in order to sustain in the ever-growing, dynamic and highly competitive marketplace. This leads them to the point where understanding the process of consumer buying behavior is of utmost importance. As the entire process of consumer buying behavior ultimately leads to their purchasing decision, deep understanding of the factors that affect this purchase decision should be the centralized core based on which all other marketing efforts should be built upon by the marketers. Based on this vitality, although these factors have already been found by past researchers in international contexts, these cannot be considered as directly applicable to the Sri Lankan context as Sri Lanka is a multiethnic country in which consumers are heavily driven by traditions and values of the ethnic group they belong to. Therefore, this study has been conducted in order to analyze the moderating effect of “Ethnicity” on the relationship between these factors and the purchasing decision.

The sample has been selected through Random Sampling and the Quantitative Research Approach has been applied. Chi-Square analysis method has been used to analyze the relationships between the independent variables (price, brand name and composition) and dependent variable (purchase decision). Two-way Anova analysis method has been used to analyze the moderating effect of the moderating variable (ethnicity) on the relationships between independent variables and the dependent variable. Based on interpretation guidelines of Chi-square test, all three independent variables, namely price, brand name and composition, affect the purchase decision of females in the beauty care product market of Sri Lanka. Thereafter, based on the interpretation guidelines of Two-way Anova, research findings of the second analysis conclude that ethnicity of the Sri Lankan females of the beauty care product market (Sinhalese, Tamils and Muslims) affect the relationships between “brand name and purchase decision” and “composition and purchase decision”, but does not affect the relationship between “price and purchase decision”.

Keywords: consumer buying behavior, consumer purchase decision, price, brand name, composition, beauty care market, skin whitening market, females of Sri Lanka, ethnicity

1. Introduction

“Marketing is the science and art of exploring, creating, and delivering value to satisfy the needs of a target market at a profit” (Kotler, 2015). “One of the key success factors in effective marketing is consumer centricity” McDonald (2016.) In order to focus on consumer centricity, firms need to first understand the consumer and prioritize their needs and wants in order to deliver value to them ultimately. This leads to the fact that marketers should clearly and deeply understand the consumer buying behavior to carry out effective strategy formulation. According to Perner (2008), in the process of consumer buying behavior, the main focus point is on consumer purchase decision, because that is where all businesses begin and survive. Therefore, it can be argued that core of all marketing efforts should be based influencing and triggering the final purchase decision of consumers.

2. Background of Study

According to many researchers, it has been argued that consumer purchase decision in the skin care product market can be affected by many factors. According to D.Court, D.Elzinga, S.Mulder, and O.J.Vetvik(2013), “...different consumers are affected by different factors in making their purchase decision when purchasing skin care products”. “In North America, even if the consumers select the same skin care brand, the factor which has influenced them to

choose the brand is different”, J. Jacoby, G. V. Johar and M. Morrin(2001). According to A.Kirmani (2013), “when purchasing skin cream, the decision of which brand to purchase heavily varies from person to person even if the buying motive is the same. This is because their decision is affected by many external factors such as the fragrance, color and manufacturing company, of the particular skin cream product”. Moreover, according to J.Escalas (2013), it has been stated that in a study of 500 female university students in Jamaica, it has been identified that each consumer is motivated by a particularly different factor when making their final purchase decision in the skin care product market. “The ultimate objective of purchasing skin care products of all females is the same, which is to enhance their beauty. But, their product choice is not the same due to being affected by other internal and external factors”, D.J. Macinnis and V.S.Folkes (2015). Furthermore, “although consumers choose their skin care products out of habit as they are used to particular brands, the first choice always depends on a particular fact which can vary from an advertisement to the color of the product package”, D. Lentini (2015).

When all of these details are taken into consideration, it is evident that purchasing decision in the skin care product market is affected by a myriad of internal and external factors. Past research have been done to examine these factors as explained below

According to C.Moungkhem and J.Surakiatpinyo (2010), main factors that affect consumer purchase decision in the cosmetic market are price, brand name and influence of spouse. Factors that affect purchase decision in the herbal care product market are price, brand name and composition, says Jacinta AtienoOkumu (2015). According to H.Y.Kim and J.E.Chung (2011), factors that affect consumer buying behavior in the skin care market are price, influence of closest friends and composition. Main factors that affect consumer purchase decision in the shampoo category are price, composition and celebrities used in advertisements, says G.Wijesundera, R.Abeyssekera (2008). According to I.Kokoi (2011), the factors that affect purchase decision in the health care category are price brand name and advertisements. Furthermore, according to M.Huda and P.Sultan (2013), factors that affect purchase decision in the herbal market are advertisements, composition and brand name. Main factors that affect consumer motives in the soap market are package design, price and fragrance of package, says N.Souiden and M.Diagne (2015). Moreover, according to Joseph Scrannel (2013), factors that affect purchase decision in the beauty care market are price, color of package and composition. Finally, the main factors that affect the purchase decision in the beauty market are price, brand name and package design.

Researchers have carried out an analysis to examine the 3 factors which have the highest frequency according to past research; “Price, Brand name and Composition”

2.1 Current Situation of Study and Knowledge Gap

Price, brand name and composition have been generalized and accepted globally as the factors that affect purchase decision in the skin care product market based on past research findings. But, Sri Lanka is a multiethnic country, in which consumers are heavily driven by traditions and values of the ethnic group they belong to. “Ethnicity is a very sensitive subject area which directly impacts standards, opinions, values, attitudes and the thought processes of people and it can have humungous effects on consumer purchase decision. Purchase decisions even in a very niche market could be different from person to person based on their ethnicity”. Moreover, “belonging to a certain ethnic group will affect the purchase decision of consumers to a certain extent in the herbal care product market. This is because there are different types of norms and values for each ethnic group. Therefore, it is agreeable to state that ethnicity have an effect on consumer purchase decision as researched and proved in international context. Thereby, these generalized factors might or might not be applicable and valid in the Sri Lankan context due to varying traditions, practices and habits followed by each ethnic group.

2.2 Objectives of the Study

1. To examine the moderating effect of ethnicity on the relationship between price and purchase decision of Sri Lankan females in the beauty care product market.
2. To examine the moderating effect of ethnicity on the relationship between brand name and purchase decision of Sri Lankan females in the beauty care product market.
3. To examine the moderating effect of ethnicity on the relationship between composition and purchase decision of Sri Lankan females in the beauty care product market.

2.3 Research Questions

1. Is there a significant moderating effect of ethnicity on the relationship between price and purchase decision of Sri Lankan females in the beauty care product market?

2. Is there a significant moderating effect of ethnicity on the relationship between brand name and purchase decision of Sri Lankan females in the beauty care product market?
3. Is there a significant moderating effect of ethnicity on the relationship between composition and purchase decision of Sri Lankan females in the beauty care product market?

3. Literature Review

3.1 Theoretical Reviews

Theoretical Review		Summary of theoretical review	Implication to research
Ethnicity Theory		Different dimensions of ethnicity	Important for the formulation of the research questionnaire
Ethnicity Theory		Moderating effect of ethnicity on psychological through processes of people	Important for the formulation of research problem statement, background of study and knowledge gap
Consumer Model	Decision	Consumer behavior is a psychological thought process	Important for the formulation of research problem statement, background of study and knowledge gap
Theoretical Review		Summary of theoretical review	Implication to research
Consumer Model	Decision	External and internal factors affect the consumer purchase decision	Important for the formulation of research problem statement, background of study and knowledge gap
Hofstede's Diagram	Onion	Different dimensions of ethnicity	Important for the formulation of the research questionnaire
Hofstede's Diagram	Onion	How the different dimensions of ethnicity affect the behavioral processes of people	Important for the formulation of research problem statement, background of study and knowledge gap
Functionalism		Behavioral patterns of people fluctuate across different ethnic boundaries	Important for the formulation of research problem statement, background of study and knowledge gap
Consumer Model	Decision	External and internal factors affect the consumer purchase decision	Important for the formulation of research problem statement, background of study and knowledge gap
Hofstede's Diagram	Onion	Different dimensions of ethnicity	Important for the formulation of the research questionnaire

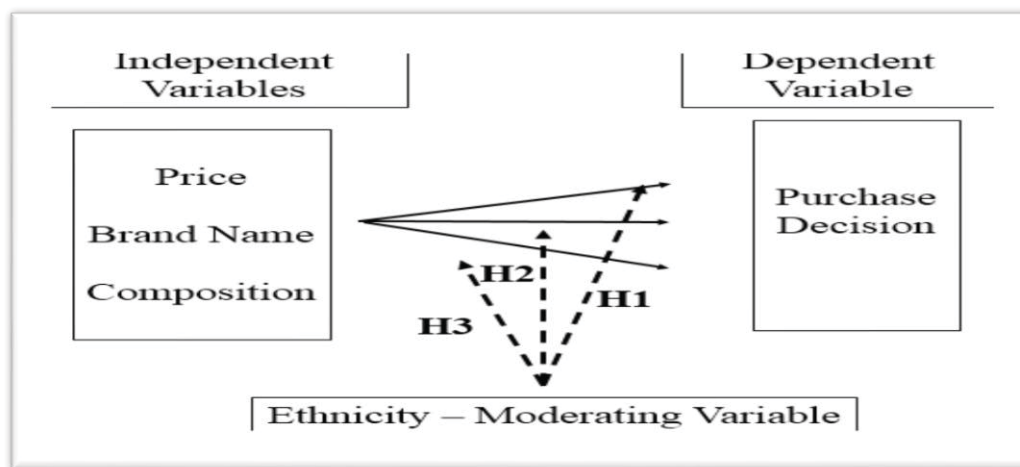
3.2 Empirical Reviews

Author	Empirical review	Part of the research to which it is applied
Steven MacDonald (2016)	Consumer centricity is key when marketing is being considered	Problem statement formulation - Background of study
Lars Perner (2008)	Purchase decision is one of the most vital points in the consumer behavior process	Problem statement formulation - Background of study
LMRB Household Panel data (2014-2015)	Amongst the sub-segments within the FMCG sector of Sri Lanka, beauty care sub-category reflects the highest monthly growth rate compared to other sub-categories such as home care, foods, etc.	Problem statement formulation - Background of study
LMRB Household Panel data (2014-2015)	Within the beauty care market of Sri Lanka, the highest contribution is from the skin whitening cream sub-category compared to other sub-categories such as cosmetics, perfumes, etc.	Problem statement formulation – Current situation in the Sri Lankan context and Knowledge gap
HeeYeon Kim and Jae-Eun Chung (2011)	Main factors that affect consumer buying behavior in the skin care market are price, influence of closest friends and composition	Problem statement formulation – Current situation in the Sri Lankan context and Knowledge gap
Chanintorn Mounghkem and Jiraporn Surakiatpinyo (2010)	Main factors that affect consumer purchase decision in the cosmetic market are price, brand name and influence of spouse	Problem statement formulation – Current situation in the Sri Lankan context and Knowledge gap
Jacinta Atieno Okumu (2015)	Main factors that affect purchase decision in the herbal care product market are price, brand name and composition	Problem statement formulation – Current situation in the Sri Lankan context and Knowledge gap
HeeYeon Kim and Jae-Eun Chung (2011)	Main factors that affect consumer buying behavior in the skin care market are price, influence of closest friends and composition	Problem statement formulation – Current situation in the Sri Lankan context and Knowledge gap
Chanintorn Mounghkem and Jiraporn Surakiatpinyo (2010)	Main factors that affect consumer purchase decision in the cosmetic market are price, brand name and influence of spouse	Problem statement formulation – Current situation in the Sri Lankan context and Knowledge gap

Jacinta AtienoOkumu (2015)	Main factors that affect purchase decision in the herbal care product market are price, brand name and composition	Problem statement formulation – Current situation in the Sri Lankan context and Knowledge gap
AmnaKirmani (2013)	When purchasing skin cream, the decision of which product to purchase heavily varies from person to person even if the buying motive is the same. This is because their decision is affected by many external factors such as the fragrance, color, manufacturing company, etc. of the particular skin cream product	Problem statement formulation – Current situation in the Sri Lankan context and Knowledge gap
Trading Economics (2014)	“Females of Sri Lanka” accounts to 51.75% of Sri Lankan population	Population and Sample – Selection of the population
World Bank Indicators (2014)	Out of a total of 20 million people in Sri Lanka (20,639,000 accurately), the female population accounts to over 10 million (10,680,682.5 accurately) as of the year 2014	Population and Sample – Selection of the population

4. Methodology

4.1 Conceptual Framework



Source: Authors

4.2 Hypotheses of Study

- H₁ - There is a significant moderating effect of ethnicity on the relationship between price and purchase decision of Sri Lankan females in the beauty care product market
- H₂ - There is a significant moderating effect of ethnicity on the relationship between brand name and purchase decision of Sri Lankan females in the beauty care product market
- H₃ - There is a significant moderating effect of ethnicity on the relationship between composition and purchase decision of Sri Lankan females in the beauty care product market

4.3 Population

As the research focuses on purchase decision of Sri Lanka females, the population is Sri Lankan females .

4.4 Sample

The sample selected consists of a total of 470 machine operators randomly selected based on employee databases of Brandix Intimates, MAS and Hela Clothing in Sri Lanka

4.4.1 Sampling Method

Random sampling method has been used in order to select the sample for the study. Frame of reference for sampling was females of garment factories of Sri Lanka.

4.4.2 Measurement Instruments

The sole measurement instrument used in this study is a manually distributed questionnaire developed based on the “Quantitative Approach”. The questionnaire consists of 22 questions which covers the main attributes of each of the 2types of variables (independent and dependent). The 22 questions span in such a way to cover all the

attributes of “Purchase decision, Price, Brand Name and Composition

4.5 Research Methods

4.5.1 Pilot Study

The “Pilot Study” of this study has been conducted among 45 randomly selected respondents. The data gathered through this study were recorded on an excel sheet based on the variables and attributes of the distributed questionnaire. The data were then exported to SPSS and the “Reliability Test” of the research questionnaire was done through “SPSS Version 22”.

4.5.2 Reliability Test

As the Cronbach’s alpha values of the test for all Likert scale based questions are above 0.75, which is the Cronbach’s alpha error rate, it can be concluded that all of the 22 Likert scale based questions included in the questionnaire of this study are reliable

4.5.3 Data Collection

Main data collection method used which has been used is “Primary Data Collection” as the researches have personally visited the selected sample and carried out data collection.

4.5.4 Data Analysis

SPSS Version 22 has been used to carry out data analysis. Chi-square test has been used to analyze the relationship between the dependent variables and the independent variable. Two-way anova has been used to test the moderating effect

5. Results and Interpretation

Chi-square Test Results

Relationship	“p” value according to analysis
Relationship between purchase decision and price	0.001
Relationship between purchase decision and brand name	0.002
Relationship between purchase decision and composition	0.003

Two-way Anova Test Results

Relationship	“Sig” value according to analysis
Moderating effect of ethnicity on the relationship between purchase decision and price	0.427
Moderating effect of ethnicity on the relationship between purchase decision and brand name	0.000
Moderating effect of ethnicity on the relationship between purchase decision and composition	0.000

As the chi-square test value of all 3 relationships between dependent and independent variable are below 0.05 (the error factor), the null hypotheses have been rejected and the research hypotheses have been accepted. As the two-way anova test value is lower than 0.05 (error factor) for the relationships between brand name and composition, the null hypotheses have been rejected and research hypotheses have been accepted, but for price, since the test value is above 0.05, the null hypothesis has been accepted.

6. Recommendations

In the field of marketing customer is considered as the key without whom a market will not exist in the first place. Therefore, the main focal point in the eye of any marketer should be to satisfy the customer to the best possible level, in order to sustain in the ever growing, dynamic and highly competitive marketplace. This leads them to the point where understanding the process of consumer buying behavior is of utmost importance. As the entire process of consumer buying behavior ultimately leads to their purchasing decision, deep understanding of the factors that affect this purchase decision should be built upon by the marketers. Therefore the findings of this research area significant support for the marketers in the beauty care product market of sri lanka for formulating their strategies effectively in a way which convinces and triggers the consumer purchasing decisions. This includes all promotional efforts which would include all the elements of the “Marketing Mix”. For example, based on findings of this research it has been concluded that all three factors “Price, Brand Name and Composition “affect the purchasing decisions of females in the beauty care product market of Sri Lanka. Therefore, when designing marketing campaigns or simply and advertisements for a new product launch in the skin whitening product market, the advertisement should clearly and distinguishably mention the price , brand name and the composition of the product.

7. Conclusion

The research aims to test 3 different research hypotheses; which imply that there is a relationship between each of the independent variable and the dependent variable. When a sample of 470 females in the beauty care product market of Sri Lanka, which was randomly selected, was analyzed, it has been found that the purchasing decision of these females when buying skin whitening cream was affected by 3 main factors; Price, Brand name and Composition. Moreover, when a sample of 470 females in the beauty care product market of Sri Lanka, which was randomly selected, was analyzed, it has been found that their ethnicity affects the relationship between price of product and purchasing decision of these females when buying skin whitening cream and their ethnicity does not affect the relationship between brand name and purchase decision and composition and purchasing decision of these females when buying skin whitening cream.

References

- Boduszek, D. (2011). Chi Square test of independence and McNemer Test .
- Chandler , S. (2012). What is SPSS. Canada.
- Choudhury , A., & Mukherjee, K. (2014). Celebrity Endorsment and its Impacts on Studnets Buying Behavior towards Persoanl Care Products. *Journal of Marketing* , 50-62.
- Das, S., & Padhy , P. K. (2012). Brand perception by external factors. *International Journal of Advanced Research*, 25-38.
- Dissanayake & Weerasiri. (2007). Involvement of Personnel Endorsements for building Brand. *Kelaniya Journal of Management*, 20-36.
- Doss, S. (2012). The transference of brand attitude : the effect on the celebrity endorser. *Journal of Management and Marketing Reserach*.
- Dudovskiy, J. (2011). An ultimate guide to write a dissertation .
- Gupta, S. (2006). Celebrity Endorsement . India: Slideshare .
- H. C., K. (1979). The Role of Action inAttitude change . University of Nebraska Press .
- Hilary, J. (2008). The research Process. Retrieved from <https://businessmanagement.wordpress.com> .
- Hovland , C., Janis , I., & Kelly, H. (1953). Communication and Persuasion .
- Jain , V. (2011). Clebrity Endorsement and its impact on sales. *Global Journals*, 45-59.
- Kasana, J., & Chaudhary, N. (2014). Impact of External factors on Consumer buying behavior. *International Reserach Journal of Commerce , Arts and Science*, 25-33.
- Kelly. (1973). Attribution Theory.
- Kumar, A. (2010). Factors and its impact on consumer buying behavior . United Kingdom .
- Louis. (2008). DJS Reaserch. Retrieved from Quantitative Reserach:
<http://www.marketreseachworld.net/content/view/393/42>
- McCracken, G. (1989). Who is the Celebrity Endorser? Cultural Foundations of the Endorsement Process. *Journal of Consumer Research*, 16(3), 310-321. <https://doi.org/10.1086/209217>
- T.N.Company. (2014). Review and Oppurtunities. Sri Lanka .
- Trading Economics. 2014
- World Bank Indicators., 2014

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An Investigation of the Predictive Speed of the UK VIX for the Downside Risk in European Equity Markets

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Received: September 18, 2018 Accepted: October 25, 2018 Online Published: November 2, 2018

doi:10.5539/ibr.v11n12p18

URL: <https://dx.doi.org/10.5539/ibr.v11n12p18>

Abstract

Using the time-series data of UK volatility index (VIX) and other four European equity indices of France, Italy, Spain, and Portugal, and applying quantile regressions, this study investigates the predictive power and predictive speed of the UK VIX for the future sharp price drops in other four European equity markets. As a result, our empirical examinations derive the following findings. (1) First, we clarify that the increases of the UK VIX have statistically significant predictive power for the downside risk in other four European equity markets. (2) Second, our empirical results reveal that the two to four days before, the changes in the UK VIX can forecast the downside risk in other four European equity markets.

Keywords: European equity markets, downside risk, quantile regression, VIX

1. Introduction

In the fields of business, economics, and finance, downside risk in financial markets is a highly crucial research topic and in fact, recently, many interesting studies regarding this issue have been conducted (e.g., Galsband, 2012; Reboredo and Rivera-Castro, 2014; Min and Kim, 2016; Tsuji, 2017a; Farago and Tédongap, 2018; Bernstein et al., 2018). In a globalizing and tightening international financial markets, how does downside risk in international equity markets spill over? Further, how is the speed of downside risk spillovers in international equity markets? To answer these research questions, by using the time-series data of the UK VIX and other four European equity price indices of France, Italy, Spain, and Portugal, and applying quantile regressions, this study investigates the predictive power and predictive speed of the UK volatility index (VIX) for the future sharp price drops in other European equity markets.

In European equity markets, the UK equity market is particularly important, and the UK VIX used in this study is the volatility index as to the most representative and popular UK equity market index, the FTSE100. Thus, the use of this UK VIX is highly meaningful for conducting beneficial empirical examinations for European equity markets. In addition, the equity markets of France, Italy, Spain, and Portugal are also important in Europe; and all the five countries are included in the Southern and Western Europe. That is, this study focuses on these major important five European equity markets in the Southern and Western Europe.

Furthermore, we stress that this study is highly significant because our study can be expected to reveal the following matters: (1) How does the turmoil of the UK equity market spill over to other European equity markets? (2) Does the increasing fear in the UK equity market predict the downside risk in other European equity markets? The clarifications regarding these matters shall lead to new contributions to existing and future research in the fields of business, economics, and finance; and this is the reason why we conduct this research in this paper. In addition, it is noted that the left-tail downside risk of the price changes in equity markets can be effectively tested by using quantile regressions. More specifically, by applying quantile regressions, we can test the one-to-one linkages between the UK VIX increases and the sharp price drops in other European equity markets more directly. For these reasons, we apply quantile regressions in this study.

As a result, the main findings derived from our investigations are as follows. First, the second and third lags of the changes in the UK VIX predict the downside risk for the French equity market. Next, the second, third, and fourth lags of the changes in the UK VIX predict the downside risk for the Italian equity market. Third, the third and/or fourth lags of the changes in the UK VIX predict the downside risk for the Spanish equity market. Fourth,

the third and/or fourth lags of the changes in the UK VIX predict the downside risk for the Portuguese equity market. The above results derived from our examinations are interesting and quite new; hence this work makes important and new contributions to the existing and future research in business, economics, and finance.

The rest of this paper is as follows. Section 2 reviews recent literature; Section 3 describes our data and variables; Section 4 introduces our quantitative methodology; Section 5 provides our empirical results; and Section 6 provides our conclusions.

2. Recent Literature Review

In this section, we briefly review existing recent literature that studied downside risk of asset prices. We focus on only recent studies in this literature review. First, Hilal et al. (2011) attempted to model the tail dependence between S&P 500 and US VIX futures, and presented some hedging effectiveness using their model. Further, using the data of emerging economies of Brazil, Chile, Colombia, India, Mexico, Russia, South Africa, and Turkey, and applying copulas, Reboredo et al. (2016) investigated the downside and upside risk spillovers between exchange rates and equity prices. Tsuji (2016) empirically exhibited that, in predicting the US equity market downside risk, US VIX did not outperform the volatility forecasts of S&P 500, which were derived from EGARCH and TGARCH models. Min and Kim (2016) investigated whether the time-variations of momentum strategies' profitability have a relationship with the variations in macroeconomic conditions, and they found that momentum strategies exposed investors to greater downside risk in financial markets.

Sukcharoen and Leatham (2017) empirically examined the effectiveness of hedging downside risk of oil refineries by applying vine copulas. The empirical results of this study suggested that the D-vine copula model was a safe and good choice in managing the downside risk as to oil refineries. Tsuji (2017b) investigated the forecast power of the previous day's US VIX for large price drops in the Tokyo Stock Price Index (TOPIX) in Japan, and this study exhibited that the previous day's US VIX had statistically significant forecast power for large price declines in the TOPIX in Japan. Further, Xiaoye (2018) investigated the downside and upside risk spillovers from China to Asian equity markets by applying a CoVaR-copula approach.

Moreover, Farago and Tédongap (2018) researched by focusing on downside risk in asset pricing framework, and they found three priced disappointment-related factors in the US; namely, (i) a downstate factor, (ii) a market downside factor, and (iii) a volatility downside factor. Tsuji (2018a) analyzed return transmission and volatility spillovers between oil futures and international oil equities, and interpreted the clarified asymmetric spillovers between them were related to downside risk in the international oil and equity markets. Finally, using the data of 20 global currencies against the US dollar, Chuliá et al. (2018) investigated the currency downside risk, liquidity, and financial stability by estimating volatility- and quantile-based spillovers across the 20 currencies against the US dollar.

As the above recent literature review shows, we understand that downside risk is one of the most significant and appealing research topics in the fields of business, economics, and finance. Hence in this study, focusing on downside risk in the Southern and Western European equity markets, we quantitatively examine whether and how UK VIX predict downside risk in other European equity markets of France, Italy, Spain, and Portugal.

3. Data and Variables

This section explains our data and variables. In this study, DUKVIX denotes the first difference series of the VIX as to FTSE100 in the UK; DFRA denotes the first difference series of the French equity price index, CAC40; DITA denotes the first difference series of the Italian equity price index, FTSE MIB; DSPN denotes the first difference series of the Spanish equity price index, IBEX35; and DPORT denotes the first difference series of the Portuguese equity price index, PSI ALL-SHARE.

All price data are from Thomson Reuters, and the sample period is from May 14, 2004 to August 2, 2018 for price series, and the period from May 17, 2004 to August 2, 2018 is for all the first price difference (i.e., price change) series. Figure 1 displays the daily time-series evolution of all the above four equity prices with the UK VIX, and Figure 2 shows all the above first difference series of the four equity price indices with the first difference series of the UK VIX.

In this study, as above, we use not return series but price change series because price changes are more important than return series in the context of risk management of asset prices as they are used in the Value-at-Risk (VaR) computations. As in VaR calculations, we focus on the left-tail quantiles of asset price changes in this study. Thus, our use of the quantile regressions applied to price change data in this paper is suitable from the viewpoint of the downside risk evaluation, which is the focus of this study.

Table 1 shows the descriptive statistics for the first difference series of the four European equity price indices

and the first difference series of the UK VIX. This table suggests that the skewness value of DUKVIX is positive, while the skewness values of DFRA, DITA, DSPN, and DPORT are all negative. Further, Table 1 also shows that the kurtosis of DUKVIX is especially high, and the kurtosis values of DFRA, DITA, DSPN, and DPORT are also higher than that of normal distributions. In addition, Figure 1 indicates that when the UK VIX largely increases, the equity prices of France, Italy, Spain, and Portugal sharply drop. Further, Figure 2 shows that when the volatility of the UK VIX changes largely increases, the volatilities of the changes in equity prices of France, Italy, Spain, and Portugal also sharply increases.

4. Methodology

This section documents our investigating methodology. In this study, we employ the following quantile regression model (1):

$$Q_t = \xi_0 + \xi_1 DUKVIX_{t-k} + v_t. \quad (1)$$

In the above model (1), Q_t denotes the specified quantile of the distribution of DFRA, DITA, DSPN, or DPORT. In our analyses, we use 0.01 quantile, 0.015 quantile, and 0.02 quantile in order to capture the large downside risk of the four European equity indices. Further, $DUKVIX_{t-k}$ denotes the k th lag variable of the daily first difference series of the VIX as to FTSE100, and we use $k=1, \dots, 5$.

Hence, using model (1), we can test the predictive power and predictive speed of the UK VIX changes as to the 1% left-tail, 1.5% left-tail, and 2% left-tail downside risk of the distributions for price changes in other European equity indices of France, Italy, Spain, and Portugal. As we noted, the quantile regressions are suitable for examining the left-tail downside risk of equity price changes more directly and effectively.

5. Empirical Results

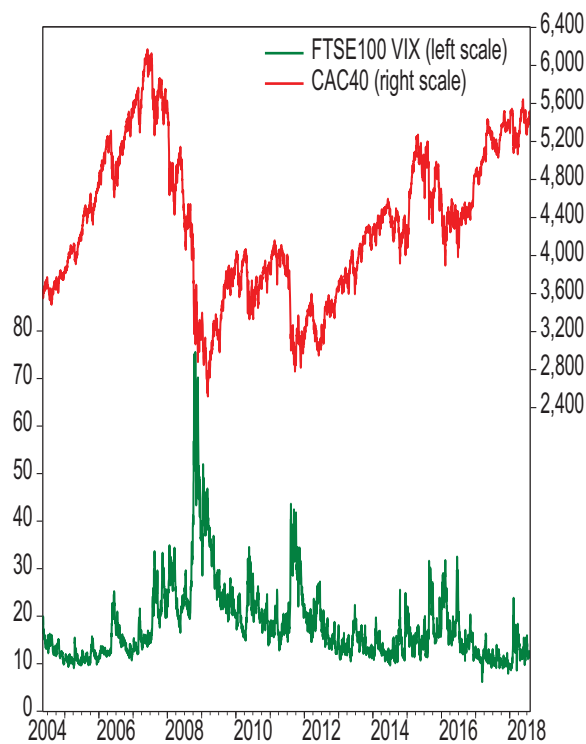
This section documents our main results. As noted, we derive our results by using price change series because price changes are more important than return series in the context of asset price downside risk evaluations. In fact, in VaR calculations, asset price changes are often used. Hence, we focus on the left-tail quantiles of equity price changes in this study. Table 2 exhibits the estimation results of our quantile regression model (1), and this table shows the predictive power and predictive speed of the UK VIX for the large price declines in other European equity markets. First, Panel A of Table 2 indicates that the second and third lags of the changes in the UK VIX predict the 0.01, 0.015, and 0.02 quantile downside risk for the French equity market. This means that the turmoil of the UK equity market predicts the 1%, 1.5%, and 2% left-tail downside risk for the French equity market, and the increasing fear in the UK equity market spills over to the French equity market in two or three days.

Table 1. Descriptive statistics of price changes in European equity indices and UK VIX changes

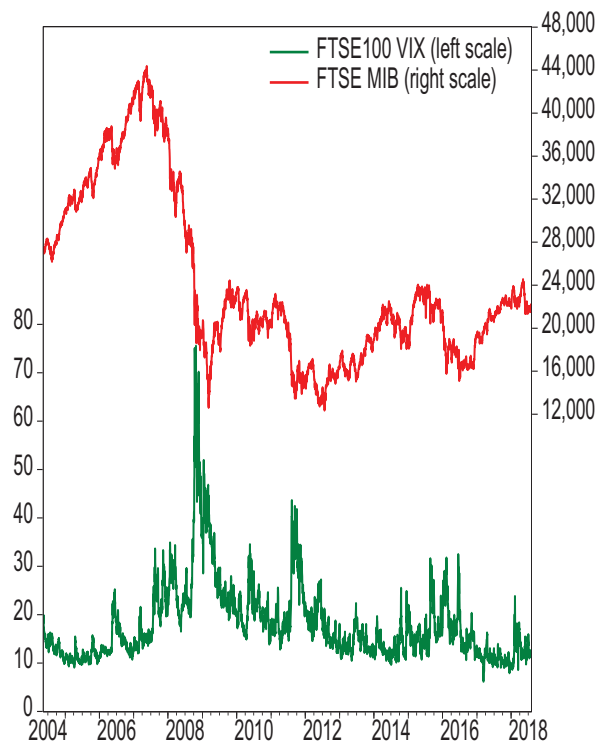
	DUKVIX	DFRA	DITA
Mean	-0.0014	0.5009	-1.5837
Median	-0.0200	0.8100	6.2800
Maximum	23.3000	367.0100	2333.5900
Minimum	-14.1400	-368.7700	-2242.3600
Standard deviation	1.5843	53.3033	322.7287
Skewness	1.1548	-0.1966	-0.2711
Kurtosis	28.2022	8.0400	7.8981
	DSPN	DPORT	
Mean	0.5173	-0.0138	
Median	3.8000	0.3300	
Maximum	1305.8000	133.2500	
Minimum	-1097.6000	-161.5100	
Standard deviation	139.8906	17.2408	
Skewness	-0.1674	-0.5287	
Kurtosis	10.5293	12.2198	

Note. DUKVIX denotes the first difference series of the VIX as to FTSE100; DFRA denotes the first price difference series of CAC40; DITA denotes those of FTSE MIB; DSPN denotes those of IBEX35; and DPORT denotes those of PSI ALL-SHARE. All observations for the five time-series are 3,709.

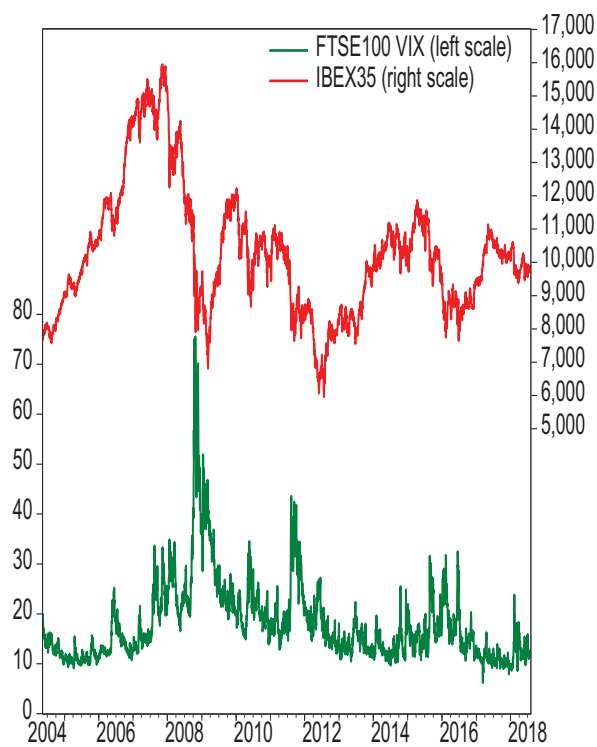
Panel A. France



Panel B. Italy



Panel C. Spain



Panel D. Portugal

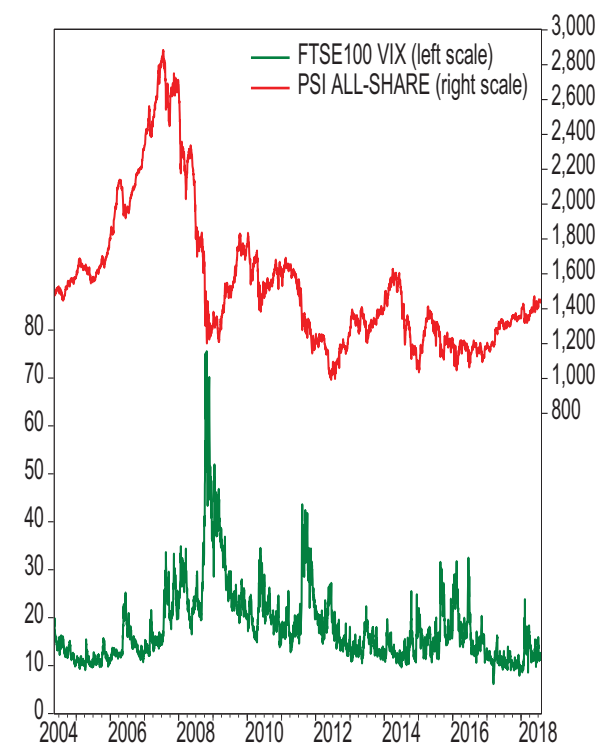
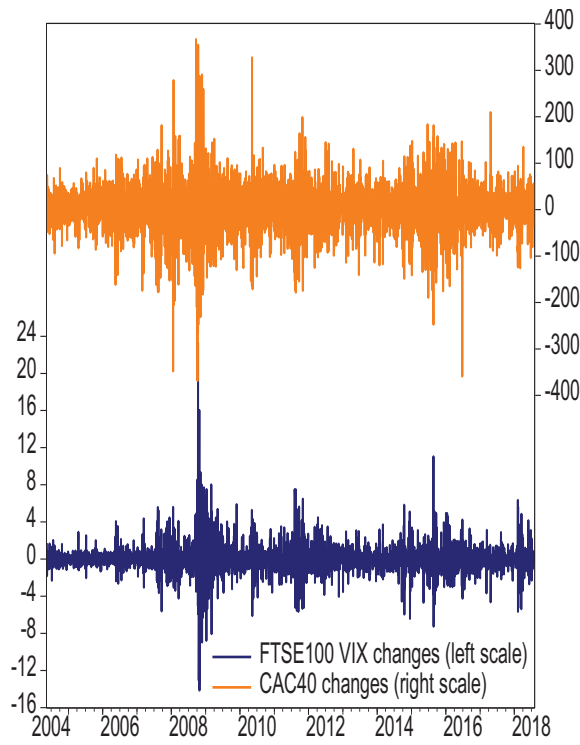
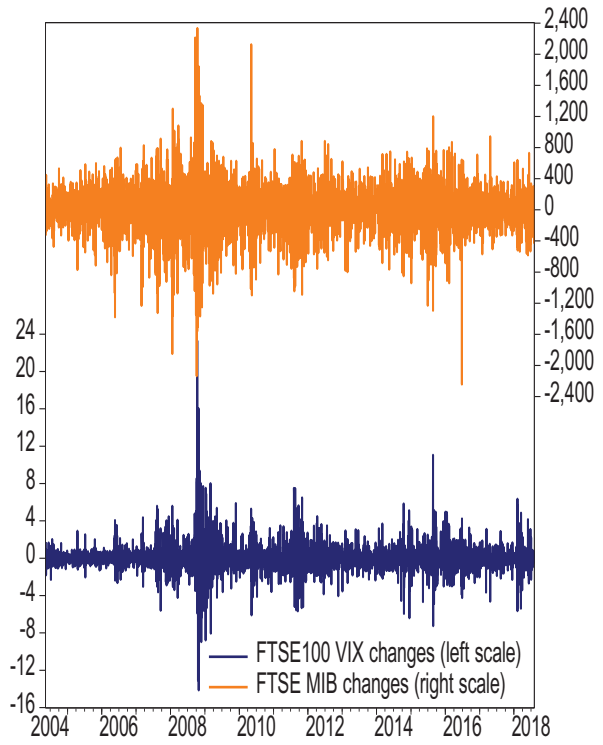


Figure 1. Dynamic time-series price evolution of European countries' equity indices with the VIX in the UK: From May 14, 2004 to August 2, 2018

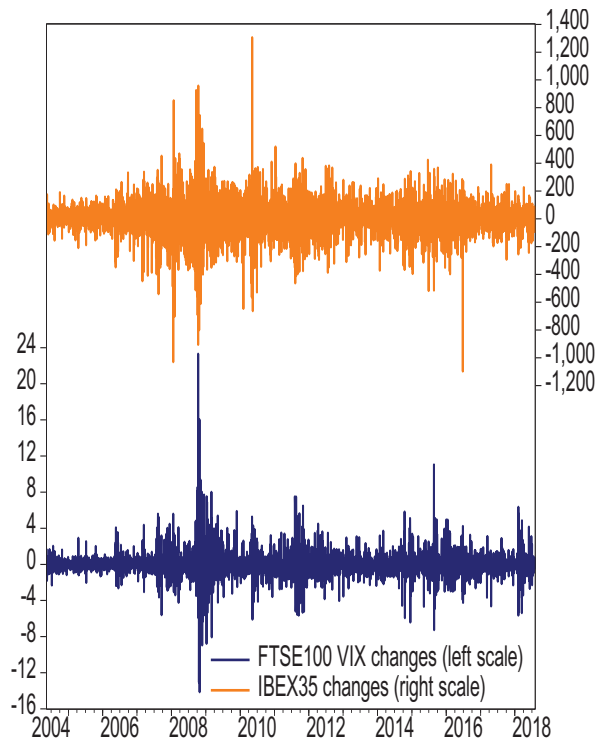
Panel A. France



Panel B. Italy



Panel C. Spain



Panel D. Portugal

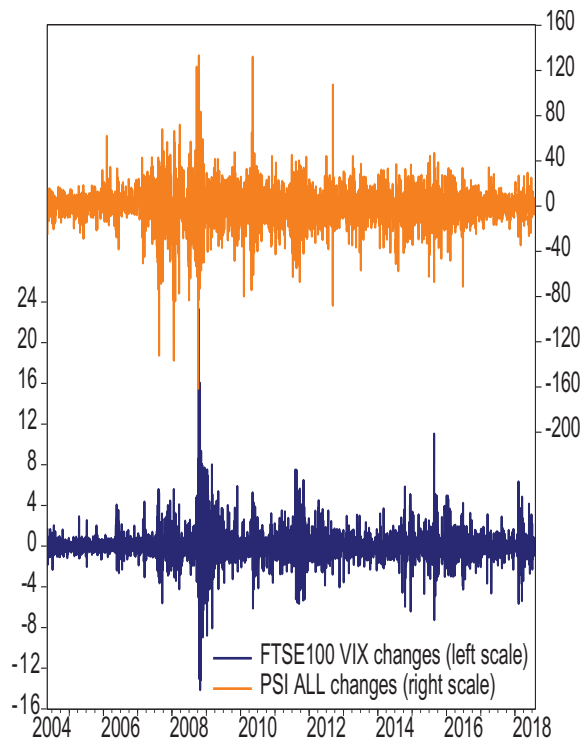


Figure 2. Dynamic time-series evolution of price changes in European countries' equity indices with UK VIX changes: From May 17, 2004 to August 2, 2018

Table 2. Predictive speed of the UK VIX for the large price declines in equity indices of other European countries: Results of quantile regressions

Panel A. France						
	0.01 quantile		0.015 quantile		0.02 quantile	
	Coefficient	<i>p</i> -value	Coefficient	<i>p</i> -value	Coefficient	<i>p</i> -value
Constant	-146.5005***	0.0000	-131.1324***	0.0000	-120.7339***	0.0000
DUKVIX(-1)	3.3113	0.3804	0.2997	0.8528	1.3997	0.1880
DUKVIX(-2)	-3.3968	0.1440	-2.7142**	0.0107	-2.1391***	0.0037
DUKVIX(-3)	-3.7722**	0.0398	-5.3453***	0.0016	-5.5420***	0.0000
DUKVIX(-4)	-1.4074	0.7506	-2.1114	0.3552	-1.6458	0.2180
DUKVIX(-5)	2.3319	0.4604	2.8743	0.1176	1.5837	0.1441
Panel B. Italy						
	0.01 quantile		0.015 quantile		0.02 quantile	
	Coefficient	<i>p</i> -value	Coefficient	<i>p</i> -value	Coefficient	<i>p</i> -value
Constant	-916.9733***	0.0000	-791.8599***	0.0000	-747.5550***	0.0000
DUKVIX(-1)	29.6605***	0.0029	9.2034	0.3299	2.3928	0.6868
DUKVIX(-2)	-33.8504***	0.0011	-11.8987	0.5985	-19.6509	0.1271
DUKVIX(-3)	-13.4432	0.1668	-27.8245***	0.0000	-29.4966***	0.0100
DUKVIX(-4)	-17.1099***	0.0059	-27.1027***	0.0010	-32.2428***	0.0000
DUKVIX(-5)	31.6342***	0.0000	16.2099*	0.0594	12.8975	0.1079
Panel C. Spain						
	0.01 quantile		0.015 quantile		0.02 quantile	
	Coefficient	<i>p</i> -value	Coefficient	<i>p</i> -value	Coefficient	<i>p</i> -value
Constant	-384.0946***	0.0000	-339.6576***	0.0000	-315.0487***	0.0000
DUKVIX(-1)	4.9010**	0.0304	0.8935	0.7561	-0.2470	0.9110
DUKVIX(-2)	-3.9899	0.5365	1.0542	0.8192	-4.7069	0.1889
DUKVIX(-3)	-6.1510***	0.0031	-7.9787***	0.0000	-10.4921***	0.0000
DUKVIX(-4)	-2.4303	0.5536	-2.3766	0.3492	-5.0431***	0.0085
DUKVIX(-5)	2.7151	0.2348	0.2751	0.9227	1.2125	0.6315
Panel D. Portugal						
	0.01 quantile		0.015 quantile		0.02 quantile	
	Coefficient	<i>p</i> -value	Coefficient	<i>p</i> -value	Coefficient	<i>p</i> -value
Constant	-50.7222***	0.0000	-45.4806***	0.0000	-40.6466***	0.0000
DUKVIX(-1)	0.6325	0.1418	0.0985	0.8830	-0.1826	0.8051
DUKVIX(-2)	0.3387	0.7326	-0.4838	0.4559	-0.9485	0.2670
DUKVIX(-3)	-0.2936	0.7271	-1.2586*	0.0991	-1.8222	0.1122
DUKVIX(-4)	-0.7613***	0.0067	-0.9961*	0.0939	-0.4897	0.5126
DUKVIX(-5)	0.1938	0.8733	0.3082	0.8513	0.8762	0.5076

Note. In Panel A, the dependent variable is DFRA; in Panel B, the dependent variable is DITA; in Panel C, that is DSPN; and in Panel D, that is DPORT. In this table, DUKVIX(-*k*) denotes the *k*th lag variable of the daily first difference series of the VIX as to FTSE100. ***, **, and * means the statistical significance at the 1%, 5%, and 10% levels, respectively.

Second, Panel B of Table 2 suggests that the second, third, and fourth lags of the changes in the UK VIX predict the 0.01, 0.015, and 0.02 quantile downside risk for the Italian equity market. This indicates that the turmoil of the UK equity market predicts the 1%, 1.5%, and 2% left-tail downside risk for the Italian equity market, and the increasing fear in the UK equity market spills over to the Italian equity market in two to four days. Third, Panel C of Table 2 indicates that the third and/or fourth lags of the changes in the UK VIX predict the 0.01, 0.015, and 0.02 quantile downside risk for the Spanish equity market. This means that the turmoil of the UK equity market predicts the 1%, 1.5%, and 2% left-tail downside risk for the Spanish equity market, and the increasing fear in the UK equity market spills over to the Spanish equity market in three or four days. Fourth, Panel D of Table 2 suggests that the third and/or fourth lags of the changes in the UK VIX predict the 0.01 and 0.015 quantile downside risk for the Portuguese equity market. This suggests that the turmoil of the UK equity market predicts the 1% and 1.5% left-tail downside risk for the Portuguese equity market, and the increasing fear in the UK equity market spills over to the Portuguese equity market in three or four days.

In addition, Panels A to D of Table 2 indicate that in general, the first lags of the changes in the UK VIX do not predict the 0.01, 0.015, or 0.02 quantile downside risk for other four European equity markets, and the coefficients of the first lags of the UK VIX changes take positive signs weirdly in general. We interpret that this is because the UK VIX includes the information as to downside risk in other European equity markets very quickly, and as a result, the first lags of the UK VIX changes show little linkages with the downside risk for other four European equity markets.

However, as above, interestingly, all our empirical results from effective quantile regressions show that the two to four days before, the changes in the UK VIX can forecast the downside risk for other European equity markets investigated in this study. We note that looking at the statistically significant lags of the UK VIX changes in Panels A to D in Table 2, it is also understood that after the increases of the UK VIX, the equity prices in France firstly drop, and then those in Italy decline. After that, the equity prices in Spain decline, and then those in Portugal drop. Therefore, our quantile regression analyses also reveal that the predictive and spillover speed of the UK VIX changes as to the downside risk in other four European equity markets slightly differ with countries. Overall, as we demonstrated above, the UK VIX have statistically significant forecast power for sharp price drops in other European equity markets of France, Italy, Spain, and Portugal.

6. Summary and Conclusions

In the fields of business, economics, and finance, downside risk in financial markets is highly crucial, and recently, on the back of globalizing and tightening financial markets, the research of downside risk becomes more important. More concretely, how does the downside risk in international equity markets spill over? Further, how is the speed of downside risk spillovers in international equity markets? In order to answer these research questions, using the time-series data of the UK VIX and other four European equity indices, and applying quantile regressions, this study has investigated the predictive power and predictive speed of the UK VIX for the future sharp price drops in the equity markets of France, Italy, Spain, and Portugal. Our empirical examinations derived the following findings.

First, (1) the second and third lags of the changes in the UK VIX predict the 0.01, 0.015, and 0.02 quantile downside risk for the French equity market. Next, (2) the second, third, and fourth lags of the changes in the UK VIX predict the 0.01, 0.015, and 0.02 quantile downside risk for the Italian equity market. Third, (3) the third and/or fourth lags of the changes in the UK VIX predict the 0.01, 0.015, and 0.02 quantile downside risk for the Spanish equity market. Fourth, (4) the third and/or fourth lags of the changes in the UK VIX predict the 0.01 and 0.015 quantile downside risk for the Portuguese equity market. Finally, (5) as to the predictive and spillover speed of downside risk, after the increases of the UK VIX, the equity prices in France firstly drop, and then those in Italy decline. After that, the equity prices in Spain decline, and then those in Portugal drop. Therefore, our quantile regression analyses also revealed that the predictive and spillover speed of the UK VIX as to downside risk in other four European equity markets slightly differ with countries.

In addition, our empirical results can be interpreted as follows. First, (1) the downside risk in European equity markets comoves. This interpretation is quite interesting and important, and we also consider that such downside risk comovements may relate to the psychology of equity markets because VIX is known as a fear gauge. Second, (2) we understand that there are downside risk spillovers between the UK and other European equity markets, and this can be interpreted that the spillovers of asset price evolutions between international equity markets shall be asymmetric (This context of spillovers is analyzed by Tsuji (2018a, 2018b), for example.). These two viewpoints are highly important and useful for further considerations of the issues related to international financial market linkages and interactions. This kind of further work is one of our future tasks.

Acknowledgments

The author is particularly grateful to the repeated and courteous invitation from the journal to write to this journal. The author also appreciates the Japan Society for the Promotion of Science Grant-in-Aid for Scientific Research and the Chuo University Personal Research Grant for their generous financial assistance to this research. In addition, the author thanks an editor and three anonymous referees for their supportive and constructive comments on this paper. Furthermore, the author also thanks Kevin Duran for his kind editorial assistance to my paper. Finally, the author deeply thanks all the Editors of this journal for their care and kind attention on my paper.

References

- Bernstein, S., Colonnelli, E., Giroud, X., & Iverson, B. (2018). Bankruptcy spillovers. *Journal of Financial Economics*, forthcoming.
- Chuliá, H., Fernández, J., & Uribe, J. M. (2018). Currency downside risk, liquidity, and financial stability. *Journal of International Money and Finance*, 89, 83-102. <https://doi.org/10.1016/j.jimonfin.2018.09.009>
- Farago, A., & Tédongap, R. (2018). Downside risks and the cross-section of asset returns. *Journal of Financial Economics*, 129, 69-86. <https://doi.org/10.1016/j.jfineco.2018.03.010>
- Galsband, V. (2012). Downside risk of international stock returns. *Journal of Banking & Finance*, 36, 2379-2388. <http://dx.doi.org/10.1016/j.jbankfin.2012.04.019>
- Hilal, S., Poon, S. H., & Tawn, J. (2011). Hedging the black swan: Conditional heteroskedasticity and tail dependence in S&P500 and VIX. *Journal of Banking & Finance*, 35, 2374-2387. <https://doi.org/10.1016/j.jbankfin.2011.01.035>
- Min, B. K., & Kim, T. S. (2016). Momentum and downside risk. *Journal of Banking & Finance*, 72, S104-S118. <http://dx.doi.org/10.1016/j.jbankfin.2016.04.005>
- Reboredo, J. C., & Rivera-Castro, M. A. (2014). Gold and exchange rates: Downside risk and hedging at different investment horizons. *International Review of Economics and Finance*, 34, 267-279. <http://dx.doi.org/10.1016/j.iref.2014.07.005>
- Reboredo, J. C., Rivera-Castro, M. A., & Ugolini, A. (2016). Downside and upside risk spillovers between exchange rates and stock prices. *Journal of Banking & Finance*, 62, 76-96. <http://dx.doi.org/10.1016/j.jbankfin.2015.10.011>
- Sukcharoen, K., & Leatham, D. J. (2017). Hedging downside risk of oil refineries: A vine copula approach. *Energy Economics*, 66, 493-507. <http://dx.doi.org/10.1016/j.eneco.2017.07.012>
- Tsuji, C. (2016). Does the fear gauge predict downside risk more accurately than econometric models? Evidence from the US stock market. *Cogent Economics & Finance*, 4: 1220711, 1-42. <http://dx.doi.org/10.1080/23322039.2016.1220711>
- Tsuji, C. (2017a). Forecasting large price declines of the Nikkei using the S&P 500 implied volatility. *International Journal of Business Administration*, 8, 58-64. <http://dx.doi.org/10.5430/ijba.v8n1p58>
- Tsuji, C. (2017b). Does the CBOE volatility index predict downside risk at the Tokyo stock exchange? *International Business Research*, 10, 1-7. <http://dx.doi.org/10.5539/ibr.v10n3p1>
- Tsuji, C. (2018a). Return transmission and asymmetric volatility spillovers between oil futures and oil equities: New DCC-MEGARCH analyses. *Economic Modelling*, 74, 167-185. <https://doi.org/10.1016/j.econmod.2018.05.007>
- Tsuji, C. (2018b). New DCC analyses of return transmission, volatility spillovers, and optimal hedging among oil futures and oil equities in oil-producing countries. *Applied Energy*, forthcoming.
- Xiaoye, J. (2018). Downside and upside risk spillovers from China to Asian stock markets: A CoVaR-copula approach. *Finance Research Letters*, 25, 202-212. <http://dx.doi.org/10.1016/j.frl.2017.10.027>

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A Pricing Scheme for the Task “Take Photos to Make Money”

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Received: October 8, 2018

Accepted: October 24, 2018

Online Published: November 8, 2018

doi:10.5539/ibr.v11n12p26

URL: <https://doi.org/10.5539/ibr.v11n12p26>

Abstract

In this paper, we first use the multiple stepwise regression to fit the price function and analyze the reason of the unfinished task from many angles. Then, by using the idea of "optimal neighbor", the matching model of task and member is established to optimize the original pricing model. Then, starting from the "small world" model, the actual packaging situation was simulated, and the price correction function was defined to reduce the impact of task distribution density on the completion situation, and the pricing scheme was further optimized. Finally, the new project is priced with an optimal package pricing formula, and the implementation effect is judged from the two perspectives of task completion and simulation results.

Keywords: simulation of multiple regression, matching, close to optimal, simulation

1. Introductions

1.1 Background Description

Crowdsourcing, a business model that has emerged on the Internet in recent years, refers to companies outsourcing work traditionally done by internal employees or external contractors to a wide range of Internet users. Professional services the crowdsourcing model applying information technology to service all of the link, to marketing, organization and management of outsourced work via the Internet users, rely on the expertise of Internet users to provide customers with professional services, the model introducing e-commerce, crowdsourcing professional services, for the traditional service industry has brought impact and change (Liu su, 2011).

"Take photos to make money" is a self-service model of mobile Internet. The user downloads the APP, registers as a member of the APP, and then gets the task that needs to be photographed from the APP (such as going to the supermarket to check the shelf situation of a certain product), and earns the remuneration as set by the APP for the task. This self-service crowdsourcing platform based on mobile Internet provides enterprises with various business inspection and information collection. Compared with the traditional market survey method, it can greatly save the investigation cost, effectively guarantee the authenticity of the survey data and shorten the investigation cycle. Therefore, APP becomes the core of the platform, and task pricing in APP is the core element. If the price is not reasonable, some tasks will be neglected, resulting in the failure of commodity inspection.

1.2 Research Design

Firstly, data of finished tasks and member information collected from an app are respectively annex 1 and annex 2. The task pricing rule of the project is studied, and the reason why the task is not completed is analyzed. This paper collected the data of the location, price and execution of the completed task on an app. In order to explore the pricing law, it is necessary to find the factors influencing the pricing, analyze the pricing law based on the influencing factors and the actual situation, and define the expression of pricing law. Then, based on the pricing rules and the actual situation, the factors that may affect the task completion are identified, and the specific analysis of these factors is conducted to summarize the reasons for the unfinished task.

Then, a new task pricing scheme is designed for the completed projects on the app and compared with the original scheme. From the first part of the analysis, whether in the pricing of tasks, the difficulty of completing

tasks, or in the reasons for unfinished tasks, the location of tasks always has a direct or indirect relationship with the pricing. In order to design a better pricing scheme, the new pricing scheme is designed based on the location relationship between tasks and members.

Finally, in the case of a concentrated task distribution, the pricing model when the task is packaged and released is considered and evaluated. It can be seen from the second part that the user pursues unit distance gain when completing the task. When the task distribution is more concentrated, even if the benefit of a single task is lower, there will be higher benefit per unit distance due to the task concentration. In the same way, when the task is distributed, the benefit per unit distance is lower even if the single task has a high profit. To further improve the model. The pricing model should be improved for task distribution.

2. The Establishment and Solution of the Model

2.1 The Task and Member Distribution are Clustered

There are many data processing methods, such as interval convergence processing, standardization processing, clustering processing, etc., and appropriate data processing methods can be selected according to specific data. This paper adopts *Z-score* standardization method to process data. The steps of *Z-score* standardization processing are as follows:

For the index value x_{ij} ($i = 1, 2, \dots, n; j = 1, 2, \dots, m$) of m items of n evaluated objects, the new standardized index value is

$$x_{ij}^* = \frac{x_{ij} - \bar{x}_j}{s_j}$$

Where, $\bar{x}_j = \frac{1}{n} \sum_{i=1}^n x_{ij}$ is the average value of the J th index of n evaluation objects, and $s_j = \sqrt{\frac{1}{n} \sum_{i=1}^n (x_{ij} - \bar{x}_j)^2}$ is the mean variance of the J th index of n evaluated objects, that is, x_{ij}^* ($i = 1, 2, \dots, n; j = 1, 2, \dots, m$) is the unquantified index value.

The k-means method is used to cluster tasks and member distribution (Tingting Li, 2015). First, randomly choose K objects as the initial clustering center from the distribution coordinates and then loop. Then, the distance from each object to the central object is calculated according to the mean value of the central object, and the corresponding object is divided again according to the minimum distance. Finally, the mean value of each cluster is recalculated until the center of the cluster does not change, making the following formula minimal (Zhuo jinwu, 2014).

$$E = \sum_{j=1}^k \sum_{x_i \in w_j} \|x_i - w_j\|^2$$

Where m_i is the mean of the i th cluster and x_i is the variable in the i th cluster, so the distance between the variables in the cluster and the mean should be minimized. The clustering results are as follows:

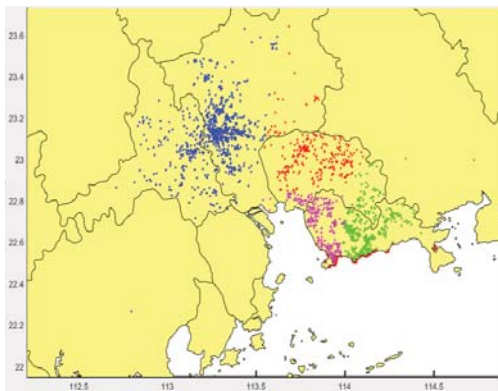


Figure 2.1. Membership profile

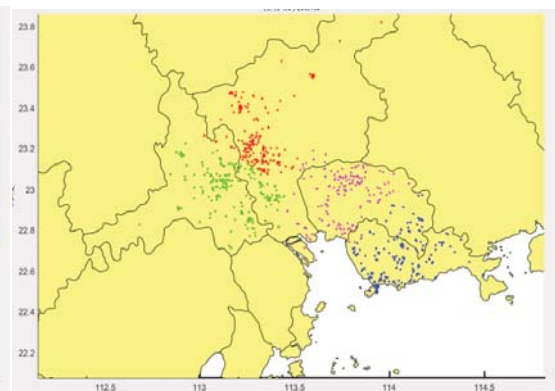


Figure 2.2. Task profile

2.2 Spatial Distribution of Task Pricing

With the help of surfer8.0 software, the spatial distribution of the task price in annex 1 is described, so as to obtain the spatial distribution diagram of the pricing of each task. The results are as follows:

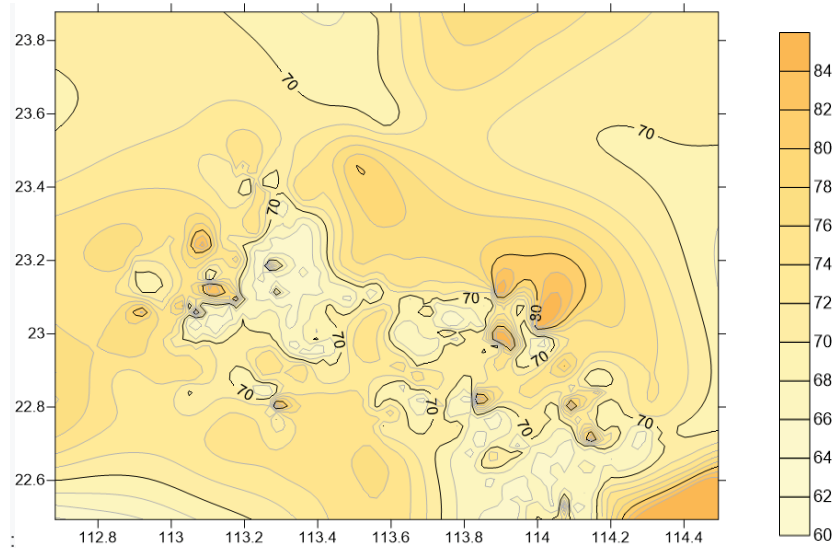


Figure 2.3. Task pricing diagram

In the figure above, most areas are relatively light in color, indicating that the area between 65 and 75 accounts for the majority of the task pricing, while the darker areas with higher pricing are mostly distributed in sheet form, and the task pricing near the darker areas is also relatively high, while the continuous areas are generally the same or similar in price.

From the actual analysis, the location of the task determines whether the platform members need to spend a certain amount of time and energy to arrive and complete, and the tasks that require members to spend more energy to complete are often located in remote locations, so the pricing of such tasks should be improved to motivate members to complete the task.

To sum up, there is a close relationship between task pricing and task location. Therefore, the longitude and latitude of the location coordinate level task point is used as the variable influencing the pricing.

2.3 Model of Task Pricing

According to the above analysis, the price of the task is closely related to the location of the task, so the longitude and latitude of the task point can be taken as the independent variable affecting the price.

In addition, the task price far away from the member location should be increased accordingly. When the price increase of a task does not match the distance increase, the task may not be completed. In order to motivate members to complete tasks, the price should be increased when the distance between tasks increases. Based on this, the p-d (price-distance) matching factor is defined as the third variable influencing the price. The matching factor is used to measure the matching degree of the change of task distance and the change of task list price. Only when the change degree of the two is consistent can the task be accepted and completed by members.

Based on k-means clustering analysis, the tasks in annex 1 are classified into four categories according to the coordinates (figure 2-1), and the average price of each type of task is calculated.

The ratio of the price and the clustering average price of each specific task to the price and the average price of all tasks is defined as the degree of price change, that is

$$P_C = \frac{P_i - \bar{P}}{\sum_{i=1}^{835} (P_i - \bar{P})}$$

P_C is the degree of price change, P_i is the Price for task i, \bar{P} Is the average price of the category to which task item belongs.

Again using K - means method according to its location in the annex ii member into four classes (figure 2-2), clustering center of purple category is (22.91, 22.91), clustering center of the red category for (22.99, 22.99), blue category of clustering center for (23.16, 23.16), clustering center of the green category for (22.64, 114.07). The task location to the member center distance clustering and the ratio of the sum of all the tasks to the member center distance is defined as the distance change, due to the topic given data point location change is very small, You can almost view it as a plane, where the Euclidean distance is calculated to measure the distance between two points. That is

$$D_c = \frac{\sqrt{(x_i - \bar{x})^2 + (y_i - \bar{y})^2}}{\sum_{i=1}^{835} \sqrt{(x_i - \bar{x})^2 + (y_i - \bar{y})^2}}$$

The ratio between the degree of price change and the degree of distance change is defined as the p-d interaction factor, which is expressed by the formula

$$PD = \frac{P_c}{D_c} = \frac{\frac{P_i - \bar{P}}{\sum_{i=1}^{835} (P_i - \bar{P})}}{\frac{\sqrt{(x_i - \bar{x})^2 + (y_i - \bar{y})^2}}{\sum_{i=1}^{835} \sqrt{(x_i - \bar{x})^2 + (y_i - \bar{y})^2}}} \tag{1}$$

To the degree of the degree of price change and the distance change using z - score method standardization, to eliminate the influence of the dimension, after processing of numerical plug (1) calculate the each task points matching values, based on the above analysis, define the task for the multivariate linear regression equation model is established, with task price as the dependent variable, the longitude, latitude, and the matching factor for the multiple linear regression equation of independent variables can be obtained as follows:

$$P = \beta_0 + \beta_1 * La + \beta_2 * Lo + \beta_3 * PD$$

Where *La* is the latitude of a task point, *Lo* is the longitude of the task point, and *PD* is the p-d interaction factor.

There are some mutant values in the p-d interaction factors. Although it may be reasonable to consider the occurrence of these values from the actual situation, it will affect the fitting effect of the model. Therefore, these singular data should be removed when fitting the equation (annex 2).In the previous 90% or 742 data, multiple regression was solved by matlab and the optimized regression equation can be obtained by using the regression toolbox in matlab

$$P = -199.5307 + 3.41324La + 1.6699Lo - 0.08189PD$$

2.4 Model of the Factors Influencing the Complexity of the Task

Besides the distance of the task and the matching degree of the price, the difficulty of completing the task also affects the setting of the price. The harder the task is, the higher the price should be. According to the conclusion that the task is more difficult to complete when it is farther away from the member location, this paper measures the difficulty of completing the task by the distance between the task and the member center, and takes the difficulty as an influence factor to indicate the influence of the difficulty of the task on the pricing.

$$\text{The difficulty level of task } i = \frac{\text{Distance from cluster center for task } i}{\text{Average distance from all points to cluster center}}$$

In terms of the formula:

$$d_i = \frac{\sqrt{(x_i - \bar{x})^2 + (y_i - \bar{y})^2} * 835}{\sum_{i=1}^{835} \sqrt{(x_i - \bar{x})^2 + (y_i - \bar{y})^2}}$$

d_i is the difficulty level of task I, $\sqrt{(x_i - \bar{x})^2 + (y_i - \bar{y})^2}$ Is the distance from the cluster center for task i.

Under the condition of considering the impact of task difficulty on pricing, the model of pricing can be obtained as

$$P = (-199.5307 + 3.41324La + 1.6699Lo - 0.08189PD)d_i \quad (2)$$

The effect of equation (2) is tested with the remaining 10% data as above, and the average value of prediction error is 6.10% (annex 2). Compared with the model without the influence factor, the error value of the model is reduced to a certain degree by 6.94%. Therefore, it can be judged that the effect of the pricing rule is better after adding the influence factor of the difficulty of the task.

2.5 The Cause of the Unfinished Task

According to annex I, the project has a total of 834 tasks, among which 521 tasks have been completed, with a completion rate of 62.47%. There are a certain number of unfinished tasks. According to the above analysis, the location of a task has the greatest impact on the completion status. Secondly, the price level also determines whether a task is attractive. The matching degree of price-distance also affects the members' willingness to accept a task to some extent. Finally, the limit of the member's acceptance of the task and the credibility of the member will also affect the completion of the task. Therefore, the reasons for unfinished tasks are analyzed from the following four perspectives:

(1) Geographical location

The clustering results are drawn according to the distribution of completed and unfinished tasks. From the completion degree of different regions, it can be concluded that there is a great relationship between task completion and geographical location. At the same time, the coefficients of the two variables of longitude and latitude can be obtained from the regression equation are relatively large, so the pricing has a great relationship with longitude and latitude, namely the location, while the pricing can directly determine whether the members are willing to complete, so the geographic location has a great relationship with whether the task can be completed.

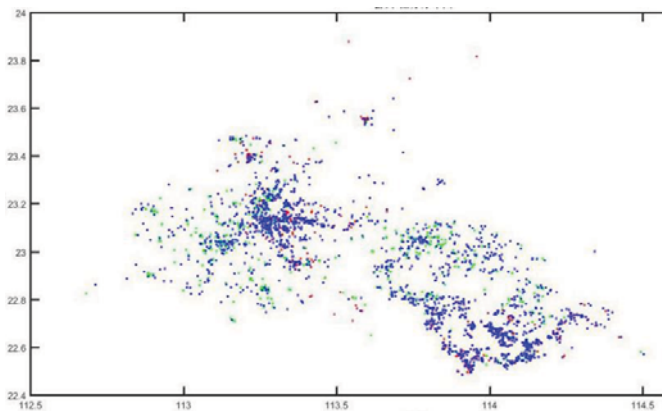


Figure 2.4. Task completion map

The red dots represent unfinished tasks, the green dots represent completed tasks, and the blue dots represent members' positions.

By common sense, the closer you get to a densely populated area, the easier it will be. Topic given the task of position in central guangdong province roughly, observe the task completion of the task distribution can be found that there are several regional degree is higher, respectively in longitude $113.3^\circ \sim 113.6^\circ$ and $113.6^\circ \sim 113.8^\circ$ and 113.9° and 114.2° range. Corresponding to the actual longitude, the region between these three longitude degrees is exactly three cities, namely guangzhou, dongguan and shenzhen. Therefore, the conclusion of higher completion degree of urban area can be obtained compared with other regions.

From a practical perspective, densely populated areas tend to be economically developed regions(Lina Wang & Aoran Xu, 2015), (Xiaorong Jiang & Shenglan Qang, 2017), which are more convenient to carry out various surveys and to reach the survey areas, so the number of people receiving tasks and the completion degree of

tasks are relatively high. Non-urban areas are relatively less complete due to the inconveniences in various aspects of the survey process. Therefore, the unfinished task may be caused by the unreasonable geographical location of the task.

(2) Reasons for price

Price is the most important factor to determine whether a task can be accepted and completed. The task is divided into two groups according to its completion, and the price tag of the two groups is analyzed for difference. Since the two groups of data are numerical data and there is no correlation, k-w test is adopted to analyze the difference between the two groups of data. The test results showed that P value was less than 0.005 and the original hypothesis was rejected, so there was a significant difference between the two groups of prices. Therefore, the unfinished task may be caused by unreasonable price setting.

(3) Reasons for price-distance match

According to the above analysis, when the task is located far away from the urban area, the difficulty will increase accordingly. At this point, the platform needs to increase the price of this task before anyone can accept it. When the distance of the task increases and the price does not increase accordingly, the task will be difficult to complete. Therefore, the price and location mismatch of the task will also make it difficult to complete. This factor is reflected in the P-D (price - distance) matching factor above.

(4) Reasons for membership

As can be seen from the attachment given in the title, members with high reputation in the platform are preferred to start the task selection, and the task quota is larger. Theoretically, people with high credibility should accept more tasks, but in fact, the platform stipulates the scheduled task limit for everyone. As a result, some tasks cannot reach people with high credibility, and finally, some tasks may not be completed.

According to the observation in annex 2, there are a large number of members with low reputation. Although members with high reputation can choose tasks first, due to the limitation of the scheduled task limit and the difference in number, there will still be many tasks that are selected by members with low reputation, resulting in the failure to complete the task (Huang limei, 2016).

The number and distribution of members will also lead to the low degree of task completion. In large cities like guangzhou and shenzhen, the number of members will far exceed the number of tasks, so there will be member competition for tasks and member resource waste with low reputation. In non-large cities such as dongguan, the number and distribution of members are well matched with the task, and there will be no waste or competition, which may be the reason why the task completion level in dongguan is much higher than that in guangdong and shenzhen.

3. Establishment of New Pricing Scheme

3.1 Improvement Direction of the New Scheme

First, from the regression equation in question (1), it can be known that the pricing and location of the task have a direct relationship, and the p-d interaction factor also reflects the relationship between location and price. The influencing factors also measure the difficulty of the task from its position. Therefore, it can be judged that the main reason why the task cannot be completed is that the task is located at a far distance and is difficult to complete. Although the price has been improved to a certain extent, it is still not enough to motivate members to complete the task.

Therefore, from the perspective of task location, draw a circle with task coordinates as the center. According to the principle of nearby assignment, find the minimum radius to reasonably allocate each task. The longer the radius is, the more difficult it is to complete the task, so the price should be raised to make members accept the task. The task is priced according to the length of the radius.

3.2 Establishment of Dynamic Partition Pricing Scheme

Build a matching model centered on the task location, and match each task with the member nearest to him according to the principle of "optimal proximity". The principle of "proximity optimization" is to assign tasks to members closest to the task point within a circle of radius¹.

¹The allocation of taxi resources in the era of "Internet +", 2015 excellent paper of Chinese university students' mathematical modeling contest.

Since the data obtained from the appendix of the subject is the longitude and latitude coordinates of the task point, and the radius is the plane radius when the circle is drawn, it is necessary to convert the longitude and latitude to the plane distance. By referring to the data, the following method can be used to calculate the distance between any two points on the surface of the map²

The Longitude and Latitude coordinates of point A are (LonA, LatA), and the Longitude and Latitude of point B are (LonB, LatB). According to the datum of Longitude of 0 degree Longitude, the value of Longitude of east Longitude, minus Longitude of west Longitude, 90-latitude of north Latitude and 90+Latitude of south Latitude are (MLonA, MLatA) and (MLonB, MLatB).Based on the triangulation, the following formula for calculating the distance between two points can be obtained:

$$K_0 = \sin(\text{MLatA}) * \sin(\text{MLatB}) * \cos(\text{MLotA} - \text{MLotB}) + \cos(\text{LatA}) * \cos(\text{MLatB})$$

$$D_0 = R_1 * \text{arc cos}(K_0) * \text{Pi} / 180$$

D_0 Is the spherical distance between two points, K_0 Is the radius of neighborhood, R_1 has the same units as D_0 , If we use 6371.004 kilometers as the radius, then D_0 is in kilometers.

The distance between the two points mentioned above can be correspondingly replaced by the distance formula $D_0(A, B)$ here. Thus, the radius of the neighborhood is a set of values.

Since the assignment is based on the proportion of the quota, So the data structure of the member is represented as $V(j)(Lo(j), La(j), PM(j), j = 1, 2, \dots, 1877)$, $V(j)$ represents the data structure of the j th member, $Lo(j)$ is the Longitude for the j th member, $La(j)$ is the latitude for the j th member, $PM(j)$ is the percentage of the j th member's scheduled task limit in the total task limit.

$$PM(j) = \frac{M(j)}{\sum_{j=1}^{1877} M(j)}, \quad j = 1, 2, 3, \dots, 1877$$

Corresponding to the member's data structure, the data structure of the task is represented as $T(i)(Lo(i), La(i), PP(i), i = 1, 2, \dots, 835)$, $T(i)$ represents the data structure of task i , $PP(i)$ is the proportion of the price of task i in the total task price.

$$PP(i) = \frac{M(i)}{\sum_{i=1}^{835} M(i)}, \quad i = 1, 2, 3, \dots, 835$$

It can be predicted that the larger the radius is, the more difficult it is to find matching members, and a higher price should be defined for this task. According to the above formula of calculating spherical distance by longitude and latitude, the shortest distance between any two task points in annex I is 0.17km and the longest distance is 13.50km. Therefore, the shortest distance and the furthest distance are used as extreme values of the radius taken, and 40 radii are taken at intervals of 0.33km to test the minimum radius that each task point can match to the member one by one.

Table 3.1. The value of the radius and corresponding serial number

Number (k)	1	2	3	39	40
Radius (km)	0.17	0.50	0.83		13.17	13.50

For $K_0(k, k = 1, 2, \dots, 40)$ and then define the radius of the tasks i th $Mat(i)$ matching degree, because of the task assignment is, in fact, according to the proportion of reserve quota when to, when the price of the i th a task

²The allocation of taxi resources in the era of "Internet +", 2015 excellent paper of Chinese university students' mathematical modeling contest.

in the price of all tasks in $PP(i)$ is higher than the proportion of greater than or equal to the first J_{th} a member of the limitation of scheduled tasks in addition limitation when the proportion of $PM(j)$, can match, the matching degree is defined as 1, otherwise the matching degree is defined as 1. Use the formula expressed by:

$$Mat(i, K_0) = \begin{cases} 1 & PP(i) < PM(j) \\ -1 & PP(i) \geq PM(j) \end{cases}$$

$Mat(i, K_0)$ is the match degree of the i th task when the radius is $K_0(k, k = 1, 2, \dots, 40)$

According to the principle of "optimal proximity", the goal is to determine the price of a task point according to the minimum radius of a task point. Therefore, the programming model can be established with the minimum matching as the objective function, so as to obtain the minimum radius of each task point. The planning model is as follows:

$$k_{min}(i) = \min_k \{Mat(i, k) = -1, k = 1, 2, \dots, 40\}, i = 1, 2, \dots, 83$$

$$S.t. \quad Mat(i, K_0) = \begin{cases} 1 & PP(i) < PM(j) \\ -1 & PP(i) \geq PM(j) \end{cases}$$

$k_{min}(i)$ is the sequence number of the minimum radius taken for the task point i , $Mat(i, k)$ is the match degree of the first task point at the i -th radius.

With matlab, the minimum radius corresponding to each task point in annex 1 can be obtained. After analysis, the minimum distance is 0.17km, which should correspond to the minimum price of 65 yuan, and the maximum distance of 13.50km, which should correspond to the maximum price of 85 yuan. Because the farther the distance, the higher the price, so the distance and the price one-to-one correspondence, can get the most suitable price that should be set for each task point in annex I. Limited by space, only part of the result is shown below.

Table 3.2. Comparison of data indexes between the original scheme and the new scheme

Task number	latitude	longitude	Price		completion	
			The original plan	new plan	original price	new price
A0100	22.61177508	114.0380587	66.5	66.0	0	0
A0101	22.73006657	114.0666477	69.0	66.5	0	1
A0102	22.65235376	113.9299125	67.5	70.0	0	0
A0103	22.71365257	114.0652375	68.5	66.0	0	0
A0104	22.56073431	113.8900779	67.5	70.0	1	1
A0105	22.67343353	113.8257052	67.0	65.0	0	0
A0106	22.59155498	114.1259102	66.5	67.5	0	1

3.3 Comparison of Pricing Schemes

The pricing of each task under the new pricing scheme is calculated above, and the task completion degree under the new scheme should be compared with the task completion degree under the original pricing rules to analyze whether the new scheme has effectively improved the situation that the task cannot be completed. Use surfer8.0 software to make the price distribution diagram under the new pricing scheme:

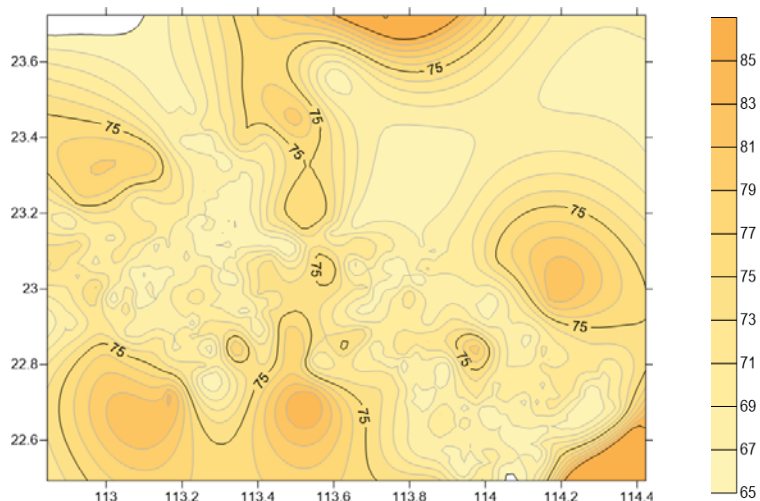


Figure 3.1. Pricing scenarios for different regional missions under the new programme

Compared with the original price distribution diagram (figure 2-3), it can be seen that the dark areas are obviously increased, so the task price under the new scheme is improved compared with the old one.

Although the price under the new plan has been increased, there will still be members who think the price is low and do not finish the task. Therefore, it is necessary to establish a price discrimination value. When the task price is higher than the discrimination value, the task can be completed; otherwise, the task cannot be completed. This paper measures task price with unit distance gain.

In fact, the differentiating value of the price can be interpreted as the minimum and minimum that members are willing to complete the task. For completed tasks, the value of this differentiation is the ratio of the gain to the distance of the task with the maximum distance; for unfinished tasks, this critical value is the ratio of the gain to the distance of the task with the minimum distance.

If this condition holds, the distinction between completed and unfinished tasks should be similar. The differentiated price is 6.3 yuan /km after calculation. The formula is as follows:

$$CP(i) = \begin{cases} 1 & P_r > P_{rm} \\ 0 & P_r < P_{rm} \end{cases}$$

$CP(i)$ is the completion status of task i , P_r is the actual unit distance gain, P_{rm} is the differential value of the distance gain. When the actual task price is higher than the differentiated value, the task can be completed, which is denoted by "1"; otherwise, the task cannot be completed, which is denoted by "0".

This evaluation standard is used to compare the price of each task under the new pricing scheme with the price difference to obtain the degree of completion. A total of 835 missions were completed, with 565 completed tasks and a completion rate of 67.66%. Under the original pricing scheme, there were 835 tasks, of which 521 were completed, with a completion rate of 62.47%. Compared with the original pricing scheme, the completion degree of the new pricing scheme is increased by 8%, indicating that the new pricing scheme is effective.

4. Task Packaging Model

It can be seen from the above analysis that whether a member can complete the task depends largely on the income per unit distance when he completes the task. The more concentrated task distribution enables members to complete more tasks in one area, thus the benefit per unit distance will be improved; The distributed task distribution requires members to go to different regions to complete the task, which will reduce the income per unit distance of members, thus causing users to scramble to choose the tasks distributed together. To further optimize the model, we need to adjust the distributed intensive and dispersed tasks on the price, and minimize the impact of the location distribution on the task completion.

4.1 Task Packaging Model Based on "Small World"

It can be seen from the observation data that the amount of data given in the appendix of the question is large, and it is difficult to determine the packaging model directly from the density of original data analysis. After observation analysis, as to make the task of distribution of middle latitude for $23^\circ \sim 23.2^\circ$, longitude $113.2^\circ \sim$

113.4 ° area more reasonable distribution of tasks and membership on this article selects the area as a "small world", it is a small world and realistic factors, just model is relatively simple, easy to analysis. You can simulate realistic task packaging by analyzing small world models. In the small world, the grid is used to divide the small world into 5*5 regions. The results are as follows:

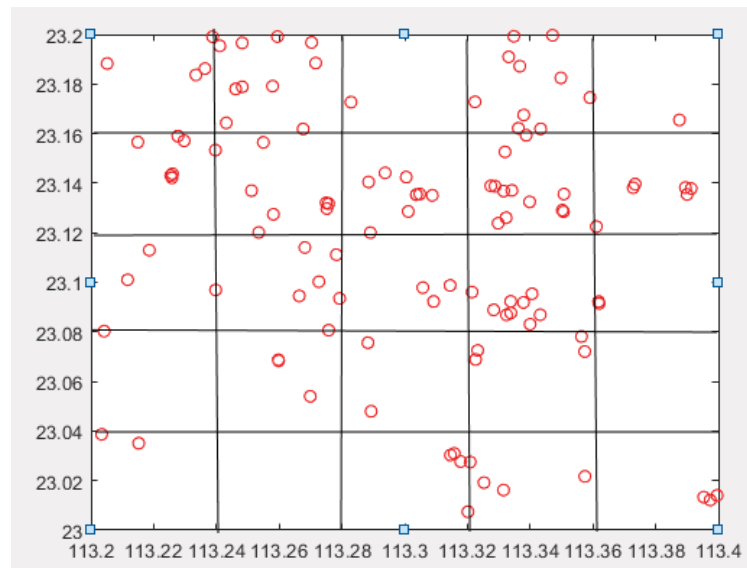


Figure 4.1. The regional division diagram of the "small world" model

Tasks in a grid are relatively concentrated and can be packaged, and tasks in a grid can be considered as a package. When not packaged, the task is independent, task of data structure for price} {the longitude, latitude, task, when in the grid data is packaged as a "package", after the package has become a task points set, the package of data structure is defined as {latitude and longitude, the package price, package contains singular}, parcel is belong to latitude and longitude of the center of the grid longitude and latitude.(see annex iv for the specific values of each package data structure in the small world). In this way, each package is equivalent to a task point, so that we can consider the pricing model of combining tasks and distributing them together.

4.2 The Creation of a Price Correction Function

According to the above analysis, the packages with a relatively concentrated task distribution will lead to the selection of users, while the willingness of parcel users with a relatively dispersed task is not very strong. Considering this reason, the task is more dispersed task completion after packaging will become low, in order to reduce the effects of task distribution density of the results of packaging, need to adjust the price, different package for intensive task distribution to adjust prices, making as much as possible and complete the package can be member to choose.

As the title suggests, in principle, the more creditworthy a member is, the higher the priority of starting a task, and the higher the priority. High-priority members will give priority to tasks with high income per unit distance. As a result of delayed selection, members with low priority are often unable to select some tasks with high income. Over time, this phenomenon will lead to higher priority members with higher priority and less priority members will not be able to receive tasks.

Based on the above considerations, this paper defines a price correction factor to adjust the price.

Each grid represents a unit area. The more tasks within the unit area, the denser the task distribution within the package, and the less tasks within the unit area, the more dispersed the task distribution within the package. Under normal circumstances, the price of the package should be the sum of the price of each task within the package. In order to reduce the effect of task distribution density, the price of package should be reduced to reduce the choice willingness of members. For packages with distributed tasks, the price should be increased to encourage more members to choose.

The above idea of price correction is expressed in the mathematical equation, that is, when the number of tasks contained in the package is small, the price of the package should be greater than the value added directly to the price; when the number of tasks contained in the package is large, the price of the package will be less than the value added directly to the price.

According to the data structure wrapped in the small world, the function image is fitted as follows:

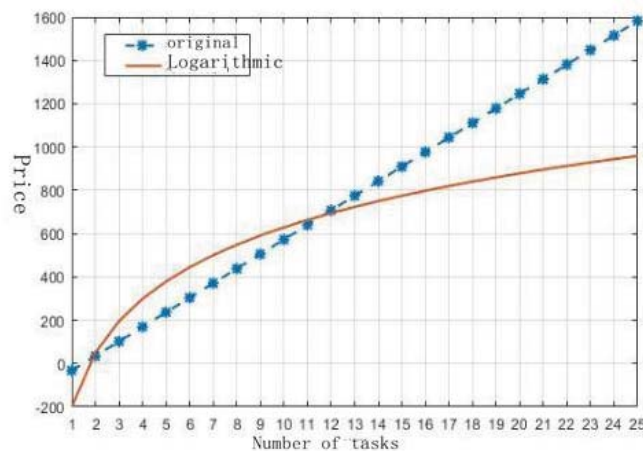


Figure 4.2. A fitting diagram of the package data

As shown in the figure, if the singular number contained in the package is taken as the independent variable and the package price obtained by simple summation is the dependent variable, the blue line in the figure above can be obtained. Based on the above considerations, it can be seen from the mathematical knowledge that the growth rate of the logarithm function is decreasing with the independent variable, so the logarithm function is adopted to correct the price. By fitting the logarithmic function with data, the logarithm formula is $y = \ln x - 200$. It can be seen from the curve that when the singular number of the package is below 12, the revised price of the package with less tasks increases to a certain extent, which will improve the hospital where members complete the package with less tasks. For packages with more than 12 tasks, the revised price will be reduced to a certain extent, which will reduce the number of members competing for such packages. Therefore, theoretically, the new plan effectively considers the impact of packaging on pricing and further optimizes the pricing model.

4.3 Model Comparison

Theoretically, the packaged pricing model takes into account more comprehensive factors, making the model more optimized. It is also necessary to analyze the effects of the model based on actual data.

Using matlab to solve the pricing under the new scheme, the package is equivalent to a single task in the previous problem. Based on the second part, the completion of the task is measured based on the idea of distinguishing values, and the change of completion degree is analyzed. The calculated completion rate of the task under this scheme is 72%, which is 4.34% higher than the original completion rate, indicating that the pricing scheme considering the packaging situation is better.

5. Evaluation and Improvement of the Model

5.1 Advantages of the Model

- (1) In the first part, the p-d interaction factor and the difficulty of the task were added to consider the impact on price, making the perspective more comprehensive.
- (2) In the second part, the measurement index to evaluate the matching degree of the task is given, and the task is priced according to the measurement index, so the pricing is more accurate.
- (3) In the third part, the analysis of the general situation of package pricing through the small-world model not only simplifies the analysis process, but also is representative.

5.2 Disadvantages of the Model

- (1) Due to the small amount of data given in the annex, the impact of some factors cannot be specifically considered, leading to the inability to consider the factors affecting pricing more comprehensively.
- (2) In practice, there may be some influences of personal preference and some random factors when members complete tasks, so there may be some deviations in the results obtained.

(3) In order to simplify the problem, when describing the correlation between factors, more empirical formulas were used instead of more in-depth analysis of the correlation between factors.

5.3 Improvement Direction of the Model

Given fewer data angles, more specific data from different perspectives should be collected when possible, such as members' personal preference, members' free time and the correlation between various factors, etc., so as to get a more accurate pricing scheme by pricing tasks from multiple perspectives.

6. Conclusion

In this paper, the price function is fitted by means of multiple stepwise regression, and the reasons for the unfinished task are analyzed, including the difficulty level of task completion, distance, the relationship between task quantity and population density and so on. Then, the model of matching task and member is established by using the idea of "optimal neighbor". Then, starting from the "small world" model, the actual packaging situation was simulated, and the price correction function was defined to reduce the impact of task distribution density on the completion situation, and the pricing scheme was further optimized. The train of thought to provide the service provides the reference, the company pricing on the task, should be mainly based on to the difficulty of the task, and the distance of the city, and population density on pricing, will be closer at the same time, ease similar tasks package, which can be profitable, and can improve the completion of tasks.

References

- Calculate the distance according to the longitude and latitude of two points.
<http://www.cnblogs.com/yicsfwhh/archive/2010/12/20/1911232.html>.2012-12-20
- Huang, L. M. (2016). Research on user credit and message pushing algorithm based on crowdsourcing platform [D]. Guangdong normal university of technology, 2016.
- Lina, W., & Aoran, X. (2015). University students' employment to second-tier cities transfer phenomena research - in chongqing, for example [J]. *Journal of the Chinese Market*, 26, 113-121.
- Liu, S. (2011). Application research of professional services crowdsourcing model [D]. Beijing university of technology, 2011. <https://doi.org/10.1190/978-1-56080-284-6.15>
- The allocation of taxi resources in the era of "Internet +", 2015 excellent paper of Chinese university students' mathematical modeling contest.
- Tingting, L. (2015). Research on improving k-means clustering algorithm [D]. Anhui university, 2015.
- Xiaorong, J., Shenglan, Q., & Yongchun, Y. (2017). Research on urban population flow network in China -- based on baidu LBS big data analysis [J]. *Population and Development*, 23(1), 13-23
- Zhuo, J. W. (2014). Application of MATLAB in mathematical modeling. Beijing: Beijing university of aeronautics and astronautics press, 2014.

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Research on Strategic Emerging “Energy Conservation and Environmental Protection” Enterprise Performance Control—Based on the “X Inefficiency” Research Perspective

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Received: April 7, 2018

Accepted: October 31, 2018

Online Published: November 8, 2018

doi:10.5539/ibr.v11n12p38

URL: <https://doi.org/10.5539/ibr.v11n12p38>

Abstract

Corporate performance is the foundation of the company's growth. Researching corporate performance issues is the eternal theme of corporate research. This paper specifically analyzes the inefficient allocation of non-material resources in energy-saving and environmentally-friendly strategic emerging enterprises, and proposes various countermeasures for the “X inefficiency” problem of energy-saving and environmentally-friendly strategic emerging enterprises, which will be a strategic new development for energy conservation and environmental protection in China. The development of the enterprise is provided a theoretical basis and methodological guidance.

Keywords: energy saving and environmental protection, X inefficiency, influencing factors

1. Introduction

In the “12th Five-Year Plan” national strategic emerging industries development plan issued by the State Council, strategic emerging industries were defined as major technological breakthroughs and major development needs as the basis for the overall economic and social development and long-term development has a significant role in leading ties. With high knowledge and technology, low consumption of material resources, large growth potential, and comprehensive benefits, it is at the high end of the high-tech industry and will grow rapidly in the next 10 to 20 years. Accelerating the development of strategic emerging industries is a major strategic plan made by the Party Central Committee and the State Council, and it is also a major strategic choice for many developed countries to seize the commanding heights of future economic development during the post-international financial crisis. It is directly related to the future of the Chinese nation and the country's long-term competitiveness. Therefore, it is of great significance to study the development of strategic emerging industries.

2. Definition of "X Low Efficiency" of Energy-saving and Environment-Friendly Strategic Emerging Enterprises

Corporate performance is the foundation for a company's sustained and healthy growth. It is an eternal theme in both theoretical and business circles to study how corporate performance is improved. There are two important aspects affecting corporate performance: material allocation efficiency and non-material allocation efficiency. Allocative efficiency refers to the production of “optimal” product quantity combinations with the best combination of input factors. The traditional theory holds that under the condition of constant investment, through the optimization and combination of resources and effective allocation, the efficiency will increase and the output will increase. However, some studies have found that this conclusion is not inevitable, and even negative efficiency may occur. The reason for this lies in the immaterial allocation efficiency that affects corporate performance. Judging from the existing research literature, the earliest economist studying the issue of immaterial allocation efficiency was the American economist H. Libnstein, who published the “configuration” in the “American Economic Review” in 1966. Efficiency and 'X inefficiency' are described in the article as “X inefficiency” and “X inefficiency” which is not caused by misalignment of physical resources is listed as the top ten management problems in the world today. One of them is a major discovery in the economics of the 20th century. Later, he found through a large number of investigations and studies that “X inefficiency” is widespread among enterprises and is a “X inefficiency” that is closely related to human instinct motivation or organizational structure. It is simply referred to as inefficient allocation of non-material resources of enterprises. . Obviously, “X

inefficiency” (inefficient allocation of non-physical resources of enterprises) is different from “X inefficiency”, and it has more extensive connotations than “X inefficiency.” As far as the research object of this thesis is concerned, this paper is to study the problem of “X inefficiency”, rather than just the problem of “X inefficiency” of Lebinstein. In this paper, “X inefficiency” refers to the sum of all efficiency losses that are not caused by misconfiguration of material resources.

3. Influencing Factors of “X Inefficiency” of Energy-Saving and Environment-Friendly Strategic Emerging Enterprises

Characteristics of strategic emerging industries

Technical uncertainty. Technical uncertainty refers to the uncertainty in the path, speed, and level and effect of energy-saving and environmentally-friendly strategic emerging enterprises. At the same time, this technical uncertainty also reflects the lack of a series of mature methods in business operations and Regulations, such as the structure of the new series of products and management technologies in the new network environment, are difficult to determine. They are like energy-saving and environmentally-friendly strategic start-ups such as Huawei and CITIC. When they determine the trend of several technologies, Usually three or four choices are identified, resulting in the generation of “X inefficiency”.

Market uncertainty. Energy-saving and environmentally-friendly strategic start-ups do not form their own sales network and brand. The purchasers of products or services are basically first-time buyers. They take into account the short life cycle of new products, many customers wait and see, and look forward to a new generation of new products. When it appears, it is difficult for companies to predict the market, and thus it is difficult to efficiently produce and operate, resulting in the generation of “X inefficient”.

Uncertainty in the industrial structure change. The emerging stage of the industry is accompanied by a large proportion of newly established companies, because there are no established game rules and barriers to economies of scale at this stage. Sprouting companies are relative to new companies that have established themselves in the newly established enterprises. In addition, there are many other portal companies, namely new companies founded from employees who have already gone out of business. Another portal phenomenon stems from many factors. Uncertainty in the changes in the industrial structure makes it difficult to maintain a basic balance between supply and demand in the industry, leading to excessive competition or lack of competition in the industry, resulting in the generation of “X inefficiency”.

Network structure of strategic emerging industries

The loss of organizational network structure efficiency refers to the loss of efficiency in the coordination of organizational structure. According to Mrton, “The validity of the social structure ultimately depends on the participants of the group who are encouraged and inspired by the right attitude and emotions. These emotions are often more stressful than the technical requirements.” It reveals the dependence of social structure validity on human emotions. Lebinstein analyzed the various inefficiencies of the hierarchical structure, and considered that the division of labor increased the efficiency and also produced a hierarchical structure. Compared with a single person, this hierarchical structure organization has a differentiation in organizational identity, trust, work motivation, coordination, information, and goals. As a result, an intricate network of relationships is formed within the organization to form various groups. The degree of deviation between group goals and organizational goals affects organizational efficiency.

First, sometimes there are conflicts between operating units or between operating units and task teams due to differences in business objectives and conflicts of interest, which often do not work together very well, resulting in efficiency losses. Second, multi-headed management may obscure responsibilities, rights, and benefits. Third, resources are not shared and there is waste between departments. Fourthly, emotional factors of products sometimes cause operating units to see no signs of their products starting to decline. Fifth, operating units serving different industries may have fierce competition for the company's resources.

Employees' psychological contract violations in strategic emerging industries

“Psychological contract” is a term proposed by Professor, a famous American management psychologist. The employee psychological contract refers to a subjective feeling of employees' understanding of organizational responsibility and self-responsibility. The employee's psychological contract violation refers to the individual. The expected value after the performance of the responsibilities is less than the actual value of the responsibilities performed by the organization, resulting in the employee's expectations of frustration, resulting in a psychological phenomenon. The existence of “informal organizations” in an enterprise is an indisputable fact. While the existence of informal organizations can be more closely integrated with people in the

“organization”, it is invisible to people outside the “organization”. The boundaries are felt to be unfair, and when this feeling arises, employees may reduce their investment, reduce efforts, and lead to the “X inefficient” generation. The existence of an informal organization also makes it easy for the company to become a synthesis of multiple informal organizations, which is detrimental to the establishment and popularization of corporate culture, and is more likely to develop into an informal organization due to the dissatisfaction of certain members of the informal organization with the company’s personal dissatisfaction. The dissatisfaction of the members caused the work efficiency of the entire work team to decline, and the work attitude became worse, resulting in the generation of “X inefficiency”.

4. Energy-Saving Environmental Protection Strategic Emerging Enterprises X inefficiency Control Measures

Based on the “four errors” control

In terms of ideological understanding, we must recognize that employees' psychological contract violates the negative impact on the enterprise, insist on human-based management, and avoid “ideological misunderstandings”.

In the management of employees, the responsibility of both employees and the company must be clearly defined and reduced. It is lower than the occurrence of employees' expectations and evades the “misunderstanding of responsibility”.

In management decision-making, it is necessary to clarify differences in the content of psychological contracts between different groups of employees, to reduce blind decision-making, and to avoid “decision errors.”

In the post-event behavior, compensation measures must be taken, and the negative impact of the reduction of psychological contract is the least to avoid “growth errors”.

Implement PATC management of psychological contracts to improve corporate X inefficiency

Performance feedback management. Organization managers should also provide clear and explicit feedback on employee performance, so that they can clearly understand their own work level and room for improvement. Especially those employees who are not able to fulfill their responsibilities, the feedback will make them realize that their activities have led to the organization's failure to honor its commitments.

Attribution management. When the original psychological contract is broken, the next mood is not necessarily destructive, because the organization can manage the employee's failure to fulfill the contract, in order to achieve the understanding of the staff to the organization and reduce the employee's sense of injustice. Especially when the uncontrollable external causes the contract to be difficult to perform, the organization can ensure that employees recognize this through a sincere and adequate explanation. Deficit in the psychological contract is to pay the price, and the result is the same as the failure of the formal contract. When untrusted or inconsistent psychological contracts are to occur inevitably, managers can use attribution management methods to reduce losses and reduce corporate X inefficiencies.

Training and Socialization management. Regardless of how well the organization works in the selection and recruitment of personnel, it is impossible for new employees to clearly understand the requirements of the organization at the beginning of the company and fully adapt to the organization's culture. Organizations provide employees with some training to increase their understanding of the organization, adjust their unrealistic fantasies and expectations, and enable them to integrate into the organization more quickly. The process of adaptation of new employees is called a socialization process. After socialized collisions and adjustments, new employees will have a clearer understanding of the company's business philosophy and cultural values, clarify the organization's expectations and requirements for employees, and correct the cognitive structure of the psychological contract that exists in the mind. At this point, many large companies have done well, such as IBM, Lenovo, TCL, and so on.

Establish a cyclical management system for psychological contracts to improve corporate X inefficiencies

Sometimes organizations will face many major and rapid changes, such as new employees, high-level substitutions, and organizational restructuring, which will affect the foundation of the psychological contract between senior talents and organizations. In particular, when corporate decisions deviate from the expectations of high-level talent, they will feel that these changes have undermined psychological contracts. At this time, they may take the initiative to revise their own psychological contract or directly depart from the psychological contract. In order to control the departures that occur in such situations, the organization must have executives who communicate regularly with the employees. Supervisors must have patience and keen insight. They must

keep abreast of their job satisfaction through exchanges with senior talents, allow them to freely express their opinions, dissatisfaction, and complaints. They should also selectively adopt their suggestions and counsel. Their misunderstandings are insightful about their new expectations for the organization so that the psychological contract can be continuously strengthened. At the same time, the organization should try its best to perfect its own institutional policies and management methods, and constantly revise its organizational management strategies. This can also guide the re-strengthening of employees' psychological contracts.

In short, the analysis of the inefficiency of the inefficient allocation of non-physical resources can expand the decision-making space for decision makers. In the analysis of the inefficiency of the non-physical resource allocation in the enterprise, it involves the individual's psychological and behavioral law, the rationality of the person's choice, the assumption of the individual's effort diversification, and the hypothesis that the individual's behavior is characterized by inertia. Although these analyses are preliminary, because of their novel perspectives, they can expand the decision-making space for decision makers, improve the quality of decision-making, and improve the inefficiency of non-material resources allocation. In addition, the study on the inefficient avoidance strategy of non-material resource allocation in enterprises can also provide policy makers with operational countermeasures.

Acknowledgments

The research of paper is supported by Hunan Province University Innovation Platform Open Fund Project (16K012) and Hengyang Normal University Platform Development Fund project (HJ16K02).

References

- Bao, J. Q., Miao, Y., & Chen, F. (2014). Low carbon economy: The new mode change of human economic development. *The Industrial Economy of China*, 4, 153-160.
- Bu, H. B. (2016). Explaining the inefficiency of enterprise X from the perspective of cognitive bias. *Commercial Age*, 19, 56-59.
- Bu, H. B. (2016). Research on the economic performance of enterprises implementing green production in the context of low-carbon economy. *Ecological Economy*, 3, 79-83.
- Bu, H. B. (2017). Human irrational decision-making behavior research [J]. *Business and Management*, 12, 21-26.
- Chen, Y. X., & Wang, X. Q. (2012). Research and Evaluation of Regional Environmental Management Index System—Taking Dadukou District as an Example. *Journal of Chongqing Normal University (Natural Science Edition)*, 02, 12-18.
- Chen, Y. X., & Wang, X. Q. (2016). Research and Evaluation of Regional Environmental Management Index System—Taking Dadukou District as an Example. *Journal of Chongqing Normal University*, 02, 12-18.
- Fan, J. H. (2014). The connotation and system construction of the Low Carbon Economy Theory. *Theoretical Exploration*, 2, 122-123.
- Li, Z. Q. (2015). "After crisis era" and Low carbon economy. *Wen Hui newspaper*, 07-02.
- Xu, G. L. Liu, Z. Y., & Jiang, Z. H. (2016). The factor decomposition model of China's carbon and its empirical analysis. *China's Population, Resources and Environment*, 16, 158-161.

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An Empirical Analysis of the Impact of Fiscal and Tax Incentives on Enterprise Technological Innovation - Taking Listed Companies on GEM as Examples

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Received: October 22, 2018

Accepted: November 19, 2018

Online Published: November 21, 2018

doi:10.5539/ibr.v11n12p42

URL: <https://doi.org/10.5539/ibr.v11n12p42>

Abstract

Enterprise technological innovation is the backbone of the transformation of economic development mode in China, the optimization of economic structure, and the realization of national innovative development strategy. In order to promote the transformation and upgrading of the economic structure and encourage the development of technological innovation of enterprises, a series of fiscal and tax policies which encourage technological innovation are introduced in China. Although the fiscal and tax incentives are generally adopted by the governments of the world, the research conclusions of the academia on the implementation effect of fiscal and tax policies are not unified. For this reason, in this paper, based on the data of listed companies on the Growth Enterprise Market from 2011 to 2017, the STATA 14.0-version software is used to analyze the sample data, and the relationship between the current fiscal policies and technological innovation is explored. The study results show that the fiscal and tax incentives positively affect the technological innovation of enterprises, which provides an important theoretical basis for the government to further improve fiscal and tax policies. Finally, based on the previous research contents, the corresponding conclusions are summarized, and relevant suggestions for improving the fiscal and tax incentive policies are proposed.

Keywords: fiscal and tax incentives, technological innovation, growth enterprise market

1. Introduction

Enterprise technological innovation is the backbone of the transformation of economic development mode in China, the optimization of economic structure, and the realization of national innovative development strategy. Especially, the transformation of technology into production achievements by enterprises will directly affects the economic benefits and social and economic development of enterprises. According to relevant surveys, the contribution rate of current technological innovation in China to the economic growth remains at around 75% in recent years, dropping 18 percentage points compared with 93% in 2009 (Guirong Zhou et al., 2018). This shows that the cost of technological innovation of enterprises in China is relatively improved, and that the efficiency of transforming technology into direct production achievements is not significant. In order to improve the bottleneck of enterprise technological innovation, a series of policy guidelines are introduced in China. Since the introduction of the “strategy of invigorating China through science and education” in 1998 and the “innovation-driven development strategy” at the 19th National Congress, China has been committed to promoting the innovation and development of science and technology. While the fiscal and tax incentives greatly affect the technological innovation. In 2017, the annual R&D expenditure in 2017 reached 1.75 trillion yuan, with an increase of 11.6% compared with the previous year, and the pace of technological innovation of enterprises has also accelerated.

In order to promote the transformation and upgrading of the economic structure and encourage the development of technological innovation of enterprises, a series of fiscal and tax policies that encourage the technological innovation has been introduced in China. All of these have promoted the commercial transformation of the technological innovation achievements in enterprises and played an important role in the improvement of innovation performance in enterprises. Although the fiscal and tax incentives are generally adopted by the governments of the world, the research conclusions of the academia on the implementation effect of fiscal and

tax policies are not unified. Then, what is the role of fiscal and tax incentives, and can it promote enterprises to carry out technological innovation activities and improve the innovation performance? These problems need to be further settled by theoretical analysis and empirical analysis. In view of this, in this paper, based on the data of listed companies on the Growth Enterprise Market from 2007 to 2017, the STATA 14.0-version software is used to analyze the sample data, and the relationship between the current fiscal policies and technological innovation is explored. The study results show that the fiscal and tax incentives positively affect the technological innovation of enterprises, which provides an important theoretical basis for the government to further improve fiscal and tax policies.

2. Literature Review

2.1 Research Status of the Impact of Fiscal Subsidy Incentive Policies on Technological Innovations in Enterprises

Domestic and foreign scholars have studied whether fiscal subsidies affect the technological innovation in enterprises. Some scholars hold that the fiscal subsidy incentive policies can effectively promote the technological innovation in enterprises, while other scholars hold dissenting opinions. After reading a large amount of literature in the study, we summarize the relevant points in this section.

(1) The fiscal subsidy incentive policies have a positive effect on the technological innovation in enterprises.

Fiscal subsidy incentive policies can promote the technological innovation. Holger Gorg and Eric Strobl (2007) held that there were fiscal subsidy incentive differences in different types of enterprises, and that after receiving fiscal subsidies for enterprises, medium and small-sized enterprises would apply the subsidies to the R & D investment. Therefore, the fiscal subsidy incentive policies have positive significance for the technological innovation in small and medium-sized enterprises. Lv Jiuqin and Yu Dandan (2011) conducted research based on the sample data from 2007 to 2008 of listed companies. And the empirical studies showed that after receiving the fiscal subsidies from government, the listed companies would apply the subsidies to the R&D expenditure in the next year. In other words, the government fiscal subsidy incentive policies have a positive effect on the technological innovation in enterprises. Ajay Aggarwal and Richard Sullivan (2014) conducted a research based on 300 sample data and found that the government fiscal subsidies had an inverted “U” relationship to the technological innovation of enterprises. This means that there is a limit to the government fiscal subsidies to the technological innovation. Within a certain reasonable range, the fiscal subsidies have positive significance for the technological innovation of enterprises. They conducted conclusions from the empirical research that the government should rationally invest in the technological innovation of enterprises. Ren Shuwei and Ju Xiaofeng (2016) explored the relationship between fiscal policies and technological innovation of small and medium-sized enterprises based on the ESN model. With the fiscal policies as the characterization variables, the fiscal policies significantly and positively correlate to the technological innovation of enterprises. This shows that the fiscal policies have strengthened the investment of technological innovation in small and medium-sized enterprises. Li Zhaoyou and Qi Xiaodong (2017) took the data of 65 listed companies in the new energy automotive industry in China as the research sample, and found through the construction of empirical models that the impact of government subsidies on the R&D investment and patent output of enterprises was distributed in a “inverted U” shape. In general, the fiscal subsidy incentives in China have a positive effect on the technological innovation in enterprises.

(2) Fiscal subsidy incentive policies have a negative effect on the technological innovation in enterprises.

Some domestic and overseas scholars held that the direct subsidies to the R & D activities of enterprises will restrict the enthusiasm of enterprises to invest in innovation to a certain extent. Tommy (2009) believed that fiscal subsidies had a substitution effect on the R&D investment of enterprises and could reduce the innovation performance. Yu Mingguai, Hui Yafu and Pan Hongbo (2010) believed that private enterprises that established political connections with local governments could get more financial subsidies, and that these private enterprises did not apply subsidies to the R&D activities, but to expand the size of enterprises. Gao Hongwei (2011) constructed the theoretical models based on the game theory and explored the impact of government subsidies on the technological innovation in state-owned enterprises. And it was found through empirical studies that the increase in government subsidies would lead to the crowding out effect of research and development in state-owned enterprises, and that the state-owned enterprises would use special political connections to defraud fiscal subsidies and may even lead to widespread corruption. Cao Xianfei (2014) explored the relationship between fiscal subsidies and technological innovation of enterprises based on propensity score matching difference method. And through empirical research he found that there was an inverted “U” relationship between the promotion effect of government fiscal subsidies and the intensity of subsidies, and that in the actual

technological innovation in enterprises, excessive fiscal subsidies often led to the deviation of the direction of subsidies. Camila Gramkow and Annela Anger-Kraavi (2018) held that the fiscal subsidies had a reverse effect on the technological innovation in enterprises. In the research, they found that companies that received fiscal subsidies would cut the investment of equity capital in technology input. The more government fiscal subsidies will replace the R & D input of the equity capital of enterprises. In other words, the government fiscal subsidies can not achieve the desired results. Guo Jingxian and Yuan Zeming (2018) held that the fiscal subsidies have some crowding out effect on the technological innovation in enterprises. The purpose of the government fiscal subsidies for enterprises is to promote enterprises to use subsidies to invest in the technology research and development. While, in the process of investing in real technology research and development, companies often use fiscal subsidies in other directions, leading to a waste of fiscal resources in technological innovation.

2.2 Research Status of the Impact of Preferential Tax Incentive Policies on the Technology Innovation in Enterprises

The academic circles at home and abroad believed that preferential tax incentive policies play an important role in the technological innovation in enterprises. The content of this section will be elaborated on the impact of preferential tax incentive policies on the R&D innovation investment of enterprises and the impact of preferential tax policies on the R&D innovation output of enterprises.

(1) Impact of preferential tax policies on the technology innovation in enterprises

Preferential tax policies can stimulate innovation activities and promote technological innovation. Dominique (2003) conducted empirical researches based on data of corporate R&D innovation investment of 17 OECD countries. The empirical researches showed that the preferential tax policies can alleviate the cost of corporate R&D innovation, and thus mobilizing the enthusiasm of technological innovation in enterprises. Xu Jingting, Zhang Bing and Yan Shenyou (2013) took the preferential tax policies of Jiangsu Province as an example by the method of qualitative analysis, and revealed the relationship between preferential tax policies and technological innovation in enterprises. They found from researches that preferential tax policies played a leveraging role in the technological innovation in enterprises, which strongly supported the development of technological innovation in enterprises. Based on a survey of the technology innovation data of American enterprises, Shahrouz Abolhosseini and Almas Heshmati (2014) found that the technological innovation capability of enterprises increased by 0.8932 percentage points for every 1 percentage point of increase of tax preferences. It can be seen that the preferential tax policies have a significant positive effect on technological innovation of enterprises. Yuan Jianguo, Fan Wenlin and Cheng Chen (2015) explored the relationship between preferential tax policies and technological innovation in enterprises with the data of China's A-share listed companies from 2006 to 2013 as the research sample. Through empirical researches, it was found that the preferential tax policies had an important role in promoting the R&D investment of enterprises. At the same time, they further confirmed the difference in the incentive effect of preferential tax policies in different regions and of different types of enterprises on the technological innovation of enterprises. Huang Haibin, Luo Jun and Chang Jing (2017) found that the incentive effect of preferential tax policies on the technology research investment in enterprises is conditional based on the analysis of preferential tax policies for high-tech industries. The basic precondition is that enterprises have interests. In other words, the greater the taxable income is, the greater the incentive effect is. However, some scholars are skeptical about the view that "preferential tax policies promote the technological innovation in enterprises". Wu Jinming (2016) and Yang Xudong (2018) held that the preferential tax policies had a reverse effect on the technological innovation in enterprises.

(2) Impact of preferential tax policies on the R&D innovation output of enterprises

Czarnitzki D and Hanel P & Rosa J (2011) found that the reduction in tax burden had a positive impact on the innovation output indicators, based on the empirical analysis of sample data. In other words, preferential tax policies can effectively promote the increase of technological innovation output in enterprises. Li Linmu and Guo Cunzhi (2014) conducted researches based on high-tech industries and found that preferential tax policies positively affected the technological innovation output of enterprises, and that the tax reduction or exemption policies could enable enterprises to have more new products or new patents. Zheng Chunmei and Li Pei (2015) held that preferential tax policies would produce opposite incentive effect under different types of enterprises. Preferential tax policies enjoyed by large companies can stimulate the technological innovation output in enterprises. The preferential tax policies for small and medium-sized enterprises has little effect on the technological innovation output in enterprises. Zhou Xiaodan (2016) conducted empirical researches based on the sample data of A-share listed companies, and found that nominal preferential tax policies and actual preferential tax policies significantly and positively affected the R&D and innovation output of enterprises. Gao

Kaidi (2018) conducted empirical researches based on the panel data of 520 listed companies in 2016. And the empirical researches showed that tax preferences had a positive incentive effect on the R&D and innovation output of enterprises, and that as an intermediate variable between tax preferences and enterprise innovation, R&D investment played a conducive role in the process of impact. In view of this, academic circles at home and abroad generally believe that preferential tax policies can promote the technological innovation output of enterprises, However, since there are some deficiencies for tax policies in the implementation, the quality of technological innovation output of enterprises is not high.

2.3 Literature Summary

Through the writing of the literature review, the following conclusions are summarized. Firstly, the academic circles at home and abroad focus on the researches of impact of fiscal and tax incentive policies on the technological innovation in enterprises, and emphasize the role of fiscal subsidies in the technological innovation in enterprises. Secondly, the academic circles at home and abroad adopt empirical research method to explore the impact of fiscal and tax incentive policies on the technological innovation in enterprises. But different scholars may draw different conclusions based on different variables. Finally, the research on the synergistic effect between fiscal subsidies and tax preferences in the academic circles at home and abroad is still insufficient. In view of this, in this paper, the impact of fiscal subsidies and tax preferences on the technological innovation in enterprises is explored, and the impact of synergistic effect between fiscal subsidies and tax preferences on the technological innovation in enterprises is studied.

3. Empirical Analysis of the Impact of Fiscal and Tax Incentives on the Technology Innovation in Enterprises

The analysis is conducted in this chapter based on the sample data of 243 listed companies on GEM from 2010 to 2017. The impact of fiscal and tax incentives on the technological innovation in enterprises is explored in this chapter by defining relevant variables and constructing theoretical models. And the impact of fiscal and tax incentives on the technology innovation in enterprises, the impact of different fiscal and tax incentives on the technology innovation in enterprises, and synergistic effect between tax preferences and government subsidies are explored based on the theoretical models.

3.1 Research Design

3.1.1 Research Hypothesis

Based on the theoretical basis of the foregoing chapters and the description of the basic situation, the following three aspects of hypotheses are proposed in this section, In order to better construct the theoretical models and explore the impact of fiscal and tax incentives on the technological innovation in enterprises, the three proposed hypotheses are as follows.

Tax preferences and government subsidies, as two manifestations of fiscal and tax incentive policies, have different effects on the technological innovation. Government subsidies could reduce the cost of technological innovation in enterprises through the support of special capital, thus effectively improving the enthusiasm of technological innovation in enterprises (Fan Zhang, Youdou Zhang, 2018). The goal of tax preferences is the high-tech enterprises, not technological innovation activities. Therefore, there are differences between the effect of tax preferences on technological innovation in enterprises and fiscal subsidies. In view of this, the hypothesis 1 in the research is proposed in this paper: tax preferences and government subsidies affect the enterprises' R&D investment and the enterprises' innovation ability.

Tax preferences and government subsidies are two different forms of fiscal and tax incentive policies, and there are must differences between their effects on technological innovation in enterprises. The essence of the two incentives, tax preferences and government subsidies, is whether there is support of special funds. Fiscal subsidy is an incentive for the government to use public account funds to support enterprises for technological innovation. While tax incentive is an incentive to stimulate enterprises for technological innovation through tax cuts and tax exemptions for projects related to the technological innovation in enterprises. The academic circle believed that government subsidies could promote the technological innovation in enterprises (Chen Dai, Yi Liu, 2008). In view of this, hypothesis 2 is proposed in this paper: compared with tax preferences, government subsidies can promote the R&D investment in enterprises, that is, government subsidies can play a more incentive role than tax preferences and enhance enterprises' innovation capability.

Tax preferences and government subsidies are effective incentives for technological innovation in enterprises. From this perspective, tax preferences and government subsidies make important contributions to the advancement of technological innovation in enterprises. And scholars in academic circle held that there is a

synergistic effect between tax preferences and government subsidies. Based on the synergistic effect of tax preferences and government subsidies, whether fiscal incentive had a significant impact on technological innovation in enterprises was determined (Haoyan Li, Jinghua Cui, 2014). In view of this, hypothesis 3 is proposed in this paper: tax preferences have synergistic effects with government subsidies.

3.1.2 Variable Selection

The types of variables involved in this paper include explanatory variables, interpreted variables, and control variables.

(1) Explanatory variables

Enterprises' R&D Investment (RD). According to the main content of this paper, the enterprises' R&D investment belongs to the explanatory variables. In order to further quantify the status of enterprises' technology innovation, enterprises' R&D investment adopted by Ying Chen (2016) is drew on in this paper to measure the technological innovation in enterprises.

In the research of this paper, the R&D investment of enterprises is measured by the ratio of R&D expenditure to operating income.

Technological Innovation Efficiency of Enterprises (INNOV). In addition to taking the enterprises' R&D investment as an indicator to measure the technology innovation in enterprises, we also incorporate the technology innovation efficiency of enterprises into the scope of enterprise technology innovation index. The efficiency of enterprise technology innovation measures the "quality" of enterprise technology innovation. In this paper, the ratio of the number of patent applications in the current year to the R&D investment in the previous year is used to measure the innovation efficiency of enterprises (Qian Xin et al.,2018). As this measurement index belongs to the stock index of enterprises, and the key variable fiscal subsidy and income tax preference are flow indexes of the government, this method is adopted.

(2) Interpreted variables

Financial Subsidy Intensity (FS). The intensity of financial subsidies is an important indicator of financial subsidies for the technological innovation in enterprises. Therefore, in this paper, the intensity of financial subsidies is taken as an important criterion for measuring the fiscal and tax incentive policies. According to the calculation method commonly used in academia, the ratio of government fiscal subsidies obtained by enterprises to the operating income is taken as the calculation standard.

Income Tax Benefit (ITB). Income tax benefit is an important criterion for tax preferences to stimulate technological innovation in enterprises. Therefore, in this paper, the income tax benefit is taken as another standard to measure the fiscal and tax incentive policies. According to the calculation method of academia, the ratio of corporate income tax to the operating income is used as the calculation method.

(3) Control variables

The factors affecting enterprises' technological innovation also include important economic indicators, such as total return on assets, return on equity, asset-liability ratio and nature of property rights. In order to more scientifically explore the impact of fiscal and tax incentive policies on enterprises' technology innovation policies, the relevant factors of enterprises' technology innovation are incorporated into the scope of control variables in this paper.

Total Return on Assets (ROA). The total return on assets has an important impact on the technological innovation of enterprises. The higher the total return on assets is, the stronger the profitability of enterprises is, and the stronger the investment in technological innovation is. the ratio of net profit to average total assets is used to measure the total return on assets in this paper.

Return on Equity (ROE). The return on equity has an important impact on the technological innovation in enterprises. The higher the return on equity is, the stronger the profitability of enterprises is, and enterprises will have huge economic strength to invest in technological innovation. The ratio of total net profit of enterprises to owner's equity is used to measure the return on equity of enterprises in this paper.

Sales Margin (SM). The ratio of the main business profit to the main business cost is used to measure the net sales gross margin in this paper.

Asset-Liability Ratio (ALR). The asset-liability ratio reflects the solvency of enterprises, that is, the stronger the solvency of enterprises, the more capital it can invest in technological innovation. The ratio of total liabilities to total assets is used to measure the asset-liability ratio in this paper.

Capital adequacy (lcash). The logarithm of cash holdings is used to measure the capital adequacy in this paper. The higher the capital adequacy, the more the disposable capital of enterprises is, and the more the funds can be used for technological innovation is.

Enterprise size (SIZE). The enterprises' total assets at the end of the year are used to measure the enterprise in this paper. The enterprise size will affect the technological innovation in enterprises. In order to eliminate heteroscedasticity, this indicator uses the logarithm of total assets at the end of the year to measure the enterprise size.

Government Quality (GQ). Government quality represents the quality of the government in the region where the enterprise is located. The relevant indicators in the "China Provincial Marketization Index Report (2016)" compiled by Wang Xiaolu, Fan Gang, and Yu Jingwen is used in this paper to measure the institutional environment. The smaller the index is, the lower the rule of law is and the worse the institutional environment is. When the index in this region where the enterprise is located is lower than the median of the sample region, the GQ dummy variable is defined as 0, whereas the variable is defined as 1.

Political connection of corporate executives (Political). This variable is also a dummy variable. When a board member of an enterprise has served in the party and government departments, or obtained titles at various levels, such as "NPC Deputy" and "CPPCC Member", he Political dummy variable is defined as 1, whereas the variable is defined as 0. This data is derived from the background information of the board of directors and management information disclosed in the annual report of the listed companies, and is obtained through manual finishing.

Property Right of Enterprise (SOE). If the enterprise is a state-owned enterprise, it takes 1; otherwise, it takes 0. Ownership concentration of enterprise (the shareholding ratio of the first shareholder).

In addition to the above control variables, the indicators of the intangible assets of enterprises, the number of authorized inventions (firpatent), and the growth rate of operating income (GROW) are taken as control variables on the basis of reading a large amount of literature in this paper.

3.1.3 Construction of Model

Based on the previous hypotheses, theoretical models are built in this section. In order to verify hypothesis 1 and hypothesis 2, the following regression model is built.

$$RD_{i,t} = \beta_0 + \beta_1 ITB_{i,t} + \beta_2 FS_{i,t} + \beta_3 ROE_{i,t-1} + \beta_4 SM_{i,t-1} + \beta_5 ALR_{i,t-1} + \beta_6 SIZE_{i,t-1} + \beta_7 GROW_{i,t-1} + \beta_8 YEAR_{i,t-1}$$

In order to verify hypothesis 3, we innovatively introduce the interactive term $ITB \times FS$ of preferential tax policies and government subsidy policies in the empirical model to verify the interaction of the two policy instruments and establish the following regression model:

$$RD_{i,t} = \beta_0 + \beta_1 ITB_{i,t} + \beta_2 FS_{i,t} + \beta_3 (ITB \times FS)_{i,t} + \beta_4 ROE_{i,t-1} + \beta_5 SM_{i,t-1} + \beta_6 ALR_{i,t-1} + \beta_7 SIZE_{i,t-1} + \beta_8 GROW_{i,t-1} + \beta_9 YEAR_{i,t}$$

3.2 Descriptive Statistics and Correlation Test

3.2.1 Descriptive Statistical Analysis

Key indicators involved in this paper are descriptively analyzed in this section, with the purpose of grasping the basic situation of fiscal and tax incentives and enterprise technological innovation through simple statistical analysis. The collected and processed data is descriptively analyzed in this section, and Table 1 shows the results of the analysis. Through the digging of descriptive statistical analysis results, the following conclusions are mainly summarized in this section. From the perspective of the R&D investment of enterprises, the average value of R&D investment of enterprises is 0.0609, which is lower than the median value. This shows that most companies' R&D investment accounts for a small proportion of operating income. It can be seen that the companies' R&D investment needs to be further strengthened. From the perspective of income tax benefit, the average value of corporate income tax benefit is 0.0286, which is lower than the median value. This shows that the expenditure on corporate income tax has been greatly reduced under the guidance of the state. From the perspective of the intensity of fiscal subsidies, fiscal subsidies are more stable in the investment of technological innovation of enterprises. In general, the relevant indicators are more reasonable in distribution, and the empirical research and digging of sample data are scientific.

Table 1. Descriptive statistical analysis results

Variable	Obs	Min	Q1	Q3	Mean	Max	Sd
RD	1944	0.0000	0.0348	0.0706	0.0609	0.4650	0.0504
ITB	1944	0.0001	0.0163	0.0365	0.0286	0.1616	0.0186
FS	1944	0.0000	0.0040	0.0247	0.0195	0.2043	0.0245
ROE	1944	0.0000	0.0660	0.1665	0.1409	0.9206	0.1171
SM	1944	0.0035	0.1559	0.4682	0.4842	15.3506	0.9512
ALR	1944	0.0110	0.1341	0.3838	0.2703	0.7695	0.1659
SIZE	1944	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
GROW	1944	-0.9106	0.0000	0.3590	0.3482	82.6992	2.3880

3.2.2 Correlation Test

When using the multiple linear regression model to explore the impact of fiscal and tax incentives on technological innovation, we must first ensure that various impact factors of the hypotheses will not be affected by endogeneity. From this perspective, it is necessary to examine the mutual independence of the influencing factors of technological innovation in enterprises before conducting research. The STATA14.0 statistical tool is used for analysis in this section, and the empirical results are shown in Table 2. There is a correlation relationship between the income tax benefit, the intensity of fiscal subsidies, the investment in technological innovation of enterprises, and the synergistic effect between income tax benefit and the intensity of fiscal subsidies, and they are all significant under the condition of 1%. This shows that through the correlation analysis between the various indicators in this study, the impact of fiscal and tax incentives on enterprise technology innovation is effectively confirmed in this section.

Table 2. Descriptive statistical analysis results

	RD	ITB	FS	ROE	SM	ALR	SIZE	GROW	ITBFS
RD	1.000								
ITB	0.034	1.000							
FS	0.447***	0.270***	1.000						
ROE	-0.066***	0.316***	0.099***	1.000					
SM	0.194***	0.494***	0.176***	0.230***	1.000				
ALR	-0.265***	-0.276***	-0.253***	0.239***	-0.222***	1.000			
SIZE	-0.055**	-0.038*	-0.03	-0.015	-0.041*	0.089***	1.000		
GROW	-0.025	-0.011	-0.01	0.019	-0.018	0.027	0.027	1.000	
ITBFS	0.255***	0.599***	0.820***	0.200***	0.308***	-0.248***	-0.033	-0.013	1.000

Note. Robust P-value in parentheses; ***p<0.01, **p<0.05, *p<0.1

3.3 Empirical Analysis

The impact of fiscal and tax incentives on technological innovation of enterprises is explored in this section, mainly including two aspects: the difference in incentive effects between tax preference and fiscal subsidies; the impact of tax preference and fiscal subsidies on technological innovation of enterprises. The STATA14.0 statistical tool is used in this paper for analysis, and the empirical results are shown in Table 3.

Table 3. Empirical analysis of the impact of fiscal and tax incentives on enterprise technological innovation

Variable	Predicted sign	Model (1)	Model (2)
FSit	+	0.9533*** (22.25)	1.5789*** (19.62)
ITBit	-	-0.5462*** (-8.39)	-0.0609 (-0.73)
ROEit-1	+	0.0085317 (0.77)	0.0058 (0.53)
SMit-1	+	0.0093*** (7.78)	0.0089*** (7.58)
ALRit-1	-	-0.0566*** (-8.23)	-0.0500*** (-7.38)
SIZEit-1	-	-5.52E-13 (-1.18)	-5.58E-13 (-1.22)
GROWit-1	-	-0.0003 (-0.65)	-0.0003 (-0.68)
(ITB × FS)it	-		-16.9286*** (-9.11)
F-Statistics		57.50***	61.48***
Adj.R ²		0.2893	0.3183
N		1944	1944

3.3.1 Difference in Incentive Effects between Tax Preference and Fiscal Subsidies

There are big differences in the incentive effects of tax preference and fiscal subsidies on the technological innovation of enterprises. According to the empirical results of model (1) in Table 3, the tax preference has a negative incentive effect on the technology innovation in enterprises, and fiscal subsidies have positive incentive effect on the technology innovation in enterprises. Tax preference has a negative impact on the technology innovation in enterprises, and are significant at the 1% level. This means that for every increase of income tax benefit, the technology innovation in enterprises will be reduced by 0.5462 units. The negative effect of income tax benefit on the technological innovation in enterprises is largely due to the unclear orientation of tax preference. As long as taxpayers are qualified for high-tech industries, they will want to receive tax preference even for the non-technical innovation activities, which leads to the weakening of technological innovation capabilities of enterprises under tax preference. Fiscal subsidies have a positive impact on the technological innovation in enterprises and are significant at the 1% level. This means that for every increased unit of fiscal subsidies, the technological innovation in enterprises will increase by 0.9533 units. Fiscal subsidies are special, in other words, fiscal subsidies can specifically subsidize technological innovation activities of enterprises. The fiscal subsidy policies have a clear policy orientation and can effectively stimulate the technological innovation in enterprises.

3.3.2 Analysis of the Synergistic Effect of Tax Preference and Fiscal Subsidies

The combination of tax preference and fiscal subsidies can produce synergistic effect. According to the empirical results shown in model (2), the intensity of fiscal subsidies significantly impacts the technological innovation in enterprises. Each additional unit of fiscal subsidy intensity means that the technological innovation in enterprises will increase by 1.5789 units. The impact of income tax preference on the technological innovation in enterprises in this model is not significant. From the perspective of the synergistic effect between tax preference and fiscal subsidies, it has a significant impact on the technological innovation in enterprises and is significant at the 1% level. From another point of view, the synergistic effect between tax preference and fiscal subsidies is negative, which means that for each additional unit of tax preference and fiscal subsidies, the corresponding technological innovation in enterprises is reduced by 16.9286 units. The fundamental goal of both tax preference and fiscal subsidies is to promote the technological innovation in enterprises. However, since the tax preference is aimed at innovative enterprises, not technological innovation activities, it leads to the expansion of the object of tax preference. In other words, in the actual practice of tax preference, the innovative companies enjoy tax benefits even without innovation activities, which causes the negative effect of tax preference on the technological innovation in enterprises. From another perspective, fiscal subsidies are special for the technological innovation in enterprises. Therefore, fiscal subsidies can directly stimulate the innovation activities. However, due to the expansion of the sample size, the innovative activities with fiscal subsidies are far less than that in the enterprises that are popularized by tax preference. Therefore, the synergistic effect between the two is significantly negative. In general, there is a synergistic effect between tax preference and fiscal subsidies. and it has a negative effect on the technological innovation in enterprises.

4. Research Conclusions and Recommendations

4.1 Research Conclusions

This paper draws the following conclusions through a combination of normative analysis and empirical analysis.

Firstly, there is a difference in the incentive effects of the two kinds of incentives, tax preference and fiscal subsidies, on the technological innovation in enterprises. Tax preference negatively affect the technological innovation in enterprises and is significant at the 1% level, which means that the technological innovation in enterprises will reduce by 0.5462 units for every increased unit of income tax preference. Fiscal subsidies positively impact the technological innovation in enterprises and are significant at the 1% level, which means that the technological innovation in enterprises will increase by 0.9533 units for every increased unit of fiscal subsidies. The reason why the tax preference and fiscal subsidies are different in the incentive effect of technological innovation in enterprises is reflected in that whether the policy orientation is clear.

Secondly, the combination of tax preference and fiscal subsidies can lead to synergistic effect. The synergistic effect between tax preference and fiscal subsidies is negative, which means that the corresponding technological innovation in enterprises will reduce by 16.9286 units for each increased unit of tax preference and fiscal subsidies. In the actual practice of tax preference, innovative enterprises enjoy tax benefits even without innovative activities, which causes the negative effects of technological innovation stimulated by the tax benefits. From another perspective, fiscal subsidies are special for the technological innovation in enterprises. There is synergistic effect between tax preference and fiscal subsidies, which has a negative effect on the technological innovation in enterprises.

Finally, the incentive of tax preference and the technological innovation in enterprises are complementary. That is to say, the fiscal and tax incentive policies will promote the development of technological innovation in enterprises. and the benefits brought by the technological innovation in enterprises will prompt the state to introduce more powerful fiscal and tax policies. From this perspective, the incentive of fiscal and tax policies will reduce the costs of technological innovation in enterprises. The two manifestations of fiscal and tax policies are different in the incentive effects of technological innovation in enterprises, they all have a close relationship with the corporate innovation.

4.2 Policy Suggestion

According to the basic conclusions of empirical research, the corresponding suggestions are proposed from the national macro policy in this section.

Firstly, the government needs to appropriately increase the amount of fiscal subsidies. According to the empirical research conclusions, the fiscal subsidies can effectively promote the technological innovation in enterprises due to the special nature. While there are still quality deficiencies in the government fiscal subsidies for the technological innovation in enterprises. On the one hand, the government shall raise the “quality” of fiscal subsidies to stimulate the technological innovation in enterprises. The government sets up special subsidy funds for the technology innovation activities in enterprises. and makes reasonable subsidies according to the situation of technological innovation in enterprises. Only in this way can we ensure that the direction of fiscal subsidies is truly used for the technological innovation in enterprises. On the other hand, the government should increase the “quantity” of fiscal subsidies to stimulate the technological innovation in enterprises. The government also needs to expand the overall amount of fiscal subsidies to support more technology-based companies to achieve technological innovation. All in all, the government needs to improve the fiscal subsidy policies, and actively increase the number of technological innovations enjoying the fiscal subsidies.

Secondly, the government needs to improve preferential tax policies, making the preferential tax policies directional. In the previous study, it was pointed out that the object of preferential tax policies is technological enterprises rather than technological innovation activities. From this point of view, non-technology innovation activities of enterprises with high and new technology legal person qualification will also enjoy tax preference. Under these conditions, the preferential tax policies will lose the incentive effect on the technological innovation in enterprises. In view of this, the government needs to further narrow the object of preferential tax policies, that is the technological innovation activities with high-tech corporate legal person qualification. From this point of view, the specialization of the government preferential tax policies can effectively promote the technological innovation in enterprises. To sum up, the preferential tax policies can only promote the technological innovation in enterprises if they are used reasonably, stipulate the object of preferential tax policies, and clarify that which behaviors can enjoy tax benefits.

Finally, the Chinese government needs to set up the supervisory organizations for fiscal and tax incentive policies for the technological innovation in enterprises. The goal of the existence of supervisory organizations is to ensure that fiscal policies can be directly applied to the technology innovation activities in enterprises. According to the practice of fiscal and tax incentive policies at this stage, the fiscal and tax policies are often used by enterprises for non-technical innovation activities, causing that the incentive effect of fiscal and tax policies on the technological innovation in enterprises is not obvious. In view of this, the Chinese government needs to design special organizations to effectively supervise the fiscal and tax policies driving the technological innovation in enterprises. Through supervision, it aims to ensure the effectiveness of the effect of fiscal and tax policies to drive the technological innovation in enterprises.

References

- Ajay, A., & Richard, S. (2014). Affordability of cancer care in the United Kingdom – Is it time to introduce user charges? *Journal of Cancer Policy*, 2(2).
- Camila, G., & Annela, A. K. (2018). Could fiscal policies induce green innovation in developing countries? The case of Brazilian manufacturing sectors. *Climate Policy*, 18(2).
- Cao, X. F. (2014). Government Subsidies and Enterprise R&D Investment - An Empirical Study Based on Propensity Score Matching Method. *Inquiry into Economic Issues*, 9, 160-166.
- Chen, Y. (2016). Government Support, High-Tech and Enterprise Performance - Evidence of High-Tech Listed Companies. *Finance and Accounting Monthly*, 15, 57-62.
- Clausen, T. H. (2009). “Do subsidies have positive impacts on R&D and innovation activities at the firm level?”. *Structural Change & Economic Dynamics*, 20(4), 239-253. <https://doi.org/10.1016/j.strueco.2009.09.004>

- Czarnitzki, D., Hanel, P., & Rosa, J. M. (2011). Evaluating the Impact of R&D Tax Credits on Innovation: A Microeconometric Study on Canadian Firms. *Research Policy*, 40(2), 217-229. <https://doi.org/10.1016/j.respol.2010.09.017>
- Dai, C., & Liu, Y. (2008). A Comparative Analysis of the Impact of Tax Preferences and Fiscal Subsidies on Enterprise R&D. *Economic Sciences*, 03, 58-71.
- Dominique, G., & Bruno, P. (2003). The impact of public R&D expenditure on business R&D. *Economics of Innovation and New Technology*, 12, 225-243. <https://doi.org/10.1080/10438590290004555>
- Gao, H. W. (2011). Research on the Extrusion Effect of Government Subsidies on the R&D of Large State-Owned Enterprises. *Forum on Science and Technology in China*, 8, 15-20.
- Gao, K. D. (2018). An Empirical Study of Tax Preferences, R&D Investment and Enterprise Innovation. *China Market*, 8, 95-98.
- Guo, J. X., & Yuan, Z. M. (2018). Life Cycle, Fiscal Policies and Innovation Capability—Based on the Empirical Evidence of SMEs. *Contemporary Finance and Economics*, 3, 23-34.
- Huang, H. B. Luo, J., & Chang, J. (2017). Analysis on the Incentive Mechanism for High-Tech Enterprises to Develop Fiscal and Tax Policies. *Science and Technology Management Research*, 37(16), 68-72.
- Li, H. Y., & Cui, J. H. (2014). The Driving Effect of Coordination Mode of Tax Preferences and Direct Subsidies on Innovation. *Taxation Research*, 3, 85-89.
- Li, L. M., & Guo, C. Z. (2014). Is the Huge Tax Reduction and Exemption Effective in Promoting the Development of China's High-Tech Industry. *Finance & Trade Economics*, 5, 14-26.
- Li, Z. Y., & Qi, X. D. (2017). Research on the Relationship between Government Fiscal Policies, Enterprise R&D Input and Patent Output - Based on Panel Data of New Energy Vehicle Listed Companies in China. *Journal of Liaoning University (Philosophy and Social Sciences Edition)*, 45(04), 31-41.
- Lv, J. Q., & Yu, D. D. (2011). Government Research Innovation Grant and Enterprise R&D Investment: Extrusion, Substitution or Incentive? *Forum on Science and Technology in China*, 8, 21-28.
- Ren, S. W., & Ju, X. F. (2016). Research on the Relationship between Public Policies and SMEs' Technological Innovation Level Based on ESN Model. *Journal of Northeast Agricultural University (Social Science Edition)*, 14(01), 7-16+23.
- Shahrouz, A., & Almas, H. (2014). The main support mechanisms to finance renewable energy development. *Renewable and Sustainable Energy Reviews*, 40.
- Wu, J. M. (2016). An Empirical Analysis of the Three Stages of Preferential Tax Policies Affecting the Value of Technological Innovation - Taking the Data of Guangdong Maoming from 2001 to 2013 as An Example. *Money China*, (01), 272-275+277
- Xin, Q., Zheng, Y., Gong, X., & Sun, L. H. (2018). A Comparative Study on the Impact of Tax Preferences and Fiscal Subsidies on R&D Investment of Chinese Traditional Medicine Enterprises. *Chinese Traditional and Herbal Drugs*, 49(09), 2215-2220.
- Xu, J. T., Zhang, B., Yan, S. Y. (2013). Research on Preferential Tax Policies for Enhancing Enterprise Technological Innovation Capability - Based on Macro Analysis of Jiangsu Province. *Productivity Research*, (01): 41-43+4.
- Yang, X. D. (2018). Environmental Uncertainty, Tax Preferences and Technology Innovation - An Empirical Analysis Based on the Listed SMEs in China. *Taxation Research*, 3, 86-91.
- Yu, M. G., Hui, Y. F., & Pan, H. B. (2010). Political Connection, Rent Seeking and the Effectiveness of Local Government Fiscal Subsidy. *Economic Research*, 3, 22-26.
- Yuan, J. G., Fan, W. L., & Cheng, C. (2016). Tax Preferences and Enterprise Technology Innovation - An Empirical Study Based on Chinese Listed Companies. *Taxation Research*, 10, 28-33.
- Zhang, F., & Zhang, Y. D. (2018). The Impact of Fiscal Subsidies and Preferential Tax Policies on Business Performance in Competitive Fields. *Finance and Trade Research*, 29(03), 80-89.
- Zheng, C. M., & Li, P. (2015). The Impact of Government Subsidies and Tax Preferences on Enterprise Innovation Performance - An Empirical Study Based on GEM High-Tech Enterprises. *Science & Technology Progress and Policy*, 16, 83-87.

- Zhou, G. R., Long, H. F., & Li, X. H. (2018). An Empirical Study on the Contribution Rate of Technological Innovation to Industrial Economic Growth — Taking Tianjin as an Example. *Industrial Innovation Research*, 6, 14-19.
- Zou, X. D. (2016). Tax Preferences, R&D Investment and Enterprise Independent Innovation - An Empirical Analysis Based on A-share Listed Companies in Shanghai and Shenzhen Stock Exchanges. *Journal of Liaodong University (Social Science Edition)*, 18(5), 64-70.

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The Effects of China's "Belt and Road Initiative" and "31 Measures to Benefit Taiwan" on the Development of Taiwanese Enterprises

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Received: October 19, 2018

Accepted: November 14, 2018

Online Published: November 21, 2018

doi:10.5539/ibr.v11n12p53

URL: <https://doi.org/10.5539/ibr.v11n12p53>

Abstract

China has achieved rapid economic growth and become involved in the economic globalization through its policy of reform and opening-up and modernization. It has attracted much investment from lots of Taiwanese enterprises, including some small and medium-sized enterprises featuring a high labor cost and facing difficult operation in the traditional industries. Thanks to the policy, many Taiwanese enterprises have got a chance to rebirth by transforming their crises into opportunities. With the implementation of the policy of urbanization, the people from rural areas in China have been moving to urban areas, and the enterprises of the second and third industries have been concentrating in cities. This has not only fueled the livelihood-oriented consumption in China but also expanded the domestic demand market of the Taiwanese medium and large-sized livelihood enterprises in China. The Belt and Road trade foundation construction program, which aims to link Europe, Asia and Africa and was proposed in 2013, is an extension of the Great Development of Western Part of China and offers Taiwanese enterprises a chance to get fully involved in the development of the international market. The 31 Measures to Benefit Taiwan announced by the Chinese government in February 2018 has significant influence on the future development of the Taiwanese enterprises in China. Therefore, this paper will elaborate on the effects of the Belt and Road and the 31 Measures to Benefit Taiwan on the Taiwanese enterprises.

Keywords: reform and opening-up, policy of urbanization, Belt and Road Initiative, 31 Measures to benefit Taiwan

1. Introduction

The trade between China and Taiwan has been suspended since 1949 when the Chinese Communist Party established its political power and the Kuomintang retreated to Taiwan. It was not until the implementation of China's policy of reform and opening-up that the trade between the two began to resume. The ever closer economic and trade tie between China and Taiwan has had great impacts on both parties. Later, China witnessed fast economic advancement and launched some major policies, including the ones of urbanization and the Belt and Road Initiative, both of which have had far-reaching influence on Taiwan's economy. Meanwhile, the economic tie between the two parties across the Taiwan Strait has evolved into an equivalent one with the implementation of these economic policies. On February 28, 2018, the National Office of Taiwan Affairs in Mainland China announced the 31 Measures to Benefit Taiwan, or the Measures to Boost the Cross-Strait Economic and Cultural Exchange and Cooperation. Of these measures, 12 ones promote equal preferential to enterprises from Taiwan and Mainland China; 19 ones aim to provide equal treatment for compatriots from Taiwan and Mainland China. The most prominent part in the 31 Measures to Benefit Taiwan is economic transformation, and there are several regulations on investment, taxation, development, manufacturing and land acquisition. Of all these regulations on economy, emphasis is placed on fair participation, joint investment and cooperation. Special attention is paid to the establishment of cross-strait cooperation zones in the middle, western and northeast parts of China, the participation in the Belt and Road Initiative, and the expansion of the domestic and international markets. Aside from the investment in high technology, the 31 Measures to Benefit Taiwan attaches particular importance to agricultural cooperation so that the Taiwanese farmers of industrialization will be able to obtain the support and preferential from the policy (Yuan, 2018). Hence, this paper will elaborate on the effects of the Belt and Road and the 31 Measures to Benefit Taiwan on the Taiwanese enterprises.

2. Literature Review

According to Lin (2013), what motivates Taiwanese enterprises to make investment in China lies in the cheap production factors. The processing and export bases, the branches of European and American brand manufacturers, the supportive policies for the eastern part of China, and the convenient access to the support from Taiwan's industrial chains – all these factors have motivated many Taiwanese enterprises to invest in the manufacturing industry in the coastal areas in the east of China as far as the investment field and the industry for investment are concerned. But as the operation environment in the coastal areas deteriorates, the governments in the middle and western parts of China have released some supportive policies. Moreover, as China's 12th Five-Year Plan emphasizes industrial restructuring, significant changes have taken place in the investment of Taiwanese enterprises in China in recent years. For instance, the investment has gradually shifted from the coastal areas in the east of China to the middle and western parts of the country, from the manufacturing industry to the service industry, and from processing and export to domestic and international marketing. According to Chen (2015), China will promote urbanization and balance the development between urban and rural areas in the 10th Five-Year Plan released in 2001. In the Economic Work Meeting of the Chinese central government in December 2012, the State Council listed urbanization as a major task for the first time. Right after the National People's Congress and the political consultative conference in March 2013, the State Council released the National Program of New Urbanization (2014-2020) on March 16, 2014, making it a macroscopic and fundamental program for the sound development of urbanization across the nation. According to Chinese premier Li Keqiang, urbanization will not only lead to enormous consumption and investment but also step up China's transformation from a World Factory into a World Market. Besides, it is certain that urbanization will result in a large-scale population movement in China. As migrant population and capital concentrate in cities and economic activities become denser, the production and commodity trade will have scale effects and become an essential support for the expansion of domestic demand. To a large extent, the development of urbanization is closely related to the resettlement of migrant workers. In particular, the reform of the binary household registration system in urban and rural areas has always been an essential factor in promoting urbanization and improving welfare for people. Therefore, China released the State Council's Opinions on Furthering the Reform of Household Registration System on July 30, 2014, announcing that it will lift the restriction on urban settlement of rural residents so that farmers will enjoy the rights as an urban dweller.

In 2013, China launched the inter-continental Belt and Road Initiative, shaped the concept of a European-Asian Community and set the goal of realizing the Chinese Dream (Sung, 2018). As for the necessity of Taiwan's participation in the Belt and Road Initiative, Chu and Liu (2017) argue that domestically Taiwan's economic development is boosted by private consumption and the import and export and its dependence on foreign trades has exceeded 130%. In case that foreign trade is in depression, such an economic development model will have direct impacts on private investment and consumption in Taiwan. Internationally, the crisis that Taiwan is marginalized in the regional economic integration has become increasingly prominent, and Taiwan's international competitiveness has been significantly weakened. By launching the Belt and Road Initiative and the Made in China 2025, China encourages and supports the internationalization of industrial chains that manufacture equipment and motivate the enterprises in these industrial chains to make investment and start business in the foreign countries, promoting the upgrading of local industries and fueling local employment.

In the press conference in February 2018, the Taiwan Affairs Office of the State Council released the Measures to Boost the Cross-Strait Economic and Cultural Exchange and Cooperation, and there are altogether 31 measures. As for a faster provision of equal benefits for the enterprises from Taiwan and Mainland China, the measures reveal that Taiwanese enterprises will participate in the Made in China 2025 and enjoy supportive policies on taxation; Taiwanese enterprises that meet the requirements will enjoy a reduction of 15% in the business income tax from the research and development fund, a preferential for high-tech enterprises; Taiwanese enterprises can join the infrastructure in energy, transportation, water conservation, environmental protection and municipal engineering in the form of franchise. Additionally, Taiwanese enterprises are free to have a fair participation in governmental procurement; they can play a role in the reform of the mixed ownership of state-owned enterprises through joint venture, cooperation, acquisition and merger, and restructuring. Apart from providing the same benefits enjoyed by people living in Mainland China for Taiwanese compatriots, the measures allow all Taiwanese to take 134 national occupational qualification exams, join the 1,000 Talents Project and the 10,000 Talents Project, and apply for several funds, including the national fund for social science. Moreover, they are allowed to join the projects of carrying forward the fine traditional Chinese culture and some assessment projects, take part in the evaluations for honorary titles, gain the membership of professional social organizations and industrial associations, and assist the poverty alleviation and public interest undertakings in

Mainland China. According to the measures, Taiwanese people can take part in the making of radio and television programs and films regardless of quantity. The film-releasing institutions, radio stations, video websites, and online television websites in Mainland China can introduce numerous films and soup operas made in Taiwan. Furthermore, the restriction on producers, Mainland China elements and investment in the joint making of films and soup operas between Taiwan and Mainland China has been loosened.

These measures are not something new, but they are special in two aspects from the perspective of private needs. First, they fasten the offering of the benefits for the enterprises in Mainland China to Taiwanese enterprises in terms of investment and economic cooperation. Second, they gradually provide the benefits enjoyed by people living in Mainland China for people from Taiwan in terms of studying, starting a business, finding a job and living in Mainland China. If such a comprehensive policy to benefit Taiwan is fully implemented, there will be tremendous support from people on both sides of the Taiwan Strait, which is the real fundamental force to develop the cross-strait relationship (Huang, 2018). The 31 measures to benefit Taiwan are closely related to Taiwan's society and economy and have great appeal to Taiwanese talents and enterprises. It is sure that they will have far-reaching impacts on Taiwan (Sung, 2018).

3. Research and Analysis

In this study, the impacts of the three policies that China has implemented for 40 years since it began the market-oriented economy policy in the late 1978, "Reform and Opening-up", "Urbanization" and "Belt and Road Initiative", and the 31 Measures to Benefit Taiwan, which was launched this year (2018), will be analyzed fully.

3.1 The Effects of "Reform and Opening-up" on Taiwanese Enterprises

China's policy of reform and opening-up was implemented since the late 1978, but Taiwan's indirect investment in China didn't start until the released of the Management of the Indirect Investment in and Technical Cooperation with Mainland China in October 1990. But on August 14, 1996, President Teng-hui Lee unexpectedly announced the restriction on the intention of making investment in China. It was later called as the policy of "Controlling Hastiness with Tolerance". Besides, the "Southward" policy that prevents Taiwanese enterprises from making much investment in China and encourages them to shift investment to the ASEAN countries was implemented since 1994. In May 2000, President Shui-bian Chen invited the politicians out of office to establish the Economic Development Consultation Committee in the presidential palace. In August 2001, he accepted the suggestion from the committee and made the policy of "Be active to become open to the world and strive for effective management" in November. Since 2002, Taiwan has gradually loosened the control over the enterprises in the hi-tech industry, the banking industry and the service industry which wanted to invest in China. But in the New Year speech on January 1, 2006, President Shui-bian Chen once again proposed to change the policy of "Be active to become open to the world and strive for effective management" into the one of "Be active to manage and strive for effective openness". As what has been mentioned above, the Taiwanese government constrained the investment of Taiwanese enterprises in China due to the political situation. But according to Wang et al. (2011), promoting the cross-strait economic activities and increasing the cross-strait economic demand can solve the economic problems facing China as well as advance the industrial structure and economic development of Taiwan. Given the supplementary relationship between the two sides in terms of resource and productive factor, the cooperation will contribute to reciprocal and win-win results. One of the reasons why China initiated the economic transformation of expanding domestic demand is to become independent of the American market and get rid of the impact of overseas markets on the stability of China. Therefore, Taiwan, which is adjacent to China, can play a positive and active role in the economic transformation, as the Taiwanese enterprises and Taiwan-funded companies did in the industrial transformation and growth of Mainland China in the beginning of China's reform and opening-up. Today, both sides have signed and implemented the Economic Cooperation Framework Agreement (ECFA), which serves as a systematic foundation for the cross-strait reciprocal cooperation.

According to a study by Chiang (2010) where 68 IC factories were taken as the subjects, manufacturer-related factors have the greatest effect on Taiwanese enterprises' foreign direct investment (FDI) in China, including the demand for capital, the large proportion of receiving orders in Taiwan but manufacturing in China, the control over technology and ownership, the adverse economic landscape, and the upper limit on domestic investment. The second one is the overall economic situation of the destination country. This indicates that FDI is in a positive relation with overall economic situation of the destination country. China's magnet effect also has impact on the capital investment of manufacturers. The third one is the overall economic situation of the home country. This implies that the more Taiwan become dependent on the export of Mainland China and Hong Kong,

the stronger motivation Taiwanese enterprises will have to make investment and establish factories in China. The fourth one is the comparative benefit. As the cost of productive factors climbs in Taiwan, Taiwanese enterprises have a stronger intention to make investment in China. The home country's upper limit on investment is influential but not statistically significant. In other words, the upper limit on investment of 40% is still adequate for most manufacturers. The comparison of overall economic situation between the home and destination countries shows that the continual economic growth of China also fuel Taiwan's investment in China. On top of the changes to the global political situation, the actual economic demand is a major force that has converted the relationship between Kuomintang and the Communist Party from conflict into cooperation. Even China, a country that has always attached great importance to military and political conflicts, has become aware of the importance of economy and strived for economic development, while the Taiwanese people are still criticizing each other over the investment in China. As the proportion of the American market dwindles and that of the Chinese market increases, it is inevitable to place emphasis on the Chinese market. Given the economic downturn and the market saturation in Europe, the US and Japan, Taiwan must seize the new opportunities brought by the rise of China's economy.

3.2 The Effects of "Urbanization" on Taiwanese Enterprises

Thanks to the success China has achieved in the reform and opening-up, China has witnessed a thriving industrial production, an improving living standard, and a greater demand for materials. Meanwhile, national consumption has expanded, the tertiary industries like financial service has prospered, and the number of middle-class population has increased rapidly. Driven by the economic growth, more residents in small and medium-sized cities as well as big ones have the demands of consumption and the ability to seek a better life. This has contributed to a huge consumer market. According to the report by Wen et al. (2013), the growth of the middle class in China will definitely result in the transformation of consumption, and special attention will be paid to life quality. People will shift their emphasis from quantity to quality; the proportion of consumption will become larger in the disposable income. Such changes coincide with the common orientation of Taiwanese enterprises and products in the market: high quality/performance and average price. Additionally, the rise of the middle class has also put forward the adjustment and upgrading of the industrial and economic structures in cities, especially the advancement of the tertiary industry, thus advancing the tertiary industry in China, the industry that China has particular strength in.

According to the report by Chen and Lee (2010), the Chinese government proposed a policy of expanding domestic demand in response to the financial turmoil in 2008. Aside from the domestic demand expansion program worthy of RMB 4 trillion which covered railway, highroad, post-disaster rebuilding, infrastructure in rural areas, and medicine, others like home appliance subsidy for rural families, the substitution of old appliances for new ones, and the energy-efficient products for people are all subsidies for home appliances. Such a policy underlines the enormous domestic demand market in China. Teng (2014) also believes that the international demand declined in the post-financial tsunami period. To maintain the economic growth, China enlarged urban population through urbanization to increase income and stimulate the consumption of private sectors. Moreover, it increased the infrastructure expenses in the urbanization. Urbanization, infrastructure expenditure and the consumption of private sectors, all of which are closely connected, are regarded as important indicators for observing the transformation of China's economic growth model featuring "from export to domestic demand" and "from investment to consumption". In response to the international financial crisis and expand domestic consumption, since 2007, China launched the consumption policies for rural residents, including "home appliance subsidy for rural areas", "automobile subsidy for rural areas" and "motorcycle subsidy for rural areas", so as to give play to the consumption potential of rural residents. Similar policies were implemented in the form of price compensation. In the implementation, the type of subsidized products became increasingly diverse, and the upper limit on product price became gradually higher. But the study by Chang (2013) showed some negative results: (1) the home appliances for rural areas were low in quality and narrow in variety, and the farmers' passion for purchase was not as great as expected; (2) the marketing benefits of the home appliance subsidy for rural areas were small, and the retailers were not active in the marketing; (3) the procedure of applying for the subsidies was complicated, and the efficiency of subsidy delivery was low; (4) the after-sale service of the home appliances for rural areas was incomplete and the delivery was delayed; (5) the operation was against the regulations. For the families which desire to get rid of poverty and lead a moderately prosperous life, daily necessities and home appliances are indispensable. The Chinese government attempts to improve people's living standards through the home appliance subsidy for rural areas. The urbanization has expanded the large and medium-sized livelihood industries like logistics and home appliance in China's domestic demand market. The huge domestic market of China has changed the industrial production in Taiwan. To respond to the demands of

the domestic market, it has shifted some industries from outbound manufacturing to domestic marketing and manufacturing. The equivalent cross-strait economic relationship during this period changed again. As for the outlet distribution and marketing in China's domestic market, both parties operate on the basis of equality and reciprocity. In this way, the cross-strait relationship has become more equal.

3.3 The Effects of the "Belt and Road Initiative" on Taiwanese Enterprises

The Belt and Road Initiative refers to the fact that on September 7, 2013, Jinping Xi proposed to co-establish the Silk Road Economic Belt in the speech he delivered in Kazakhstan. On October 3, 2013, he mentioned the construction of the 21st Century Maritime Silk Road in Indonesia. On May 14, 2017, the Belt and Road International Cooperation Summit Forum was held in Beijing and was attended by 1,500 political leaders from over 130 countries, including the heads of 29 states. The Belt and Road Initiative is a major international strategic policy that China launched after it promoted the development of the secondary industry by implementing the policy of reform and opening-up and introducing foreign enterprises for domestic production and outbound marketing. The release of the initiative also came after China had witnessed economic growth, the improving living standards of the people and the rapid development of urbanization. Nevertheless, the Belt and Road Initiative is unlike the reform and opening-up or urbanization which is confined to China; instead, the inter-continental initiative will make China global. Bearing a close trade and economic tie with China, Taiwan, however, doesn't join the initiative and will lose an excellent chance to boost global economy through common efforts. A similar situation appeared in the beginning of the implementation of China's reform and opening-up: the Taiwanese government restrict Taiwanese enterprises from entering Mainland China due to political factors. In face of the Belt and Road Initiative today, the Taiwanese government put forward the New Southward Policy. But as the weight of the American market becomes smaller, it hopes to join the Trans-Pacific Partnership dominated by the US. In the literature review, Chu and Liu (2017) have mentioned the necessity of Taiwan's involvement in the Belt and Road Initiative. Chen (2015) also pointed out the difficulties that Taiwan faces at home and abroad. Internationally, Taiwan will be confronted with many complicated situations and take the US, Japan and China into account if it wants to join an international organization or a regional economic integration. Domestically, Taiwan casts its doubt over a deeper cross-strait exchange and cooperation despite its domestic political conflict, the strong call against free trades and Mainland China, and the ineffective cross-strait service and trade agreement. He also thinks that Taiwan has many advantages in the implementation of the Belt and Road Initiative. As a seaside island of China, Taiwan is naturally a part of the Maritime Silk Road; besides, Taiwan's economy has become deeply integrated with China's economy. Yen and Chang (2017) even point it out that the implementation of the initiative and President Trump's announcement of America's withdrawal from the TPP will make it impossible for Taiwan to join the regional economic cooperation mechanism dominated by the US. According to China's economic power and market scale, the initiative will surely have impacts on Taiwan's New Southward Policy and its achievements.

According to Cheng (2015), after the speech delivered by President Jinping Xi in the opening ceremony of the Bo'ao Asian Forum in 2015, China released the Vision and Action of the Belt and Road Initiative, where the Chinese government is expected to give full play to the role of Hong Kong, Macau and Taiwan in the Belt and Road Initiative and make a good plan for Taiwan's participation in the initiative. First, Taiwan is expected to push forward the fulfillment of the national geographical strategic goals. Early in the 1980s, Taiwan finished the ten major construction programs. Therefore, it is believed that Taiwan is able to play a role in the construction of railways, highways, airports, ports, nuclear power plants and industrial parks in the initiative, making contribution to the fulfillment of the goals. Second, Taiwan is still a developing region, but in recent years, it has exceeded some developed countries in terms of architectural technology and art, medical care and technology, convenience store service. Moreover, it has launched the experimental program of "Smart City" recently. In the future, the private enterprises in Taiwan will discover infinite markets and business opportunities in the newly-established communities in Southeast Asia, Central Asia and South Asia. If what the claims by Cheng (2015) are true that Taiwan is still playing a leading role in infrastructure, medicine and service, it may have some vantage points if it participates in the Belt and Road Initiative in the early stage. Hence, Taiwan should fasten its entry into the initiative. Undoubtedly, the Belt and Road Initiative will provide a broader and bigger international market for Taiwanese enterprises which have become so familiar with the international market. Therefore, Taiwan must put aside its current political thinking and grasp the chance to join the initiative; otherwise, the equal cross-strait relationship will be weakened and Taiwan will fall far behind Mainland China.

3.4 The Effects of the 31 Measures to Benefit Taiwan on Taiwanese Enterprises

Early in the Taiwan Strait Forum in 2009, the 8 Policies to Benefit Taiwan announced by Yi Wang, the then director of the National Office of Taiwan Affairs already allowed Taiwanese enterprises to participate in the

infrastructure in Mainland China. On February, 2018, the National Office of Taiwan Affairs in Mainland China announced the 31 Measures to Benefit Taiwan, or the Measures to Boost the Cross-Strait Economic and Cultural Exchange and Cooperation. Of these measures, 12 ones promote equal preferential to enterprises from Taiwan and Mainland China; 19 ones aim to provide equal treatment for compatriots from Taiwan and Mainland China. The release and implementation of these measures will have significant impacts on the cross-strait interaction and the future development of Taiwan's society and economy. According to Wei (2018), the proposal of the 31 Measures to Benefit Taiwan is consistent with the policies on Taiwan that President Jinping Xi mentioned in the 19th National People's Congress Report. These measures, covering many ministries and fields, were summarized by 31 political departments, including the Taiwan Affairs Office of the State Council and the National Development and Reform Commission, within merely four months. This demonstrates the high efficiency of the administration in putting the ideas of leaders into practice and reveals the importance of the policies towards Taiwan. These measures seem to be exclusively beneficial for Taiwan, but they also serve as a way to increase China's openness to the world. They symbolize a stage of China's endeavor to introduce the commodities, services, technologies and talents that would benefit its economic transformation through greater openness after 40 years of its implementation of reform and opening-up. Especially, the measures place strong emphasis on advanced manufacturing, the high-end service industry, and the production and service industry that support the manufacturing industry.

According to the measures, Taiwanese enterprises can participate in the Belt and Road Initiative, the 2025 Project and the infrastructure and enjoy the preferential in renting and taxation in Mainland China; they can enjoy "equal rights". In the past, Taiwanese enterprises are regarded as foreign enterprises by Mainland China. They enjoyed many benefits in the early stage, but they also encountered some limitation. Today, the benefits for foreign enterprises have been reduced, while the enterprises in Mainland China have become more competitive. The Taiwanese enterprises that enjoy "equal rights" no longer have chances to take part in fair competition (Lu, 2018). But according to the Mainland Affairs Council of the Executive Yuan, the measures seem beneficial, but they neglect the difference in institution, regulation, living environment, market, thinking and values between Taiwan and Mainland China. The council reiterates that China has always launched the policies about Taiwan with a strong political intention and that relevant measures aim to fuel its economic growth and attract resources, technologies and talents from Taiwan, so as to sacrifice its interest for the political identity of the Taiwanese people (CNA, 2018).

4. Conclusions

After the split between Kuomintang and the Communist Party of China, Taiwan suffered great losses in military and political conflicts. But with the support from the US, it has achieved remarkable economic success. In comparison, China encountered severe economic depression due to its inefficient measures like the Great Leap and the Three-line Construction before the implementation of reform and opening-up that began in the late 1978. But thanks to the policy of reform and opening-up, China has gained rapid economic growth. Given the dwindling proportion of the American market and the increasing weight of the Chinese market, it has become inevitable for Taiwanese enterprises to develop in the Chinese market. Some Taiwanese enterprises grasped the chances brought by China's reform and opening-up and endeavored to develop in the Chinese market, but the then Taiwanese government made a negative response to the situation. Fortunately, the progressive Taiwanese enterprises strived to enter the Chinese market in the early stage of the reform and opening-up and managed to obtain eye-catching results. Later, the urbanization gave them another business opportunity to expand the domestic consumption in China. In face of the decline in the American market and the stagnation in the Chinese market, the Taiwanese government hasn't come up with a guideline for its enterprises. Therefore, the future development of Taiwan's economy remains unknown.

In contrast, China's Belt and Road Initiative has won positive response from the majority of the related countries and the country is in a marvelous situation featuring beneficial external and internal factors. Chinese scholars like Chu, Liu and Chen (2015) all point out the domestic and international predicament that Taiwan faces. Cheng (2015) says that Taiwan should learn the lesson and hold a positive attitude towards the Belt and Road Initiative. Pessimistically, the author believes that the three policies of China will have increasing impact on the three levels of the Taiwanese government, and the cross-strait relationship will continue to fluctuate. Due to the political consideration of the Taiwanese government, the private enterprises become confused and lose their advantages, and the cross-strait economic gap will be enlarged. During the period of the military conflict between the two, both sides were still howling political slogans. Finally, Taiwanese enterprises made direct investment to respond to the Taiwanese government's slogan of "making a U-turn attack against Mainland China". The Chinese government's slogan of "liberating Taiwan" can also be fulfilled through the Belt and Road Initiative.

The equal rights that Taiwanese enterprises enjoy in the 31 Measures to Benefit Taiwan include: (1) Taiwanese

enterprises can join the infrastructure in energy, transportation, water conservation, environmental protection and municipal engineering in the form of franchise; Taiwanese enterprises are free to have a fair participation in governmental procurement; they can play a role in the reform of the mixed ownership of state-owned enterprises through joint venture, cooperation, acquisition and merger, and restructuring. (2) Taiwanese enterprises can participate in the Made in China 2025 Program, promoting the investment in high-end, smart and environmentally-friendly enterprises and establishing regional headquarters and research and design centers. (3) Mainland China will pay special attention to the establishment of cross-strait cooperation zones in the middle, western and northeast parts and encourage Taiwanese enterprises to shift their attention from Taiwan to Mainland China and take part in the Belt and Road Initiative. (4) Taiwanese enterprises that meet the requirements will enjoy a reduction of 15% in the business income tax from the research and development fund, a preferential for high-tech enterprises, and they can get full-amount refund of value-added tax if they purchase equipment from Mainland China. (5) Taiwanese agricultural enterprises also enjoy the subsidies for the purchase of agricultural machines and the supportive policies for major leading enterprises of industrialization. In terms of financial cooperation, Taiwanese financial institutions and enterprises can collaborate with China UnionPay and non-banking payment institutions in Mainland China and provide convenient small-amount payment service. Taiwanese credit institutions can cooperate with the credit institutions in Mainland China, offering credit services to the people and enterprises on both sides of the Taiwan Strait. Taiwanese banks can work with the peers in Mainland China to provide services for real economy through syndicate loan. As is mentioned by Wei (2018), some problems will be inevitable in the implementation of the measures. Take the example of the cooperation between Taiwanese financial institutions and those in Mainland China. Taiwanese Pan-public stock banks will be restricted, and only private financial institutions will enjoy the benefits. Additionally, the difference in institution will put limitation on Taiwanese enterprises when they join the infrastructure in energy, transportation, water conservation, environmental protection, municipal engineering and the Belt and Road Initiative. These problems remain to be solved. Despite this, the measures will have magnet effect on the talents and resources in Taiwan according to the overall development trend of the cross-strait relationship.

According to Sung (2018), what is more worthy of attention is that China released the measures to benefit Taiwan on the same day when the US launched the law concerning the travel to Taiwan, and both are competing with each other in the policy-making about Taiwan. The 31 measures to benefit Taiwan are the ones that will benefit people, while the law concerning the travel to Taiwan is a policy beneficial for officials. It is extraordinary for the two to take such high-profile actions. But the impacts of these actions on Taiwan remain to be seen. Taiwan has become a game played by China and the US, but it will be Taiwan that will bear the risks. Along with the measures to benefit Taiwan, special attention is also paid to the benefits for China by attracting Taiwanese talents and industries to make investment and develop in Mainland China. Taiwanese technologies and capital will also be introduced by China to solve the problems it faces in the economic growth. While strengthening the cross-strait relationship, Mainland China can attract and make full use of Taiwanese talents.

Acknowledgement

This research is supported by the National Chin-Yi University of Technology, Taiwan, R.O.C. (under Project #: NCUT-18-R-MB-024)

References

- CNA (Central News Agency, Taiwan) (2018). Xiamen launches 60 Measures to Benefit Taiwan, Mainland Affairs Council: Unilateral measures will not work. Retrieved from: <https://money.udn.com/money/story/5641/3081428>
- Chang, C., Lee, H., & Chang, F. (2013). A study of China's policy-home appliances going to the countryside. *Asian Economic Review*, 71(2), 79-94. <http://petit.lib.yamaguchi-u.ac.jp/G0000006y2j2/metadata/C040071000209>
- Chen, Q., & Li, X. (2010). Report on the results of the implementation of the research on expanding the domestic markets in Mainland China. *Executive Committee on Economic Policy*, 18-27. Retrieved from: <https://ws.ndc.gov.tw/Download.ashx?u=LzAwMS9hZG1pbmlzdHJhdG9yLzEwL3JlbGZpbGUvNTYzNi8yMzU5LzAwMTM2MzkucGRm&n=OTkwMi5wZGY%3D&icon=.pdf>
- Chen, X. (2015). Rising up or sinking down: The opportunities and challenges brought by the Belt and Road Initiative and the Free Trade Zone of Taiwan. *HAI XIA KE XUE*, 101, 9-17. <https://core.ac.uk/download/pdf/41456287.pdf>
- Cheng, H. (2015). The Progress and Impact of Mainland China's Urbanization. *Economic Research*, 15, 350-372.

- http://readopac2.ncl.edu.tw/nclserialFront/search/detail.jsp?sysId=0006828164&dtdId=000040&search_type=detail&la=ch&checked=&unchecked=0010006828164,0020006775029,0030006722071,0040006632631
- Chiang, Y. (2010). Determinants on foreign direct investment by Taiwan in China. *Journal of Tainan University of Technology*, 29, 213-232. <https://doi.org/10.6970/JTUTHSM.201010.0213>
- Huang, C. (2018). Changes to and understanding of Mainland China's Policies to Benefit Taiwan. CRNTT.com. Retrieved from: http://hk.crntt.com/doc/1050/2/9/5/105029599_2.html?coluid=247&kindid=17652&docid=105029599&mdate=0528150436
- Lin, J. (2013). Analysis of investment trends and research: Changes in the trend of investment in Taiwanese businessmen and the impact of external investment. Ministry of Economic Affairs Investment Review Committee. Retrieved from: www.moeaic.gov.tw/download-file.jsp;jsessionid...?id=14CCQMcuqwc
- Lu, Y. (2018). The appeal of the 31 Measures to Benefit Taiwan to the young people should not be neglected. Business Today. Retrieved from: <https://www.businesstoday.com.tw/article/category/80392/post/201803060004/%E4%B8%AD%E5%9C%8B31%E6%A2%9D%E6%83%A0%E5%8F%B0%E6%94%BF%E7%AD%96%E3%80%80%E5%B0%8D%E5%B9%B4%E8%BC%95%E6%97%8F%E7%BE%A4%E5%90%B8%E5%BC%95%E5%8A%9B%E4%B8%8D%E5%AE%B9%E5%BF%BD%E8%A6%96>
- National Office of Taiwan Affairs of China, (2018). The press conference of National Office of Taiwan Affairs on the latest implementation of the 31 Measures to Benefit Taiwan. http://www.gwytb.gov.cn/31t/bjzl/201807/t20180703_11971181.html
- Sung, C. (2018). Taiwanese people will become increasingly hesitant due to the 31 Measures to Benefit Taiwan. *Straits Review*, 328. <https://www.haixia-info.com/articles/9944.html>
- Teng, Y. (2014). Chinese economic transitions and international participation in the Post-Crisis Era. *Taiwan International Studies Quarterly*, 10(1), P137-159. <http://www.airitilibrary.com/Publication/alDetailedMesh?docid=18162622-201403-201404110025-201404110025-137-159>
- Wang, T., Huang, T., & Chu, G. (2011). Economic development and government role: Mainland China cases and cross-strait cooperation. *Journal of Yuda University of Science and Technology*, 27, 163-180. <https://doi.org/10.7074/YDAJB.201106.0165>
- Wei, I. (2018) Meaning and impacts of the 31 Measures to Benefit Taiwan. *Straits Review*, 328. <https://www.haixia-info.com/articles/9949.html>
- Wen, F., Liu, M., Zhong, F., & Liu, B. (2013). The overall development of domestic consumption in the mainland China and the Yangtze River Delta. China Economic Research Institute. Retrieved from: https://www.moea.gov.tw/Mns/main/content/wHandMenuFile.ashx?file_id=1132
- Yan, A., & Zhang, J. (2017). The Influence of the Belt and Road Initiative to the Asia-Pacific Order and Cross-Strait Relations. *Taiwan Studies*, 4, 19-28. http://www.siis.org.cn/UploadFiles/file/20180314/_%E4%B8%80%E5%B8%A6%E4%B8%80%E8%B7%AF_%E5%80%A1%E8%AE%AE%E5%AF%B9%E4%BA%9A%E5%A4%AA%E7%A7%A9%E5%BA%8F%E4%B8%8E%E4%B8%A4%E5%B2%B8%E5%85%B3%E7%B3%BB%E7%9A%84%E5%BD%B1%E5%93%8D_%E4%B8%A5%E5%AE%89%E6%9E%97.pdf
- Yuan, C. (2018). Methods of responding to the 31 Measures to Benefit Taiwan. *Straits Review*, 328. <https://www.haixia-info.com/articles/9934.html>
- Zheng, X. (2015). The "Belt and Road" strategic layout of the Mainland and the construction of a cooperative development system across the Taiwan Strait. *HAI XIA KE XUE*, 5(101), 60-61. <http://www.airitilibrary.com/Publication/alDetailedMesh?docid=yjyzx201505016>
- Zhu, X., & Liu, S. (2017). One Belt One Road: The opportunities, challenges and countermeasures for Taiwan's participation. Retrieved from: <https://www.sinoss.net/show.php?contentid=75567>

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The Impact of Extrinsic Motivation on Employees' Performance: A Comparative Analysis of Food and Textile Industries in Sindh, Pakistan

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Received: October 31, 2018

Accepted: November 20, 2018

Online Published: November 21, 2018

doi:10.5539/ibr.v11n12p61

URL: <https://doi.org/10.5539/ibr.v11n12p61>

Abstract

The purpose of present study is to examine the effects of external motivational factors on employees. Current study is employed Herzberg's two-factor theory to investigate the effects of extrinsic factors on employees' performance in food and textile industries of Sindh, Pakistan. Seven point Likert scale is used for survey purpose. Reliability test is conducted for knowing the internal consistency of extrinsic factors as independent variables and employees' performance as dependent variable. Pearson correlation, Analysis Of Variance (ANOVA), t test and multiple regression techniques are employed for data analysis. The results found that all extrinsic factors have positive and significant effects on employees. This study provides good amount of knowledge on the importance of extrinsic factors for improving the employees' performance.

Keywords: extrinsic factors, motivation, food industry, textile industry, employee performance

1. Introduction

The theme of research is to determine the impact of extrinsic factors on employees' working efficiency. Current study illustrates the association of extrinsic motivation with employees' performance because the factors of extrinsic are playing an imperative role for increasing workers' performance. Therefore, present study demonstrates the effects of extrinsic factors on employees' performance for their goodwill.

Luthan (1998) concluded that motivation is playing a centralization role at place of work to accomplish the desired goals. Motivation means to be encouraged and activated towards an end (Deci & Ryan, 2002). Motivation is a force to push employees for completion of their tasks. Motivation is associated with every step of life e.g. drinking is motivated by thirst (Deci & Ryan, 2002). Intrinsic and extrinsic are two types of motivation (Mc Cormick & Tiffin, 1979). According to Ryan and Deci (2002), intrinsic motivation is related to happiness occurred internally after completion of certain desired tasks. Whereas extrinsic motivation is related to external factors of job itself, which is helpful for improving performance of employees. This study focuses on two-factor theory of Herzberg to evaluate impact of external factors on employee performance. Hygiene factors work as extrinsic factors and contribute a major role to fulfill the basic needs of employees (Khan et al., 2013). According to Cannizzaro et al., (2017), once an organization wants to accomplish a task from workers, they will offer financial rewards along with extrinsic rewards. Organization makes sure to their employees for providing extrinsic rewards when job is properly done (Remi, 2011). Dahlqvist and Matsson (2013) asserted that motivation is a vital tool for increasing the performance of employees and retaining them for longer period in organization. High performance increases the firm's status and position. Extrinsic motivation boosts the employees' performance through good working condition, noble policies, security and reliable relations among peers (Emeka et al., 2015). According to Remi (2011), employees are highly motivated and performed well when they feel interest and pleasure in their job. Security, effective supervision and reliable association among peers in the place of work are approved as important factors that play vital role in boosting performance of the organization.

This paper cover introduction for the research followed by a detailed literature review, scope of the research, research gape, research objectives, research hypothesis & methodology. In the last, the results of this research work are complied followed by conclusion and come recommendations.

2. Literature Review

Mixed results have portrayed in earlier studies regarding extrinsic motivation and their influence on employee performance. Some previous studies displayed the insignificant impact of few extrinsic factors on workers' performances such as Field et al., (1974), Rahman et al., (2017), Kuvaas et al., (2017), Cannizzaro et al., (2017). Whereas other studies portrayed the insignificant impact of all extrinsic factors on employees' performance such as Mulki et al., (2017), Houston (2010), Hyun S. (2009), Gain et al., (2017). While other studies summarized the significant impact of all extrinsic factors on employees' performance such as Casey et al., (2012), Yuan and Woodman (2010), Stella (2013), Parker et al., (2017), Bear et al., (2017), Ghanbahadur (2014). Recent study has revealed that all extrinsic factors are essential for improving employees' performance. Hur, 2017; Chang and Teng, 2017; Sanjeev and Surya, 2016; Emeks et al., 2015; showed a positive and significant impact of hygiene factors for improving the employee satisfaction, talent and performance in the industry.

Emeka et al., (2015) asserted that all extrinsic factors enhanced the motivation of employees which ultimately influenced positively to performance of workers in terms of productivity. According to Attrams (2013), extrinsic factors were playing a major role for increasing the employee performance in public and private sectors e.g. monetary policy and good working relatives. Hong Tan and Waheed (2011) believed that hygiene factors were more prominence as compared to intrinsic factors in retail industry by applying Herzberg two-factor theory in Malaysia. Their study had more focused on salary then gives importance to company policy and working condition among all extrinsic factors. William (2010) explained that employees were motivated by extrinsic motivation to achieve their high performance in organization. Stella (2008) explained that high motivation and high performance for successful organization can be achieved by numerous variables such as working condition, work relation, supervision and job security in Kitgum District Local Government to carry out good resultant.

3. Scope of the Study

Current thesis will help in many areas concerning hospitals, educational institutions and organizations. Present study will offer an awareness about upcoming route. Present thesis will also be supportive for academic's professionals to recognize the dynamic, helpful and supportive relationship amongst external factors with employees' performance.

4. Research Gap

Mixed results have portrayed regarding extrinsic motivating factors and their influence on employee performances still modern world. They determined that amongst all extrinsic factors, some factors presented insignificant impact on performances of workers. Current thesis shows that all extrinsic factors are playing a vital role for boost employees' performances.

5. Research Objectives

Current study considers subsequent objectives:

- I. To estimate the influence of extrinsic motivating factors on performance of employees.

Present objective is supplementary divided into subsequent sub-objectives:

- i. To estimate the influence of company policy on performance of employees.
- ii. To estimate the influence of work security on performance of employees.
- iii. To estimate the influence of supervision on performance of employees.
- iv. To estimate the influence of money on performance of employees.
- v. To estimate the influence of working condition on performance of employees.
- vi. To estimate the influence of relationship with peers on performance of employees.

6. Research Hypotheses

Current hypotheses are:

H1= The extrinsic motivating factors are significantly related with on performance of employees.

This hypothesis is further split into following sub-hypotheses:

- H1a: Company policy significantly related with performance of employees.
- H1b: Work security significantly related with performance of employees.
- H1c: Supervision significantly related with performance of employees.

- H1d: Money significantly related with performance of employees.
- H1e: Working condition significantly related with performance of employees.
- H1f: Relationship with peers significantly related with performance of employees.

7. Research Methodology

For collecting and analyzing data, research methodology is playing an important role. Quantitative approach has been employed in present thesis. The data was gathered through questionnaires. For this purpose, 385 copies of questionnaire were collected from textile industry and 395 from food industry. Reliability test was conducted through SPSS version 20.0. Descriptive statistics, Pearson correlation, Analysis Of Variance (ANOVA), t test and multiple regression techniques were used for analysis of data. Random sampling technique was used in present study. The selected area is Hyderabad and Karachi Sindh.

8. Results and Discussions

In current research, the descriptive analysis (Table 1) for external factors demonstrated that in textile industry, the mean was larger whereas in food industry, the standard deviation was larger as compared to textile industry. The food and textile industries provide the secured job, good company policies, flexible working condition and loyal relation to their employees, which ultimately increase the satisfaction level due to that they take more interest in their work.

According to George & Mallery (2003), Hyun (2009) and Pallant (2005), acceptable/satisfactory internal consistency of survey is employed for more statistical analysis. As per rule, ranges more than 9 values displays excellent consistency, values in the middle of 9 to 8 expresses good results. From 8 to 7 illustrates acceptable results, 7 to 6 displays questionable results, 6 to 5 indicates poor results and less than 5 confirms unacceptable consistency.

In current research, the reliability test (Table 1) for external factors confirmed that the internal consistency of food industry (combined variables) was .947 and textile industry (combined variables) was .935, which presented satisfactory and excellent outcomes. While individual variables in food industry, company policy, money and working condition revealed the good results whereas work security, supervision and relationship with peers exposed satisfactory acceptable results. The individual variables in textile industry showed satisfactory acceptable results. The satisfied employees are beneficial for sustaining and maintaining the efficiency to achieve the desired goals which ultimately raise the reputation of the industries.

According to Hair et al., (2007), the value amid .9 to 1 indicatess very strong link, .7 to .9 confirms high link, .5 to .7 displays moderate link, .2 to .5 demonstrates small but definite link and .00 to .2 represents slight, almost negligible link.

The Pearson correlation in food industry displayed the positive relation, company policy, supervision, working condition and relationship with peers were medium association whereas money and work security were small affiliation with employee performance while all extrinsic factors were small but definite association with employee performance in textile industry. By comparison of Pearson correlation among food industry and textile industry, present thesis determined that company policy, supervision, working condition and relationship with peers of food industry potrayed the medium relation. The employees of food industry are inspired by extrinsic rewards, which will raise their usage. When products are more used then demands for products will also rise then there will be requests for more products, which will ultimately improve morals of employees by providing facilities to individuals and industries.

Table 1. Descriptive Statistics and Reliability Test

Extrinsic Factors	Combine industries			Food industry			Textile industry		
	Mean	SD	Cronbach alpha	Mean	SD	Cronbach alpha	Mean	SD	Cronbach alpha
Company policy	5.4585	.79229	.787	5.4354	.82336	.802	5.4823	.75942	.768
Work security	5.4850	.69837	.774	5.4658	.72941	.790	5.5048	.66540	.754
Supervision	5.4141	.76707	.760	5.3899	.80285	.778	5.4390	.72874	.738
Money	5.4635	.87264	.730	5.4443	.91971	.804	5.4831	.82228	.752
Working condition	5.4801	.90281	.801	5.4557	.94785	.817	5.5052	.85466	.779
Relationship with peers	5.6684	.64602	.781	5.6641	.66391	.744	5.6727	.62797	.714
Over all factors	87.9654	10.60010	.942	87.6658	11.17329	.947	88.2727	9.98311	.935

By comparison of variables among food industry and textile industry, the results found from (Table 2) that independent t test of company policy, supervision, money and relationship with peers of food industry were bigger than textile industry because the workers were become more energetic by achieving higher wages and salaries along with sincere relationship among administration and employees. Whereas work security and working condition of textile industry were larger than food industry because workforce of textile industry was more encouraged and activated, which will increase organization progress in market competitive place that ultimately raises employment and benefits to the individual as well as organization.

Table 2. Regression Analysis

	Combine industries	Food industry	Textile industry
Extrinsic Factors	Standardized beta (t-value)	Standardized beta (t-value)	Standardized beta (t-value)
Company policy	.026 (2.714)	.026 (1.958)	.025 (1.880)
Work security	.041 (5.536)	.040 (3.892)	.042 (3.936)
Supervision	.655 (42.874)	.656 (30.668)	.653 (29.930)
Money	.110 (15.293)	.112 (11.172)	.107 (10.441)
Working condition	.040 (3.381)	.038 (2.284)	.043 (2.501)
Relationship with peers	.068 (4.791)	.071 (3.541)	.066 (3.226)
R square	.571	.575	.566
Adjusted R square	.570	.575	.566
F value	1900.162	978.760	920.304
P value	.000	.000	.000

Present study has supported by motivational theories. The Maslow (1954) needs categories like Physiological needs, safety needs and belonging needs, Aldefer (1969) ERG includes existence and relatedness, Mc Clelland's theory (1961) includes affiliation and Herzberg's two-factor theory (1959) includes hygiene factors/extrinsic factors (Swinton, 2006; Bloisi *et al.*, 2007).

9. Conclusion

It is concluded that extrinsic factors are key tools within the organization. Food and textile industries enhances and improves the employee's performance by facilitating with training opportunities through which they will increase their status, confidence, style of communication and manage the industrial matters. The result demonstrated that performance of employees is extremely motivated by hygiene factors which created an affirmative link amongst extrinsic factors and employee performance along with good future impact on performance of industries. Present thesis shows the first impression in food and textile industries of Sindh. There is no any its type that measures the impact of extrinsic factors on employee performance of food and textile industries in Kotri, Mitiari and Karachi. Current study recognises at what degree extrinsic factors are influenced. The results suggested that extrinsic factors in food and textile industries provided the opportunities to take an interest in the job and create effective leadership. The employee turnover rate is much lower due to proper and flexible environment. Textile and food industries saves money, make effective products and high profit by concentrating on employees' satisfaction and performance.

10. Limitation

Jobs were inattentive for workers, so cooperation from respondents side was less due to terror of organization that action would be taken against by them. In textile industries, teams were facing trouble to provide information regarding the company. In textile industries, there is immoral association among employees and administration, which will create loss of company and employee's turn over that create negative impact to industrial employees.

11. Recommendations

Based on our results, certain recommendations are described here: Administration should put emphasis on creating the workplace helpful and favorable so that supervisor have good relations with employees. Employees will take more interest in work, if their jobs will be on permanent base, which will ultimately benefit to organization. Top management should relax the company policy and trust employees. Employee dissatisfaction can be eliminated by applying hygiene factors, so managers should concentrate on it. Extrinsic motivation make the employees more energetic and enthusiasm as far more effective and productive, which ultimately boost the performances of workforce.

References

Alderfer, C. P. (1969). An Empirical Test of a New Theory of Human Needs. *Organizational Behavior & Human Performance*, 4(2), 142. [https://doi.org/10.1016/0030-5073\(69\)90004-X](https://doi.org/10.1016/0030-5073(69)90004-X)

- Attrams, R. A. (2013). Motivation and Employee Satisfaction : Perceptions of Workers in Public and Private Health Care Facilities. Retrieved from <http://ugspace.ug.edu.gh>
- Bear, G. G., Slaughter, J. C., Mantz, L. S., & Farley-Ripple, E. (2017). Rewards, praise, and punitive consequences: Relations with intrinsic and extrinsic motivation. *Teaching and Teacher Education*, *65*, 10-20. <https://doi.org/10.1016/j.date.2017.03.001>
- Cannizzaro, D., Stohl, M., Hasin, D., & Aharonovich, E. (2017). Intrinsic and extrinsic motivation predict treatment outcome in a sample of HIV+ drug user. *171(34)*. <https://doi.org/10.1016/j.drugalcdep.2016.08.106>
- Casey, R. J., & Robbins, J. (2012). a Comparison of Motivation of Workers in the United States Versus Nicaragua and Guatemala Utilizing the Hackman and Oldham Job Characteristics Model. *International Journal of Business & Public Administration*, *9(3)*, 39-60.
- Chang, J. H., & Teng, C. C. (2017). Intrinsic or extrinsic motivations for hospitality employees' creativity: The moderating role of organization-level regulatory focus. *International Journal of Hospitality Management*, *60*, 133-141. <https://doi.org/10.1016/j.ijhm.2016.10.003>
- Dahlqvist, A., & Matsson, A. (2013). The impact of extrinsic and intrinsic rewards on employees' motivation: A case study of an insurance company.
- Emeka, N., Amaka, O., & Ejim, E. P. (2015). The Effect of Employee Motivation on Organizational Performance of Selected Manufacturing Firms in Enugu State. *World Journal of Management and Behavioral Studies*, *3(1)*, 1-8. <https://doi.org/10.5829/idosi.wjmbms.2015.3.1.1314>
- Feild, H. S., Holley, W. H., & Armenakis, A. A. (1974). Graduate students' satisfaction with graduate education: Intrinsic versus extrinsic factors. *Journal of Experimental Education*, *43(2)*, 8-15. <https://doi.org/10.1080/00220973.1974.10806312>
- Gain, D., & Watanabe, T. (2017). Unsustainability risk causality in a private industrial forest: An institutional analysis of factors affecting stand ecosystem services in Kochi Prefecture, Japan. *Forests*, *8(4)*. <https://doi.org/10.3390/f8040126>
- George, D., & Mallery, P. (2003). SPSS for Windows Step by Step: A Sample Guide & Reference.
- Ghanbahadur, R. R. (2014). To test the effectiveness of Hygiene-Motivation factors on Irish Accountants and American Engineers in predicting Intrinsic-Extrinsic job satisfaction. *Journal of Personnel Psychology*, *20*, 369-380.
- Herzberg, F. H., Mausner, B., & Snyderman, B. S. (1959). The motivation to work. *John Wiley and Sons*.
- Hong Tan, T., Waheed, A., & Teck-Hong, T. (2011). Herzberg's motivation-hygiene theory and job satisfaction in the Malaysian retail sector: The mediating effect of love of money Herzberg's motivation-hygiene and job satisfaction in the Malaysian retail sector: Mediating effect of love of money. *Asian Academy of Management Journal*, *16(1)*, 73-94.
- Houston, D. J. (2000). Public-Service Motivation: A Multivariate Test. *Journal of Public Administration Research and Theory*, *10(4)*, 713-728. <https://doi.org/10.1093/oxfordjournals.jpart.a024288>
- Hur, Y. (2017). Testing Herzberg's Two-Factor Theory of Motivation in the Public Sector: Is it Applicable to Public Managers? *Public Organization Review*, 1-15. <https://doi.org/10.1007/s11115-017-0379-1>
- Hyun, S. (2009). Reexamination if Herzberg's two factor theory of motivation in the Korean Arcurrent foodservice operation.
- Khan, W., & Iqbal, Y. (2013). An investigation of the relationship between work motivation (intrinsic & extrinsic) and employee engagement. A study on Allied Bank of Pakistan.
- Kuvaas, B., Buch, R., Weibel, A., Dysvik, A., & Nerstad, C. G. L. (2017). Do intrinsic and extrinsic motivation relate differently to employee outcomes? *Journal of Economic Psychology*, *61*, 244-258. <https://doi.org/10.1016/j.joep.2017.05.004>
- Luthans, F. (1998). Organisational Behaviour.
- Maslow, A., Harold, R. F., & Cox, R. (1954). Motivation and personality. *Motivation and Personality*, 1887-1904.
- McCormick and Tiffin. J. (1979). *Industrial Psychology; New York*.

- Mulki, J. P., & Wilkinson, J. W. (2017). Customer-directed extra-role performance and emotional understanding: Effects on customer conflict, felt stress, job performance and turnover intentions. *Australasian Marketing Journal*, 25(3), 206-214. <https://doi.org/10.1016/j.ausmj.2017.04.002>
- Parker, S. K., Morgeson, F. P., & Johns, G. (2017). One Hundred Years of Work Design Research : Looking Back and Looking Forward, *102*(3), 403-420.
- Rafiq, M., Javed, M., Khan, M., & Ahmed, M. (2012). Effect of rewards on job satisfaction evidence from Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 4, 337-347
- Rahman, K. U., Akhter, W., & Khan, S. U. (2017). Factors affecting employee job satisfaction: A comparative study of conventional and Islamic insurance. *Cogent Business & Management*, 4(1). <https://doi.org/10.1080/23311975.2016.1273082>
- Remi, J. A. (2011). An empirical study of the motivational factors of employee in Nigeria. *International Journal of Economics and Finance*, 3(5), 227-232. <https://doi.org/10.5539/ijef.v3n5p227>
- Ryan, R. M., & Deci, E. L. (2002). An overview of self-determination theory. *University of Rochester Press*
- Ryan, R., & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation. *American Psychologist*, 55(1), 68-78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Sanjeev, M. A., & Surya, A. V. (2016). Two-factor theory of motivation and satisfaction: an empirical verification. *Annals of Data Science*, 3(2), 155-173. <https://doi.org/10.1007/s40745-016-0077-9>
- Stella, O. (2008). Motivation and Work Performance: Complexities in Achieving Good Performance Outcomes; A Study Focusing on Motivation Measures and Improving Workers Performance in Kitgum District Local Government. *Istitute of Social Studies*, 1-83. <https://doi.org/10.1111/j.2044-8295.1969.tb01226.x>
- William, A. N. (2010). Employee motivation and performance. *Ultimate Companion Limited*.
- Yuan, F., & Woodman, R. W. (2010). Innovative behavior in the workplace: The role of performance and image outcome expectations. *Academy of Management Journal*, 53(2), 323-342. <https://doi.org/10.5465/amj.2010.49388995>

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Nigerian 3C-Index Rating of Corporate Social Responsibility and the Profitability of Some Companies Listed on the Nigerian Stock Exchange

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Received: October 25, 2018

Accepted: November 20, 2018

Online Published: November 27, 2018

doi:10.5539/ibr.v11n12p67

URL: <https://doi.org/10.5539/ibr.v11n12p67>

Abstract

This study sought to ascertain the link between Corporate Social Responsibility (CSR) rating and the profitability of companies listed on the Nigerian Stock Exchange (NSE), following the release of the first ever country rating of Corporate Citizenship Index (3C-Index) in 2013. The study further sought to ascertain whether significant differences exist between the performances of companies that received high CSR ratings as compared to those that received low ratings. Secondary data were extracted from the 2013 to 2017 annual reports and accounts of companies that got different CSR ratings classified as high and low. The multiple regression and Mann-Whitney rank test (U-test) were used to test the propositions. The findings from the regression showed a positive but insignificant relationship between CSR rating and firm performance but a significantly positive relationship with the size of firms. The results of the U-tests were mixed, whereas the Return on Assets (ROA) of companies with high CSR ratings did not differ significantly from companies with low CSR ratings, the Return on Equity (ROE) of companies with high CSR ratings was significantly greater than that of companies with low CSR ratings. This finding suggests that CSR may be in its infancy among the study sample but is beginning to take roots as evident by the positive β s statistics and a significant difference in the ROE of the companies as captured by the non-parametric statistics. It is recommended that the period of the study be extended in the intermediate and long-run to determine if the relationship might become significant.

Keywords: corporate social responsibility, corporate citizen index, financial performance, Nigerian stock exchange

1. Introduction

Corporate Social Responsibility (CSR) is a set of guidelines outlining the procedures and strategy that a business entity can follow in the disclosure of the potential and real impacts of its business activities on the environment, people and profits and the ways in which these adverse effects can be mitigated in a sustainable manner (GRI, 2013). It is considered germane to corporate performance and firms that engage in CSR activities are said to have greater value than otherwise and thereby gain higher profits (Haitain, 2015; Eccles, Ioannou & Serafeim, 2014). Some other benefits associated with the practice of CSR include an increase in the value of the firm's brand, having greater access to financial capital, the firm's workforce is safer, healthier and thereby more productive, the firm's risk management architecture is considered more robust and such a firm is touted to gain the confidence and trust of stakeholders as well as enhanced public image thereby resulting in fewer disruptions and low litigation costs (Haitain, 2015; Eccles, et al., 2014).

Since the coming of CSR into being, the concept has generated a lot of debate and contentions as to its relevance. On one divide are the profit-centric capitalists, who are opposed to the squandering of investor capital on activities, such as addressing environmental, social and ethical concerns that have no bearing on the profit motives of capital holders (Friedman, 1970). They argue that shareholders should have all of the profits from what they ploughed into an investment, as they are the providers of the capital. On the other divide are the sustainability stakeholders group, they contend that the activities of the business of shareholders is carried out in a manner that affects the ecologic environment of everybody and so some of the profits of these businesses should be used to mitigate the concerns and the impact of the business activity on people and the environment

(Freeman, Harrison, Wicks, Parmar, & de Colle, 2010).

1.1 Statement of the Problem

The value of CSR seems to be well established in the countries of Eastern Europe, most of North America and Japan than in other climes (Suzuki & Tanimoto 2015). Many corporations in the world are now become aware of the purported benefits associated with CSR adoption and are creating strategic agendas for operating CSR activities. However, the evidence in support of the benefits of embracing CSR remains inconclusive. The empirical facts consistently tend to show mixed results of positive (Wang, 2015; Akpinar, Jiang, Gomez, Berron & Walls, 2008; Eccles et al., 2014), neutral (Aly & Hussainey 2010; Garvare & Johansson, 2015) and negative (Pan, 2014; Garvare & Johansson, 20) relationship between various measures of CSR and those of firm performance.

Haitain (2015) has identified ambiguity in the definition of CSR activities as a possible reason for the inconclusive empirical evidence and also noted that CSR data that is in quantitative stream could yield more reliable conclusions on the nexus between company performance and the practice of CSR. Blomgren (2011) opines that defects in the methods used in analysing the results of some CSR studies with the aim of linking it to firm performance. He criticized the use of Ordinary Least Square regressions (OLS) on rather dichotomously defined variables in the violation of the assumptions of OLS regression when the nexus is researched.

In Africa, the data on CSR activity particularly in Nigeria seems to be scarce because it was not collected or reported. The issues of CSR may also have been evolving here and therefore the awareness may have been low among the population and the business community, with respect to the importance of the CSR concept. The initial studies of CSR in Nigeria were based on subjective surveys of the financial service sector that has the fewest environmental impacts. Other studies on CSR use dichotomous scoring, on whether CSR is contained in the financial reports or not of firms to proxy for CSR engagement. In other studies, that attempted to use quantitative data to analyse the relationship between CSR and firm performance, the construction of the proxies for CSR were arbitrary, using different measures that each researcher felt pleased to use, which is biased and likely to lead to spurious conclusions (Ameshi, Adi, Ogbeche & Amao, 2006).

Additionally, most global institutions collecting and hosting the data on CSR did not have information about the CSR ratings of companies in Nigeria. For example, a search on CSRHub website, one of the leading private organisations that host CSR data of over 7,000 companies in 135 different industries and in 90 countries, by the researchers, yielded 87% incomplete rating for Nigerian listed companies in their database as recent as in 2017.

An intensive search for quantitative data on CSR in Nigeria, however, revealed that the first ever country rating of Corporate Citizen Index (3C-index) in Africa, compiled by CSR-in-Action for 117 companies was published in 2013. The 3C-index contains information of some companies listed on the NSE. These companies are from diverse sectors such as; automobile/transportation, the business services sector, education, manufacturing, electricity and energy, engineering construction and financial services. Others covered by the 3C-index include fast-moving consumer goods (FMCG), the mass media, health care, and telecommunications.

Although the NSE recommends mandatory disclosure of Environmental and Social Governance (ESG) issues for all its listed companies (NSE, 2016), there was no information on any ESG indicator by any of the listed companies in 2017 on the NSE website. This development the 3C-index as a basic benchmark for CSR practice in Nigeria presents a rare opportunity for empirical exploring how CSR and financial performance of companies listed on the NSE is represented, using the 3C-index data.

The CRS-in-Action 3C-Index rating framework is derived from the peculiar pedestal of Nigeria-centered facets of the Millennium Development Goals (MDGs) and the United Nations Global objectives based on environment, human rights, anti-corruption, and community investment as well as labour and reporting.

1.2 Literature Review

1.2.1 Conceptual Framework

The lack of congruence about the definition and the concept of CSR make it highly contentious and debatable amongst practitioners and academics, as noted by Carroll and Shabana (2010). The concept is associated with a variety of terminologies and its meaning and context differ across industrial sectors. According to Carroll (2012), CSR is those “actions that appear to further some social good, beyond the interests of the firm than what is required by law”.

Dahlsrud (2008) in a review of the numerous definitions of CSR, likened CSR to the practice by which firms strive to enhance their responsibility in respect of the “five organizational dimensions: stakeholders, social,

economic, voluntariness and environmental". In Aguinis and Graves (2012) opinion, CSR entails organizational actions and policies that take into account stakeholders' expectations and the triple bottom line of economic, social, and environmental performance in their business strategy. The perspective of Aguinis and Graves (2012) is adopted in this study and CSR is considered as a strategic business concept encompassing the application and incorporation of ethical standards and well-grounded management conventions that enable the creation and sharing of wealth for the advancement of the interest of parties to a business operation.

Firm performance relates to the ability of managers to generate profit with shareholder capital so as enhances the long-term wealth of the capitalists and to run the firm successfully in a sustainable manner (Andreas., Costa, Pesci & Taufer, 2013). In the accounting and economic literature, the firm performance is sorted into the classical and contemporaneous financial indexes (Carroll & Shabana 2010).

The classic indexes of firm performance comprise the financial rate of returns or financial ratios such as the Return on Assets (ROA), the Return on Equity (ROE) and the Return on investment (ROI). Others are gross profit margin, debt ratio, current ratio, acid test ratio etc. The contemporaneous indexes are related to the attribute of creating value such as Tobin-Q and multi-Beta value. Studies on CSR have used a wide range of measures for firm financial performance. These include: Return on Assets (ROA) (Bratenius & Melin, 2015; Chih, Chih, & Chen, 2010; Whitehouse, 2008; Waddock & Graves, 1997), Return on Equity (ROE) (Bratenius & Melin, 2015; Aupperle, Carroll & Hatfield, 1985; Carroll & Shabana 2010) and Tobin's-Q (Amaesi, et al., 2006). Santos and Brito (2012) identified other measures of firm financial performance as Profit Margin (PM), Earnings per Share (EPS), Divided Yield (DY), and Price - Earnings Ratio (PER). Others include Return on Sales (ROS) and Expense to Assets (ETA). They also mentioned Cash to Assets (CTA), Sales to Assets (STS), Expenses to Sale (ETS), Abnormal returns (AR), Operating Cash Flow (OCF), Return on Investment (ROI), Market-to-book value (MTBV), and Growth in Sales (GRO).

Glick, Washburn, and Miller (2012) have opined that superlative firm performance in the form of profitability provides greater satisfaction for shareholder and they reported a consistent and highly significant positive correlation when using ROA and ROE as measures of profitability. The ROA and ROE, are therefore, adopted as the proxies for the firm's financial performance in this study because they have a strong appeal in the empirical literature.

Some firm distinctive attributes have been spotted from previous research, to clarify significant changes in the matrices of CSR reporting made by the firms. Singh (2017); Dhaliwal, Radhakrishnan, Tsang and Yang (2011) in different reviews have identified some of the firm distinctive attributes to include; leverage, the type of industry the firm belongs to, the size of the firm, internationality, media exposure and the presence of CSR committee/representative on the firm's board among others. On the whole, the size of firms has consistently shown a positive and significant influence on CSR practice (Branco & Rodrigues, 2008; Bratenius & Melin, 2015). The size (SIZE) of the firms in this study is also used as a control variable to see if bigger firms have higher CSR inclinations.

1.2.2 Theoretical Framework

The literature on the link between CSR practice and the profitability of firms seem to have mixed outcomes and therefore does not fit a single theoretical perspective. Fundamentally, the relationship is based on the managerial branch of stakeholders' perspective which holds that the interest of several stakeholders who are affected by the business operations of a firm should be considered and provided for by the firm in order to increase; patronage, access to capital and commendation as well as to decrease disruption risks, and legal cost which will result in higher profits (Freeman, et al., 2010; Eccles et al., 2014). The theory, however, is constrained in explicating the management of different stakeholders for corporate survival.

On the other end, in the political-economic domain is the legitimacy theory. It deals with firm interaction and the whole of society. Suchman (1995) defines 'legitimacy' as an all-encompassing viewpoint or notion which signals that the activities of a corporate entity are pleasing, advantageous, or are in conformity within some socially constituted structure of models of beliefs, philosophy, tenets, and interpretations. The theory holds that the persistent survival of any corporation is determined by the combine effects of market determinants and the expectations of the social environment in which it operates and having quality information about the important concerns of community expectations becomes a vital imperative for the corporation's continuous existence.

The focus of the theory is hinged on the assumption that a corporate entity needs to gain the support of its social environment by yielding to their social expectation and providing the society its expected needs. With regards to CSR, firms aspire to tailor the narrative of their operation by voluntarily depicting to the social, political and economic world, their own viewpoints of how they are taking care of the concerns of the stakeholder so as to

gain legitimacy and minimize the adverse effects of government regulation and public disruption of their business activity.

1.2.3 Related Prior Empirical Studies

Extant literature is replete with the studies that examined the relation between CSR and corporate financial performance. The empirical studies comprise essentially two groups; in the first, a study methodology is used to assess the short-run financial impact (abnormal returns) when firms engage in either socially responsible or irresponsible acts. The results of these studies have been mixed. Whitehouse (2006) discovered a negative relationship; Pava (2008) on the other hand, reported a positive relationship, while Adebayo and Olawole (2012) found no significant relationship between CSR and the financial performance of some studied firms. Other studies, discussed in Chih et al. (2010), are similarly inconsistent, revealing neutral coefficients on the relationship between CSR and short run financial returns.

The second group examines the relationship between some measure of corporate social performance (CSP) and measures of financial performance, by using accounting or financial measures of profitability. These studies that have explored the relationship between CSP and accounting performance-based measures have also shown mixed outcomes. Whereas, Carroll and Shabana (2010); Aguinis and Glavas (2012) found a positive correlation between CSP and accounting performance after controlling for the age of assets. Aupperle, et al., (1985); Carroll (2008) reported an insignificant link between CSP and the firm's risk adjusted return on assets. Modum, Ugwoke and Onyeonu (2012) also found significant positive relation between CSR and profitability. In contrast, Waddock and Graves (1997) found significant negative relationships between the index of CSP and firms' performance measures, such as ROA, when the effect was lagged by one year.

The summary of a recent review on the nature of the relationship between CSR and firm performance by Galant and Cadez (2017) reveals further that Burnett and Hansen (2008); Rodgers Choy and Guiral (2013) found relationships of significantly positive nature. The findings of Baird, Geylani, and Roberts (2012); Peng and Yang (2014) on the same issue, on the other hand were significantly inverse. The review also reported findings of neutral relationships by Suchman (1995); Sun, Salama, Hussainey and Habbash (2010); Haitain (2015). The review further reported results of U-shape or inverted U-shape by Barnett and Salomon (2012).

In the Nigeria environment, studies by Richard and Okoye (2013); Shehu (2013) have showed a positive and significant nexus between CSR and profitability, Adebayo and Olawole (2012); Solomon Oyerogba and Olaleye reported neutral outcome while Umobong and Agburuga (2018); Emma, Amaefule and Onyekpere (2016) reported negative outcomes.

On the link between CSR and SIZE, Branco and Rodrigues, 2008; Nega, 2017 have consistently reported positive and significant relationships. However, Prado-Lorenzo, Gallego-Álvarez and Sanchez (2009) could not find a significant link between CSR and SIZE among Spanish firms.

1.2.4 Study Objectives and Hypothesis Development

The main objective of this study is to determine the extent of the relationship between CSR rating and the financial performance of companies listed on the NSE. The specific objectives include the determination of:

1. The relationship between CSR rating and the ROA of companies listed on the NSE.
2. The relationship between CSR rating and the ROE of companies listed on the NSE.
3. Whether the ROA of top-rated companies listed on the NSE is significantly different from low-rated companies after the announcement of 3C-Index.
4. Whether the ROE of top-rated companies listed on the NSE is significantly different from low-rated companies after the announcement of 3C-Index.
5. The link between CRS rating and size of companies listed on the NSE.

This study sets out to answer these research questions;

1. What is relationship between CSR rating and ROA of companies listed on the NSE?
2. Is the relationship between CSR rating and ROE of companies listed on the NSE significant?
3. Does the ROA of listed firm on the NSE that received high 3C-Index ratings, differ significantly from those that received low 3C-Index ratings?
4. Is there a significant difference between the ROE of listed firms on the NSE that received high 3C-Index ratings and those that received low 3C-Index ratings?

5. What is the link between CRS rating and size of companies listed on the NSE?

In line with the research objectives, the study seeks to test the following null hypotheses;

H₀₁: There is no significant relationship between CRS rating and ROA of companies listed on the NSE.

H₀₂: There is no significant relationship between CRS ranking and ROE of companies listed on the NSE.

H₀₃: The ROA of listed firm on the NSE that received high 3C-Index ratings does not differ significantly from those that received low 3C-Index ratings.

H₀₄: There is no significant difference between the ROE of listed firms on the NSE that received high 3C-Index ratings and those that received low 3C-Index ratings.

H₀₅: The link between CSR and SIZE is not statistically significant.

2. Methodology

2.1 Research Design

The research study adopts an ex-post facto research design which consists of secondary data analyses. The population of the study comprises 117 companies ranked in the 3C-index survey of 2013.

2.2 Population and Sampling Procedure

The population of the study is 117 companies and using convenience sampling technique, data was collect only from a sample of 17 firms across five sectors that met the selection criteria and represents the sample for the study (Table 1). The sample selection criteria were for a firm to have a 3C-index rating and be listed on the NSE before the year 2011 so that the firm who have started filing with the SEC by 2013. Although this methodology is considered biased and non-representative and lacks the sufficiency to identify differences in population groups (Woodside, 2012), it is considered adequate in the present study.

Table 1. Distribution of Study Sample

Consumer Goods	Industrial Goods	Finance	Construction	Agriculture	Oil & Gas	Total
7 UP Nig. Breweries PZ	WAPCO Beta Glass UAC	Access Bank GT Bank UBA Union Bank Zenith Bank FCMB	Julius Berger	PRESCO	Mobil Nig. MRS Oil Total Nig.	
3	3	6	1	1	3	17

Source: NSE (2017)

2.3 Measures and Covariates

The Financial performance of the firms as proxied ROA and ROE were computed based on standard ratio analyses from figures extracted from the financial statements of the firms from 2011 to 2017, two years before and four years after the CSR rating were released, including the year of the rating. This is to determine the trend between CSR ratings and financial performance. ROE was computed based on average equities for the years 2011 to 2017. The weighted 3C- Index CSR scores were extracted from the Collective Social Investment Report by CSR-in-Action without modification (see CSR-in-Action, 2013; CSI Report Nigeria for the details of the methodology). The variable specification and measurement are shown in Table 2. The control variable that seems to consistently mediate the interaction between CSR and firm performance is the size of the firm (Aguinis and Glavas, 2012; Eccles et al., 2014) and so the size of listed firms were computed using the logarithm of book value of total assets to control for the outliers typical of market value data to proxy for size.

Table 2. Variable Specification

Variable	Code	Measurement	Source
Corporate Social Responsibility (Dependent Variable)	CSR	Measured by aggregating and averaging scores on social and environmental indicators	CSR-in –Action Collective Social Investment Report
Profitability Return on Assets (Independent Variable)	ROA	Measured as net profit after tax divided by total assets.	Annual Financial Report
Profitability-Return on Investment (Independent Variable)	ROE	Measured as net income divided by the change in equity in the current from the previous year	Annual Financial Report
Firm size (Control variable)	SIZE	Ln of book value of total sales	Annual Financial Report

In order to categorise firms into low and high CSR performance, the 3C- Index CSR scores of all the sampled firms were divided into percentiles of 33% to represent one-third of the score in the lower boundary limit, 66% the median percentile and 100% for upper percentile. The raking for the lower boundary was computed as 21.00, the middle boundary was 30.76 and the high boundary as 44.00. The values were then re-coded into low ranks for values falling below 30.00 and high rank for values ranging from 30 to 44.00 (see details in Bornmann, 2013). The multiple regression model (Equation 1 & 2) were used to analyse the relationship between the dependent and independent variables. The Mann-Whitney U -test (Equation 3) was employed to determine the difference in the financial performance of high-rating and the low-rated companies listed on the NSE using Cohen's effect size (r) (equation 4) of the magnitude of differences. The explicit and implicit regression functions are given in Equations (1) and (2):

$$CSR_{it} = f(ROA_{it} + ROE_{it} + SIZE_{it}) \quad (1)$$

$$CSR_{it} = \beta_0 + \beta_1 ROA_{it} + \beta_2 ROE_{it} + \beta_3 SIZE_{it} + \epsilon_{it} \quad (2)$$

where

CSR, ROA ROE and SIZE are as explained in Table 2 and ϵ is the error term, β_0 , β_1 and β_2 are the intercepts of the dependent variable.

Mann-Whitney ranked test was computed using equation (3);

$$U = n_1 n_2 + \frac{N_1(N_1 + N_2)}{2} - R_1 \quad (3)$$

where;

n_1 and n_2 are the sample sizes of groups, R_1 is the sum of ranks for group 1 and N_1 the population in group 1

The Cohen Effect Size (r) was computed using equation (4);

$$r = \frac{Z}{\sqrt{N}} \quad (4)$$

Where; Z , is the value of the Z -score in the Mann-Whitney U -test result and N is the sample population.

3. Results

The result of the descriptive statistic for CSR scores ROA, ROE and SIZE is given in Table 3, the mean score of ROA is 0.01, and that of ROE is -0.72 with standard deviations of 0.76 and, 1.84 respectively. The minimum CSR score is 15.00 and the maximum is 44.00 with a mean score and standard deviation of 27.00 and 8.60. The average SIZE of these companies is 17.56 with a standard deviation of 3.31

Table 3. Descriptive Statistics of study variables

	N	Minimum	Maximum	Mean	Std. Deviation
CSR_scores	17	15.00	44.00	27.0000	8.5951
ROA	17	0.0072	0.3263	0.07208	.07690
ROE	17	-0.7224	5.5077	2.0316	1.8348
LnSIZE	17	6.92	21.48	17.5625	3.3085

Correlation results

The correlation matrix is presented in Table 4 and shows no significant correlation between all variables except for SIZE. The SIZE of the firm correlates with CSR significantly at 0.01 levels. However, all the other independent variables also correlations positively and with CSR scores. The correlations among the entire independent variables are not significant are inverse. The Pearson correlations between all independent variables are far below 0.7 and indicate the absence of multicollinearity.

Table 4. Correlation Coefficients of study variable

	CSR Score	ROA	ROE	SIZE
CSR Score	1.000			
ROA	0.295	1.000		
ROE	0.154	-0.127	1.000	
SIZE	.586**	-0.003	-0.091	1.000

** Correlation is significant at 0.01 levels

Regression assumptions were assessed using Variance the Inflation Factor (VIF), tolerance and Durbin-Watson statistics (Table 5). Field (2009) suggested that if the average VIF is substantially greater than 1, then the regression may be biased. The average VIF is very close to 1 and this confirms that collinearity is not a problem in this investigation. The tolerance of the model range (Field, 2009). The Durbin-Watson statistics is very close to 2 meaning that the residuals are uncorrelated and there is no problem of autocorrelation. The histogram of CSR (Fig 1.) and plot of residuals (Fig. 2) show that the data are not affected by normality and linearity problems respectively.

Table 5. Collinearity Statistics

Variable	Tolerance	VIF	Durbin -Watson
ROA	0.984	1.017	2.207
ROE	0.975	1.025	
SIZE	0.991	1.009	

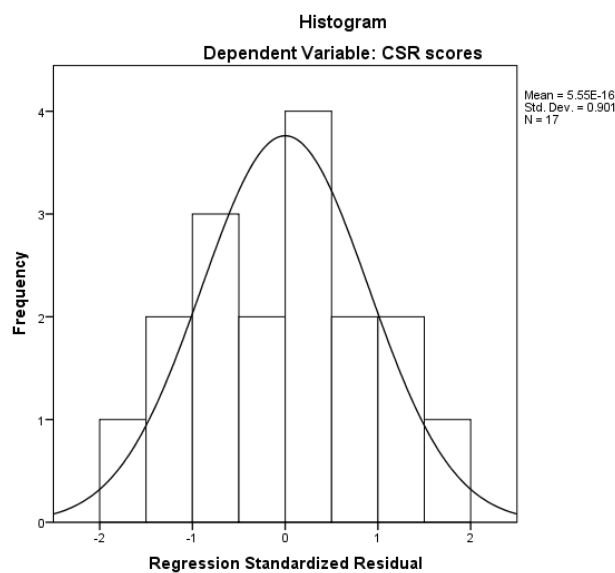


Figure 1. Histogram of CSR

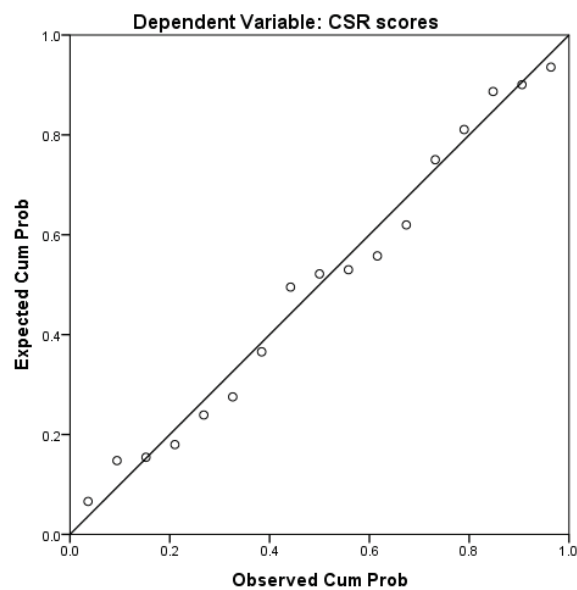


Figure 2. Normal plot of CSR

Having met some of the necessary regression assumptions, the results of multiple-regression are then given in Table 6. The results reveal that the independent variables explain about 37.5% of the variation in the dependent variable based on the adjusted R^2 value. This suggests that factors other than CRS affect the profitability of the companies under study. The Fisher-statistics (F) is 4.205 ($p < 0.028$) which suggests that the model is a good fit, and could be used for testing the relationship between the dependent and independent variables. The standardized beta coefficients suggest a positive relationship between the independent variables and the dependent variables. However, the relationship for ROA and ROE are not significant at 95% confidence interval ($p > 0.05$). The result however shows a positively significant p -value of 0.009 for SIZE ($p < 0.05$) signalling the bigger firms have greater CSR engagement than smaller ones.

Table 6. Regression results

Variable	Statistics	Coefficient (β)	Standardized coefficient (β_s)	Std. Error	t-ratio	p-value
Constant		-5.844		9.761	-0.599	0.560
ROA		36.743	0.266	22.268	1.560	0.123
ROE		1.176	0.458	0.937	1.255	0.232
SIZE		1.583	0.609	0.526	3.071	0.009
R^2	0.492					
Adjusted R^2	0.375					
F	4.205					
Fp -value	0.028					

Results of Mann-Whitney Rank Test

The result of Mann-Whitney U-test for ROA and ROE of companies that receive high CSR ratings compared to those that receive low CSR ratings are given in Table 7 and 8 respectively. Table 7 reveals that ROA of firms with high CSR ranks (Mdn = 36.00) differs significantly from firms with low CSR ranks (Mdn = 21.00), $U = 13.000$, $Z = -2.464$, $r = -0.49$, $p < 0.05$. It was also found that the ROE of firms with high CSR ranks (Mdn = 18.21) did not differ significantly from firms with low CSR ranks (Mdn = 17.50), four-years after the firms were indexed by CRS-in Action; $U = 21.000$, $Z = -1.206$, $r = -0.29$, $p > 0.05$ (Table 8).

Table 7. Result of Mann-Whitney rank test on ROA

	RANK	N	Mean Rank	Median Ranks	Sum of Ranks
ROA	high rank	6	12.33	36.00	74.00
	low rank	11	7.18	21.00	79.00
	N	17			
Mann-Whitney U	13.000				
Z	-2.010				
r_{ROA}	-0.49				
Asymp. Sig. (2-tailed)	0.049				

Table 8. Result of Mann-Whitney rank test on ROE

	RANK	N	Mean Rank	Median Ranks	Sum of Ranks
ROA	high rank	6	11.00	18.21.00	66.00
	low rank	11	7.71	17.50	87.00
	N	17			
Mann-Whitney U	21.000				
Z	-1.206				
r_{ROE}	-0.29				
Asymp. Sig. (2-tailed)	0.256				

4. Discussion

Five hypotheses were raised at the beginning of this study, the first two and the fifth postulated significant relationships between CSR ratings of Nigerian listed companies and profitability ratios as well as the size of the companies. The result of regression analysis finds an insignificant relationship between CSR and ROA ($t = 1.560$, $p > 0.05$) on the one hand and between CSR and ROE ($t = 1.560$, $p > 0.05$) on the other hand. However, the relationships between CSR ratings and SIZE was positive and significant ($t = 3.071$, $p < 0.05$). The first two propositions are accordingly accepted as the relationships between CSR ratings and the profitability ratios are not significantly different. However, the relationships signs are positive and directly proportional which signals that CSR practice can lead to increased profitability of Nigerian listed companies marginally. This finding is consistent with previous findings by Adebayo and Olawole (2012); Solomon et al. (2015) but it contrasts with the findings of Umobong and Agburuga (2018); Emma, Amaefule and Onyekpere (2016) who reported negative relationships among Nigerian firms in previous studies. The lack of significant relationship between CSR and ROA/ROE of the firms can be attributed to the low practice of CSR by the firms as reflected in about 65% (11)

of the sample firm been on the lower end of the 3C-index. The practical implication of this finding is that there is the need to increase the practice of CSR and reporting among Nigerian listed companies through advocacy or enforcement compliance by the SEC or the NSC. The media too needs to take a leading role in publishing the CSR information of the firms periodically so as to bring them to intense media expose. The firms also should be mandated to set-up CSR committees or have a CSR practitioner among the dominant coalition, as this can likely expedite CSR practice and reporting.

The third and fourth hypotheses assumed that the ROA and ROE of listed firms on the NSE that received high 3C-Index ratings does not differ significantly from those that received low 3C-Index ratings. The result of Mann-Whitney rank test for ROA and ROE of companies that receive high CSR rankings compared to those that receive low CSR rankings is given in Table 6 and 7 respectively. In respect of ROA, Table 6 reveals that the ROA of firms with high CSR ranks (Mdn = 36.00) was significantly different from firms with low CSR ranks (Mdn = 17.18), $U = 13.00$, $Z = -2.010$, $r = -0.49$, $p < 0.05$. The effect size of ROA (r_{ROA}) between the companies that receive high CSR rankings as compared to those that receive low CSR rankings is approximately 0.5 and represent a large effect size. It implies that the difference in the value of ROE firms with high CSR rating is significantly larger than for firms with low CSR rating. The practical implication of this finding is that the non-parametric test is signalling that CSR practice, after all, illustrate profitability. It was also found that the ROE of firms with high CSR ranks (Mdn = 18.21) did not differ significantly from firms with low CSR ranks (Mdn = 17.50), four-years after the firms were indexed by CRS-in Action ($U = 21.00$, $Z = -1.206$, $r = -0.29$, $p > 0.05$). The r_{ROE} for ROE of top-ranked and low-ranked companies listed on the NSE is medium.

This study invested the relationship between CSR rating and the financial performance of companies listed on the NSE. The intention is to explore an alternative measure for CSR expenditure by using the rankings contained in the first ever country ranking of Corporate Citizen Index (3C-index) of 2013. This study found a positive but insignificant relationship between CSR and firm performance (ROA and ROE) among companies listed on the NSE using OLS regression. However, the result also revealed that large companies were significantly more inclined to CSR practice on the NSE. Another important finding was that the non-parametric Mann-Whitney test showed that proxied by ROA. It is also clear that the CRS rank grading of companies listed on the NSE did not significantly relate to profitability ratios in the short run. This has created avenues for further research into the intermediate and long-run effect of CSR ranking and firm profitability.

References

- Adeboye, O. R., & Olawale, S. R., (2012). Corporate Social Responsibility and Business Ethics: Effective Tools for Business Performance in Nigeria Banks. *Interdisciplinary Journal of Contemporary Research Business*, 4(5), 274-279.
- Adreaus, M., Costa, E., Pesci, C., & Taufer, E., (2011). The Interaction between Industrial Specific Standards and Corporate Social Responsibility Empirical Evidence from cooperative Banks in Italy. 36 *EAA Annual Congress*, 1-49.
- Aguinis, H., & Glavas, A., (2012). What We Know and Don't Know About Corporate Social Responsibility: A Review and Research Agenda. *Journal of Management*, 38(4), 932-968.
<https://doi.org/10.1177/0149206311436079>
- Akpinar, A., Jiang, Y., Gomez, L. R., Berron, P., & Walls, J. L. (2008) *Strategic use of CSR as a signal for good management*. IE Business School Working Papers.
- Aly, D. S., & Hussainey, K., (2010). Determinant of Corporate internet reporting: evidence from Egypt. *Managerial Auditing Journal*. <https://doi.org/10.1108/02686901011008972>
- Amaeshi, K. M., Adi, B. C., Ogbeche, C., & Amao, O. O. (2006). Corporate Social Responsibility in Nigeria; Western Minority or Indigenous Influences? *Journal of Corporate Citizenship*, 24(3), 83-99.
<https://doi.org/10.9774/GLEAF.4700.2006.wi.00009>
- Aupperle, K. E., Carroll, A. B., & Hatfield, J. D. (1985). An Empirical Examination of the Relationship between Corporate Social Responsibility and Profitability. *Academy of Management Journal*, 28(2), 446-463.
- Baird, P. L., Geylani, P. C., & Roberts, J. A. (2012). Corporate social and financial performance re-examined: Industry effects in a linear mixed model analysis. *Journal of Business Ethics*, 109, 367-388.
<https://doi.org/10.1007/s10551-011-1135-z>
- Blomgren, A. (2011). Is the CSR Crazy Good for Society? The Welfare Economic Approach to Corporate Social Responsibility. *Review of Social Economics*, 69(4), 495-515.

- <https://doi.org/10.1080/00346764.2011.592329>
- Bornmann, L. (2013). How to analyse percentile impact data meaningfully in bibliometrics: The statistical analysis of distributions, percentile rank classes and top-cited papers. *Journal of the American Society of Information Science and Technology*, 64(3). <https://doi.org/10.1002/asi.22792>
- Branco, M. C., & Rodrigues, L. L. (2008). Factor Influencing Social Responsibility Disclosure by Portuguese Companies. *Journal of Business Ethics*, 83(4), 685-701. <https://doi.org/10.1007/s10551-007-9658-z>
- Bratenius, A. L. H., & Melin E. J., (2015). The impact of CSR on financial performance: An event study of abnormal stock returns of Swedish companies as a reaction to the release of the Folksam Index of Corporate Social Responsibility. www.studenttheses.cbs.dk
- Burnett, R., & Hansen, D. (2008). Ecoefficiency: Defining a role for environmental cost management. *Accounting, Organization and Society*, 33, 551-581. <https://doi.org/10.1016/j.aos.2007.06.002>
- Carroll, A. B., & Shabana, K. S., (2010). The Business Case of Corporate Social Responsibility. *International Journal of Business Review*, 12(1).
- Carroll, A. B. (2012). Corporate Social Responsibility and Related Terms in Sage publications, *Sage brief guide to Corporate Social Responsibility*. London: Sage publication Inc. 1-10.
- Chih, H. L., Chih, H. H., & Chen T. Y. (2010). On the determinants of Corporate Social Responsibility: International evidence on the financial industry. *Journal of Business Ethics*, 93(1), 115-135. <https://doi.org/10.1007/s10551-009-0186-x>
- Dahlsrud, A. (2008). How Corporate Social Responsibility is Defined: an Analysis of 37 Definitions!. *Corporate Social Responsibility and Environmental Management*, 15(1), 1-13. <https://doi.org/10.1002/csr.132>
- Dhaliwal, D. S., Radhakrishnan, S., Tsang, A., & Yang, Y. G. (2012). Nonfinancial disclosure and analyst forecast accuracy. *International Evidence on Corporate Social Responsibility Disclosure, The Accounting Review*, 87, 723-759. <https://doi.org/10.2308/accr-10218>
- Eccles, R. G., Ioannou I., & Serafeim, G., (2014). The Impact of Corporate Sustainability on Organisational Processes and Performance. *Management Science*, 60(11), 2835-2857. <https://doi.org/10.1287/mnsc.2014.1984>
- Emma, U., Okoye, E. I., Amaefule L., & Onyekpere U., (2016). The Implication of Corporate Social Responsibility Practice on Manufacturing Firms' Performance in Nigeria. *Conference paper*.
- Freeman, R. E., Jeffrey, S., Harrison, A. C., Wicks Bidhan, P., & Simone, de Colle (1984). *Stakeholder Theory*. Cambridge University Press, The Edinburgh Building, Cambridge CB2 8RU, UK.
- Friedman, M. (1970). The social responsibility of business is to increase its profits. *New York Times*, September 13, 33.
- Galant, A., & Cadez, S. (2017). Corporate social responsibility and financial performance relationship: a review of measurement approaches, *Economic Research- Ekonomska Istraživanja*, 30(1), 676-693.
- Garvare, R., & Johansson, P. (2010). 'Management for Sustainability – A Stakeholder Theory'. *Total Quality Management*, 21(7), 37-744.
- Glick W. H., Washburn, N. T., & Miller, C. C. (2012). The Myth of Firm Performance. *Organization Science*, 24(3), 948-964.
- GRI (2013). G4 Sustainability Reporting Guidelines. www.globalreporting.org/resourcelibrary/GRIG4-Part1-Reporting-Principles-and-Standard-Disclosures.pdf
- Haitain, L. (2015). The legislation of corporate social responsibility: Hong Kong experience on ESG reporting. *Asian Pacific Law Review*, 24(2), 123-148.
- Modum, U., Ugwoke, R. O., & Onyeonu, E. O. (2012). Content Analysis of the Effect of CEO Duality on the Corporate Performance of Quoted Companies on the Nigerian Stock Exchange 2006-2012. *European Journal of Business and Social Sciences*, 2(6), 61-77.
- Nega, F. T. (2017). The Relationship between Financial Performance, Firm Size, Leverage and Corporate Social Responsibility. Published Ph.D. Thesis. Walden Dissertations and Doctoral Studies Collection. <http://scholarworks.waldenu.edu/dissertations>
- NSE. (2016). Nigeria Stock Exchange Sustainability Report 2016.

- Pava, M. L. (2008). Why corporations should not abandon social responsibility, *Journal of Business Ethics*, 83(4), 805-812. <https://doi.org/10.1007/s10551-008-9666-7>
- Peng, C., & Yang, C. (2014). Corporate Social Responsibility and Financial Performance: Does CEO Compensation Really Matters? *Journal of Applied Finance and Banking*, 5(6), 51-67.
- Prado-Lorenzo, J. M., Gallego-Álvarez, I., & Sánchez, I. (2009). Stakeholder Engagement and Corporate Social Responsibility Reporting: The ownership Structure Effect. *Corporate Social Responsibility and Environmental Management*, 16, 94-107. <https://doi.org/10.1002/csr.189>
- Rodgers, W., Choy, H. L., & Guiral, A. (2013). Do investors value a firm's commitment to social activities? *Journal of Business Ethics*, 114, 607-623. <https://doi.org/10.1007/s10551-013-1707-1>
- Santos, J. B., & Brito, L. A. L. (2012). Towards a Subjective Measurement Model for Firm Performance. *BAR, Rio de Janeiro*, 9(6), 95-117, Special Issue. <https://doi.org/10.1590/S1807-76922012000500007>
- Shehu, A. (2013). The influence of corporate social responsibility on profit after tax on some selected deposit money banks in Nigeria. *International Research Journals*, 4(10), 722-732.
- Singh, P. J., Sethuraman, K., & Lam, J. Y. (2017). Impact of Corporate Social Dimension in Firm Value: Some Evidence from Hong Kong and China. *Sustainability*, 9(9), 1532-1544. <https://doi.org/10.3390/su9091532>
- Solomon, O., & Olaleye (2014). Effects of corporate social responsibility performance (CSR) on stock prices: Empirical study of listed manufacturing companies in Nigeria. *Journal of Business and Management*, 6(8), 112-117.
- Suchman, M. C. (1995). Managing Legitimacy: Strategic and Institutional Approaches. *The Academy of Management Review*, 20(3), 571-610. <https://doi.org/10.5465/amr.1995.9508080331>
- Sun, N., Salama, A., Hussainey, K., & Habbash, M. (2010). Corporate environmental disclosure, corporate governance and earning management. *Managerial Auditing Journal*, 25, 679-700. <https://doi.org/10.1108/02686901011061351>
- Suzuki, K., & Tanimoto, K. (2015) Corporate Social Responsibility in Japan Analysing the Participating Companies in Global Reporting Initiative.
- Umobong, A., & Agburuga, U. T. (2018). Firm Performance and Corporate Social Responsibility of Quoted Firms in Nigeria.
- Waddock, S. A., & Graves, S. B. (1997). The Corporate Social Performance Financial Performance Link. *Strategic Management Journal*, 18(4), 303-319. [https://doi.org/10.1002/\(SICI\)1097-0266\(199704\)18:4<303::AID-SMJ869>3.0.CO;2-G](https://doi.org/10.1002/(SICI)1097-0266(199704)18:4<303::AID-SMJ869>3.0.CO;2-G)
- Wang, S. (2015). *Chinese Strategic Decision-making on CSR, CSR, Sustainability, Ethics & Governance*.
- Whitehouse, L. (2006). Corporate Social Responsibility: Views from the Frontline. *Journal of Business Ethics*, 63(1), 73-82. <https://doi.org/10.1007/s10551-005-3243-0>
- Woodside, A. G. (2010). Bridging the Chasm between Survey and Case Study Research: Research Methods for Achieving Generalization, Accuracy and Complexity. *Industrial Marketing Management*, 39, 64-75. <https://doi.org/10.1016/j.indmarman.2009.03.017>

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A Correlational Analysis to Assess Major Obstacles Associated with the Internationalization of Saudi Startup Enterprises

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Received: November 1, 2018

Accepted: November 20, 2018

Online Published: November 27, 2018

doi:10.5539/ibr.v11n12p78

URL: <https://doi.org/10.5539/ibr.v11n12p78>

Abstract

Startups' constant tendency to grow and scale up through internationalization is occasionally collided with a number of barriers in the domains of legalization and regulation, market and customer, environment and competitiveness, information and knowledge, resources and accessibility, and economy and culture. The sharpness of these barriers might intensify when it comes to startups from emerging markets. Consequently, a need for assessing the major obstacles associated with the internationalization of emerging markets' startups is emphasized. In this regard, a correlational analysis has been used to identify and assess the role of these obstacles in restricting Saudi startup enterprises to operate internationally. A total of 103 participants were included in the data collection process of the study from Saudi startup enterprises. The findings have shown that liability of foreignness, managerial dispute and organizational distrust, and immaturity of home market were the most influential barrier towards internationalization process of SMEs. Coping implications were suggested to mitigate the impact of each barrier and possible avenues for future research in the area of startups' internationalization were recommended.

Keywords: startups, internationalization, obstacles, Saudi Arabia

1. Introduction

Startups in emerging countries look forward to grow their businesses as a refreshing occurrence that brings new hope to their regions. Mainly, the startup businesses seek for economic as well as political and social security. In this context, Sinu (2017) has shown the boost got from the startups in India, specifically in growing the economy and empowering youths to spread their talents and innovative ideas in business. In the context of Nigeria, startups have played an important role in achieving and sustaining economic growth by generating innovation, employment, diversifying the economic source of revenue, boosting the small and medium enterprises (SMEs), and increasing production (Ogunlana, 2018). In the context of Germany, startups boost economic growth of the country by instigating products, services and innovative technologies. Similarly, new job opportunities are provided by startups in the short and long term, accelerating structural changes by replacing sclerotic companies, increasing competition, and raising the productivity of economies and firms (Kritikos, 2014). Undertaking the paradigm of Romania, Herte (2017) emphasizes the role of startups in boosting economic growth of the country by creating job opportunities, ensuring social stability, encouraging innovation and entrepreneurship, boosting employment and competitiveness, improving the business environment, and generating opportunities to access funds through different programs.

According to OECD (2005), the share of SMEs in international markets is inappropriately low towards the role they play in their national economies as these startups comprise the most important economic growth and employments source all over the world. One of the major reasons of this low proportion is barriers of internal and external character, restricting or precluding the expansion of SMEs on foreign markets (Pietrasieński & Ślusarczyk, 2015). Correspondingly, Roy, Sekhar & Vyas (2016) have emphasized informational barriers, financial barriers, marketing barriers and managerial barriers as internal barriers whereas governmental and economic barriers, task and socio-cultural barriers, procedural and currency barriers, and political/legal barriers as external barriers. Likewise, Toulouva, Votoupalova & Kubickova (2015) have listed lack of experience and language barriers as internal barriers, while lack of finance was revealed as the most important external barrier among Czech SMEs. In the context of India, Kalyanasundaram (2018) has revealed delays in product delivery, government policies, lack of finance, and lack of market knowledge as major causes of failure to startups

internationalization. Similarly, these startups lack time to realize product development, revenue realization, market growth, government policy leverage and personal characteristics, which causes into the failure of internationalizing their activities. In the context of Lithuanian startups, Sekliuckiene (2013) company's size, lack of knowledge, lack of financial resources, inability to contact to distributors and customers, lack of experience, company's scale as internal barriers for internationalization. On the contrary, bureaucratic problems and processes, intensive competition, verbal and nonverbal language differences, geographical distance, problematic communication with overseas customers, cultural differences in particular areas, national and target market regulations, and licenses and approvals on activities are revealed as external barriers for internationalization. Severe financial conditions and labor market constraints are considered as major external barriers for internationalization among German startups (Arndt, Buch & Mattes, 2009). Likewise, tariff and non-tariff barriers, exchange rates, limited resources and funds, and foreign government customs and restrictions are revealed as barriers for internationalization (Patmore & Haddoud, 2015).

For Saudi Arabia (the country in which this study took place), different practices were witnessed as compared to the Western context, resulting in limited contribution of Saudi SMEs to national GDP (Azyabi, 2013). According to Babagi (2017), the contribution of Saudi SMEs can be proportionally higher if they overcome their encountered challenges. Alharbi (2014) has revealed lack of financial, institutional, marketing, development, educational, and legal services support as obstacles to the success and growth of Saudi startups.

1.1 Contribution of the Study

From an internationalization perspective, no previous and existing studies managed to provide empirical evidences on the internationalization of Saudi startups and its associated barriers. Meaning that the current study is considered to be first to empirically investigate the obstacles or barriers to internationalization for Saudi Arabia startups. Therefore, this study is required to provide Saudi startups' decision makers with explanations and implications on the potential role played by obstacles in restricting the stimulation of their companies' internationalization and ways to cope with them.

2. Literature Review and Hypotheses Development

International penetration for small and medium startup companies has been enabled through globalization to offer long-term competitive advantage. However, such penetration of foreign markets is usually hindered by a series of obstacles, which ultimately prevents these startups from internationalizing their activities.

2.1 Lack of Owners' International Experience

The lack of owners' experience towards internationalization activities is an utterly negligible subject towards the success of startups. Correspondingly, the owners who operate their businesses without having an exposure to international experience and knowledge are likely to not successfully internationalize the activities of their startup firms (Chachar, 2013). Chelliah et al (2010) revealed that lack of international experience of firms' owners is the major weakness towards the internationalization activities of their firms. Likewise, Wang et al (2007) have stated that lack of international experience and knowledge of owners is detrimental to strategic execution and internationalizing activities in small and medium businesses. Similarly, Hutchinson et al (2009) have stated that lack of experience and knowledge of startups' owners hinders internationalization and usually prevents them to convey the distinctive qualities and image of a product or a service to consumers overseas. The following hypothesis is developed to validate the lack of owners' international experience on the internationalization of their startups;

H1: Lack of owners' international experience prevents the internationalization of their startups' activities.

2.2 Lack of Funds

Finance is observed as important part of the development ability of startups and it is stated as a holding element of an enterprise. Funds allow enterprise to grow and nurture the needs to invest in different areas; for instance, increased capacity, updated technology and market development. However, lack of funding is considered as another important barrier towards the internationalization of startups and; therefore, these entities are not able to develop their ability to sustain in a well-established market (Eriksson, 2017). Abdin (2016), argued that startups are often low investment firms as they do not have accessible and available funds to operate trade of their own cost. Due to limited access to institutional funds, these entities lack to utilize financial when they penetrate foreign markets. According to the report of OECD (2017), access to funds in the suitable and proportionate forms is hindered by a range of demand and supply obstacles for several startups. For instance, credit constraints, and lack of collateral and fixed costs are major obstacles of financing. Correspondingly, Fuentes (2017) has reported that 67% of SMEs in the form of startups failed to internationalize their activities due to lack of funding

or financial resources. Based on the aforementioned discussion, this study has proposed following hypothesis;

H2: *Lack of funds affects the internationalization of startups.*

2.3 Immaturity of Home Market

Entrepreneurs need to switch their operations out of their home market for internationalization to take place. It has been emphasized that a firm possess its ownership advantages and constitutes its own character from its home market. This implies that a startup as a learning organization is required to initiate its processes in a home market that is characterized by its maturity and its ability to foster the disruptive and innovative dynamic capabilities of its newly established ventures. According to Anna and Ida (2017), the immaturity of home market can hamper or decelerate the internationalization of startups. Correspondingly, Karlsson and Rydqvist (2017) have revealed that the immaturity of the startups' home markets may encourage them to move towards similar immature markets and adapt their internationalization activities accordingly, which ultimately might negatively affect their strategic expansion plans in their industry. The immaturity of the startup sector in a specific home market, with limited possibilities of spillover and exchange of advanced and sophisticated knowledge among the startups might lead them to ignore market-seeking opportunities outside of their home market. This can be converted into the following hypothesis;

H3: *Immaturity of home market negatively affects the internationalization of startups.*

2.4 Depth and Size of Home Market

The choice of startups to internationalize in foreign markets is based on the situational motivators such as size, dimension, and excess capacity, depth of market, unsolicited orders and common market membership. Likewise, capabilities of startups such as their size and scale are developed with a long-lasting perspective. This makes it vital for startups to screen its home market first and develop their capabilities through exploiting the untapped niches within it prior to committing their future overseas (Kozlova, 2014; Stouraitis & Kyritsis, 2016). As a consequence, startups in large and deep home markets may tend to spend a relatively long time domestically before internationalizing their activities in comparison with their counterparts in small home markets for demand purposes. Operating domestically for a sufficient period of time can enhance the capacity of the startup to acquire the size and maturity required for internationalization since the small age and size of the firm are amongst the major uncertainties and barriers that prevent and cause a possible failure (Yener, Dođruođlu & Ergun, 2014; Baranovskaja, 2015; Kozlova, 2014; Stouraitis & Kyritsis, 2016). The following hypothesis is developed to detect the impact of the depth and the size of the home market on internationalization;

H4: *The extended depth and the large size of home market negatively affect the internationalization of its startups.*

2.5 Weak Absorptive Capability

It has been indicated that early startups can rapidly learn and grow in international markets as compared to older entrants, but they might probably lack international knowledge or merely have narrow skill foundation. For instance, new internationalizers have limited learning about markets and competition as compared to their established competitors. It has been argued that early internationalizers have limited operational experience if they internationalize at an early age. Thereby, startups require a suitable level of absorptive capacity to comprehensively benefit from the learning advantage of internationalization. Early internationalization cannot bring performance advantages as internationalization exposes a firm to uncertainties and risks (Castro Abancens & Cepeda-Carri3n, 2016; Saeedi, 2014; Aljanabi, Noor & Kumar, 2014; Onwuzuligbo & Hurmelinna-Laukkanen, 2017; Wu & Voss, 2015). Startups with firm absorptive capacity can incorporate and access novel ideas and approaches as well as can robustly position themselves in the host country. Therefore, we propose the following hypothesis;

H5: *Weak absorptive capacity can hamper or prevent internationalization of startups.*

2.6 Managerial Dispute and Organizational Distrust

The internationalization decision is commonly based on the perceptions about the external and environment actors as compared to organization-related perceptions. Due to diverse and probably negative perceptions concerning internationalization and choice of the foreign market, startups' owners and management personnel might enter into a dispute that is characterized by mutual distrust. Decisions pertaining to internationalization, choice of host country and mode of entry are entirely based on perceptions about managerial preferences. This is resulted in differences in perceptions on other aspects of the internationalization like assessment of external opportunities, partners of performance, growth pressures, and fulfillment of the changing needs in the foreign

markets. All these factors ultimately lead to the occurrence of managerial dispute and organizational distrust towards internationalization (Ruigrok & Wagner, 2003; Mupemhi, Duve & Mupemhi, 2013; Amann, 2003; Agndal, 2004; Sieler, 2008). Therefore, the following hypothesis is worth of validation;

H6: *Managerial dispute and organizational distrust directly affects the internationalization decision of startups.*

2.7 Liability of Foreignness

Many studies have shed light on the phenomenon of internationalization and its inevitable consequences. Competing in a foreign market makes it imperative for firms, notably, startups to encounter the hazard of the liability of foreignness (LOF) and its associated risks (Zhou & Guillen, 2016). As an outcome of the severe effect of these risks, many startups tend to intentionally neglect the option of going international, especially if they are uncertain about their ability to overcome the liability of foreignness (Kaiser & Sofka, 2006). Firm based LOF, on the other hand, derives from firm-specific characteristics including ownership structure, firm-specific resources, learning, and network based linkages such as affiliation to a business group (Johanson and Vahlne, 2009; Petersen and Pedersen, 2002). Stated differently, the magnitude of LOF that different firms face in a given market will vary based on certain firm specific characteristics. Furthermore, we argue that both the environmentally-derived and firm based LOF are different for emerging We following hypothesis;

H7: *Liability of foreignness discourages startups to internationalize their activities.*

2.8 Relocation of Employees Overseas

For startups, human resources are the backbone of the organization and the drive behind the successes of the business. Therefore, startups with the desire to internationalize usually tend to relocate their key employees to the target foreign market (Vineburgh, 2010). This tendency is relied on two facts, represented in the limited staff startups usually have, especially at their early stages and the strategic importance of the first generation of their employees given into account their contribution to the initiation of the business (Wu & Voss, 2015). This makes startups forced to relocate some of those key employees to the overseas market to ensure a successful launch of their business there. However, the decision of relocation staff overseas might be collided with intense resistance by the selected staff for personal reasons and preferences and it can entail a number of unaffordable costs (Stouraitis & Kyritsis, 2016). This eventually may lead the startups to reconsider their decision and postpone the internationalization process to a later stage of their life. This decision can be validated using the following hypothesis;

H8: *Relocation of employees overseas can postpone the internationalization of startups.*

3. Methodology

A quantitative study was conducted through the use of structured questionnaires. The questionnaire survey used in this study was designed for owners and CEOs of startup enterprises. The startup enterprises that had 249 employees or less were chosen for the study. The questionnaires were distributed to start-up enterprises in the cities of Riyadh Region and Eastern Region of Saudi Arabia. The survey was conducted on 170 respondents; however, responses were received from 103 owners and/or CEOs of startups. The questionnaire was designed in English but was translated into Arabic by certified translation services for clarification purposes. To maintain a high degree of accuracy, the translation process was checked by the professionals at the King Faisal University Translation Center.

The content of the questionnaire was developed according to the barriers that prevent/hamper/postpone the startup enterprises from going international and investing overseas. The questionnaire was divided into two parts; the first part is designed to collect information about the company size, sector and years of experience. The second part comprises of questions that investigate the major barriers faced by the startup enterprises in the process of internationalization. These barriers include lack of owners' international experience, lack of funds, immaturity of home market, depth and size of home market, weak absorptive capability, managerial dispute and organizational distrust, liability of foreignness, overseas relocation of employees. The data gathered through the questionnaires was analyzed statistically using Statistical Package of Social Sciences (SPSS) version 20.0. Descriptive and inferential statistics have been used to analyze the collected data.

4. Results

The results are presented on the basis of startup enterprises' responses toward barriers, and obstacles associated to internationalization. The profile of these enterprises is presented in Table 1. As per the findings, 57.1% startup enterprises were micro-size enterprises who employ 0-9 employees, 25.3% startup enterprises were small enterprises who employ 10-49 employees while 17.6% companies were medium enterprises, employed 50-249

people. Mostly startups have 4-5 years of experience (46.4%) while 40% startup firms have 0-3 years of experience. A total of 47.1% startups belong to information and communication services sector, 30.6% startups belong to logistic services sector, 15.9% startups belong to retailing sector, and 6.5% startups belong to wholesaling sector.

Table 1. Enterprises Profile

		N	%
Company size	0-9	59	57.1
	10-49	26	25.3
	50-249	18	17.6
Years of Experience	0-3 years	41	40
	4-5 years	47	46.4
	6+	15	13.5
Sector	Logistic services sector	31	30.6
	Retailing sector	21	15.9
	Information and communication services sector	48	47.1
	Wholesaling sector	3	6.5

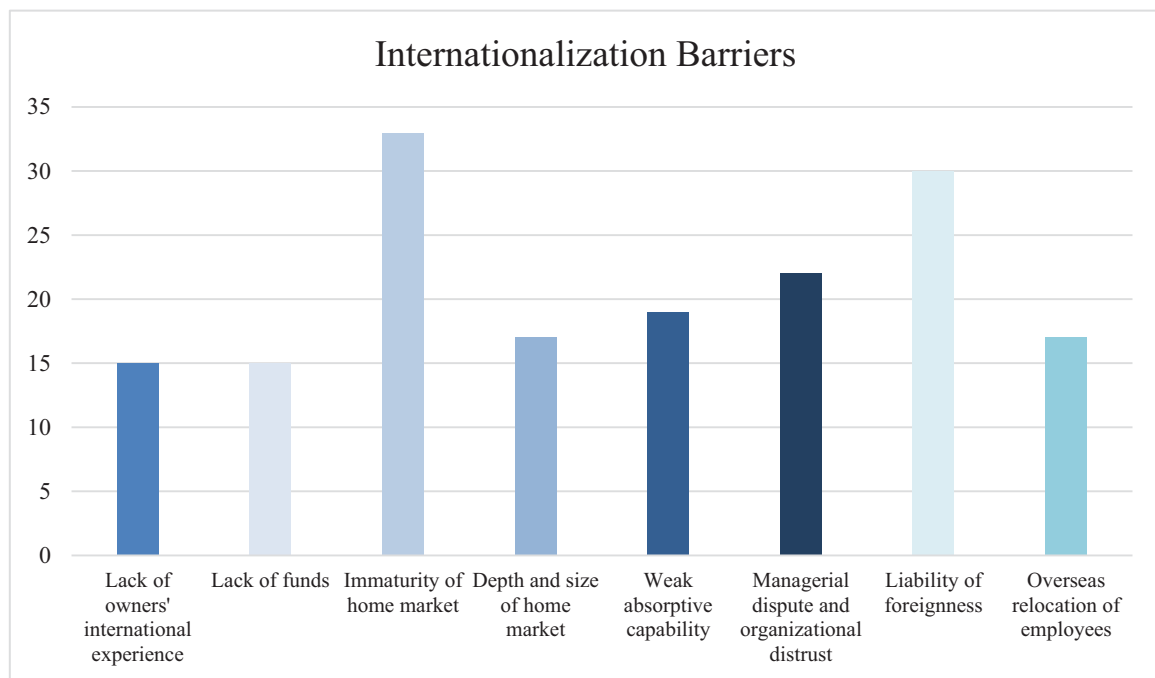


Figure 1. Internationalization Obstacles

Figure 1 shows the obstacles faced by Saudi startup enterprises toward internationalization. As per the findings, immaturity of home market was rated as the most affective barrier faced by Saudi startup enterprises toward internationalization followed by liability of foreignness, managerial dispute and organizational distrust, weak absorptive capability, depth and size of home market, and overseas relocation of employees.

Table 2. Startup Enterprises towards Internationalization Barriers

		Barriers Affecting Internationalization							p-value	
		Lack of owners' international experience	Lack of funds	Immaturity of home market	Depth and size of home market	Weak absorptive capability	Managerial dispute and organizational distrust	Liability of foreignness		Overseas relocation of employees
Company Size	0-9	0 0.0%	1 1.6%	24 40.6%	1 1.6%	3 5.5%	11 18.6%	15 25.4%	4 6.7%	0.028
	10-49	1 3.8%	3 12.0%	4 15.3%	2 7.6%	1 3.8%	8 30.7%	5 19.2%	2 7.6%	
	50-249	1 5.5%	2 11.5%	3 16.6%	1 5.5%	1 5.5%	3 16.6%	3 16.6%	4 22.2%	
Total		3 100.0%	5 100.0%	31 100.0%	3 100.0%	3 100.0%	25 100.0%	23 100.0%	10 100.0%	

Table 2 has presented the perception of startup enterprises towards internationalization barriers. The findings have shown that immaturity home market was the most influential barrier towards internationalization process of micro enterprises followed by managerial dispute and organizational distrust, and liability of foreignness. Similarly, managerial dispute and organizational distrust, liability of foreignness, and immaturity of home market were the most influential barriers affecting the internationalization process of small enterprises. In contrast, overseas relocation of employees, managerial dispute and organizational distrust, liability of foreignness, and immaturity of home market were the influential barriers affecting the internationalization process of medium enterprises. Furthermore, the results of chi-square statistics showed a significant and positive affect of internationalization barriers on the internationalization process of Saudi startup enterprises.

Table 3. Company's perception towards Internationalization Obstacles

		Obstacles							p-value	
		Lack of owners' international experience	Lack of funds	Immaturity of home market	Depth and size of home market	Weak absorptive capability	Managerial dispute and organizational distrust	Liability of foreignness		Relocation of employees
Years of experience	0-3 years	4 9.7%	12 29.1%	9 21.9%	2 4.8%	1 2.4%	4 9.7%	8 20.0%	1 2.4%	0.046
	4-5 years	4 8.5%	3 6.3%	5 10.9%	3 6.3%	4 8.5%	11 23.4%	8 17.0%	9 19.1%	
	5+ years	1 6.6%	0 0.0%	4 26.6%	2 13.3%	1 6.6%	5 33.3%	1 6.6%	1 6.6%	
Total		8 100.0%	7 100.0%	24 100.0%	4 100.0%	6 100.0%	29 100.0%	20 100.0%	5 100.0%	

Table 3 presents the company's perception towards obstacles associated to internationalization. As per the findings, lack of funds, immaturity of home market, and liability of foreignness were the most common barriers affecting the internationalization process of enterprises with 0-3 years of experience. In the same vein, managerial dispute and organizational distrust, relocation of employees and liability of foreignness were the barriers to internationalization for enterprises with 4-5 years of experience. In contrast, managerial dispute and organizational distrust, immaturity of home market, and depth and size of home market were the barriers to internationalization for enterprises with 5+ years of experience.

5. Discussion

5.1 Lack of Owners' International Experience

The skills, experience and operating behavior of private business owners that were successful under communism were not compatible with the free market environment after the transition, negatively affecting their ability to compete with foreign investors as well as with new start-ups.

The concept of “the learning advantage of newness” within organizational learning theory (Autio et al., 2000) might also be useful in explaining the internationalization patterns of entrepreneurial start-ups during periods of transition. This concept suggests that newly established firms demonstrate greater flexibility than older ones, allowing them, in this case, to assimilate knowledge on international markets more efficiently. However, even this theory may not outweigh all the impediments of internationalization that result from an unstable institutional environment and the absence of specialized knowledge and skills, particularly during the initial phases of transition.

Although this barrier does not entail a great significance when it comes to startups' internationalization according to the results of the current study and in opposition to what Kubickova et al (2014) found, startups still need to consider to develop international experiences of their decision makers prior to their potential internationalization. A possible way to develop these experiences without a direct engagement in the international market is through developing “arm-length relationships” with actors in that market via contractual agreements.

5.2 Lack of Funds

Lack of funds is emerged as an influential barrier affecting the internationalization of Saudi startups. However, this study fails to show that Saudi startups fail to internationalize their activities due to lack of funds. This indicates that entrepreneurs are likely to rely on external financing when there is a lack of in-house resources (Mann & Sanyal, 2010). Therefore, it is important for startups to acquire make sure that they have different financing options in their target foreign markets increase their chances of having a successful and sustainable international experience. Secondly, venture capital might be one of these options when it comes to maximizing the return of startups' investment in the foreign market. Lastly, the management and decision-making process of the startups can be also affected from the accumulation of fund from friends and family sources.

5.3 Immaturity of Home Market

The findings have shown a higher extent of influence of immaturity of home market as a barrier to internationalization in Saudi Arabia. This finding has been supported by previous studies and reported that the entrepreneurial ecosystem is the main factor affecting the internationalization of small and medium enterprises (SMEs) (Toulova, Votoupalova & Kubickova, 2015; Stouraitis & Kyritsis, 2016; Pietrasieński & Ślusarczyk, 2015). Similarly, constraints and voids in firms afflict the emerging markets, which also lead to immature home markets (Prashantham & Yip, 2017). The consequence of such barrier will be resulted in the form of poor access to reliable information, unsound governance, and weak property rights. Thereby, competition is lacking in fair play and can be potentially dysfunctional. The development of trusting relationships and institutions will be weakened through unreliable and unnecessary enforcement activities (Andens& Pendegraft, 2016). Multinational startups identify high-quality startups due to the lack of robust entrepreneurial ecosystem rather than their counterparts in mature markets. The resources or legitimacy lack among emerging economies to seek access to multinational corporations. Therefore, following propositions have been made to overcome the influence of this barrier. Firstly, the ecosystem, financing, and culture should be included as a three-fold pillar to create an environment for boosting innovation, employment, and growth in startup activities. Secondly, an entrepreneurial culture and financing should be promoted from inception to critical size with a proactive promotion of entrepreneurship and mindset. Mentoring program for startups can be a win-win strategy to train employees according to the culture and activities of international markets.

5.4 Depth and Size of Home Market

Depth and size of home market are not an important barrier when it comes to the internationalization process as elucidated from the findings. It is important for startup firms to prefer the home market with great depth and large size to accomplish the domestic demand rather than going international. This explains the hesitation of some startups to penetrate the international market within their five years of initiation. However, startups should capitalize on the sophisticated sorts of knowledge and know-how existing in some foreign markets and harness them for the interest of their domestic operations. Therefore, the option of going international should not be overlooked even in the cases of high domestic demand.

5.5 Weak Absorptive Capability

The influence of absorptive capability on the internationalization phase of startups in Saudi Arabia is found to be at a minimal extent. According to Techatassanasoontorn et al (2010), unpredictable changes or unforeseen conditions present within and outside the firms weaken the absorptive capability in dynamic environment. Therefore, the presence of internal and external factors should be triggered to seek the need of learning and integrate new knowledge while internationalizing. Managers should engage themselves in alternative activities that can lessen down the extent of events, which include modifications in technology and innovations, regulations, and poor performance. The potential absorptive capability of the startups can be increased if they invest in their research and development department. By recognizing business opportunities in the absorptive capacity of startups, the decision to enter in the international market of owners can be influenced positively. When integrating new practices, a shift in the perceptions of managers and employees is required that can influence the startups' culture (Onwuzuligbo & Hurmelinna-Laukkanen, 2017).

5.6 Managerial Dispute and Organizational Distrust

The findings of the study have shown that managerial dispute and organizational distrust is another barrier that impede the internationalization process in Saudi Arabia. In this regard, Vineburgh (2010) has asserted that the values, principles, processes, and systems involved in the internationalization phase are disrupted due to managerial dispute and organizational distrust. Therefore, several implications have been proposed to overcome the influence of this barrier specifically in the internationalization phase. Firstly, faculty socialization should be emphasized by owners or leaders to assist employees at managerial level for understanding and internationalizing principles, systems, processes, and values of their firms on a comprehensive level. Secondly, alternative means should be developed by leaders for advancing professional development in spite of the resource constraints that are specifically evident in startup firms. Collaboration between managers and owners at every aspect of the internationalization phase must be a do-able objective to assure the continuation of professional development, even under fiscal exigency.

5.7 Liability of Foreignness

The findings have indicated that liability of foreignness is amongst the most influential barrier to internationalization after immaturity of home market, and managerial dispute and organizational distrust in Saudi Arabia. This finding has been supported from the findings of Gaur, Kumar & Sarathy (2011) who asserted that the liability of foreignness can be alleviated by managers of internationalizing firms through capitalizing firm-specific and environmental conditions. Therefore, few implications are proposed to support these findings. Firstly, internationalizing firms can focus on particular industry conditions, organizational structure, and internationalization motives with the higher perceived liability of foreignness rather than differences in institutional development when planning to enter in the internationalization phase. Secondly, the environmental factors can be focused such as diversity in cultures and institutions to result in higher liability of foreignness while entering from a position of strength.

5.8 Relocation of Employees Overseas

The findings have shown that relocation of employees overseas was an influential barrier to internationalization but at minimal extent. However, it has been validated that foreign-born employees having knowledge, preferences, price sensitivity, and willingness to trends about their countries of birth can be a potential resource for firms in the internationalization phase (Gould, 1994; Rauch, 1999). The reason behind positive deployment is that the internationalization efforts might be complicated due to flawed, distorted or even false information, and; consequently, augment the internationalization cost. Therefore, one implication to overcome this barrier is to recruit employees from the host countries who share comparable mindsets to their counterparts in the startup's home country. It can be also suggested that, startups might rotate key staff between home and host markets to ensure rigid establishment of their organizational culture in the foreign markets. Furthermore, startups can provide potential deployed employees from the home market with the necessary cultural, organizational and financial support to alleviate or mitigate uncertainties faced by them during the internationalization journey (Hatzigeorgiou & Lodefalk, 2017).

5.9 Strengths and Weaknesses

The aforementioned findings have presented several strengths of the paper that will add significant insight for future studies and startup enterprises. Firstly, this study is the first to explore the major obstacles associated with the internationalization of Saudi startup enterprises in Saudi Arabia. Previously, these obstacles have not been clearly explored whereas opportunities were extensively presented. Secondly, this study has significantly

presented insights and justifications to the obstacles identified in its context. Thirdly, this study has provided a competitive advantage for startups' decision-makers to identify and overcome the barriers associated with internationalization. It will also assist them in identifying the severity of obstacles affecting their eventual success or failure in the internationalization process. In contrast, the study has only explored and assessed obstacles associated to internationalization; thereby, opportunities for startup enterprises following to internationalization have not been assessed in parallel.

Methodically, future studies should include more companies to present better representation of the population. Secondly, they should also increase the share of medium-sized startups in the aggregate number of the sampling companies. They might also explore the use of post-hoc analysis to indicate the obstacles that mostly influence the internationalization of startup enterprises. Theoretically, future researchers might find it interesting to explore startups' expectations from their home countries' governments when it comes to internationalization as a possible avenue for upcoming studies.

6. Conclusion

The study investigated the barriers to internationalization for Saudi startup enterprises and reported immaturity of home market, liability of foreignness, managerial dispute and organization distrust were the most influential barriers affecting the internationalization process of Saudi startup enterprises. The business activities of startups will be strengthened and their possibility to perform better as compared to internationalized firms with suitable absorptive capacity at home and internationally in addition to having a well-established organizational culture that can support openness to foreign markets. Several implications have been suggested to cope with each barrier, which allow startups to lessen down the extent of barrier to the internationalization phase. Despite identifying findings related to the barriers to internationalization, some limitations have been found in this study. Firstly, the study has only included few sampling firms from the category of medium-sized startups. Secondly, the study was unable to include startups from other regions of the country besides the ones from the Eastern Region and the Riyadh Region due to accessibility reasons.

References

- Abdin, M. (2016). Challenges to Internationalize Bangladeshi SMEs.
- Agndal, H. (2004). *Internationalisation as a process of strategy and change: a study of 16 Swedish industrial SMEs (Doctoral dissertation, Internationella Handelshögskolan)*.
- Alharbi, M. M. (2014). Barriers to franchising in Saudi Arabia. *Journal of Marketing Channels*, 21(3), 196-209. <https://doi.org/10.1080/1046669X.2014.913218>
- Aljanabi, A. Q. R. A., Noor, N. A. M., & Kumar, D. M. (2014). The mediating role of absorptive capacity in its effect on organizational support factors and technological innovation. *Information Management and Business Review*, 6(1), 25.
- Amann, W. (2003). *The impact of internationalization on organizational culture: A comparative study of international US and German companies (Doctoral dissertation, Verlag nicht ermittelbar)*.
- Anna, B., & Ida, S. (2017). *Factors Important for Rapid Internationalization: A Multiple Case-Study of Born Global Internet-Based Service Firms in Sweden*.
- Arndt, C., Buch, C. M., & Mattes, A. (2009). *Barriers to internationalization: Firm-level evidence from Germany (No. 52)*. IAW-Diskussionspapiere.
- Azyabi, N. (2013). *Knowledge Management Strategic Orientation in SMEs*. Monash University, PhD thesis.
- Babagi, M. S. (2017). *The Internationalization Processes in Saudi Arabia: The Relationship between International Entry Mode and Business Growth in SMEs*. Proceedings of 134th the IIER International Conference, Dubai, UAE.
- Baranovskaja, K. (2015). *Finnish SME's internationalization analysis*. Entry modes to Russian market: Case study of Tonester Oy Ltd.
- Castro Abancens, I., & Cepeda-Carrión, G. (2016). Social capital, absorptive capacity and entrepreneurial behaviour in an international context. *European Journal of International Management*, 10(4), 479-495. <https://doi.org/10.1504/EJIM.2016.077426>
- Eriksson, A. (2017). *Government Financing of SMEs: A case study of the Swedish business development check for internationalization*.
- Fuentes, D. D. (2017). *The internationalization of SME in Cantabria. SME Internationalisation Exchange'*

Project.

- Gaur, A. S., Kumar, V., & Sarathy, R. (2011). Liability of foreignness and internationalisation of emerging market firms. In *Dynamics of Globalization: Location-Specific Advantages or Liabilities of Foreignness?* (pp. 211-233). Emerald Group Publishing Limited. [https://doi.org/10.1108/S1571-5027\(2011\)0000024016](https://doi.org/10.1108/S1571-5027(2011)0000024016)
- Gould, D. (1994). Immigrant Links to the Home Country: Empirical Implications for US Bilateral Trade Flows. *Review of Economics and Statistics* 76(2), 302-316. <https://doi.org/10.2307/2109884>
- Hatzigeorgiou, A., & Lodefalk, M. (2017). *Anti-Migration as a Threat to Internationalization? (No. 302)*. The Ratio Institute.
- Herte, A. D. (2017). SMEs and Start-Ups. Importance and Support Policies in European Union and Romania.
- Hutchinson, K., Barry, Q., Nicholas, A., & Doherty, A.M. (2009). Retailer internationalization: overcoming barriers to expansion. *The International Review of Retail, Distribution and Consumer Research*, 19(3), 251-272. <https://doi.org/10.1080/09593960903233673>
- Kaiser, U., & Sofka, W. (2006). The pulse of liability of foreignness: dynamic legitimacy and experience effects in the German car market.
- Kalyanasundaram, G. (2018). Why Do Startups Fail? A Case Study Based Empirical Analysis in Bangalore. *Asian Journal of Innovation & Policy*, 7(1).
- Karlsson, O., & Rydqvist, F. (2017). Why are Swedish cleantech firms failing to internationalize? A qualitative study investigating the barriers, drivers and internationalization decisions of private Swedish cleantech firms.
- Kozlova, A. (2014). *Internationalization process of SMEs: motives and barriers. Case study of "Taste of North" (Master's thesis, Universitetet i Nordland)*.
- Kritikos, A. S. (2014). *Entrepreneurs and their impact on jobs and economic growth. IZA World of Labor*. <https://doi.org/10.15185/izawol.8>
- Mann, C., & Sanyal, P. (2010). *The financial structure of startup firms: The role of assets, information, and entrepreneur characteristics*.
- Mupemhi, S., Dube, R., & Mupemhi, R. (2013). Factors Affecting the Internationalization of Manufacturing SMEs in Zimbabwe. *ICBE-RF Research Report*, (62/13).
- OECD (2005). *OECD SME and Entrepreneurship Outlook: 2005*, OECD Paris.
- OECD (2017). *Enhancing the Contributions of SMEs in a Global and Digitalized Economy*.
- Ogunlana, F. (2018). *The role of entrepreneurship as the driver of economic growth*.
- Onwuzuligbo, N., & Hurmelinna-Laukkanen, P. (2017). Absorptive Capacity and Internationalization: A Case Study of Finnish Companies. *International Business Management*.
- Patmore, F., & Haddoud, M. (2015). The Drivers and Barriers Facing Small to Medium-sized Enterprises (SMEs) Entering the US Market. *Journal of Research Studies in Business and Management*, 1(1), 259-280.
- Pietrasieński, P., & Ślusarczyk, B. (2015). Internationalization of small and medium enterprises: empirical research review on barriers to entry into foreign markets. *Polish Journal of Management Studies*, 11(1), 113-123.
- Prashantham, S., & Yip, G. S. (2017). Engaging with startups in emerging markets.
- Rauch, J. E. (2001). Business and Social Networks in International Trade. *Journal of Economic Literature*, 39, 1177-1203. <https://doi.org/10.1257/jel.39.4.1177>
- Roy, A., Sekhar, C., & Vyas, V. (2016). Barriers to internationalization: A study of small and medium enterprises in India. *Journal of International Entrepreneurship*, 14(4), 513-538. <https://doi.org/10.1007/s10843-016-0187-7>
- Ruigrok, W., & Wagner, H. (2003). Internationalization and performance: An organizational learning perspective. *MIR: Management International Review*, 63-83.
- Saeedi, M. R. (2014). *Fostering dynamic capabilities of SMEs*.
- Sekliuckiene, J. (2013). Lithuanian companies in emerging markets: internationalization motives and barriers. *Economics and management*, 18(1), 124-133. <https://doi.org/10.5755/j01.em.18.1.3782>

- Sieler, S. (2008). *Determinants of the internationalization-performance relationship: An empirical examination of the influence of organizational and contextual variables*.
- Sinu, M. (2017). A Study on the Contribution of Start-Ups in the Economic Development of India. *International Journal of Commerce, Business and Management (IJCBM)*, 6(2), 2319-2828.
- Stouraitis, V., & Kyritsis, M. (2016). Small and medium-sized enterprises' exporting: Home and host country motivators' effect on first and successive export venture decisions. *Management: journal of contemporary management issues*, 21(1), 97-115.
- Techatassanasoontorn, A. A., Tapia, A. H., & Powell, A. (2010). Learning processes in municipal broadband projects: An absorptive capacity perspective. *Telecommunications Policy*, 34(10), 572-595. <https://doi.org/10.1016/j.telpol.2010.06.001>
- Toulova, M., Votoupalova, M., & Kubickova, L. (2015). Barriers of SMEs internationalization and strategy for success in foreign markets. *International Journal of Management Cases*, 17(1), 4-19.
- Vineburgh, J. H. (2010). A study of organizational trust and related variables among faculty members at HBCUs.
- Wang, C., Walker, E., & Redmond, J. (2007). *Explaining the lack of strategic planning in SMEs: The importance of owner motivation*.
- Wu, A., & Voss, H. (2015). When does absorptive capacity matter for international performance of firms? Evidence from China. *International Business Review*, 24(2), 344-351. <https://doi.org/10.1016/j.ibusrev.2014.08.006>
- Yener, M., Dođruođlu, B., & Ergun, S. (2014). Challenges of Internationalization for SMEs and overcoming these Challenges: A case study from Turkey. *Procedia-Social and Behavioral Sciences*, 150, 2-11. <https://doi.org/10.1016/j.sbspro.2014.09.002>
- Zhou, N., & Guillen, M. F. (2016). Categorizing the Liability of Foreignness: Ownership, Location, and Internalization-Specific Dimensions. *Global Strategy Journal*, 6(4), 309-329. <https://doi.org/10.1002/gsj.1140>

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Outcomes of Sustainable Practices: A Triple Bottom Line Approach to Evaluating Sustainable Performance of Manufacturing Firms in a Developing Nation in South Asia

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Received: October 26, 2018

Accepted: November 27, 2018

Online Published: November 29, 2018

doi:10.5539/ibr.v11n12p89

URL: <https://doi.org/10.5539/ibr.v11n12p89>

Abstract

Maintaining sustainable operations has become a major responsibility of practitioners. Sustainable practices are executed to ensure sustainable performance. Many studies conducted to examine the outcomes of sustainable practices have focused either on the economic outcomes, social outcomes or environmental outcomes of such operations disregarding the Triple Bottom Line Approach to evaluating sustainable performance. Among them the majority have focused on environmental outcomes. Less focus is placed on developing countries or countries in South Asia. Against this background this paper aims to examine the outcomes of sustainable practices towards sustainable performance of manufacturing firms in a developing nation in South Asia. A study was conducted among 154 apparel manufacturing and exporting firms of Sri Lanka in relation to their sustainable practices and sustainable performance as members of supply chains. The sustainable practices were studied in relation to orientation, collaboration, continuity, risk management and pro-activity while sustainable performance was analyzed along economic performance, social performance and environmental performance of these firms. The findings were analyzed using Variance Based Structural Equation Modelling (Partial Least Squares) and it revealed that sustainable practices lead to sustainable performance even in the context of a developing nation in South Asia, highlighting the importance of the execution of sustainable practices irrespective of the level of development of a nation.

Keywords: sustainable practices, sustainable performance, triple bottom line

1. Introduction

Organizations are now held responsible for their environmental and social performance apart from their economic performance. As a result, pressures from stakeholders towards maintaining sustainable operations have increased. Sustainability concerns of an organization are not limited to the boundaries of individual organizations but they are held responsible also for the members of supply chains whom they deal with. For example, as a result of poor environmental performance at any stage of the supply chain process may damage what is considered as a firm's premier asset its reputation. With this a strategic approach to supply chain management based on operational sustainability has been developed (Schaltegger and Burritt, 2014).

The Triple bottom line approach is a popular framework used for evaluating sustainability of supply chains where not only financial aspects are considered. It emphasizes on the environmental and social measures too. It makes an organization understand that sustainability, at a broader level consists of three components, the natural environment, society and economic performance (Carter and Rogers, 2008). Many authors show a similar understanding of sustainability in relation to an organization. For instance, The 'triple bottom line' was a concept developed by Elkington (1998). It recognizes the integration of environmental, social and economic performance as the three pillars of sustainability and sustainable supply chains.

There is no universal standard method for calculating sustainable performance based on the Triple Bottom Line approach. It allows a user to adapt the general framework to the needs of different entities. The idea behind the 3BL paradigm is that a corporation's ultimate success or wealth can and should be measured not just by the traditional financial bottom lines, but also by its social, ethical and environmental performance. According to the triple bottom line approach an organization can perform a combination of social, environmental and economic activities which

results in competitive advantage for the firm. The term 'intersection' has a broad meaning here. It identifies the need for a proper combination of strategies for sustainable performance. What is implied from this is that a sustainable performance cannot be expected merely by the practice of economic, social and environmental measures in isolation. The proper 'combination' of all three is necessary. The environmental or social practices carried out for sustainability may raise economic costs. At the same time cutting down costs can result in negative environmental and social outcomes. Literature review cites the empirical evidence on accepted practices and their dimensions in order to move towards sustainability. They are called the sustainable practices. Sustainable practices are expected to lead to sustainable performance (Rao and Holt, 2005, Winter and Knemeyer, 2012, Moretto et.al., 2012, Cater and Rogers, 2008, Schaltegger and Burritt, 2014). But if these practices are not executed in proper combination it may not finally result in sustainable performance. Therefore it is essential that individual organizations identify whether their sustainable practices lead to sustainable performance. This necessitates the conduct of empirical studies to examine the prevalence of this relationship in different contexts.

Brito et.al., (2008) stressed that it is challenging to find consistency in supply chain practices at global level since there seem to be regional differences on the view of Corporate responsibility and sustainability namely between Europe and Asia. It highlights the importance of conducting studies in the domain of sustainable supply chain management in the Asian region. The relationships between sustainable supply chain practices and sustainable performance that have already been identified in literature have not focused on the developing countries. Rao and Holt (2005) highlighting a gap in literature, explain that future research should empirically test such relationships in different countries, in order to have comparative studies. The present study will provide empirical evidence on the sustainable practices adopted and the levels of sustainable performance of manufacturing firms in developing countries, taking Sri Lanka as a case.

Identifying the relationship between sustainable supply chain practices and sustainable performance of apparel manufacturing and exporting organizations of Sri Lanka a gap in literature was addressed.

This paper will be structured as follows: First the literature related to the study will be discussed. Next, the methodology adopted will be explained. It is followed by an explanation of the findings. The conclusion and discussion will be presented next. Finally the managerial implications of the findings are highlighted.

2. Literature Review

Sustainable Performance of Manufacturing Firms in a Supply Chain

Sustainable performance of an organization is explained in literature, as the improvement in its performance in terms of environmental contribution and social contribution while gaining an economic advantage. Therefore, if a firm's performance is to be considered sustainable it should create minimum harm to the natural environment, should meet social needs while achieving its financial goals. Although the three aspects of sustainability have been discussed separately in supply chain management, the triple bottom line approach suggested by Elkington (1998), explained the need to consider them simultaneously. Simultaneous consideration of the three bottom lines of an organization clearly explains the application of the stakeholder theory in its operations. It implies that addressing the interests of all stakeholder groups are equally important for sustainable performance.

Only if performance is measured along these lines can the stakeholder requirements be satisfied. As explained earlier when organizational performance is assessed against the expectations of a variety of stakeholder groups, more attention needs to be paid to the impact of organization's activities on the natural environment and the society while assessing their economic implications. Unless the environmental and social management are linked to the economic success an overall picture of sustainable performance of the firm cannot be obtained since environmental and social scarcities are only partially reflected in economic transactions. As a result, the economic contribution of environmental and social management will remain unclear. Therefore, unless a holistic figure is not calculated a clear picture of sustainable performance cannot be derived. The reason is that there is empirical evidence to justify that inherent connections among economic performance, environmental performance, and social performance is positive (Cruz, 2009; Walsh & Margolis, 2003).

Therefore, it has become important to measure sustainable performance as a composite figure. Only one recently published article of Hollos et al. (2012) has addressed the triple bottom line concept in the calculation of sustainable performance. The performance that has been identified as sustainable in literature was confined mainly to environmental performance in empirical studies. However, a few conceptual papers have discussed about what really amounts to sustainable performance. The following sections explain how the different dimensions of sustainable performance have been identified in literature.

Overall the impact of an organization's activities on air, water and energy are identified to reflect its environmental

performance. Social performance is measured in terms of the impact of an organization's activities on the communities. Economic performance of an organization is its financial achievement. Hubbard (2009) identifies that the economic performance can be measured by its profit growth, return on equity, return on assets and gearing (Schaltegger and Burritt, 2014; Hubbard, 2009; Verdecho et al., 2012; Sloan, 2010).

Sustainable Practices of a Manufacturing Firm in Supply Chains

In the context of sustainable supply chains, the initiatives of individual firms aimed at establishing sustainability can be termed as the 'sustainability practices'. The paradigm of sustainable supply chain management has led to the discussion as to what kind of a procedure a company should conduct to integrate the sustainability with its operations in supply chain management. In the words of Warhurst (2002) sustainability practices explain the extent of social responsibility integrated in some way to give a means of measuring progress towards or away from sustainability. It identifies that the sustainable practices include those practices that are expected to bring about positive outcomes environmentally, socially as well as economically. According to Schaltegger and Burritt (2014) sustainable practices involve consideration of environmental factors and social aspects of organizational activities as well as their integration with conventional economic performance. The important fact stressed in these explanations is the need for a combination of social, environmental and economic initiatives. Research on environmental aspects of sustainability has been given more importance in many research studies while less attention has been given to social aspects of performance and how different aspects of performance are related to each other (Lehtonen, 2004). The reality is that organizations pay more attention on achieving economic objectives to remain profitable in the marketplace. It results in social welfare being viewed as a secondary goal. At the same time some authors argue that attempts to maintain a balance among the three pillars of sustainability performance can be a costly exercise. Therefore, although all the three bottom lines of an organization have been addressed for sustainability there may be differences in the application. Pagell and Wu (2009) explain that the managerial practices adopted by many sustainable chains are those that are linked to enhanced organizational performance. Some of the novel practices they have highlighted are traceability (information sharing), focus on sourcing and investing in employees indicating a trend towards social practices. What is important to be understood is the fact that synergistic effects exist where improved performance in one area corresponds to higher performance in other areas and that it is an incentive for companies to engage in sustainability practices (Janzen et al., 2015). For an example, refraining from toxic dyes in textile manufacturing can reduce environmental impacts, improve the health conditions for workers and customers and reduce costs of production, leading to environmental, social and economic benefits at the same time.

Among many definitions of sustainability initiatives that have been discussed in relation to the processes of a supply chain the ones that So et al. (2012) identified in relation to the Supply Chain Operations Reference (SCOR) model are straightforward. They emphasize the initiatives for sustainability that could be identified with the five primary SCM processes: i.e. Plan, Source, Make, Deliver, and Return, in association with new operational activities like green purchasing (Source), clean production (Make), green logistics (Delivery) and reverse logistics (Return).

Mejias and Pardo (2013) refer to sustainable practices as enormous effort of companies to reconfigure the existing practices and strategic thinking and to adapt to radical sustainable innovations across the supply chain.

Researcher found it reasonable to categorize the sustainable practices discussed in literature under the five broad headings (umbrella terms) identified by Beske and Seuring (2014). They identify these five broad headings as 'categories'. They are orientation, continuity, collaboration, risk management and pro activity directed at sustainability of organizations. This classification has been done taking into consideration the relationship of each practice to the strategy of an organization, its structure and the processes involved. The sustainable practices that are linked to the strategic level of an organization are the orientation towards the triple bottom line and the supply chain management. These are listed under the broad category of 'orientation'. The structure related practices are categorized as 'continuity'. They involve long term relationships, supply chain partner selection and partner development. Risk management and pro-activity are the categories of sustainable practices related to the processes of an organization. Selective monitoring, standards and certification and pressure groups are the practices related to risk management. Learning, stakeholder management, innovation and life cycle assessment are identified as pro-activity related practices of sustainability. Collaboration is related both to the structure as well as to the processes. Technological integration, logistical integration, enhanced communication and joint development are the practices related to collaboration.

The list of practices in the framework of Beske and Seuring (2014) include almost all the practices identified in previous literature providing a clearer classification of dimensions along which these practices could be identified. It provided the present study a clear framework for conceptualizing the sustainable practices. Therefore, the present study used the above framework of Beske and Seuring (2014) to analyze the sustainable practices

identified by several other authors. Methodologically too, there is a valid reason why this framework is suitable. This classification has been done in relation to the strategy of an organization, its structure and the processes involved. It enables the application of objectivity since the researcher emphasizes the formal properties of organizations and views it to be comprised of processes and structures.

The Relationship between the Application of Sustainable Supply Chain Practices and Sustainable Performance of Individual Organizations

There are those who argue that the implementation of environmental or social initiatives can result in substantial losses. The implication is that sustainable performance is negatively influenced by implementing initiatives to protect the environment and the society since they may involve costs that lead to poor economic performance. But many of the literature reviewed addressed the positive side of it where sustainable performance is positively influenced by the implementation of sustainable supply chain initiatives. Carter and Rogers (2008) explained that organizations that focus on all the three bottom lines can achieve higher economic performance than those that emphasize only on one or two of the three components of the triple bottom line. Moretto et al. (2012) stated that through sustainable practices Italian fashion industry could improve innovation performance in terms of sustainability. Organizations engaged in environmental protection and operating with an understanding of their social responsibility have been found to be gaining long-term benefits (Brammer & Millington, 2008). At the same time, it is argued in literature how higher economic benefits empower corporations to take greater social responsibility. Those who are economically strong can spend more money on pollution treatment, provide more benefits for society, and improve the welfare of their employees (Cao & Zhang, 2011; Li et al., 2014).

In explaining the positive relationship between sustainable practices and sustainable performance, in most of the researches performance is calculated only in relation to environmental performance (where sustainable performance is treated equivalent to environmental performance). Rao and Holt (2005) explained that greening the different phases of the supply chain leads to an integrated green supply chain, which ultimately leads to competitiveness and economic performance. They have explained that green supply chain management promotes efficiency and synergy among business partners and their lead corporations, and helps to enhance environmental performance, minimize waste and achieve cost savings. They also explain that environmental management encompasses diverse initiatives to reduce or minimize the adverse environmental impacts of an organization's operations and they improve environmental performance, reduce costs, enhance corporate image, reduce risks of non-compliance and further strengthen marketing advantages. Economic gains could be achieved in two ways by complying with environmental and social standards (Glocic and Smith, 2013). One is by way of cumulative cost savings available from decreased natural resource consumption or lower waste levels. (Lankoski, 2009). The other is by way of cost reduction (Pullman et al., 2009). Carter (2005) explains cost reduction to include total production, labour, material and service costs. Positive effects of sustainable procurement on cost reduction could be identified with methods such as life cycle assessment. When production is carried out under strict ecological and social standards the number of process interruptions are less. Enhancement of throughput resulting from reduced interruptions reduce unit costs of production. This is an advantage of sustainable products (Brady et al., 1999). These authors further explain that the same amount of output can be achieved with fewer or the same level of resources than traditional methods with the concept of eco efficiency. This results in reduced cost per purchased item. Less energy consumption, possibilities of refilling and restoration, having a longer life span and elimination of pollution and associated legal problems or penalties are other noticeable gains from sustainable products. In occasions where there are restrictions on disposal methods to avoid any harm to the environment, having sustainable products will reduce disposal expenses. In addition, the financial resources obtained from waste prevention can be reinvested in the company to provide employees with advanced equipment. These explanations show how green practices positively influence cost reduction. Similar impact on cost could be gained from social practices too. Social practices may involve providing superior wages and conducive working conditions, Cost reduction through social practices happens as a result of reducing the costs involved in breakdowns, poor safety standards and higher employee absenteeism (or even the costs of compensation for work related accidents or diseases will go down when social and safety standards improve). Motivated work force happens to be a productive workforce too, when working conditions improve. It reduces the material cost. The motivated work force will amount to increased process innovation. Innovative behavior of employees creates greater organizational support for product quality, reduces lead time and improves supply security. Existence of balanced working hours and sufficient breaks improves workers' attention to their tasks. It will reduce manufacturing errors and will ultimately result in enhanced quality of products. When the employees get sufficient leisure time between shifts it also lowers the amount of defective parts being produced and thereby reduces material costs. With the reduction in the need for subsequent processing of defective material, labour costs can be brought down.

3. Methodology

The research strategy of the present study was quantitative. The quantitative design involved elaborating theory, devising hypotheses, selecting a research design, devising measures of concepts, selecting research subjects, administering research instruments and collecting data, processing the collected data and analyzing them using quantitative techniques (Bryman and Bell, 2008). In devising the measures of concepts researcher tested and validated the research model, thereby to establish theory for better understanding and predicting the relationship between sustainable supply chain practices and sustainable performance (Sekaran and Bougie, 2012).

The theoretical understanding in this study was that the sustainable performance of a manufacturing firm results from sustainable supply chain practices.

Accordingly, two main constructs; sustainable supply chain practices & sustainable performance were identified in the conceptual domain of the study. Each of these constructs were multidimensional. Sustainable supply chain practices consisted of five dimensions; orientation, continuity, collaboration, risk management and pro-activity (Beske and Seuring, 2014). Sustainable performance had three dimensions; economic performance, social performance and environmental performance (Hubbard 2009).

In analyzing the relationships mentioned above two descriptive hypotheses and a relational hypothesis were developed in this study.

H1: The level of sustainable performance is high among individual firms in the apparel manufacturing and exporting industry of Sri Lanka.

H2: The level of application of sustainable supply chain practices is high among individual firms in the apparel manufacturing and exporting industry of Sri Lanka.

H3: The higher the level of application of sustainable supply chain practices, the higher the level of sustainable performance of individual firms in the apparel manufacturing and exporting industry of Sri Lanka.

The Conceptual Model

A conceptual model shown in Figure 1 was developed by the researcher mainly based on the argument that when an individual member of a supply chain adopts sustainable supply chain practices they can move towards better sustainable performance.

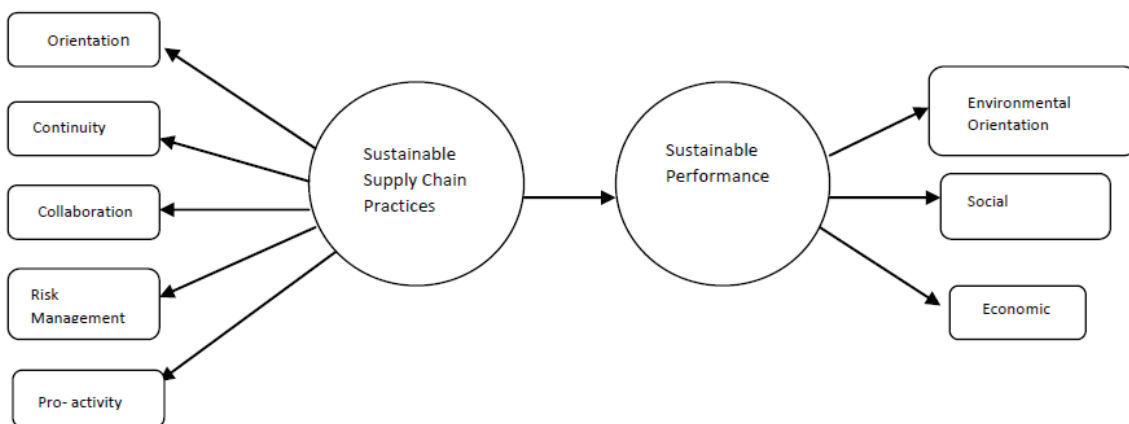


Figure 1. The Conceptual Model of the Study

Sustainable supply chain practices have been discussed in many research studies before. However Beske and Seuring (2014) provided a sound classification of dimensions of the construct. It enabled the researcher to identify sustainable supply chain practices as a multidimensional construct having indicators for each dimension. Law et al. (1998) explained the advantages of having a multidimensional construct. According to them that the dimensions of a multidimensional construct can be conceptualized under an overall abstraction and using the overall abstraction as a representation of the dimensions is theoretically meaningful and parsimonious. Due to this reason, the researcher considered sustainable supply chain practices as a multidimensional construct consisting of the dimensions identified by Beske and Seuring (2014). The sustainable performance of individual organizations also has not been studied as a composite concept in previous studies. Rather, only the individual dimensions of sustainable performance have been taken to reflect sustainable performance rather than taking it as a combination of environmental, social and economic performance. This highlights that the application of the

Triple Bottom Line approach is not evident in the previous studies in conceptualizing sustainable performance. In the present study sustainable performance was treated as a multidimensional construct consisting of environmental, economic as well as social performance.

Multidimensional nature of the constructs caused both first order constructs and second order constructs to be present in the model. The first order constructs were the dimensions of sustainable supply chain practices (orientation, continuity, collaboration, risk management and pro-activity) and dimensions of sustainable performance (environmental, social and economic). The second order constructs were sustainable supply chain practices and sustainable performance. Indicators were identified for the first order constructs.

In this present study the interest of the researcher was to investigate into the relationship between sustainable supply chain practices and sustainable performance of individual firms in the apparel manufacturing and exporting industry of Sri Lanka. Therefore, the unit of analysis was the organization. The focal entity under analysis was the manufacturer since it had been taken as the main entity of analysis in majority of supply chain management related research (Chen and Paulraj, 2004). 'Manufacturer' was identified as an entity that provided a final finished product to anyone of 'distributor', 'retailer', 'logistics provider' or 'consumer'. The reason behind the selection of the apparel manufacturing and exporting industry to represent the sample was that the organizations in this industry operate in the global network where sustainability is a major requirement for survival.

In the analytical domain the constructs had to be translated into measurable variables because these constructs could not be observed and they could only be studied through the indicators that were developed to measure them. Indicators that captured the domain of the constructs were identified through a thorough literature review. Accordingly, there were 05 indicators to measure orientation, 11 indicators to measure continuity, 05 indicators to measure collaboration, 08 indicators to measure risk management and 24 indicators to measure pro-activity. Environmental performance was identified to be having 06 indicators while social performance and economic performance were identified to be having 07 indicators and 11 indicators respectively.

Researcher developed a questionnaire to enable data collection using measurable indicators identified through the literature review. Questions were designed in such a manner that the indicators of all the first order constructs (dimensions) were presented in the form of questions. Participants were asked to respond to the questions related to sustainable supply chain practices using a 5-point Likert scale where 1 denoted 'Strongly agree', 2 denoted 'Agree', 3 denoted 'Neither agree nor disagree', 4 denoted 'Disagree' and 5 denoted 'Strongly disagree'. This scale was expected to pave the way for the calculation of values for sustainable supply chain practices. Questions that were asked to measure the sustainable performance was a benchmarking exercise where the respondent firms were required to place their organizations on a 5 point Likert scale where 1 denoted 'Strong positive variations', 2 denoted 'Weak positive variations', 3 denoted 'No variations', 4 denoted 'Weak negative variations' and 5 denoted 'Strong negative variations' This scale was intended to make it possible for the calculation of performance values for each dimension of sustainable performance separately and also an aggregate value for sustainable performance (economic performance, social performance and environmental performance). Here the researcher expected the respondent firms to state their level of performance considering industry average as a benchmark.

A pilot test was carried out to collect data to validate and refine the questionnaire before it was administered in the main survey. The pilot testing of the questionnaire was carried out with 35 managers representing apparel manufacturing and exporting firms of Sri Lanka. Through this test of the questionnaire for its psychometric properties, with 35 respondents, validity and reliability of the measurement items were established. At the end of this exercise 30 out of the 53 items that were expected to measure sustainable supply chain practices and 11 out of the 24 items that were expected to measure sustainable performance were found to be reliable and valid. The questionnaire so refined was used in the main study for data collection. Data was collected from 154 respondents. The sample consisted of 109 large, 40 medium and 05 small apparel manufacturing and exporting organizations of Sri Lanka.

Once the data was collected the researcher used both univariate and multivariate techniques to establish the normality of the data set. The psychometric properties of the measures of the constructs was also examined by performing the Confirmatory Factor Analysis (CFA) which is an inherent application of PLS.

The values of the outer loadings of the measurement model representing the estimates for the relationships between the reflective first order latent constructs and their indicators established the unidimensionality of the measures. Having confirmed the unidimensionality, internal consistency and the validity of the measures were assessed. HTMT criteria (Kline, 2011) were used to check for their discriminant validity. This exercise was carried out at first order level as well as second order level (Hair et al., 2014). The values obtained for the factor loadings, Cronbach Alpha values, Composite reliability and Average Variance Extracted matched the threshold

values as shown in Table 1. The HTMT ratio below 0.85 also was in support of the discriminant validity of the first order constructs.

As the research involved exploring relationships at a higher level of abstraction, each second order construct (sustainable supply chain practices and sustainable performance) was assessed for their psychometric properties.

Table 1. Factor loadings , Cronbach Alpha values, Composite reliability and Average Variance Extracted of First Order Constructs

Construct	Item (Measure)	Loading	Cronbach Alpha	CR	AVE
Orientation	o1. Top management provides support for reaching sustainability in the supply chain.	0.815	0.884	0.920	0.743
	o2. Integration of sustainability in the organization's strategy and strategy formulation.	0.907			
	o3. Dissemination and acceptance of sustainability values throughout the company .	0.847			
	o4. Management takes an effort to reward sustainability measures	0.875			
Continuity	con1. Efforts towards maintaining a reasonable quality of life among supply chain partners	0.837	0.94	0.952	0.690
	con2. Engages in supplier development	0.817			
	con3. Mutually beneficial relationships sharing risks and profits with partners	0.816			
	con4. Sharing common goals and structures with suppliers	0.884			
	con5. Valuing trust as an important component	0.861			
	con6. Reducing supplier base to maintain satisfactory partner	0.756			
	con7. Transparency maintained with partners	0.832			
	con8. Suppliers are informed of changes to specifications and product design.	0.834			
	con9. Sharing sensitive information with suppliers.	0.834			
Collaboration	col1. Direct involvement of the company with its suppliers and customers is encouraged in planning and forecasting logistics.	0.967	0.917	0.960	0.923
	col2. Collaboration maintained with suppliers to enhance sustainability performance.	0.954			
	r1. Evaluate the acceptability of ingredients and working conditions of supplier firms.	0.722			
Risk Management	r2. Exercise informal supplier assessment.	0.832	0.937	0.949	0.728
	r3. Standards are specified for the purchase of raw materials.	0.882			
	r4. There is early supplier involvement	0.907			
	r5. Total quality management practices are implemented.	0.884			
	r6. Pressure groups are involved for their knowledge of possible risks	0.856			
	r7. Top management focuses on customer quality needs in setting strategy	0.876			
	p1. Aware of stakeholder interests	0.814			
Proactivity	p2. Conduciveness of company environment to employee wellbeing and growth is a concern	0.921	0.951	0.960	0.750
	p3. Packing material is taken for re-use.	0.874			
	p4. Involvement in minimizing negative impacts on the community.	0.943			
	p5. Equitable treatment of employees.	0.756			
	p6. Employees are empowered on quality issues	0.806			
	p7. Determine future customer expectations	0.941			
	p8. Implement Environmental Management Programmes.	0.854			
	env1. No. of environmentally harmful by-products released	0.899			
Environmental	env2. Quantity of non renewable energy resources used	0.911	0.860	0.915	0.783
	env3. Toxic discharges to water	0.842			
	Social	s1. Wage levels			
s2. Healthcare benefits for employees		0.809			
s3. Customer complaints		0.812			
s4. Stakeholder involvement in decision making		0.783			
s5. Sponsorship		0.880			
Economic	ec1. Average order fill lead time	0.959	0.896	0.937	0.832
	ec2. Breadth of customer base	0.959			
	ec3. Market share	0.811			

The results in Table 2 show the Cronbach Alpha value which established the internal consistency and the values of composite reliability & Average Variance Extracted of the second order model which were above the threshold values providing evidence of convergent validity of higher order constructs too.

Table 2. Psychometric Properties (Internal Consistency and Validity) for Second Order Constructs

Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
SUSP	0.911	0.925	0.529
SUSPRAC	0.972	0.974	0.556

4. Findings

The structural model was assessed to understand the relationship between the second order constructs which provided the main finding of the study. The results revealed that the path coefficient from sustainable supply chain practices to sustainable performance was 0.820. The significance of these values was established through a bootstrapping procedure which revealed that the coefficient was significant since it was well above the threshold value of 1.96. This finding is consistent with the underlying theory and conceptualization of the original model. The original model hypothesized that sustainable supply chain practices contributed positively towards sustainable performance. The result of the model setup with the data collected from the apparel manufacturing and exporting industry of Sri Lanka provided empirical evidence that sustainable supply chain practices contribute positively and significantly to strengthen sustainable performance.

The R^2 value 0.824 of the endogenous variable, i.e. sustainable performance provides adequate evidence for the predictive accuracy of the model. The model was developed with the data collected from the apparel manufacturing and exporting industry of Sri Lanka. Therefore, it's reasonable to assume that sustainable supply chain practices can explain 82% of a firm's sustainable performance in the apparel manufacturing and exporting industry of Sri Lanka. The results revealed a f^2 value of 1.718. The Stone Geisser's Q^2 value indicating the predictive relevance of the model was 0.405. These values confirm the relevance of the model to explain the relationship between sustainable supply chain practices and sustainable performance.

The present study also revealed that the items identified as measures (indicators) of the categories (dimensions) of sustainable supply chain practices identified by Beske and Seuring (2014) were true reflectors of those categories. It established that they are suitable to be considered as first order constructs.. The aim of this exercise was to enhance parsimony of the model.

In the present study the researcher identified sustainable performance as a second order construct while taking environmental, social and economic performance as first order constructs to include all indicators of sustainable performance in calculating the sustainable performance of apparel manufacturing and exporting organizations of Sri Lanka. These three first order constructs, proved to be well reflective of sustainable performance giving a composite estimate for sustainable performance.

Through these exercises the present study could develop a sound measurement model with higher order constructs to establish parsimony. The hypothesis that the level of sustainable performance is high among individual firms in the said industry was proved through the one sample t-test. The second hypothesis that the level of application of sustainable supply chain practices is high among individual firms in the said industry was also proved through the One sample t-test. In testing the third hypothesis PLS-SEM, a multivariate analysis technique was used. The path coefficient in the structural model from sustainable supply chain practices to sustainable performance of 0.820 was in proof of this hypothesis. The t-statistic for this coefficient was 20.001 proving the significance of the relationship.

5. Conclusion and Discussion

5.1 Conclusion

The results of the present study showed that greater the sustainable supply chain practices adopted the greater was sustainable performance. They met the objectives set out at the beginning of the research, which were to:

- Examine the level of sustainable performance of individual firms in the apparel manufacturing and exporting industry of Sri Lanka where sustainable performance is inclusive of all pillars of the triple bottom line
- Identify how sustainable supply chain practices are adopted by individual firms in the apparel manufacturing and exporting industry of Sri Lanka and

- Examine the relationship between sustainable supply chain practices and sustainable performance of individual organizations in the apparel manufacturing and exporting industry of Sri Lanka

The results of the one sample t-test showed that sustainable performance of the apparel manufacturing and exporting firms of Sri Lanka remains at a higher level. While achieving the objective of examining the level of sustainable performance of individual firms in the apparel manufacturing and exporting industry of Sri Lanka, the research addressed two existing gaps in literature. One was by identifying the level of sustainable performance of manufacturers in a developing country in Asia. The second was by determining sustainable performance based on all three pillars in measuring sustainable performance.

The results demonstrated that there is a high level of adoption of sustainable supply chain practices in the apparel manufacturing and exporting industry of Sri Lanka. While achieving the objective of identifying how sustainable supply chain practices are adopted by individual firms in the apparel manufacturing and exporting industry of Sri Lanka researcher addressed two existing gaps in literature. One was by way of identifying the sustainable practices in a developing country in Asia. Second, was by way of validating the measures of sustainable supply chain practices at a higher level of abstraction.

The PLS analysis showed that in the apparel manufacturing and exporting industry of Sri Lanka sustainable supply chain practices lead to sustainable performance. This finding adds to the sustainable supply chain management literature a new finding in relation to a developing country in Asia which has not been studied before. The results complement a number of recently published studies in the developed nations in the Western world and extend the research into new areas.

5.2 Discussion

The Level of Sustainable Performance of Individual Firms in the Apparel Manufacturing and Exporting Industry of Sri Lanka.

Since sustainable performance has become a major determinant of the competitive advantage of apparel exporting firms in the global apparel industry, it is not surprising to see the firms maintain high levels of sustainable performance. As far as the performance in relation to the three different pillars was concerned, the emphasis on social performance of the apparel exporting firms of Sri Lanka was relatively higher than on the other two pillars. This was quite different from the explanation of Seuring (2011) which says that across a range of studies it was observed that environmental and social standards serve as minimum requirements which have to be fulfilled to stay in the market while orders are won against economic performance, i.e. product-and delivery-related criteria, measured in conventional terms such as quality, speed and dependability of deliveries, flexibility in volume and product changes and resulting costs. Researcher prefers to attribute this difference in the composition of sustainable performance in the apparel manufacturing and exporting industry of Sri Lanka from that of the literature (more emphasis on social performance), to the cultural and ethical aspects in the context of sustainability in supply chain management as referred to in the Editorial of the Journal of Cleaner Production (2008).

In many research studies sustainable performance is attributed to environmental performance. However, sustainability not only includes environmental performance, but also the social as well as economic performance of the manufacturer. The sustainable performance of an organization needs to be judged from its ability to earn economic returns while protecting the natural environment and the society at large. The importance of multi-dimensional assessment frameworks in coping with stakeholder pressure has been identified by Varsei et al. (2014). According to the explanation of Figgie et al. (2002) economic transactions do not reflect a total picture of environmental and social scarcities. But the sustainable performance of any organization involves not only economic performance but also social performance. As a result, measuring sustainable performance only in terms of economic performance does not provide a clear picture of an organization's sustainable performance. This creates a need for a multi-dimensional framework to measure sustainable performance. This view has been further established by Hanifan et al. (2012) when they say that companies will need to look into ways of reflecting the results of sustainable practices in assessing the total cost of an economic activity. This is the Triple Bottom Line approach in measuring sustainable performance introduced by Elkington in the year 1998. The argument presented by the supporters of the Triple Bottom Line approach (TBL) is that overall fulfillment of objectives to stakeholders should be measured, calculated, audited and reported (Norman and Mc Donald, 2003; Seuring and Muller, 2008; Varsei et al., 2014; Reefke and Trocchi, 2013; Svensson, 2007). They believe that, if ethical business practices and social responsibility are important functions of corporate governance and management, then tools need to be developed to make it transparent to managers, shareholders and other stakeholders how well it is performing in that regard. In the words of these supporters the TBL approach defines a company's ultimate worth in financial, social

and environmental terms. This view of addressing the additional bottom lines is supported with a measurement claim, whereby they say that TBL approach is easy to apply since objective measures are available to quantify social and environmental performance. At the same time there are those who argue that social performance and environmental performance cannot be quantified. The argument is that although measures of financial performance provides a net result after deducting the expenses from the revenue, the measurement of social and environmental performance does not enable such calculation. However, still they admit the fact that these two bottom lines of performance can be quantified thus making it possible to incorporate them in the calculation of sustainable performance. At the same time, the need for appropriate mechanisms to suit the type of performance has been raised in literature (Norman and Mc Donald, 2003), mainly in relation to social performance. An alternative mechanism that is used in the measurement of social and environmental performance is where one firm's social performance is compared against the other organizations in the industry, through a benchmarking exercise. The criticisms against the TBL approach to identifying sustainable performance as an aggregate measure have been addressed through this exercise (Hubbard, 2009; Varsei et al., 2014; Norman and Mc Donald, 2003). The present study adopted this benchmarking exercise to obtain responses for sustainable performance. The perceptual evaluation of the respondents on their own performance was rated based on a comparison of the firm's performance against industry average, as the benchmarking exercise. If a firm perceived that it performed very much better than this average they rated themselves as 'strong positive variations' with a score of '1' on the Likert scale. If they perceived their performance to be better than the industry average but not very much ahead then they rated themselves as 'weak positive variations' with a score of '2' on the Likert scale. If they found their performance in par with other competitors, they rated themselves as 'no variations' with a score of '3' on the Likert scale. If the performance was found to be below average, then the rating was for 'weak negative variations' or 'strong negative variations' with scores of '4' or '5' on the Likert scale respectively.

The TBL approach is appreciated for the transparency it provides in reporting the information about performance. Pava (2007) states that TBL approach is a step in the right direction putting the notion of accountability back into accounting. The author identifies that it is derived from a more ethically defensible theory of the firm than traditional annual report which solely emphasizes on profit maximization for shareholders. Therefore, the TBL could be justified as a proper approach for the calculation of sustainable performance and the present study believed the use of TBL is important irrespective of the criticisms against it. The performance related to all three dimensions of sustainable performance, i.e. environmental performance, social performance and economic performance were therefore considered as the dimensions in arriving at an aggregate value for sustainable performance of apparel manufacturing and exporting organizations of Sri Lanka.

However, there is a very poor level of acceptance of the claim that sustainable performance can be identified as an aggregate figure of the performance in the three bottom lines. The reason for the lack of availability of a composite measure of sustainable performance in literature may be the reason for lack of support for the aggregate claim of the TBL, by many researchers. Although Gimenez et al. (2012) identify sustainable performance in terms of the three bottom lines they have not arrived at an aggregate measure. Therefore, one of the objectives of the research was to address this gap in literature. In the present study an avenue through the methodology was identified to incorporate all the three pillars in the measurement of sustainable performance. Sustainable performance was considered as a higher order factor. The individual three pillars of performance were considered as dimensions of sustainable performance to be represented by first order factors. This enabled the calculation of an aggregate measure for sustainable performance in the structural model.

Out of the 24 items that were identified from the literature review to measure sustainable performance using all three pillars of the triple bottom line only 11 were identified by the apparel manufacturing and exporting industry of Sri Lanka to reflect their own sustainable performance. The measures of environmental and economic performance that they perceived to be not represented by the construct would have been those that were not directly related to their industry because the measures identified from literature were not specific to the apparel industry. The fact that there are possibilities of context specific variations in the measurement items is explained by Clift (2003) when he explains that although general indicator frameworks can be developed, it is commonly agreed that indicators need to be established on a sector-by-sector or even case-by-case basis. This could be clearly seen in relation to the measures of environmental performance. The items that were dropped from the questionnaire such as Carbon Monoxide emissions were not directly related to the apparel industry. Items such as number of accidents is not a measure that is highly relevant to the apparel industry.

However, there were reasons to believe that the practices they selected were not solely based on the industry, but their national culture too may have played a role, as highlighted in the Editorial of the Journal of Cleaner Production (2008). This was reflected in the items that the respondents selected as those that were used in the

measurement of sustainable performance. Five out of the seven measures of social performance that were stated in literature were identified by the respondents too, as the measures that were used in measuring social performance. Comparatively only 3 out of 6 items and 3 out of 11 items stated in literature were considered by respondents as measures of their own environmental performance and economic performance respectively. This reflects the importance assigned to the responsibility towards the society by the respondents. The path model also shows that social performance is the dimension which is explained the most, by sustainable performance (0.749). When the performance statistics for the 154 apparel exporting firms of Sri Lanka were examined carefully in detail, the researcher realized that the respondent firms find them performing better socially when compared to the other dimensions of performance with a mean value of 1.68. Their perceptual evaluation of the statements show that they agree that their environmental performance was better than economic performance when compared with the industry average. This finding differs from those of many other research studies. As stated above, Seuring (2011) says that across a range of studies it was observed that environmental and social standards serve as minimum requirements which must be fulfilled to stay in the market while orders are won against economic performance. Poor environmental performance of developing countries has also been identified by Nnorom and Osibanjo (2008), in a study on e-waste of developing countries. An Extended Producer Responsibility (EPR) has been suggested through this research, as a remedy to get the manufacturers more involved in environmental performance.

Sustainable Practices Adopted by Individual Firms in the Apparel Manufacturing and Exporting Industry of Sri Lanka

With the statistics obtained from the quantitative analysis a high level of application of sustainable practices could be observed in the apparel manufacturing and exporting industry of Sri Lanka.

The mean value of the responses for the adoption of sustainable supply chain practices in the apparel exporting industry of Sri Lanka was 1.81. This was an indication of the adoption of sustainable supply chain practices in the apparel exporting industry of Sri Lanka at a considerable level. The descriptive statistics helped in understanding the types of practices adopted and their level of adoption in detail. As discussed in previous chapters, sustainable supply chain practices can be exercised by way of orientation, continuity, collaboration, risk management and pro-activity (Beske and Seuring, 2014). This classification of sustainable practices could be identified as addressing the internal measures and external measures of making supply chains sustainable. While orientation, risk management and pro-activity could be recognized as internal measures, continuity and collaboration could be identified as external measures. This showed similarities to the frameworks of supply chain initiatives used by Brito et al. (2008) and Gimenez et al. (2012) in their studies. Their classification of initiatives broadly as internal organization and external organization, provide a clear distinction of the focus of different practices. According to Brito et al. (2008) internal organization is related to the means of achieving product and/or process innovation by using the recent technological development and high skilled labour in the organization's operations to suit sustainability. External organization is related to better management of relationships towards sustainability. The classification of practices by Schaltegger and Burritt (2014) identified the application of sustainable practices along the supply chain in terms of risks and opportunities. According to them this involves practices aimed at eliminating existing and potential problems at production sites and suppliers' vs realizing sustainability driven product designs. The practices addressed through orientation, continuity, collaboration, risk management and pro-activity are similar in nature. Under these dimensions suggested by Beske and Seuring (2014), 53 items were identified to measure sustainable practices. When the apparel exporting firms of Sri Lanka were asked to respond to a questionnaire containing these items there were only 30 items that they considered as representative of sustainable practices, indicating that those were the practices in existence in the apparel manufacturing and exporting industry of Sri Lanka. This poses a reasonable question for the researcher as to whether the sustainability practices have been carried out just in terms of compliance or whether the practitioners are committed towards implementing sustainable practices. Brito et al. (2008) explain that the leaders of sustainable performance are moving beyond sustainability as merely a compliance issue or even an exercise in risk management. Rather they identify opportunities for business improvement through sustainable initiatives. A closer look at the items that were deleted from the questionnaire show that majority of them represent pro-activity related practices which were identified very important by Klassen and Whybark (1999). The proactive measures that are already in practice in the apparel manufacturing and exporting industry of Sri Lanka too, are focused more on the employees and the consumers rather than the products and processes. This also indirectly implies of more of a 'compliance' rather than committed involvement.

Descriptive statistics further showed clearly that the sustainable practices related to continuity and collaboration which involved more interaction with other partners of the supply chain (external organization) are relatively high with mean values of 1.78 and 1.79 respectively. Risk management was also practiced at a considerably higher level

with a mean value of 1.81. According to the descriptive statistics proactivity is the next dimension of sustainable practices that the firms have focused more with a mean of 1.80. However, an important observation regarding the sustainable practices of apparel manufacturing and exporting firms of Sri Lanka was the relatively low importance attached to the orientation towards sustainability. Orientation is important to inculcate a sustainability culture within the organizations. Then only will the practices last for long. However, from the nature of practices that have been adopted it indicates that they have just been focusing more on the structural and operational means of ensuring sustainability than focusing on the strategy. Pagell and Wu (2009) stress the importance of integrating sustainability goals, practices and cognitions into day-to-day supply chain management. They emphasize that the responsibility for sustainability cannot be given to a separate entity within the organization. It must be a part of everyone's job, starting with top management. However, through the interviews conducted with the managers of the apparel exporting firms the researcher could not notice an interest more than an adherence to a legal requirement. An interest in maintaining sustainable operations as an inbuilt philosophy directed at sustainability was not revealed through the interviews. Schaltegger and Burritt (2014) clearly state that sustainability needs to be much more than a box ticking exercise though many companies still appear to believe that simply communicating their carbon management information to the outside world will suffice.

The above said findings of the present study were like that of Moretto et al. (2012) where a stronger attention to supply chain-oriented practices were placed despite product-oriented ones. The national culture also may have influenced the emphasis to be more on relationship-oriented practices, as highlighted in the Editorial of the Journal of Cleaner Production (2008).

Ninety percent (90%) of the sustainable practices related to external parties, involved interaction with suppliers. This indicated that the manufacturing firms consider the sustainability of their suppliers important. This was a justification for the significance of the present study. The rationale for hypothesizing the relationship between sustainable supply chain practices and sustainable performance as a positive outcome of relational exchanges with suppliers, was also established through this finding.

The Impact of Sustainable Supply Chain Practices on Sustainable Performance of Individual Firms in the Apparel Manufacturing and Exporting Industry of Sri Lanka.

Although many research studies have understood that sustainable supply chain practices will lead to sustainable performance very less emphasis has been placed on this in Asia. No studies have focused on developing countries. The fact that sustainable supply chain management is challenging due the cultural and political differences in countries with often unstable political and socio- economic conditions has been highlighted by Beske et al. (2008) emphasizing the need to focus on many countries. Therefore, high levels of sustainable practices and sustainable performance cannot always be expected to result in a positive relationship between sustainable practices and sustainable performance as suggested in literature.

In the previous research studies sustainable performance has not been identified as an aggregate measure. Hence the individual dimensions of sustainable practices have been related with those of sustainable performance. Gimenez et al. (2012) explain that internal and external sustainable initiatives bring different results towards the sustainable performance. According to their findings internal measures contribute more towards sustainable performance. Environmental measures were found to improve sustainable performance while social measures were found to be negatively influence sustainable performance. In the present study individual dimensions of sustainable supply chain practices were not related with the individual dimensions of sustainable performance. However, they were related with one another as second order constructs.

This relationship was found to be positive and significant. Within sustainable supply chain practices, the composition of external practices was high. Among the internal practices too the focus on social aspects was high. Therefore, the findings of the present study show no evidence of proof of the negative relationship of social measures towards sustainable performance. This finding is against that of Gimenez et al. (2012).

However, the results of the study conducted by Rao and Holt (2005) provide evidence that support the findings of the present study. They claim that supplier management is also identified important in achieving environmental performance of the manufacturer as well as an improvement in other two bottom lines. Further they explain that many enterprises closely collaborated with their suppliers to fulfill the requirements of the environmental legislations, organize environmental activities such as providing environmental awareness seminars and technical advice to suppliers. These could be identified similar to the practices adopted by apparel manufacturing and exporting organizations of Sri Lanka in relation to their suppliers.

As stated in the social capital theory (Lin ,2002) the relationships help build up cognitive, structural and relational capital which ultimately lead to better outcomes through the relationships. The findings of the present study

established this logic in relation to the apparel manufacturing and exporting industry of Sri Lanka. One may argue that how could the outcomes of the sustainable practices attributed, to relations with supply chain partners/suppliers? The sustainable supply chain practices show a considerable involvement of suppliers towards sustainable practices. In such a scenario researcher believes it is reasonable to attribute the positive sustainable performance resulting from sustainable supply chain practices, to the relational outcomes of supplier relationships.

The favourable outcomes of successful engagement with their suppliers are identified in literature as, evolving procurement strategies, moving from compliance to performance improvement and building on communication for better decision making. The evolving procurement strategies encourage suppliers to adhere to sustainable practices if they are to continue their contracts with the manufacturers (Seuring and Muller, 2008). Apple for example, conducts on-site audits and make sure that suppliers comply with the code of conduct. In the event of a violation a preventive action plan need to be implemented within 90 days. Moving from compliance to performance improvement the manufacturers can encourage their suppliers to achieve joint benefits by complying with the expected standards. Tata Steel encourages entrepreneurs from disadvantaged communities in India to become suppliers through a combination of local training initiatives and helping with working capital, as well as by giving them preference over larger multinationals provided that certain standards are met. Through building on communication for better decision-making wo\manufacturers can explore new business models. Seuring and Muller (2008) argue that the more the emphasis is placed on supplier development, the more are the win-win situations along supply chain.

6. Implications of the Study

The managerial implications of the present study could be identified in relation to sustainable practices. Given the competition in the global apparel industry and the stakeholder demands many companies and practitioners are concerned about gaining a competitive advantage through sustainable operations. This study provides evidence that the firm's level of adoption of sustainable practices will have an impact on its sustainable performance. The research findings show that the individual organizations in the apparel manufacturing and exporting industry of Sri Lanka show a keen interest on adopting sustainable practices in their operations. But these practices are only a few from a long list of practices that were discussed in literature as sustainable supply chain practices. Many items that were identified as pro-active practices were not considered in the main questionnaire since they were dropped at pilot testing. The managers need to be aware and look at the possibilities of adopting such practices in the apparel manufacturing and exporting industry of Sri Lanka since finally the products are offered to the countries in which they are valued and practiced.

The lack of sustainable orientation was a finding that should draw the attention of managers. It is generally understood that good managers create reward systems that link wanted behaviors to outcomes employees' value. The individual employees need to be trained in sustainability (Starik and Rands 1995), and then given incentives to follow through (Daily and Huang 2001). Such linkages provide employees the incentives to pursue sustainability goals along with more traditional goals such as quality improvements. Without these incentives employees are likely to continue pursuing only traditional goals (Handfield et al., 2001).

References

- Beske, J. P., Johnson, M. P., & Schaltegger, S. (2015). 20 years of performance measurement in sustainable supply chain management – what has been achieved? *Supply Chain Management: An International Journal*, 20(6), 664-680. Retrieved from [https:// www.emeraldinsight.com](https://www.emeraldinsight.com)
- Beske, P., & Seuring, S. (2014). Putting Sustainability into Supply Chain Management. *Supply Chain Management: An International Journal*, 19(3), 322-331. <https://doi.org/10.1108/SCM-12-2013-0432>
- Brady, K., Henson, P., & Fava, J. A. (1999). Sustainability, Eco-efficiency, Life-cycle Management, and Business Strategy. *Environmental Quality Management*, 8(3), 33-41. <https://doi.org/10.1002/tqem.3310080305>
- Brammer, S., & Millington, A. (2008). Does it pay to be different? An analysis of the relationship between corporate social and financial performance. *Strategic Management Journal*, 29(12), 1325-1343. <https://doi.org/10.1002/smj.714>
- Brito, M. P., Corinne, C., & Blanquart, C. M. (2008). Towards a Sustainable Fashion Retail Supply Chain in Europe: Organization and Performance. *International Journal of Production Economics*, 114(2), 534-553. <https://doi.org/10.1016/j.ijpe.2007.06.012>
- Bryman, A., & Bell, E. (2012). *Business Research Methods*. 3rd ed. London: Oxford University Press.

- Cao, M., & Zhang, Q. (2011). Supply chain collaboration: Impact on collaborative advantage and firm performance. *Journal of Operations Management*, 29(3), 163-180. <https://doi.org/10.1016/j.jom.2010.12.008>
- Carter, C. R. (2005). Purchasing Social Responsibility and Firm Performance: The Key Mediating Roles of Organizational Learning and Supplier Performance. *International Journal of Physical Distribution & Logistics Management*, 35(3), 177-194. <https://doi.org/10.1108/09600030510594567>
- Carter, C. R., & Rogers, D. S. (2008). A Framework of Supply Chain Management: Moving toward New Theory. *International Journal of Physical Distribution and Logistics Management*, 38(5), 360-387. <https://doi.org/10.1108/09600030810882816>
- Chen, I. J., & Paulraj, A. (2004). Towards a Theory of Supply Chain Management: The Constructs and Measurements. *Journal of Operations Management*, 22, 119-150. <https://doi.org/10.1016/j.jom.2003.12.007>
- Cruz, J. M., & Matsypura, D. (2009). Supply Chain Networks with Corporate Social Responsibility through Integrated Environmental Decision-making. *International Journal of Production Research*, 27(3), 621-648. <https://doi.org/10.1080/00207540701513901>
- Daily, B. F., & Huang, S. C. (2001). Achieving sustainability through attention to human resource factors in environmental management. *International Journal of Operations & Production Management*, 21(12), 1539-1552. <https://doi.org/10.1108/01443570110410892>
- Editorial (2008). Sustainability and Supply Chain Management- An Introduction to the Special Issue, *Journal of Cleaner Production*, 16, 1545-1551. Available from: www.sciencedirect.com
- Elkington, J. (1998). Accounting for the Triple Bottom Line. *Measuring Business Excellence*, 2(3), 18-22. <https://doi.org/10.1108/eb025539>
- Figge, F., Hahn, T., Schaltegger, S., & Wagner, M. (2002). The sustainability balanced scorecard—linking sustainability management to business strategy. *Business Strategy and the Environment*, 11(5), 269-284. <https://doi.org/10.1002/bse.339>
- Glocic, S. L., & Smith, C. D. (2013). A Meta-Analysis of Environmentally Sustainable Supply Chain Management Practices and Firm Performance”. *Journal of Supply Chain Management*, 49(1), 78-87. <https://doi.org/10.1111/jscm.12006>
- Hair (Jr.), J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modelling (PLS-SEM)*, [pdf] USA: SAGE Publications. Retrieved from <https://books.google.lk>
- Handfield, R. B., Melnyk, S. A., Calantone, R. J., & Curkovic, S. (2001). Integrating environmental concerns into the design process: the gap between theory and practice. *IEEE transactions on Engineering Management*, 48(2), 189-208. <https://doi.org/10.1109/17.922478>
- Hanifan, G. L., Sharma, A. E., & Mehta, P. (2012). Why a sustainable supply chain is good business? *Outlook*, 3, 1-7.
- Hollos, D., Blome, C., & Foerstl, K. (2012). Does Sustainable Supplier Co-operation Affect Performance? Examining Implications for the Triple Bottom Line”, *International Journal of Production Research*, 50(11), 2968-2986. <https://doi.org/10.1080/00207543.2011.582184>
- Hubbard, G. (2009). Measuring Organizational Performance: Beyond the Triple Bottom Line”. *Business Strategy and the Environment*, 18, 177-191. <https://doi.org/10.1002/bse.564>
- Klein, R., & Rai, A. (2009). Interfirm Strategic Information Flows in Logistics Supply Chain Relationships. *MIS Quarterly*, 33(4), 735-762. <https://doi.org/10.2307/20650325>
- Lankoski, L. (2009). Differential Economic Impacts of Corporate Responsibility Issues. *Business and Society*, 48(2), 206-224. <https://doi.org/10.1177/0007650307306635>
- Law, K. S., Wong, C. S., & Mobley, W. H. (1998). Toward a Taxonomy of Multidimensional Constructs. *The Academy of Management Review*, 23(4), 741-755. <https://doi.org/10.5465/amr.1998.1255636>
- Lehtonen, M. (2004). The environmental–social interface of sustainable development: capabilities, social capital, institutions. *Ecological Economics*, 49(2), 199-214. <https://doi.org/10.1016/j.ecolecon.2004.03.019>
- Li, Y., Zhao, X., Shi, D., & Li, X. (2014). Governance of Sustainable Supply Chains in the Fast Fashion Industry. *European Management Journal*, 32(5), 823-836. <https://doi.org/10.1016/j.emj.2014.03.001>

- Lin, N. (2002). *Social Capital: A Theory of Social Structure and Action*, [pdf] New York: Cambridge University Press. Retrieved from <https://books.google.lk>
- Markley, M., & Davis, L. (2007). Exploring Future Competitive Advantage Through Sustainable Supply Chains. *International Journal of Physical Distribution and Logistics Management*, 37(9), 763-774. <https://doi.org/10.1108/09600030710840859>
- Mejías, A. M., & Pardo, J. E. (2013). International Conference on Industrial Engineering and Industrial Management - XVII Congreso de Ingeniería de Organización. pp.59-66
- Moretto, A., Laura, M., Caniato, F., Danese, P., Caridi, M., Spina, G., ... Sianesi, A. (2012). Sustainability in the Fashion Supply Industry: An Important Source of Supply Chain Innovation. In: *Annual Academic Sessions of Decision Sciences Institute*, 75701-755012. Retrieved from <http://research.allacademic.com>
- Norman, W., & MacDonald, C. (2004). Getting to the bottom of “triple bottom line”. *Business Ethics Quarterly*, 14(2), 243-262. <https://doi.org/10.5840/beq200414211>
- Pagell, M., & Wu, Z. (2009). Building a More Complete Theory of Sustainable Supply Chain Management Using Case Studies of Exemplars. *The Journal of Supply Chain Management*, 45(2), 37-56. <https://doi.org/10.1111/j.1745-493X.2009.03162.x>
- Pava, M. L. (2007). A response to “getting to the bottom of ‘triple bottom line’”. *Business Ethics Quarterly*, 17(1), 105-110. <https://doi.org/10.5840/beq200717116>
- Pullman, M. E., Maloni, M. J., & Carter, C. R. (2009). Food for thought: Social Versus Environmental Sustainability Practices and Performance Outcomes. *Journal of Supply Chain Management*, 45(4), 38-54. <https://doi.org/10.1111/j.1745-493X.2009.03175.x>
- Rao, P., & Holt, D. (2005). Do Green Supply Chains Lead to Competitiveness and Economic Performance? *International Journal of Operations and Production Management*, 25(9), 898-916. <https://doi.org/10.1108/01443570510613956>
- Reefke, H., & Trocchi, M. (2013). Balanced scorecard for sustainable supply chains: design and development guidelines. *International Journal of Productivity and Performance Management*, 62(8), 805-826. <https://doi.org/10.1108/IJPPM-02-2013-0029>
- Schaltegger, S., & Burritt, R. (2014). Measuring and Managing Sustainability Performance of Supply Chains: Review and Sustainability Supply Chain Management Framework. *Supply Chain Management: An International Journal*, 19(3), 232-241. <https://doi.org/10.1108/SCM-02-2014-0061>
- Sekaran, U., & Bougie, R. (2012). *Research Methods for Business-A Skill Building Approach*, 5th ed. India: Wiley India (Pvt.) Ltd.
- Seuring, S. (2011). Supply chain management for sustainable products – insights from research applying mixed methodologies. *Business Strategy and Environment*, 20(7), 471-484. <https://doi.org/10.1002/bse.702>
- Seuring, S., & Muller, M. (2008). From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production*, 16(15), 1699-1710. <https://doi.org/10.1016/j.jclepro.2008.04.020>
- Sloan, T. W. (2010). Measuring the Sustainability of Global Supply Chains: Current Practices and Future Directions. *Journal of Global Business Management*, 6(1), 1-16. Retrieved from <http://www.jgbm.org>
- So, S., Parker, D., & Xu, H. (2012). A conceptual framework for adopting sustainability in the supply chain. In: *ANZAM operations, supply chain and services management symposium* (pp. 397-413). ANZAM.
- Starik, M., & Rands, G. P. (1995). Weaving an integrated web: Multilevel and multisystem perspectives of ecologically sustainable organizations. *Academy of Management Review*, 20(4), 908-935. <https://doi.org/10.5465/amr.1995.9512280025>
- Svensson, G. (2007). Aspects of sustainable supply chain management (SSCM): conceptual framework and empirical example. *Supply chain management: An international journal*, 12(4), 262-266. <https://doi.org/10.1108/13598540710759781>
- Varsei, M., Soosay, C., Fahimnia, B., & Sarkis, J. (2014). Framing Sustainability Performance of Supply Chains with Multidimensional Indicators. *Supply Chain Management: An International Journal*, 19(3), 242-257. <https://doi.org/10.1108/SCM-12-2013-0436>
- Verdecho, M. J. L., Alfaro-Saiz, J. J., & Rodriguez-Rodriguez, R. (2012). A Performance Measurement

- Framework for Monitoring Supply Chain Sustainability. *Annals of Industrial Engineering*, 331-338. Retrieved from <https://link.springer.com>
- Walsh, J., Weber, K., & Margolis, D. (2003). Social Issues and Management: Our Lost Cause Found. *Journal of Management*, 29(6), 859-881. [https://doi.org/10.1016/S0149-2063\(03\)00082-5](https://doi.org/10.1016/S0149-2063(03)00082-5)
- Warhurst, A. (2002). Sustainability Indicators and Sustainability Performance Management, *International Institute for Environment and Development, Mining Minerals and Sustainable Development*, 43.
- Winter, M., & Knemeyer, A. M. (2013). Exploring the Integration of Sustainability and Supply Chain Management, Current state and Opportunities for Future Inquiry, *International Journal of Physical Distribution and Logistics Management*, 43(1), 18-38. <https://doi.org/10.1108/09600031311293237>

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The Evolution of Viral Marketing to Improve Business Communication

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To conform to the Italian regulations on academic publishing, even though the article is the joint work of all the authors we attribute the contribution of each author as follows: Giuseppe Granata, sections: 1 – 2 and 3; Giancarlo Scozzese, sections: 4 - 5 and 6.

Received: November 15, 2018

Accepted: November 26, 2018

Online Published: November 29, 2018

doi:10.5539/ibr.v11n12p105

URL: <https://doi.org/10.5539/ibr.v11n12p105>

Abstract

To win the consumers attention, more prone to advertisement, it is essential that companies interact with them. Equally important for the effectiveness of an advertising campaign is the ability to involve, amaze and entertain users in such a way as to encourage them to talk about a brand or product, spontaneously triggering a viral word of mouth. To achieve this, companies use different communication tools, especially web communication and digital marketing.

Companies can choose to approach to these new phenomena, read them, understand them, interpret them, research and identify new advantages and opportunities; then start a process of change aimed at adapting the organization to a model that is able to fully exploit these phenomena. Or they could choose to ignore them, distance them, close their eyes, pretend they do not exist, convince themselves that they are only transitory phenomena of a technological nature and lacking relevance for the business.

The goal of the work is to verify how the viral marketing instrument can help improve and strengthen business communication. In fact, by now, there are many companies that have decided to support and, in some cases, replace traditional communication with online communication.

Keywords: digital marketing, online communication, word of mouth, viral marketing

1. Introduction

One of the main objectives pursued by viral marketing is the search for a viral idea. Godin (2000) talks about idea virus in this regard: "an ideavirus is a fascinating idea that spreads through a part of the population, changing and influencing whoever you meet". Viral marketing therefore plans to "include" an ideavirus in the sales objective and implements strategies to facilitate propagation. It would perhaps be simplistic to think of viral marketing as a "technique aimed at encouraging word of mouth" (Rubino, 2009).

Specifically, it refers to "a type of non-conventional marketing that exploits the communication skills of a few stakeholders to transmit the message to an exponential number of end users. It is an evolution of word of mouth, but it is distinguished for the fact that it is on a voluntary intention from the campaign promoters' part. The principle of viral marketing is based on the originality of an idea: something that, due to its nature or its content, is able to expand very quickly in a given population » (Venturi & Covino, 2009)

In merit of its origins, the word viral marketing was created for the first time by Steve Jurvetson and Tim Draper, to explain the incredible success experienced by Hotmail in 1997. It was July 4, 1996 when Hotmail founders Jack Smith and Sabeer Bhatia launched the first successful viral marketing action, including the following message at the end of each message sent from a hotmail.com mailbox: "PS. Get your free e-mail account at <http://www.hotmail.com>."

To enter the message, immediately understood, was the same company providing the service; to give the advice, however, was the sender of the e-mail. The result? After 18 months Hotmail reached 8.7 million users. This

shows how the web can allow a rapid and widespread dissemination of any content between users of the network, in full analogy with the spread of epidemics caused by viruses.

The use of digital means allows in fact to increase the classic word of mouth to excess. However, online media are not the only ones that can be used to trigger an epidemic: nothing prevents the viral marketing from exploiting off-line tools. A famous example is offered by the company Volkswagen that in June 2009 has created an advertising campaign called "The fun theory" with the objective, not immediately visible, to associate the brand with the value of environmental responsibility, to attract the attention of the recipient on the new ecological cars.

One of the campaigns launched (named "floor stairs"), which took place in Odenplan, Stockholm, has provided for the application of panels on the stairs at the exit/entrance of the undergrounds, visually transforming them into a piano keyboard to be played while walking it. So, to show that to change for the better people's behaviour the easiest way to follow is to make things fun, it has been chosen to analyse the attitudes held by passers-by in such context: normally the majority of the people use the escalators for comfort. It turned out that 66% more people (compared to the normal average) chose to have fun playing the stairs.

This off-line campaign was then broadcasted online, where the video was viewed about a million times in October 2009. Another campaign that really conquered everyone was certainly the one carried out by Algida, the leading brand in the sector in Italy and in Europe, which celebrated its 70th anniversary and, to best honour the traditional line of products that made the history of the company, has focused its communication campaign on "The classics of all time", that is, it concentrated on those ice-cream present in the market practically always and intended to attract future generations, namely the Liuk, the Cremino, the Crispy and the Fior di Fragola.

In fact, during the communication campaign for summer 2016 the Algida classics come to life, catalysing the attention of passers-by in a truly original way: the four "colds" protagonists, in fact, resuming some dialogues that bring to mind films, songs and funny daily skits, able to snatch anyone's smile.

2. The Evolution of Viral Marketing.

Regardless of the support used, however, what counts in a viral marketing strategy is the initial impulse. One of the most recent evolutions of viral marketing is the birth of the influencers, that is, people who are more experienced than others to spread the message. Identifying and courting the influencers is therefore one of the key factors for achieving success (Rubino, 2009).

It should be pointed out, however, that when the spread occurs on the net, the term word of mouse is used (because the spread is done by a mouse click and not by word of mouth) and comes to life when a consumer gives information to another consumer. Each person has his own social network, made up of relatives, friends, and colleagues.

On the Internet this social network is greatly expanded thanks to social networks. In fact, new consumers are no longer happy to find the technical characteristics of the product or the advertising messages of companies on the net, but seek advice on purchases and before buying they are informed on the web, read reviews and comments, listen to the experiences of purchases from other consumers, ask for advice from experienced and reliable users.

The Word of mouth marketing is born on the assumption that people love to talk about products, services, relationships (not only verbally but also on blogs on the web, forums, social network, ...) and consists in trying to give people a way to talk about products or services of their own company and make it a point in trying to make these conversations start easily. The word of mouth marketing therefore consists in trying to encourage and gain positive recommendations from the people themselves (Granata, 2016).

Another evolution in viral marketing is given by the mode of diffusion of the message and the speaker subject. Thus we can identify 2 main categories:

- frictionless
- active viral marketing.

In the frictionless viral marketing, the information about a particular service / product is unconsciously spread by the user, as happened with Hotmail in the example already mentioned.

Characteristic of the active viral marketing instead is the active role of the divulger. In fact, the user has control over the viral message and is a pro-active transmitter.

In the coming in of the active viral marketing category, moreover, there are more cases, distinguishable in relation to the degree of involvement and the motivations that push the transmitter to become an influencer:

Social viral marketing: occurs when the user is pushed to the viral for reasons of social recognition, understood as belonging to a restricted and privileged circle of users. This is not an example of the viral marketing strategy realized at the time by Gmail: the e-mail box could be activated only upon invitation by a person who has already used it;

Viral marketing in strict sense: manifests itself when the user benefits from the highest number of members or from the major activations promoted by himself. This is the case of instant messaging systems.

Incited viral marketing: it is found when the user is encouraged to disclose the message from economic and non-economic advantages. Viral games and advergimes fall into this category. (Pastore & Veernuccio 2008).

3. Objectives and Strategies

It is important that people talk about it: this is precisely the goal and the active principal of viral marketing. The basic idea is to induce people with a message or product that is so irresistible as to spread like a social epidemic. It is the path that a virus normally takes, emanating from one infected person to another, being transmitted freely in the air (Calicchio, 2006). Thus, in a metaphorical sense, as the viruses spread in the air, even the messages require a valid support to reach the greatest number of people in the shortest possible time.

There are many alternatives to this effect: for the launch of a viral marketing campaign, many tools can be adopted, such as traditionally the e-mails, banners, links, or off-line, free samples. However, the multiplication of viral initiatives based on these channels has generated over time an addiction, which has led to a loss of their effectiveness. For this reason, we aim to use new communication systems, more technological and able to arouse greater interest than other forms of simple propagation.

Therefore, it deals with newsgroups, forums, community but also viral videos, advergimes, virtual sending (virtual postcards, screensavers or ringtones), recommendation systems. In Wilson, (2000) an e-commerce consultant, developed 6 principles that need to possess a viral marketing strategy to work.

Table 1. Viral Marketing Principals by Wilson 2000

1. Offer free products or services.

2. Be easy to share.

3. Use existing communication systems.

4. Take advantage of motivations and common behaviour.

5. It must be easily scalable.

6. Take advantage of the resources of others.

Source: Wilson R.F. (2000)

1. Free products or services.

Giving away valuable products or services is the key element of most viral marketing plans. "Free" attracts attention and this, once captured, can easily move to other products or services that we offer for a fee. An example is WhatsApp, a smartphone messaging app that allows you to exchange messages and audio files, videos or images with own contacts without having to pay for SMS. The app provides a trial period of one year as from installation: thereafter there is an annual fee of 89 cents. The i-Phone users on the other hand do not pay for an agreement established with Apple.

2. Be easily shared.

Viruses spread when they can be easily transmitted. From the marketing point of view, the message, in order to be easily transmissible and without distortions, must be as simplified as possible. Precisely for this reason, the media that have to transmit the message must be easy to share. And that's why viral marketing works on the network because communication is simple, instant, quick and inexpensive.

3. Use existing communication systems.

The majority of people live on sociality. Each individual makes part of a small network (restricted network) consisting of 8 to 12 people between relatives, friends and groups. But it is also true that there is also another type of extended network made up of hundreds, if not thousands of contacts. This extended network of contacts depends mostly on the role that the individual repeats in society.

4. Take advantage of common tensions and behaviour.

Ingenuous Viral Marketing plans take advantage of common emotional tensions. Desire is what drives people. The desire to communicate something has produced millions of websites and billions of e-mails and conversations. By identifying an emotional tension, an uncovered nerve that triggers common behaviours, a winning strategy is built. These are the emotions that drive people.

5. It must be easily scalable.

To propagate as a disease, the object of viral marketing must be shared easily both by technologically advanced ones and by those who are not yet familiar with the technology. If the virus kills the host before it has transmitted it, the pandemic does not occur. In this sense it must be scalable.

6. Take advantage of the resources of others.

The most creative strategies, to facilitate their propagation, exploit the resources of the people with whom the message comes into contact.

4. The Video and the Mobile: Sharing of Influencers

Today's context is extremely competitive, populated by a multitude of actors who together communicate massively and insistently, but without creating more often a link with the consumer, passive and distracted is limited to observe, without being able to seal an engagement lasting over time. All forms of communication end up short-lived if not supported by a strong and direct mantra, which captures the attention of consumers and enlivens up their imagination, involving them emphatically. But some form of dialogue with the consumer seems to be lucky, if we consider the advertising developed through video, published mostly on social networks, but in general on the various websites and online platforms.

Since the duration tends to be greater than the 30 " spots broadcast on TV, they enjoy greater attention from the consumer than other forms of advertising, only if they possess two basic requirements: an interesting first frame that intrigues the audience, which pushes the audience to press "play" and at the same time an intense narration, which makes the audience an accomplice of the story that is being told.

Viral marketing video is a free form of advertising that is achieved by using video sharing portals, for example, video sharing websites. This strategy has experienced exponential growth, and today offers significant opportunities to reach a broad audience (Iavazzo, 2009).

It is fundamental to understand who we have in front of us, to create the content to convey through a proper language, to "engage" and persuade the public in a relevant way. There are some recurring elements that should be taken into account in the creation of a video, such as the choice of the title that should not be taken for granted and above all must not disregard users' expectations. The choice of thumbnail, or the preview image in the video, is usually a frame taken from the video itself but lately YouTube has allowed us to choose another image to describe the video. The sharing by influencers, who will share the video with their own network, reaching an increasing number of users.

The content has its great importance, videos with children, dogs and cats are practically a guarantee of success, as they arouse emotion, fun, create empathy by emotion. Keeping in mind the timing, hardly a video of one or more hours will become viral. The shorter it is; the more users will be willing to "invest" their time in watching the video. There are many platforms that allow you to publish movies, but if we want our video to become viral, even the platform is important. The best is definitely YouTube, which has over a billion users, almost a third of all users on the Internet, generating billions of views. The number of hours that people spend watching videos, also known as watching time, on YouTube increases by 60% annually, the fastest growth recorded in 2 years. Born in February 2005, it has expanded the promotional force of viral videos. In fact, it is right around this channel that many videos rotate to show how it is possible to do marketing and advertising in a striking way. Moreover, even on a global level, YouTube is at the top ranking amongst the most consulted sites, even settling in second place.

The strength of YouTube lies in its flexibility and easy to use: without registering you can have access to millions of videos of all kinds, those mostly watched end up on the front page. This is precisely the goal of a visibility strategy conducted on YouTube: make sure you end up on the most viewed video page of the day.

An interesting aspect in this regard, concerns videos generated directly by users (user generated content): these often receive a greater success than those created by the agencies. This trend, which at first did not affect the sphere of marketing and the interest of brands, still linked to a traditional advertising production, has spread a new custom: that of fake video. In fact, to try to break down the typical aversion of users towards traditional advertising, advertising agencies are increasingly projected to the achievements of fake videos, namely apparent amateur.

In this way the user's defences are less restrictive, passing the advertising message more easily. Numerous examples of success, not only referring to user generated content videos, are collected within the YouTube Advertisers channel, launched by the same team of YouTube in collaboration with the Art Directors Club Global.

The site is entirely dedicated to the collection of successful case histories related to the use of YouTube as a marketing tool, showing that an excellent way to make a video or any other digital content popular is to capture the attention of the user completely, with a really contagious idea. Everything that entertains in a simple and immediate way on YouTube works. Short videos work, able to create a trend, a fashion, a way of being.

The growing popularity of smartphones and broadband in Italy, pushes many companies to communicate with their consumers via mobile devices. This market is certainly a valid field for proposing innovative marketing strategies. In fact, mobile devices (PDAs, smartphones, tablets, etc.) present some interesting features:

-
- the possibility of personalization;
 - the vast coverage on the territory;
 - the use in order to communicate with other users (in *social networks* for example).
-

The share of mobile marketing has now exceeded 20% of online advertising, but about 80% is in the hands of the big players of the web (above all Facebook and Google). A market that is dragged by social networks that collect almost 60% of advertising revenue thanks to the ads displayed on smartphones, from the most relevant video and rich formats. We are an increasingly connected people, Audi web confirms that around 1 Italian in 2 is connected to the Internet. In 2015 on average we find online 29 million users in the month and about 22 on the average day, in fact you check your mobile phone 150 times a day.

On the basis of socio-demographic data, it still confirms a significant diffusion of the daily use of the network by the younger segments of the population. In fact, the daily use of the Internet is widespread mainly among 18-24 year olds (67%, 2.8 million users) and 25-34 year olds (66%, 4.6 million), among the most active even in fruition of mobile internet.

On the one hand, therefore, the demand grows, on the other the supply is structured. According to a study, in 2016, 50% of companies declared that they do digital marketing, but do not have a precise strategy, while 16% consider mobile marketing as a separate activity compared to other marketing strategies. The objectives generally pursued by a mobile marketing campaign can be regarded:

- increase of brand awareness
- database generation of opt-in client profiles (volunteers)
- increase in customer loyalty.
- increase in sales (Rubino, 2009).

However, there are many innovations in this regard: recently, many applications have been designed to be downloaded directly to mobile devices. These are service applications or games and fun applications. Other tools that can be used are micro-browsing sites or sites designed for mobile phones, or even QR Codes and Data Matrix (Semacode), consisting of two-dimensional barcodes readable by mobile phone.

A QR code could improve, for example, the customer's shopping experience by providing information on the products he intends to purchase and also, based on past customer purchases and previous browsing activities, suggestions about menus, diets or combinations of food, clothes, etc. and could also allow the sharing of information and suggestions with other customers, friends or enthusiasts. (Mobile Marketing Observatory & Service, 2007).

At the same time, some companies are experimenting with the downloading of advertising games as an advertising mechanism with two types of delivery models:

- advertising games, or games, developed with different types of languages (Java, ActionScript etc.), which contain the concept or elements of the brand identity or of the communication campaign in progress;
- ad-funded games, or those games in which advertisements are inserted during the upload phase.

The feature that unites the two types and the possibility of being used for free (except for the payment of the possible data traffic). The objectives pursued by the companies through the two tools are different: the advertising games stimulates the user to become more familiar with the brand and to interact with the company, for a longer period, having fun; through the ad-funded game, a pure advertising campaign is carried out (Osservatorio Mobile Marketing & Service, 2007). In short, the mobile allows the person to reach people the moment they are making a purchase or are experiencing a particular experience.

The seasonal plan on the mobile should include not only promotional activities but also aimed at engagement: Starbucks for example has created a calendar of initiatives for customers who use their app that includes both weekly offers, and the opportunity to taste the specialty of the period, whether or not to receive thematic

greetings. Compared to traditional media, mobile makes it possible to reach consumers at any time, given that every person keeps their smartphone (and on the lookout) constantly at hand, and in many ways: messages and push notifications are immediate means of contact, that easily attract the user's attention, it is estimated that 99% of the messages are open within 90 seconds of receiving them.

From the mobile, more and more people access directly to the app, without going through the browser. In 2017, 279.628 billion app were downloaded worldwide and it is estimated that in 2018 it will be 324.801 billion. Having a site optimized for each device is a fundamental point in the mobile marketing strategy. 47% of people expect a site to load on their smartphone within 2 seconds and 40% tend to abandon it within 3 seconds if it does not load correctly, also Google has started to penalize in the ranking of results sites that are not mobile friendly (in searches made on the smartphone engine).

5. Discussion.

«Some of the most effective and powerful messages that can affect a company and its products come from outside the organization and are beyond the control of marketing managers» (Lovelock & Wirtz, 2007, page 216). These messages, transmitted from one individual to another in an informal way, are an excellent tool for indirect communication, and perhaps the most powerful of all. Making sure that a positive word of mouth is triggered is the ultimate goal of every organization. It is well known, in fact, that customers' recommendations to consumers represent the best type of promotion for a good, a service, and a company as a whole.

Typically, the word of mouth can be defined as spontaneous communication from person to person, between a communicator and a recipient. It "acts as an" amplifier "of experiences made by individual consumers, who are transferred to other subjects. Through word of mouth, positive experiences are transferred, to make others participate, or negative experiences to "take revenge" for the disservices suffered or the poor quality of the service received by the company or organization, or to "protect" other potential buyers "(Mauri, 2002, p.5). It is therefore important, given the implications that may derive from it, to ensure that customers are satisfied overall.

However, this is not the crux of the matter. What we want to clarify in such context is because the word of mouth, one of the oldest forms of communication in existence, still arouses such great interest today. This practice has always existed, and is universally recognized as the oldest and most natural form of marketing communication (Mauri, 2002); only recently, however, this has been realized on account of the loss of effectiveness on advertising and traditional marketing, communication mechanisms based on word of mouth could be a valid solution, given their high credibility.

In fact, coming from completely disinterested sources (such as friends, acquaintances, family members, neighbours, etc.), advice and recommendations are more credible than any other form of paid communication, including advertising (Blythe, 2006). These characteristics make the word of mouth one of the strongest forms of communication, but at the same time more fearful because it can trigger off regardless of the company's will, and difficult to manage (Granata & Scozzese, 2017).

These considerations, together with the recent changes that have led to greater consumer power over companies and the development of new communication technologies, have led to focus once again on this phenomenon, now amplified more than ever. The advent of the Internet has in fact increased the possibilities, available to consumers, to gather impartial information on products from other consumers and provide, in turn, to release others, thus engaging in actions of electronic word of mouth (e-word of mouth or word of mouse). It, together with the practice of viral marketing, is outlined as a new form of non-conventional marketing able to spread a brand message and to conquer and infect contemporary consumers.

To achieve the desired effects, whether the spread takes place on the Internet or outside, viral marketing investments should focus on engaging an initial group of users capable of performing the function of an ideavirus connector. These are the so-called opinion leaders that means people endowed with such a charisma that they are able to influence the behaviour and ideas of a large number of individuals (Pastore & Vernuccio, 2008). The mechanism of influence is based on the fact that opinion leaders are people much more permeable to information than others, participate intensely in the life of their community, and are endowed with strong charisma and credibility, strongly inclined to novelty, extremely curious and with a high level of confidence in the digital network. For the purposes of dissemination, however, a propensity for the influence of the exchange of information is not sufficient.

It is certainly necessary to motivate the individual to propagate the ideavirus: an advantage, in economic terms, in terms of social recognition or sharing of the opinion leader's experience. Just enough to distinguish influencers rewarded by those by vocation. In addition to creating an innovative idea, it is therefore important to identify the

right individuals to start influencing. Gladwell, (2001) argues in this regard that, for an effective viral marketing action, the determining factors, as well as the speakers, such as the subjects capable of spreading the message influencing the recipients, are:

- viscosity or stickiness, meaning the creation of a sticky (viscous) message, able to remain in the receiver's memory;
- a network, meaning an environment in which the message can be spread in a simple and effective way.

At a later stage, according to the author, just as happens in epidemics, the idea would explode, to the point of infecting huge masses of individuals. This reaction, this sudden change, would occur once the tipping point is reached, the critical point able to trigger gigantic chain reactions. Malcom Gladwell, analyses in detail the process of dissemination of these ideas in a population.

The thought of Seth Godin, an American essayist considered the preceptor of marketing, is interesting in this regard. In his book "Purple cow" and in his other works, he takes up and reworks the idea of Geff Moore, in describing the way in which ideas are propagated within a population.

According to the author, the spread would take place exponentially, thus affecting an ever-increasing number of consumers, to reach them all. The phenomenon can be expressed graphically by a bell-shaped curve whose initial feature is constituted by the innovators and early adapters, the central one by the majority and the final one by the latecomers. The horizontal axis represents the different groups that the idea meets over time, while the vertical axis represents the number of people present in each group.

The author then argues that in spreading, a new idea would follow the trend proposed by the graph: first would affect the innovators, for them to own the novelty is a pleasure, an almost irresistible drive, then the early adapters, do not buy something new only because it's new: but they want to be updated, fashionable. As soon as the new product begins to spread, they feel authorized to buy it and in successive stages, the majority the one early, the other late. The majority is so comfortable with the products and services it uses; that does not want to change.

Finally, the latecomers or people for whom novelty is a nuisance, a danger, is to be avoided as long as possible - and therefore the last to buy one. Thus, in viral marketing, what counts is the ability of the initial target (the innovators) to influence certain groups of consumers, unlike what happens with traditional methods, where it is necessary immediately, to reach the majority of spectators. This consents to reduce time and money to inform the rest of the public. Target selection is of fundamental importance in any viral marketing strategy; it is therefore essential to turn to a group of individuals who are able to influence, with a moderate expense, the purchasing behaviour of other consumers.

6. Conclusion.

Companies can choose to approach these new phenomena, read them, understand them, interpret them, research and identify new advantages and opportunities and then start a process of change aimed at adapting the organization to a model that is able to fully exploit these phenomena. Or they could choose to ignore them, distance themselves, close their eyes, pretend they do not exist, convince themselves that they are only transitory phenomena of a technological nature and lacking relevance for the business.

Regardless of the choices of the individual companies, these phenomena will continue their development, users and consumers will have an increasingly central and decisive role for the company's businesses, they can contribute to the launch or downfall of an organization and its products, at least in terms of image and communication. It is therefore up to companies to choose whether to change or stay, whether to grow or grow old, but aware that the numbers of this great opportunity are surprising and growing and that in 2017 Internet users worldwide exceeded 3.5 billion.

Marketing must be understood not as something aimed at selling exclusively, but aimed at the exchange. The ability to communicate and transfer value is fundamental and here social media can play an essential role, both in managing the relationship between companies, cultural organizations and the user/customer of the proposed offer, and in soliciting the desired response from the public/objective, that is the target in consideration.

Social media marketing represents an operational application of relationship marketing, as it aims to build an effective network where mutual profit relations are established, aimed at satisfying the parties, using the tools offered by the social networks.

A well-defined digital strategy ensures that the website, social media and other tools available to the organization, such as for example blogs, are integrated in synergy and their management is consistent with the mission and vision

of the company. Online communication must always be coordinated with the offline component and must be part of a dynamic organizational system, structured in concrete and measurable objectives; this requires the involvement of all the staff of the organization, who must share the objectives, ideas and work activities with the public.

References

- Blythe J. (2006). *Essentials of marketing*, Pearson education limited; ed. italiana: Cerdola E. (a cura di), *Fondamenti di marketing*, Pearson Education Italia, Milano.
- Calicchio, S. (2006). *Trasmetti il Virus*, Lulu.com
- Gladwell, M. (2001). *The Tipping Point: How Little Things Can Make a Big Difference*, Little Brown & Company, New York.
- Godin, S. (2000). *Unleashing the ideavirus, Do You Zoom*, New York.
- Granata, G. (2016). *Business Communication 2.0*, Aracne editor, Roma.
- Granata, G., & Scozzeze G. (2017). *The Influence of Virtual Communities in Marketing Decision in International Business Research*, Vol. 10 n° 12, ISSN 1913-9004, doi:10.5539/ibrv10n12p191.
- Iavazzo, V. (2009). *I segreti del video marketing. Strategie e tecniche segrete per guadagnare e fare pubblicità con i portali di condivisione video*, Bruno editore, Roma.
- Lovelock, C., & Wirtz, J. (2007). *Services marketing: people, technology, strategy*, Pearson education.
- Mauri, A. G. (2002). *The quality of firm's output as factual communication: The role of word-of-mouth Sinergie*, 59.
- Pastore, A., & Vernuccio, M. (2008). *Impres e comunicazione. Principi e strument per il management*, Apogeo Editore, Milano.
- Rubino, G. (2009). *Mobile viral marketing. Come usare il marketing virale nella comunicazione mobile*, eboogle
- Venturi, A., & Covino, G. (2009). *Web marketing per le PMI. Guida alle nuove opportunità di business e di comunicazione*, Editrice UNI Service.
- Wilson, R. F. (2000). *The Six Simple Principles of Viral Marketing*, Web Marketing.

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Status and Challenges in Implementing Beyond Budgeting: Evidence from Sri Lanka

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Received: November 2, 2018

Accepted: November 22, 2018

Online Published: November 29, 2018

doi:10.5539/ibr.v11n12p113

URL: <https://doi.org/10.5539/ibr.v11n12p113>

Abstract

Due to the weaknesses of Traditional Budgeting and Better Budgeting, budgeting moved to its third wave called Beyond Budgeting. Beyond Budgeting is an alternative, coherent management model that enables companies to manage performance through processes specifically tailored to suit today's volatile market.

Although, researchers have explained how organisations should move to Beyond Budgeting they have not discussed as to why some organisations are lagging behind in terms of Beyond Budgeting implementation. Therefore, this study intends to address and bridge the above research gap. Specifically, the study investigates how far the existing organizational set-ups support an advanced model called Beyond Budgeting and explores why can or cannot these organisations move to Beyond Budgeting.

The study carries out a multiple case study approach because it provides an in-depth analysis of budgetary processes of four reputed Sri Lankan companies. Data was collected through semi-structured interviews and documentation reviews where data triangulation was used to validate the data.

Based on the findings the study concluded that in the existing organizational set-ups, leadership principles of Beyond Budgeting were strongly present compared to process principles. It was also found that complications in setting rolling forecasts, bureaucracy, lack of virtues, dependency culture on budgets to evaluate performance, perceiving dynamic goals as too ambiguous to set and lack of competitor intelligence as main barriers of moving to Beyond Budgeting concept.

Keywords: traditional budgeting, Beyond Budgeting, leadership principles, process principles, Sri Lanka

1. Introduction

Budgeting is one of the most frequently used managerial tools by any organization. Also, it is a tool that has been repeatedly researched on. Budget is understood by many scholars as a device for planning and controlling the performance and output in organisations (Rickards, 2008; Chong et al., 2005; Anthony, 1965; Frow et al., 2010, Ekholm & Wallin, 2000; Niels & Per, 2014).

However, lately the budgets have been heavily criticized by practitioners (Stede, 2001; March, 1988; Neely et al. 2003) who suggested that the budgets bring more costs than benefits irrespective of the setting. The costs of budgeting did not only include the financial burden of lengthy budgetary processes but also negative influences on a company's culture resulting in undesirable or unethical behavior of the organisation members who are forced to deliver financial outcomes beyond their control (Hope & Fraser 2003).

Due to the weaknesses in the traditional budgeting, budgeting moved to another wave, known as Better Budgeting. Better Budgeting brought forward the techniques such as Activity Based Budgeting, Zero Based Budgeting, Value Based Management, Profit Planning and Rolling Budgets (Libby & Lindsay, 2010; Neely et al., 2003). However, several weaknesses were observed with the Better Budgeting concepts. As with activity-based management studies, capacity management studies tend to have a product-costing focus, leaving issues of capacity management integration with budgeting and other organizational practices unaddressed (Hansen et al., 2003). Even though zero-based budgeting became popular in the 1970s and 80s and proved to be a useful exercise to review discretionary overheads it was noticed in practice, the process is so bureaucratic and time consuming. Accordingly, the Better Budgeting concept too failed to address some of the fundamental issues such as linkage of the budget to the organizational strategy. Instead it promoted another level of budgeting that still

stuck to managing numbers (Hope & Fraser, 1997).

Much research work had been carried out about how the budgets should improve rather than how to eliminate the budgets until Hope and Fraser (1997) did the initial research work on Beyond Budgeting. Since then, several investigators including Waal (2005), Wallander (1999), Hope et al. (2011), Dugdale and Lyne (2004) have carried out research on the Beyond Budgeting concept.

With the insufficiencies of Better Budgeting, Hope and Fraser (1999) saw a growing dissatisfaction across the whole business community with the general management approach, which is based on and much influenced by traditional budgeting as well as the pervasive budgeting culture with all its negative implications for successful enterprise management. They pioneered the concept of Beyond Budgeting as a solution (Daum, 2002). Beyond Budgeting is a framework for budgeting which comprises of 6 leadership principles and 6 process principles that emphasize on employee empowerment, customer focus, competition, relative targets and team performance (Hope & Fraser, 2003; Waal, 2005). According to Waal (2005) the 'leadership' principles support greater devolution of responsibility to teams accountable for improving customer outcomes relative to peers and competitors. The six beyond-budgeting leadership principles are described briefly underneath.

- A self-governance framework - In the beyond-budgeting organisation the hierarchical organisational structure is subdivided into smaller, self-managing units. The traditional central control system with many rules and procedures is thus abandoned. Managers have the authority to run their unit as they see fit.
- Empowered managers - Organisational members have the freedom and opportunity to act at their own discretion. There are no tight controls that restrict people in their room to manoeuvre. Managers of self-managing units act within the values and strategic boundaries as set by senior management.
- Accountability for dynamic outcomes - People in the beyond-budgeting organization are responsible for achieving competitive results, not for achieving pre-set targets for a department or function.
- Network organization - The beyond-budgeting organisation is structured in such a way that self-managing units form independent, customer-focused entities. These entities focus completely on the market and delivering value to customers.
- Market coordination - Services from central support units (like HRM, ICT) can be purchased by the self-managing units on the basis of service level agreements. Each unit can decide for itself whether it wants to use services from central support or whether it wants to hire external support.
- Supportive leadership - The organisational members are encouraged to achieve stretching goals and coached by senior managers in obtaining these. The managers of self-managing units are allowed to take risks and make mistakes, without directly being punished for it.

According to Waal (2005) the 'process' principles support adaptive management processes that enable enterprises to be more responsive to their competitive environment and customer needs. The six beyond-budgeting process principles are briefly explained below.

- Relative targets - The organisation's strategy is aimed at beating the competition, not last year's budget. The targets are set in relation to the organisation's main competitors or comparable organisations.
- Continuous strategy-setting - The strategy-setting process in the beyond-budgeting organisation is a continuous and bottom-up process, not a yearly top-down exercise. The strategy is continually adapted to the circumstances, based upon signals and input from the organisation's front line.
- Anticipatory systems - At least once every quarter managers make rolling forecasts which extend beyond year end (preferably six quarters ahead) for both the financial and non-financial critical success factors of the enterprise. There is no connection between the forecasts and the reward system, as a result of which forecasts can be set in an objective way.
- Resources on demand - Managers allocate resources to those units where they are needed most, at the time they are needed most. The self-managing units decide for themselves how much resources they need to satisfy the demands of their markets and make investment plans accordingly.
- Fast, distributed information - Information is quickly available and easy to access for those who need it in the organisation, at the time they need it. The information is not over-detailed and contains both lagging and leading indicators.

- Relative team rewards - The rewards are based on the results of the self-managing units and the organisation as a whole, in comparison with the competition.

The success of Beyond Budgeting has been proven in several studies (Waal, 2005; Ostergren & Stensaker, 2011) In 1998 a group of companies, mainly European (including Handelsbanken, Borealis and Volvo Cars), launched a joint-research: The Beyond Budgeting Round Table (BBRT), led by Jeremy Hope and Robin Fraser. The aim was to identify companies that scrapped their budgets, to generate best practices and case scenarios and to share the knowledge. The research showed that all the companies that have abandoned budgeting have all outperformed their direct competitors on every possible measure (both financial and non-financial), and that none of the managers of the Beyond Budgeting companies interviewed for the research desired to come back to an old budgeting model (Paludgnach, 2002).

Hope and Fraser (2003) emphasized the need to eliminate the budget; however, Frow et al. (2010) argued that evidence from their study based on "Astoria" demonstrates that the abandonment of budgeting is not the only, or necessarily the best, option for organisations to pursue. Simons (1991, 1994) on the other hand, suggested that the solution is not to abandon traditional management control systems, but rather to use them as part of a more extensive control package, where they may be deployed diagnostically, in association with other forms of control to ensure that important goals are being achieved efficiently and effectively.

There are ample of studies carried out on the weaknesses of traditional budgeting (Rickards 2008, Hansen et al., 2003, Bourne et al., 2003; Ekholm & Wallin, 2000). However, Dugdale and Lyne (2004) have indicated that 71.8% of the managers of South West England believe that the budgets are extremely important for planning, controlling and motivation. In addition, they found that only 28% of the European automobile supplying companies have implemented Beyond Budgeting while 93% of them practiced traditional budgeting.

It was also noted that the research that has been carried out focusing how certain organisations have moved to the Beyond Budgeting concept, has left several knowledge gaps. Some of the research works are merely quantitative studies and have not carried out an in-depth analysis and some are based on a single case study. A multiple case study has not been carried out by any investigator. Studies by Hope and Fraser (2003) and Wallander (1999) on Svenska Handelsbanken have not revealed what barriers existed in moving to Beyond Budgeting. Waal (2005) investigated what pre-conditions should be there to introduce Beyond Budgeting and how the Beyond Budgeting Entry Scan can be used to introduce Beyond Budgeting. However, it has not been revealed why some organisations are still lagging behind in terms of the implementation of Beyond Budgeting.

Therefore, to further investigate such knowledge gaps and contradicting views, this paper intends to identify how the budgeting practice is designed in the selected organisations; how far does the existing organizational setup support the implementation of Beyond Budgeting and why some organisations are still lagging behind, and why can or cannot the selected organisations move to Beyond Budgeting. Therefore, the research covers a wider scope that has insufficiently been covered by the prior research work.

2. Case Study Companies

Four leading, reputed companies which are believed to have robust management accounting practices were selected from three different industries based on the convenience of accessing personnel who are involved in the budget setting process. The management of those companies wished their companies to remain anonymous therefore the four companies are code-named as Muffler, Carol, LFC and Brown.

Muffler is a leading apparel manufacturer and exporter established over 25 years ago with a turnover exceeding USD1.8bn as of 2017. Muffler has 38 world-class apparel facilities spread over ten countries including USA, Brazil, United Kingdom, Italy, Germany and China. Muffler provides employment to over 55,000 people. The company has a lean manufacturing system that is based on the Toyota Production system. The company is well renowned for its corporate social responsibility initiatives which improve and sustain employee and community livelihoods.

Carol is leading diversified group of businesses with a history of more than 150 years. Its main lines of business are in oil palm plantations, oils and fats, beverages, investments holdings, management services, real estate and leisure sectors. The company is listed on the Colombo Stock Exchange and has a market capitalization of LKR 32bn in 2017 (Annual Report 2017) which places it among the top 5 listed companies in Sri Lanka in terms of market capitalization.

LFC is one of the largest premier licensed finance companies in Sri Lanka with a market capitalization of LKR44bn which places it among the top 20 largest listed companies in Sri Lanka in terms of market capitalization. LFC initially was a leasing company, however, now is moving to the concept of a conglomerate

by diversifying its operations. The company highly concentrated on providing financial services and has operations in renewable energy, leisure, plantations, trading and constructions. LFC has one of the largest distribution networks compared to its peers comprising 183 branches.

Brown is a leading apparel manufacturer and exporter specialized in casual wear and lingerie manufacturing. The company employs over 40,000 and has over 42 manufacturing locations in Sri Lanka with operations in India and Bangladesh. The net sales exceeded USD 1465mn in 2017. The company made a revolutionary development in the apparel industry by its "Apparel City" which brings alive the 'Fiber to Store' concept. This fully fledged industrial city, complete with water, power, labour, communications and transportation is expected to provide "Plug & Play Infrastructure" where investors can simply set up shop immediately. The company is well known for its waste management and clean technology.

3. Methodology

To investigate the research issue, a multiple case study approach was adopted (Yin, 2003). Case studies enable the researcher to explore and study a variety of phenomena through detailed and deep insights, with much consideration given to qualitative data gathered from many actors in individual case sites (Kodama, 2003). As stated by Yin (2003) a major strength of the case study is the opportunity to use multiple sources of evidence, with data needing to converge in a triangulation fashion, and as another result. The research question in this study is "why some organisations are still lagging behind in terms of the implementation of Beyond Budgeting?" The research question intends to find out how far the organizational set-ups support Beyond Budgeting and why they can or cannot move to Beyond Budgeting. Yin (2003) argues that "how" and "why" questions are more explanatory and likely to lead to the use of case studies, histories and experiments as research strategies. Objectives of this study also tried to identify the existing situation and evaluate the possibility of moving to Beyond Budgeting rather than identifying relationships among variables. Therefore, the case study approach seemed the most appropriate method for this study.

Moreover, steps were taken appropriately to establish the reliability and validity of the research findings by applying data triangulation. Patton (1987) discusses four types of triangulation in doing evaluations; data triangulation, investigator triangulation, theory triangulation, and methodological triangulation. This study used the data triangulation method and it encourage the investigator to collect information from multiple sources within a single study but aimed at corroborating the same fact or phenomenon. Data triangulation can assist a researcher to take advantage of the strong points of each type of data, cross-check data collected by each method, and collect information that is available only through particular techniques (Hoque, 2006).

During the data gathering process, data were collected through review of documents, interviews with top and middle level managers. All the interviewees were either directly involved in the budget setting process of the companies or had a very good understanding of the management accounting practices of the organisation. All the interviews were semi-structured interviews and were based on a pre-set interview protocol. The interview protocol was updated as the interviews progressed from one person to the next person and also from one company to another company. Interviews were limited to a maximum of one-and-half hours and certain executives could be followed up for more details. In addition to face to face interviews, data was gathered through several follow-up telephone interviews. All the interviews were voice recorded with the permission of the respective interviewees. These voice records were subsequently transcribed.

In Muffler, the Financial Controller and one of the Finance Executives were interviewed. The interview with the Financial Controller was limited to one hour; however, the Finance Executive could be followed up for information several times. Since Muffler is a leading apparel exporter several industry publications and news articles along with company website could be referred for the verification of data. In LFC, first an Assistant Manager was interviewed with the ability to follow up on information. Then the Finance Manager and Executive Director could be contacted to verify some of the information. The interview with the Assistant Manager took one-and-half hours whereas the interviews with the Finance Manager and Executive Director were limited to thirty minutes each. LFC is a leading finance company which is listed therefore most of the information could be verified through the annual report, company website and industry publications. Carol provided the opportunity to interview the Finance Manager which ran for one and half hours. However, since Carol is a leading diversified conglomerate which is listed the annual reports and published data were available to be retrieved. Brown provided the opportunity to interview one Assistant Manager and Finance Executive which were set up as one-hour interviews with each person. Brown too is a leading apparel manufacturer and exporter and several publications, and the company website was helpful in gathering and verifying data.

4. Discussion and Findings

The main focus of this section is to discuss the findings of the study with respect to the research objectives. This study investigates how far the existing organizational setups support for Beyond Budgeting and explores why can or cannot these organisations move to Beyond Budgeting.

The following section elaborates the findings of each objective under each case company.

4.1 Identification of Budgeting Practices in Case Companies

The first objective of this study is to identify how the budgeting practices are designed in case companies. Accordingly, under each case company findings of the first objective were discussed.

4.1.1 Muffler

The entire budget setting process of Muffler is a zero-based budgeting approach. Muffler's budgeting process is an annually carried out process. Currently at Muffler a central budget is not imposed on individual Strategy Business Units (SBUs). Instead they prepare their own budgets aligned to achieve the corporate objectives. The budget prepared by individual SBUs would be reviewed centrally by the corporate head office finance unit and as advised changes maybe requested for the SBUs to be made to the budget. The overall responsibility of preparing budgets lies with Finance Director. However, Directors of other functions such as marketing, manufacturing and support services are responsible to complete their respective budgets accurately and support the Finance Director in meeting the deadlines.

4.1.2 Carol

The budgeting process of Carol takes mostly a top down approach initiated by the head office. The business unit makes its own budget and then communicates to the central planning unit who collates the budgets of all the departments. However, the targets for the business units are given by the head office - all the business units have to stick to those targets and prepare their own budgets. The Finance Manager stated that:

“Although the business units are allowed to prepare their own budgets, all the targets are still given by the Head Office.”

The forecasts for the budgets are still based on the past year's data and involve a great amount of judgment by the experience of the managers. A percentage will be adjusted to the past year's budget in order to arrive at the estimates for this year.

4.1.3 LFC

The budget setting process of LFC takes the form of a zero-based budgeting approach. The budget setting process starts with the target setting which is determined by the Managing Director (MD) and the Deputy Chairman (DC). They will set the execution targets for the existing year and it will be allocated to the business units. There are several business units of LFC – a micro finance unit, a factoring unit, two finance companies and an Islamic business unit. The Managers or the Chief Executive Officers of each of the business unit will have some freedom to determine their budget. However, there will be a great level of negotiation in terms of allocating resources. Finance Managers commented:

“Each of the managers can decide how much targets they can achieve but if they are taking too easy targets the MD and the DC will push them to make the targets more realistic.”

During the interviews the Executive Director of the company further contributed this idea that the business units are given autonomy to determine the level of targets they can achieve. Further the Finance Manager explained that although a zero-based budgeting approach is followed, certain items still depend on the last year's actual figures. He explained it as follows:

“Other income and expenses are very difficult to be forecasted with a zero base. Therefore, the last year's figures are considered when forecasting the other income and expenses.”

Further the budget is reviewed every 6 months and monitored but does not roll its forecasts.

4.1.4 Brown

The budgeting process of Brown is a zero-based budgeting approach which is not based on the past year's budget but rather based on the market trends and the futuristic forecasts. The budget setting process takes approximately 3-4 months and is a mix of a bottom up and a top down approach. Brown has approximately 40 SBUs and each of the SBU is driven by the ROI and net margin. However, there is an involvement of the Corporate Office in setting the targets as well as controlling and monitoring the targets. The Finance Manager

explained that each of the SBU need to send the budgets they prepare to the Corporate Office and on time delivery is a key performance indicator for all the SBUs. Once the SBU budgets are collated by the Corporate Office the consolidated budget is presented to the Board of Directors. The budget setting is carried out once a year; however, there are budget reviews once in every quarter. Brown does not roll its forecasts and only review the budget.

Based on the individual case study findings, it can be summarized that three companies - LFC, a service organisation and Muffler and Brown which are manufacturing organisations were following a zero-based budgeting approach in setting their budgets. Carol who is a leading diversified conglomerate seemed to follow rather a traditional and incremental approach. Accordingly, it can be concluded that except one organisation all the other case companies have already moved to the Better Budgeting concept.

4.2 How Far the Existing Organizational Setup Supports the Beyond Budgeting Concept

The second objective of this study is to find how far the existing organizational setup supports the Beyond Budgeting concept. For this purpose, the Beyond Budgeting principles depicted by Hope and Fraser (2003) were used. The following section elaborates the evidence of each case company on how existing organizational setup supports the Beyond Budgeting concept.

4.2.1 Muffler

Muffler has a personalized lean manufacturing system based on the Toyota Production System. The lean operating system emphasizes on maximization of resources utilization with the objective of becoming responsive to customer demand, provide value for money solutions from design to delivery.

During the interviews the Financial Controller of Muffler explained that the entire budgeting process of Muffler is based on zero based budgeting approach. Costs have to be justified by the individual managers who act as drivers for costs and past year's costs are considered to be irrelevant. This, to an extent reflects the continuous strategy setting approach which is a feature of a Beyond Budgeting organisation as described by Hope and Fraser (2003).

According to the financial controller, Muffler practices a life cycle costing approach for the long-term assets. He explained that cash flows for the entire life span of the projects are considered and appropriate investment techniques applied thereby applying the principles of life cycle costing. Only if the payback and ROI are satisfactory such projects will proceed. This feature is reflective of a "resources on demand" approach which encourages having no fixed investment budget (Hope & Fraser, 2003) but justifying the investment requirement through a long-term vision.

At Muffler a participative approach of budgeting is used whereby finance department does not enforce the budget to department/units and the budget is prepared in collaborative effort with the drivers of the cost. Finance executive states that:

"For example, the production team will actively participate in setting the production budget for the plant. The departments and business units have the freedom to govern themselves as long as they align with the corporate strategy."

The participative, self-governing approach with limited head office involvement reflects the self-governance principle of a Beyond Budgeting organisation (Hope & Fraser, 2003).

Employee empowerment (Hope & Fraser, 2003) was a clearly visible feature in Muffler. The "Go Beyond" program launched by Muffler in 2003 mainly focused empowering female employees who constitute 93% of the employee carder. Also, Muffler's managers are given autonomy in decision making and are not always restricted to budgeted number. This was further explained by the Financial Controller:

"If certain strategies deviate from that of the budget and it can be proven that it was done in the best interests of the organisation and the Board of Directors usually supports such initiatives."

The supportive leadership as explained by Hope and Fraser (2003) was visible in Muffler. According to the Finance Manager, in the budgeting process, the final outcome is presented to the Board of Directors. During this presentation the Board of Directors consider a holistic view of the company's future state and not only depict numbers and figures but also provide advice on areas covering customer and brand strategy; manufacturing strategy; support service function strategies; lean manufacturing approaches and research and innovation policies.

The fast-distributed information (Hope & Fraser 2003) were visible in Muffler as it depends highly on the IT systems, such as its well-established ERP solution and SAP, which provides management with real time

comprehensive information for decision making. According to the Finance Executive, internal communication is mainly done through emails, where each user is given a Muffler-specific email address. Overall the IT systems support the smooth flow of information across the division.

The targets being dynamic and the managers being recognized for dynamic outcomes (Hope & Fraser 2003) was another Beyond Budgeting principle visible in Muffler. During the recession that prevailed in 2008, Muffler's managers were not "punished" or "forced" to achieve certain targets but other ways and means of cutting down the costs were practiced. The budgetary system not being rigid and the outcomes being accepted to a certain dynamic level was a positive feature in Muffler.

The customer focus, at both internal and external level is visible at Muffler. Muffler is a key supplier to a number of top global apparel, sportswear and lingerie brands and has maintained strong customer relationships over fifteen years. The customer focus is a feature that would support Muffler to move to Beyond Budgeting as customer focus encourages networking the organisation to accommodate adaptive management (Hope et al., 2011). This was further verified by the Financial Controller:

"Muffler is one of the organisations who practice the customer orientation at its best in this industry....that has been one of the critical success factors of the organization."

4.2.2 Carol

A certain level of decentralized and self-managing units was visible in Carol which supports the self-governance feature of a Beyond Budgeting organisation. The organisation consists of many business units – leisure, brewery, real estate, management services, financial services and plantations all of which are decentralized to a certain extent and autonomy is provided to operate as profit-centers which should be self-sustaining. The Finance Manager of Carol mentioned that:

"Most of the SBUs are profit centers and are driven by their net margin."

This is similar to the situation at Svenska Handelsbanken who set ROI as their performance measure for each of the branches (Hope & Fraser 2003).

Customer focus was a feature that was visible in Carol too. Carol has successfully maintained long standing customer relationships with corporate, retail and wholesale customers lasting over 10 years. High customer focus was visible in Ahlsell, Volvo and several other companies that adapted a Beyond Budgeting model (Hope & Fraser 2003).

The participative contribution of the business units in the budget setting process is a feature that would support Carol to move to Beyond Budgeting.

Carol has fast information flows which are backed by robust IT systems. The Finance Manager explained that the management reports can be effectively generated through the existing information system despite some of the databases having to be maintained on MS Excel sheets. The information is accessible to the users with password protection and hence the communication is safe and authorized.

4.2.3 LFC

The empowered managers and the accountability for dynamic outcomes which are key principles of Beyond Budgeting (Hope & Fraser 2003) were visible at LFC to a great extent. One of the Managers explained that the managers are not strictly evaluated by the budget and have the freedom to be innovative and go beyond the budget. The budget was merely a reporting requirement for LFC and the organisation was managed with an entrepreneurial spirit by its top management. Therefore, moving to a budget free system was not seen as a surprise for LFC. This was further explained by the Executive Director:

"We always encourage managers to be innovative and do not manage our organization based on numbers. If managers can justify what they have achieved given the business conditions, it is well-received by the top management. That has been a reason for the fast growth we have achieved."

LFC was seen to be a continuously strategy setting organisation which is indicated in their numerous innovative new products of the recent years. Continuous strategy setting which encourages the organisation to be responsive to the environment and be innovative especially allowing the strategy to emerge from bottom-up level is a key principle of Beyond Budgeting (Hope & Fraser 2003). The Executive Director explained that some of the key new products emerged from the views of the marketing or sales people. The annual report of the company further verified this as:

“This year we initiate the gold cheque discounting which is a timely solution to SME borrowers to suit their needs. Our agility and flexibility are made possible entirely by our talented and dedicated people.”

Hope and Fraser (2003) explained that a Beyond Budgeting organisation needs to be setting targets relative to the market and the competitor. The Assistant Manager mentioned that LFC is highly competitive and the target setting at the top management level is carried out by considering the competitor action. The Executive Director further confirmed this view.

“We set our portfolio growth and profit targets by looking at the competitors. Currently we are the number one Finance Company in the country, but we always look at the market and the competition when setting our portfolio growth and profit targets.”

Customer focus was a feature that was visible in LFC to a great extent. The Assistant Manager explained that:

“Some of our micro financing and the Islamic financing products are highly customized to suit the attitudes and the culture of the customer. We cater to customers who feel shy and insecure to walk into a sophisticated bank through our post offices.”

This was further confirmed in the company annual report as:

“We helped to revolutionize the small and medium sector by financing assets that were self-financing for the customers. Our channel mechanism comprising post offices offer excellent service to the otherwise untapped micro clientele.”

Strong leadership (Bogsnes, 2016) was another feature of Beyond Budgeting that was clearly visible in LFC. One of the Managers mentioned that LFC is being managed by the well-known, prominent entrepreneurs who hold a strong track record of achievements and leadership initiatives.

4.2.4 Brown

Similar to Muffler, customer focus was a feature that was clearly visible in Brown too. Customer focus is a feature that supports an organisation to become a network organisation which is a principle of Beyond Budgeting (Hope and Fraser 2003). The Assistant Manager of Brown explained that before designing a pattern for clothing, all the customer requirements are properly gathered and documented, and certain cost reduction techniques are agreed upon. This customer focus was clearly mentioned in a statement made by the CEO to Tukatech (2012).

“Cost alone is not our focus. We want to provide speed and value to our customers.”

Relative target setting was a principle of Beyond Budgeting (Hope & Fraser 2003) that could be seen at Brown. Brown is highly competitor focused in contrast to Muffler and sets its targets relative to the competitors. The Assistant Manager mentioned that Brown has a “Market Watch” which collects competitor information and process them for the decision making by the top management. Also, the Assistant Manager mentioned that most of the social responsibility and community work is carried out as a result of this competitor focus.

“Most of Brown’s top global apparel buyers such as Gap, Banana Republic and Marks & Spencer refuse to buy from so-called garments with guilt. Therefore, to stay ahead of the competition we need to prove that we are engaged in community services and ethical work practices.”

Resources on demand were also a feature that was visible in Brown to a great extent. According to the Assistant Manager, the resources are allocated based on the need and each business unit can justify their resource requirement. This was further verified by the environmental strategy of Brown which ensures that resource allocation is done based on the priority of the environment and not on the last year’s budget.

Empowering employees to be innovative and team rewards and team work were clearly visible features in Brown (Hope & Fraser 2003). The Finance Executive mentioned that team performance has a great weight on the performance evaluation and certain projects and assignments are purely based on the achievement of objectives through team effort. Also, he explained that teams are free to come up with innovative ideas which are welcomed by the top management. This was further verified by having “teamwork” and “learning and development” as core values of the organisation on the Brown value statement which mentioned that:

“Brown provides a collaborative team environment that would promote ideas, risk taking and creativity. We will not take the personal glory at the expense of our team and will take individual responsibilities for achieving team goals.”

It was noted that Brown encourages strategy to emerge through its employees. The Assistant Manager mentioned that Brown practices an “open door” policy.

“Any employee can reach even the highest level of Brown and bring up any new idea. Even the machine operator can come up with something new and approach anyone in the organisation.”

This was indicative of the continuous strategy setting feature that is visible in a Beyond Budgeting organisation. In addition, there is an award program designed to award the innovative thinking very well confirms above views.

Strong leadership was clearly visible at Brown as the Assistant Manager mentioned that Brown is managed by the nationally recognized management professionals. The company profile indicates that the CEO of Brown was instrumental in the establishment of The Joint Apparel Association Forum (JAAF) - the apex body of the apparel industry primarily involved in driving strategy for the industry. In addition, another Director of Brown within a year after joining Brown began to successfully manage and develop a growing number of subsidiaries under the emerging Brown Group.

Fast distributed information (Hope & Fraser 2003) which is essential for the Beyond Budgeting organisation could be seen at Brown. The Assistant Manager of Brown mentioned that:

“Brown is well networked with email and internet access to staff. Even the factory staff has proper communications systems such as signal boards which are easily understood by them.”

This was further explained by the Finance Executive who explained that the formal communication systems are well backed by the IT department. In addition, weekly and monthly meetings are being carried out on assigned tasks to keep everyone in the team aware of the ongoing work.

Based on the findings it can be concluded that the six principles namely self-governance framework, empowered employees, customer focus, supportive leadership, continuous strategy setting, and fast distributed information are strongly present in most of the organisations. Out of these six principles the first four are “leadership principles” of Beyond Budgeting. In addition to the above principles, accountability for dynamic outcomes, relative targets and resources on demand could be seen in at least two organisations. Therefore, it can clearly be concluded that in the existing organizational setups, leadership principles strongly support the Beyond Budgeting concept (Bogsnes, 2016) compared to “process principles”, hence the process principles are what need to be improved.

4.3 Identification of why can or cannot the Organisations Move to Beyond Budgeting

The third research objective intended to identify why can or cannot the organisations move to Beyond Budgeting. The following section elaborates the evidence of each case company in relation to the objective three.

4.3.1 Muffler

According to the Finance Executive, Muffler’s individual employee performance evaluation takes team performance into consideration during appraisals. There is a considerable weight given to teaming in the employee performance evaluation scheme.

In a Beyond Budgeting organisation the performance of other comparable teams is taken into consideration at a broader level (Hope & Fraser 2003). But in Muffler it is different, and the Finance Executive explained it in the following way:

“The main barrier to set relative team rewards was that each of the SBUs has different operating conditions therefore an inter-SBU comparison may result in demotivation.”

Setting relative targets compared to the competitor was seen to be a challenging task when setting the competitive strategy of Muffler. Benchmarking was visible in Muffler to a great extent as it was adapting many international best practices in apparel manufacturing. However, benchmarking with the competitor was identified to be at a poor level mainly because information about the competitor was hard to be found. The Financial Controller of Muffler mentioned:

“There are very few major competitors who are not listed...therefore obtaining information about the competitor strategy is a challenging task. Also, we are already the leading player in the market and we believe that we stay ahead of the competitor rather than following the competitor. Therefore, we do not consider competition as a serious issue when it comes to budget setting.”

Muffler does not roll its budgets frequently. The budget period is divided into monthly “monitoring periods” but rolling the forecasts considering the market conditions does not happen at Muffler. The likely reason given by the Finance Executive was that it consumes a large amount of time and effort to roll the forecasts and make a new budget. It was suggested that:

“If we have sophisticated software to support making adjustments it would be easier. But at the moment we have a lot of manual work to do on MS Excel.”

This is a barrier to change the organisation into an adaptive and an anticipatory system as explained by Hope and Fraser (2003).

The market coordination feature which challenges the shared services in an organisation and provides autonomy for the business units to purchase what they need (Waal, 2005) is a principle of Beyond Budgeting which was found to be absent in Muffler. The Financial Controller of Muffler mentioned that the main barrier to eliminate the shared services such as HR and IT is that the employees are very much used to depending on the shared services over a period of time and the need to control certain common resources. Due to that the shared services having a higher demand there are inefficiencies and delays in delivering the output. This was further clarified by the Finance Executive who mentioned that:

“Sometimes it is difficult to get the stationary ordered or a computer fixed, as we are always depending on the shared services to do it for us. They also get number of requests a day and therefore delays and inefficiencies are unavoidable.”

According to the Financial Controller, to a great extent budgets do drive Muffler’s managers to achieve targets as mostly their performance. Further, the achievement of the budget is important because manager’s incentives would be dependent on achievement of budgets. As such planning and control based on budgeted numbers is critical for performance measurement and evaluation. From the perspective of the Financial Controller, this dependency on budget is one barrier that Muffler cannot completely eliminate the budget. The Financial Controller also mentioned that the budgets provide a guidance to some extent and eliminating budgets cannot be done overnight.

4.3.2 Carol

The managers of Carol lacked empowerment to take risks and make mistakes as they were strictly controlled by the budget. The performance bonuses of Carol’s managers are tied to the achievement of the budget while not achieving the budgets costs the job to certain managers. The Finance Manager of Carol explained:

“I can remember there were occasions that some of the senior managers were asked to go home where they could not achieve the budget targets – because budget target achievement is of such importance.”

Empowerment is an important feature in a Beyond Budgeting organisation (Hope & Fraser 2003) and lack of empowerment remains a key barrier for Beyond Budgeting implementation. From the perspective of the Finance Manager, the organisation is accustomed to achieving budget targets and it is known as a golden rule in performance evaluation. This dependency culture on budgets for performance evaluation can be seen as the barrier to empower the managers. In addition, the Finance Manager mentioned that:

“It is difficult to empower people at time because of lack of virtues. You cannot expect everyone to act responsibly and transparent.”

Dynamic outcomes were not recognized as acceptable at Carol as achieving the budget target is a crucial responsibility of a manager. However, exceptionally good performance was recognized and rewarded, yet adverse variances were not treated as acceptable. From the perspective of the Finance Manager to justify the adverse outcomes the top management needs to change their views on realistic targets. The Finance Manager mentioned that:

“The budgets have to be achieved, it’s true; but also, the budgets should be realistic to achieve. If your budget target is going to change all the time it would not be realistic to achieve it because the goal is ambiguous.”

Continuous strategy setting seemed to be a feature that is blocked by the bureaucracy and the fear in employees. According to the Finance Manager the employees rarely bring up new ideas to the top management straight forward and many good ideas seem to be dying at the middle layer of the management. The Finance Manager of Carol explained that:

“Although there are no restrictions to bring up your suggestions to the top management, people are generally scared to approach the top management straight. As I see, this is an established organisation and the bureaucracy is unavoidable to some extent.”

According to Waal (2005) the continuous strategy setting is possible in an organisation if there is a bottom up approach for strategy setting.

Carol too did not seem to be rolling its forecasts. The Finance Manager explained that the budget is monitored quarterly for control purposes. However, rolling the forecasts are not done because of the following reasons mentioned at the interviews:

“Making the annual budget itself is a rigorous, time-consuming process. Rolling the forecasts may take even more time and resources and end up with not-so-reliable forecasts.”

The above views are mostly cited in previous research work carried out by Hope et al. (2011) and Dugdale and Lyne (2004). Hope et al. (2011) mentioned that as neutralized by the powerful antibodies of the budgeting immune system. Budgeting, perhaps more than any other process defines the cultural norms inside an organisation. It was found that Carol’s managers had the autonomy to decide which resources it should acquire. However, they had to go through the central shared service process which was time consuming and lacked market coordination. Market coordination is one principle of Beyond Budgeting (Hope & Fraser 2003). The Finance Manager of Carol mentioned that although it’s time consuming and bureaucratic, shared services are needed to have a control on acquiring resources. The Finance Manager viewed:

“Eliminating shared services is an impossible task as much of the paperwork and coordination support is provided by the shared services. It is a too much of a burden for an individual business unit to focus attention on those HR, IT and such shared services.”

Setting relative targets seems to be a challenge for Carol too. Carol practices a benchmarking approach when adapting some of its manufacturing, brewery and hotel management practices. The actions of the competitor and the market conditions are incorporated to some extent in target setting by the Corporate Office. However, Carol is a leading diversified conglomerate and operates in many business lines including beverage, financial services, management services, leisure, plantation and real estate and conducts operation overseas too. Therefore identifying a realistic competitor itself is a challenge which is the main barrier to set relative targets. The Finance Manager of Carol viewed:

“Setting targets relative to a competitor is complicated as we operate in many business lines. Each business line will have a different competitor and you will have to consider each business line separately.”

4.3.3 LFC

LFC was seen to be decentralized organizations; however, the self-governance framework that is a key principle of Beyond Budgeting (Hope and Fraser 2003) was not strongly present as almost all the business units highly depend on the Parent Company which the key decision is making unit. According to the Executive Director, LFC is decentralized to a great extent as the business units operate on their own and the CEOs are free to make decisions on their own. However, the Executive Director also mentioned that:

“The individual business units need to align with the Corporate Strategy and therefore cannot be considered as fully independent. The Board of Directors can always over-write the decisions of the CEOs which frequently happen.”

As the reason for the disability to make all business units completely independent the Executive Director explained that:

“We need to align with one policy for the whole Group and cannot have different policies which arouse conflict of where we should reach as an organization.”

Accordingly, decentralization was viewed by LFC as be giving rise to ambiguous goals. This idea was clearly mentioned in the company’s annual report:

“By aligning its business interests with the sectors, LFC has placed itself on a strong upward trajectory that grows steeper.”

The market coordination and resources on demand are two important principles of Beyond Budgeting (Hope & Fraser 2003) which was seen to be hard to implement at LFC. According to the Assistant Manager LFC highly depend on shared services such as HR, marketing and was seen to be difficult to be eliminated. This was clearly stated in the company’s annual report in the following way:

“As the Group began to expand, the Board reviewed the operations and a decision was taken to centralize support services. This ensured that the procedures and controls were standardized across all Group companies.”

As a reason the Executive Director explained that the shared services have proven to be efficient in providing

them which provides a shared platform for “learning through mistakes”. The company annual report further verified this idea as:

“The Group companies should share lessons learnt and experiences and immediately commence operations at a high level rather than go through repetitive cycles of leering.”

However, due to the high dependency on the shared services, the resources were seen to be not flowing on demand, rather it has been based on a standardized resource allocation policy of the shared service unit. According to the Assistant Manager there are process change requests from IT division which are pending surprisingly more than two years. By the time the process change request is completed the environment has changed and the request is outdated.

In addition, rolling the forecasts every month was seen as creating extra work by the Assistant Manager. Currently only the budget monitoring is carried out every 6 months and rolling the forecast is not done. The main barrier to implement the rolling forecast was not having a robust information system. From the point of view of the Assistant Manager:

“We have an in-built IT system and some of the information cannot be generated automatically. There have been situations where the IT system has generated incomplete inaccurate data. Because of that first the IT system need to be upgraded to accommodate the rolling forecasts.”

Setting relative team rewards was seen to be a challenging task for LFC. The Assistant Manager explained that:

“Measuring team effort is somewhat tricky. People always do not work for the best interest of the team and the person with the team spirit can be unfairly treated if team performance is rewarded.”

This view was further explained by the Executive Director who mentioned that the employees need to have teaming skills. However, in rewarding them the individual contribution should be separately considered to encourage competition.

4.3.4 Brown

At Brown, budgets seemed to be providing guidance to managers on what direction to move. The Assistant Manager explained that:

“It is based on the budget that the CEOs of particular business units know how well they should do in the next year.”

From the perspective of the Assistant Manager of Brown’s manager performance evaluation had a significant weight on achieving the budgeted ROI or net margin. The dependency on budgets to evaluate performance was seen to be a barrier to eliminate the budget. The Assistant Manager explained that:

“If budgets are eliminated it is difficult to monitor the performance by the Corporate Office. The Board of Directors evaluates the performance and monitors and control the CEOs of each SBU based on the ROI and the net margin achieved by them compared to the budget.”

This view was further explained by the Finance Executive who mentioned that achieving the budget target is important for managers. This is further confirmed by the findings of Dugdale and Lyne (2004) who argued that budgets still play a key role in monitoring and control.

Rolling the forecasts was seen as a good but challenging activity and arising confusion on which direction to move. The Assistant Manager explained that:

“It is a good thing to look ahead the next month and adjust the budget to include the latest information; however, obtaining information itself is a challenging task. Not only that when the targets keep on changing it is difficult to track where we will be heading to”

The Finance Executive further explained that some of the budget items are still based on past year’s data and obtaining the latest market information will be a somewhat difficult task as perfect information is hardly available.

According to third objective, to identify why can or cannot the organisations move to Beyond Budgeting, findings of four companies can be summarized as follows. Both Muffler and Brown indicated eight of the twelve principles of Beyond Budgeting while LFC indicated six of the Beyond Budgeting principles. Carol indicated only four of the principles of Beyond Budgeting. Accordingly, Carol seemed to indicate most of the barriers of moving to Beyond Budgeting. However, it was not only Carol that indicated barriers of Moving to Beyond Budgeting. Muffler, LFC and Brown also had certain concerns of being a budget-free organisation.

Except LFC none of the organisations was sufficiently aware of a concept where the budgets can be totally eliminated. None of the four organisations rolled its budgets due to the complications and extra work which were perceived to be a burden. The shared services seemed to be hard to eliminate due to the high dependency culture on shared services. Also, in all organisations except LFC there was a high dependency on budgets to evaluate manager performance and provide guidance and direction. Brown, Carol and LFC viewed setting dynamic goals as confusing, ambiguous and creating extra burden. Carol could not identify its direct competitor while Muffler complained of difficulties of deriving competitor information to set relative targets. Carol viewed bureaucracy and lack of virtues as barriers of empowering managers. LFC viewed setting relative team rewards would be unfair as all employees do not equally contribute well to teamwork.

5. Conclusion

Based on the findings from four case companies it can be concluded that in the existing organizational set-ups, leadership principles of Beyond Budgeting were strongly present compared to process principles. Also, the study found that lack of awareness on Beyond Budgeting, complications of setting rolling forecasts, bureaucracy, lack of virtues, difficulties in assessing team performance, dependency culture on budgets to guide and evaluate performance, dependency culture on shared services, perceiving dynamic goals as too ambiguous to set and lack of competitor intelligence were the main barriers of moving to Beyond Budgeting. Accordingly, it can further be concluded that the organisations had certain features that supported the Beyond Budgeting concept; however, certain barriers stagnate them from completely transforming to Beyond Budgeting organisations.

References

- Anthony, R. N. (1965). *Planning and Control Systems: A Framework for Analysis*. Harvard University Press.
- Bogsnes, B. (2016). *Implementing Beyond budgeting: Unlocking the Performance Potential*. John Wiley & Sons, Inc., New Jersey.
- Bourne, M., Neely, A., Mills, J., & Platts, K. (2003). Implementing performance measurement systems: a literature review. *J. Business Performance Management*, 5(1), 1-24.
- Chong, V. K., Eggleton, R. C., & Leong, M. K. C. (2005). The Impact of Market Competition and Budgetary Participation on Performance and Job Satisfaction. *The British Accounting Review*, 37(1), 115-133. <https://doi.org/10.1016/j.bar.2004.06.007>
- Daum, J. (2002). Beyond Budgeting: A Model for Performance Management and Controlling in the 21st Century? *Controlling and Finance*, 5, 33-34.
- Dugdale, D., & Lyne, S. (2004). *The Changing Roles of Company Budgets*. Department of Economics. University of Bristol.
- Ekholm, B., & Wallin, J. (2000). Is the Annual Budget Really Dead? *The European Accounting Review*, 9(4), 519-539. <https://doi.org/10.1080/09638180020024007>
- Frow, N., Marginson, D., & Ogden, S. (2010). Continuous Budgeting: Reconciling Budget Flexibility with Budgetary Control. *Accounting, Organisations and Society*, 35(4), 444-461. <https://doi.org/10.1016/j.aos.2009.10.003>
- Hansen, S. C., Otley, D. T., & Stede, W. (2003). Practice Developments in Budgeting: An Overview and Research Perspective. *Journal of Management*, 15, 95-116. <https://doi.org/10.2308/jmar.2003.15.1.95>
- Hope, J., & Fraser, R. (1997). Beyond Budgeting: Breaking Through the Barrier to the Third Wave. *Management Accounting*, 75(11), 20-23.
- Hope, J., & Fraser, R. (1999). Beyond Budgeting: Building a New Management Model for the Information Age. *Management Accounting*, 77(1), 16-21.
- Hope, J., & Fraser, R. (2003). *Beyond Budgeting: How Managers Can Break Free from Annual Performance Trap*. Harvard Business School Press, Boston, MA.
- Hope, J., Bunce, P., & Roosly, F. (2011). *The Leaders' Dilemma: How to Build an Empowered and Adaptive Organisation without Losing Control*. John Wiley & Sons, Ltd. USA.
- Hoque, Z. (2006). *Methodological Issues in Accounting Research: Theories and Methods*. Spiramus Press Ltd.
- Kodama, M. (2003). Strategic innovation in traditional big business: Case studies of two Japanese Companies. *Organization Studies*, 24(2), 235-268. <https://doi.org/10.1177%2F0170840603024002345>
- Libby, T., & Lindsay, R.M. (2010). *Beyond Budgeting or Budgeting Reconsidered? A Survey of North-American*

- Budgeting Practice. *Management Accounting Research*, 21, 56-75.
<https://doi.org/10.1016/j.mar.2009.10.003>
- March, J. G. (1988). *Decisions and Organizations*. Basil Blackwell.
- Neely, A., Mike, B., & Chris, A. (2003). Better Budgeting or Beyond Budgeting? *Measuring Business Excellence*, 7(3), 22-28. <https://doi.org/10.1108/13683040310496471>
- Niels, S., & Per Nikolaj, B. (2014). Beyond Budgeting and change: a case study. *Journal of Accounting & Organizational Change*, 10(3), 409-423. <https://doi.org/10.1108/JAOC-05-2012-0032>
- Ostergren, K. & Stensaker, I. (2011). Management Control Without Budgets: A Field Study of 'Beyond Budgeting' in Practice. *European Accounting Review*, 20(1), 149-181.
<https://doi.org/10.1080/09638180903487842>
- Paludgnach, P. (2002). Beyond Budgeting in an International Manufacturing Company. Retrieved from <http://people.arcada.fi/~eldons/Seminar%202012/Pierre%20Paludgnach%20Thesis%202.pdf>
- Patton, M. Q. (1987). *How to use qualitative methods in evaluations*. SAGE Publications.
- Rickards, R. (2008). An Endless Debate: The Sense and Nonsense of Budgeting. *International Journal of Productivity and Performance Management*, 57(7), 569-592. <https://doi.org/10.1108/17410400810904038>
- Simons, R. (1991). Strategic orientation and top management attention to control systems. *Strategic Management Journal*, 12, 49-62. <https://doi.org/10.1002/smj.4250120105>
- Simons, R. (1994). How New Top Managers Use Control Systems as Levers of Strategic Renewal. *Strategic Management Journal*, 15(3), 169-189. <https://doi.org/10.1002/smj.4250150301>
- Stede, W. (2001). The Effect of Corporate Diversification and Business Unit Strategy on the Presence of Slack in Business Unit Budgets. *Accounting, Auditing and Accountability Journal*, 14(1), 30-52.
<https://doi.org/10.1108/09513570110381060>
- Tukatech. (2012). *Tukatech: A Case Study*.
- Waal, A. (2005). Is Your Organisations Ready for Beyond Budgeting? *Measuring Business Excellence*, 9(2), 56-67. <https://doi.org/10.1108/13683040510602885>
- Wallander, J. (1999). Budgeting: An Unnecessary Evil. *Scandinavian Journal of Management*, 15(4), 405-421.
[https://doi.org/10.1016/S0956-5221\(98\)00032-3](https://doi.org/10.1016/S0956-5221(98)00032-3)
- Yin, R. K. (2003). *Case Study Research-Design and Methods*. 3rd Edition, Thousand Oaks, CA: Sage.

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Rethinking and Moving Beyond GDP: A New Measure of Sarawak Economy Panorama

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Received: October 24, 2018

Accepted: November 26, 2018

Online Published: November 29, 2018

doi:10.5539/ibr.v11n12p127

URL: <https://doi.org/10.5539/ibr.v11n12p127>

Abstract

Despite the relatively strong adjustment in the global economy outlook, the Malaysian economy remains uncertain as the ringgit movement lies ambiguously ahead while volatile capital flows, inflationary pressure, and the vulnerable external sector and global trade remain intense. The Sarawak economy, which relies heavily on primary commodities and export earnings from oil-based industries, will soon face a noxious mixture of economic risks following the decrease in commodity prices. Thus, it is essential to develop a well-timed signaling mechanism to estimate the unpredictable economic forces that develop from the complex and multidimensional issues of domestic and global economies. The ideology of indicator construction from the Conference Board will be applied in this study to build a composite leading indicator, called the Sarawak Business Cycle Indicator (SBCI), to trace the cyclical movement of the aggregate economic activity in Sarawak. In this respect, the SBCI, which has demonstrated statistical significance with an average leading power of 3.5 months, is expected to be important in reflecting a notable economic outlook for the State. More importantly, the SBCI will serve as a valuable reference to act as a short-term forecasting tool to provide insight at both the national and state levels.

Keywords: forecasting, business cycle, indicator, turning point analysis

1. Introduction

According to the Department of Statistics Malaysia (2017), the economic growth in Malaysia expanded to 5.9 percent in 2017, driven mainly by private sector demand, with support from the external sector. Among the 13 states in Malaysia, Sarawak has the strongest economic foundation (Regional Economic Development Authority, 2014). Sarawak's most abundant natural resource is the key strength to enhance economic growth, wise fiscal management, and a strong position of liquidity relative to its debt level. The export of primary commodities, such as liquefied natural gas (LNG) and crude petroleum, is the main contributor to the Sarawak economy (Furuoka, 2014). However, the commodity market is likely to extend losses in the face of plunging crude oil prices, threatening the position of the state to remain as the third largest Gross Domestic Product (GDP) contributor in the country.

Because the domestic and global markets are full of uncertainty and are highly dynamic and the comprehensiveness of the Sarawak's GDP as a measure of the economic outlook remains a long-running debate in the business cycle analysis, it is important for Sarawak to keep abreast not only on the latest external development but also predict the possible outcomes that could affect the development of different sectors of the economy. Therefore, the SBCI must be constructed in this scenario in order to provide a clear picture of the outlook of a market for policymakers, the business community, business players, and investors. On the other hand, there is a significant time lag in the reporting and publication of the Sarawak GDP. This lag of the Sarawak GDP series causes delays in policy actions, which in turns prevents the full impact of a policy measure if the degree of foresight is not sufficient to overcome the economic downturn in a timely manner. Hence, in this study, the Auto-Regressive Integrated Moving Average (ARIMA) model will be used to forecast the unavailable data of the Sarawak GDP series in recent years, and this series will act as a means to establish the reference chronology of the Sarawak economy.

Above all, this study moves beyond the GDP as a leading measure of aggregate economic activity as an approach to sustainable economic development in the State. In addition, a reliable forecasting tool that can suit the context of

the Sarawak economy is needed to produce a bottom-line statistic that can encapsulate an insightful bird's-eye view into the economy as well as to alert the policymakers in order to prevent a severe economic crisis that will greatly influence the Sarawak economy. Thus, the main aim of this study is to construct the SBCI in order to trace the cyclical movement of aggregate economic activity in Sarawak via a composite leading indicator approach. This paper consists of five sections. The next section will provide a review of the literature. The subsequent sections cover a brief description of the data and the methodology that will be used in this study as well as the presentation of empirical findings with interpretations, while the last section offers the conclusion.

2. Review of Literature

Recently, extensive research has been done in developed and developing countries, especially Malaysia, to predict and interpret the business cycle. Different studies have applied different reference series and leading indicators for their own countries as well as the periods they examine. Many researchers have asserted that the Composite Leading Indicator (CLI) is the most well-fitted approach in forecasting the turning points of business cycle compared to other approaches. Although a few studies focus on constructing CLI in Malaysia, it is rare for a researcher to build a CLI for the state. By constructing the CLI, we can forecast the economic activities that might occur in a country, but then it does not fully reflect the real economic situation of a state. This is because the economic fluctuation of a state somehow differs from that of the country.

Atabek, Coşar, and Şahinöz (2005); Mohanty, Singh, and Jain (2003); Wong, Abu Mansor, Puah, and Liew (2012); Zhang and Zhuang (2002); Albu (2008); and Bascos-Deveza (2006) exhibit the same characteristics in forecasting the turning points and business cycle by constructing the CLI. While Bordoloi and Rajesh (2007) use a probit model at 3 months and 6 months forecast horizons to predict the business cycle recessions in India. Issler, Notini, Rodrigues, and Soares (2013) use the individual coincident indicator to forecast the economy of Latin American. Sfia (2010) constructed a CLI to forecast the inflation in Tunisia. On the other hand, Yap (2009) completed an analysis on how to improve business cycle indicators in Malaysia by using the coincident index and leading index.

Meanwhile, in developed countries, most research done by Kholodilin and Siliverstovs (2005); Fukuda and Onodera (2001); and Fichtner, Ruffer, and Schnatz (2009) investigate the ability and properties of CLI and determine whether the CLI is a good indicator to forecast the business cycle during the dynamic change of economy. Furthermore, the research performed by Bierbaumer-Polly (2010); Bandholz (2005); den Reijer (2006); Vesselinov (2012); Kholodilin and Siliverstovs (2005); Fichtner, Ruffer, and Schnatz (2009); and Křůčik & Haluška (2008) use the Organisation for Economic Co-operation and Development (OECD) CLI approach to forecast the turning points and business cycle. However, Matkowski (2002) conducted a different approach to introduce a set of composite indicators of business activity for Poland based on the qualitative data collected from business and consumer surveys. In addition, Bodart, Kholodilin, and Shadman-Mehta (2005) used the regime-switching and Logit models to identify and forecast the turning points of the Belgian business cycle.

3. Data Description and Methodology

3.1 Data Description

In this study, the selection of a reference series comprises the beginning stage in order to identify a suitable measurement for the business cycle. The condition of a reference series must show a strong correlation with economic growth and must offer an uninterrupted series over a long period (Zhang & Zhuang, 2002). Therefore, in this study, the Sarawak real gross domestic product (RGDP) has been selected as that which can best mirror the real economic activity for the case of Sarawak. The monthly basis of consumer price index (CPI) and yearly basis of GDP were extracted from 2000 to 2016 in the Sarawak Planning Unit (SPU). Furthermore, we have applied the ARIMA model to obtain a complete set of yearly data regarding Sarawak's GDP. In order to get a higher frequency within the series, the Gandolfo (1981) interpolation method has been used in this study, and thus the ratio of GDP to CPI was computed to obtain the real GDP for Sarawak from 2001 to 2016.

More than 15 data series have been collected from different sources, such as the Census and Economic Information Center (CEIC), Sarawak facts and figures, and Department of Statistics Malaysia (DOSM) for empirical examination. In order to fulfill the goal of building a CLI to reflect the cyclical fluctuations in the Sarawak economy, only those component series with leading characteristics will be chosen to construct the SBCI. Then, the correlation analysis will be adopted to show the degree of association between the reference series and component series. The series that are highly correlated with reference series will be chosen, as they present an important interrelationship with the business cycle. Thus, six chosen component series (crude oil price, crude palm oil, electricity consumption, pepper price, share price, and total capital investment) then constitute the composite index for the construction of SBCI.

3.2 Methodology

In this study, the autoregressive integrated moving average (ARIMA) model will be employed to forecast the missing data for Sarawak's GDP in the recent few years, so that we can get a complete set of data for our reference series. The ARIMA model is a generalization of an autoregressive moving average (ARMA) model proposed by Box and Jenkins (1970). These models are used in some cases when the data show proof of non-stationary and when an initial differencing step can be applied to eliminate the non-stationarity. The model is basically referred as an ARIMA (p, d, q) model where p , d , and q are integers greater than or equal to zero and represent to the order of the autoregressive, integrated, and moving average parts of the model respectively. After fitting the real GDP data into an ARIMA models, the models efficiencies will be evaluated using the Mean Squared Errors (MSE) and the model that provides the least MSE will be selected as the most efficient model to forecast the Sarawak GDP.

As for the construction of the SBCI, component series that potentially form the indicator series of SBCI will be subjected to lead/lag structure analysis and the best combination that provide the most leading attributes will be undergoing a systematic aggregation process suggested by The Conference Board (2000). The composite index will be transformed into a growth cycle after the construction of the SBCI. In this study, the growth cycles setting is more preferable than the classical cycle, because we are intended to examine the growth rate of the Sarawak business cycle rather than the business cycle in its level form. Zarnowitz and Moore (1986) suggested four major steps in dating the turning points of a business cycle. First of all, the Census X-12 and TRAMO/Seats methods will be adapted to the seasonal adjustment of each component indicator in this study. It will be affected by the irregular components and may cover the underlying direction of the series if we do not remove the seasonal fluctuation of economic activity.

The cyclical extraction and detrending that occur when using the Christiano-Fitzgerald (CF) filter introduced by Christiano and Fitzgerald (2003) will provide the second step of dating the turning points of the business cycle. The CF filter takes the whole time series for the formulation of the filtered series and deals with a greater class of time series when compared to the Baxter and King (BK) filter (Baxter & King, 1999). The third step involves the data smoothing. The irregular series can be smoothed through the simple centered moving average method. Zhang and Zhuang (2002) suggested that the moving average length of seven months is the best choice to settle the spurious cyclical difficulty in the series. Lastly, the Bry and Boschan (BB) procedure (1971) will be used in this study to identify the turning points of the business cycle, starting with the steps of deseasonalized, detrending and smoothing the reference series.

4. Empirical Findings and Interpretation

In response to the limited availability of the Gross Domestic Product (GDP) in the State, we have reckoned the GDP series of Sarawak using the autoregressive integrated moving average (ARIMA) model and interpolated the quarterly series into monthly observations using Gandolfo's (1981) technique to ensure completeness of the selected reference series. The month series of the Sarawak GDP was transformed into real GDP by dividing the normal GDP with the State's consumer price index. Figure 1 illustrated the forecasted real GDP of Sarawak based on ARIMA (2, 2, 2) model.

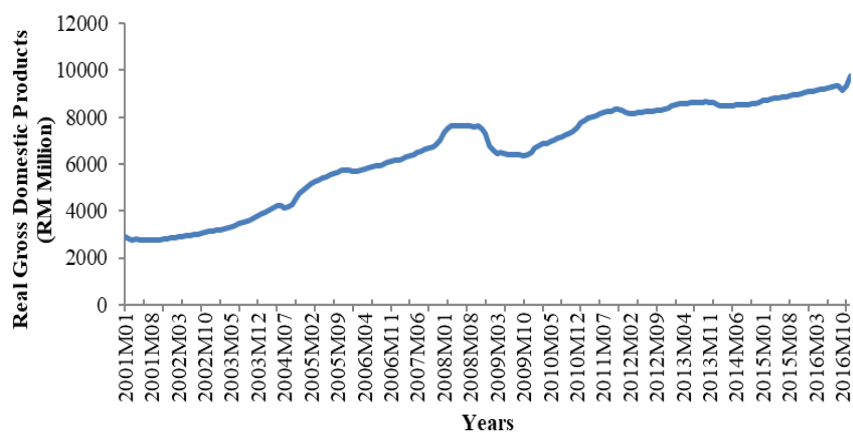


Figure 1. Forecasted real GDP of Sarawak based on ARIMA (2, 2, 2) model

In this case, the ARIMA (2, 2, 2) model was chosen as the most well-fitted and efficient model to forecast the Sarawak GDP based on the minimal out-of-sample forecast evaluation reported by Mean Squared Errors (MSE). In addition, it is found that the ARIMA (2, 2, 2) model is able to established a chronology of the Sarawak economy that is reasonably close to the true representation of the State's economy.

After having a complete Sarawak real GDP in hand, we have resolved the issue of incomplete reference series from 2001 to 2016. The process of reckoning the missing data in the Sarawak real GDP series has enable us to develop a broad reference chronology of the Sarawak economy, and thus enable us to identify the leading profile (leading period) of the constructed Sarawak Business Cycle Indicator (SBCI) via a turning point analysis. The component series of SBCI were selected based on the recursive assessment of the lead-lag structure between the cycles of the indicator series and the reference series. We finally settled down with six component series which consist of share price, global crude oil price, crude palm oil, electricity consumption, pepper price, and the total capital investment in Sarawak. The selected component series were bought into a composite that form the SBCI using the indicator construction procedure proposed by The Conference Board (2000). We visualized the smoothed cyclical fluctuation of the real GDP of Sarawak and the SBCI in Figure 2.

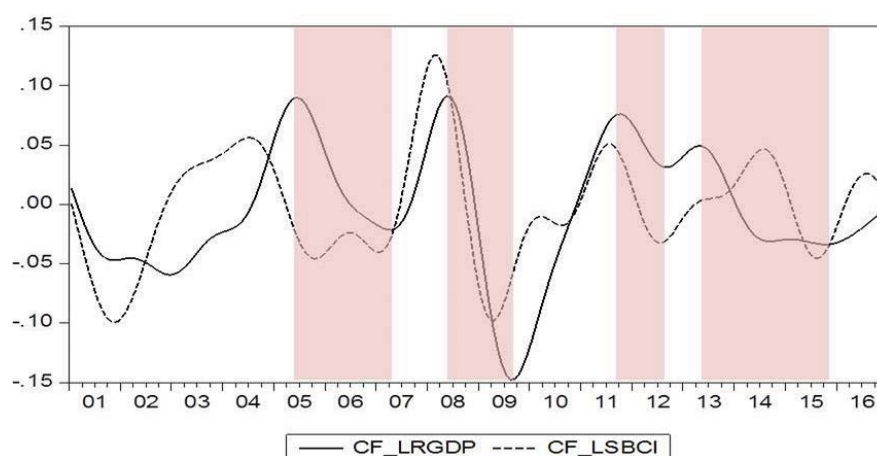


Figure 2. LRGDP versus LSBCI; 2001M1-2016M12

As demonstrated in Figure 2, the shaded areas indicate economic precariousness during the years 2005, 2008, 2011, and 2013. In the main, the movement of the SBCI is relatively consistent with the movement of real GDP of Sarawak, and it is clear that the SBCI moves ahead of the State's real GDP for most of the time. Apart from this, Figure 2 also indicates that the turning points (or significant events) marked by the constructed SBCI have occurred in advance of the economic episodes detected by the State's real GDP. This finding implies that the SBCI has successfully in tracing most of the major critical episodes that happened in Sarawak economy from 2001 to 2016, and the early warning signs of economic turmoil or precursors of a cyclical recession were signaled with some lead times.

In order to establish the leading profile and quantify the lead times contributed by the SBCI, the cyclical movement of the SBCI and the real GDP of Sarawak were subjected to a turning point dating algorithm proposed by Bry and Boschan (1971). The dated turning points were reported in Table 1 and turning point analysis was conducted between the reference chronology given by real GDP of Sarawak and the alternative chronology marked by the SBCI. The amount of lead/lag for each peak and trough as well as the average leading period were computed and jointly reported in Table 1.

As shown in Table 1, eight important episodes, covering four peaks and four troughs of the Sarawak economy were detected across the year of 2001 to 2016. Furthermore, the leading profile developed in the turning point analysis has confirmed the existence of leading ability of the SBCI as visualized in Figure 2. The constructed SBCI not merely traced well the evolving economic condition in Sarawak, but also captured all the significant episodes that have been translated into several critical events in the State such as oil price hikes in 2004, sub-prime mortgage crisis in 2008, sovereign debt crisis in 2011 as well as the incident of falling oil price in 2015. Moreover, the constructed SBCI has an average leading period of 3.5 months, suggesting that it is able to foretell the changing economic condition in Sarawak besides serving as a good monitoring tool to reveal the greater picture of the economic panorama in the state of Sarawak. As a result, the SBCI is deemed to be a useful

short-term forecasting tool to detect economic precariousness in state of Sarawak, and it would be a viable alternative or complement to others forecasting practices in the State rather than overreliance on GDP as the single most comprehensive measure of the overall economic performance.

Table 1. Turning point analysis and the amount of early signals

	Turning Points Dated from:			Amount of Lead/Lag (months)	Important Events
	LMRGDP	LRGDP	LSBCI		
Peak	Nov-2004	June-2005	July-2004	+11	Oil Price Hikes
Trough	Jan-2007	Apr-2007	Jan-2007	+3	
Peak	Mar-2008	May-2008	Feb-2008	+3	Sub-Prime Mortgage Crisis
Trough	May-2009	Aug-2009	Apr-2009	+4	
Peak	Dec-2011	Oct-2011	July-2011	+3	Sovereign Debt Crisis
Trough	Apr-2013	Sep-2012	July-2012	+2	
Peak	Feb-2014	Apr-2013	July-2014	-9	Falling Oil Price
Trough	Dec-2015	Oct-2015	Aug-2015	+2	
Average Leading Period (months)				+3.5	

Notes. LMRGDP refer to the Malaysian real GDP, serving as the benchmark series in the present study while LRGDP is the reference series proxied by the real GDP of Sarawak and the LSBCI is the Sarawak Business Cycle Indicator constructed in the present study. The amount of lead/lag (in months) was computed by taking the difference between LSBCI and LRGDP, and the average leading period (in months) was the mean of the leading profile across the period of the study.

5. Conclusion

In a nutshell, by using a set of macroeconomic series, a SBCI was constructed to predict the cyclical movement of Sarawak economy. The newly constructed SBCI has resulted in an average lead time of 3.5 months and works well in tracing the business cycle in Sarawak. With this result, the SBCI can act as a short-term forecasting tool in macroeconomic analysis and policy recommendation. The construction of the SBCI tends to bring awareness to policymakers, the business community, business players, and investors and thus help them to prevent economic vulnerability and to make more effective decisions regarding the economy of Sarawak in the future.

The present study has shown strong potential for the leading indicator approach to serve as a short-term forecasting mechanism to produce a better economic outlook in the State in addition to the publicly available GDP series. The newly constructed SBCI will be a good gauge of the approaching economic precariousness, given its strength to generate a remarkable leading period of policy establishment. The SBCI can be used to complement other economic forecasting practices when recognizing the economic outlook in the State. The predictive outcome from SBCI is subjected to the sensitivity of the chosen variables, in which the forecasting power can be enhanced further with the availability of a longer time series in the future. Furthermore, future study is encouraged to consider a more holistic robustness check to ensure the profundity of the out-of-sample forecast performance.

Acknowledgments

The authors acknowledge the financial support of the UNIMAS Special Short-Term Grant No. F04/SpSTG/1395/16/37.

References

- Albu, L. L. (2008). A model to estimate the composite index of economic activity in Romania-IEF-RO. *Journal of Economic Forecasting*, 5(2), 44-50.
- Atabek, A., Coşar, E. E., & Şahinöz, S. (2005). A new composite leading indicator for Turkish economic activity. *Emerging Markets Finance and Trade*, 41(1), 45-64. <https://doi.org/10.1080/1540496X.2005.11052597>
- Bandholz, H. (2005). *New composite leading indicators for Hungary and Poland* (IFO Working Paper No.3). Institute for Economic Research at the University of Munich: IFO Working Paper.
- Bascos-Deveza, T. (2006). Early warning system on the macroeconomy identification of business cycles in the Philippines. *Bangka Sentral Review*, 7-16.
- Baxter, M., & King, R. G. (1999). Measuring business cycles: Approximation band-pass filters for economic time series. *Review of Economics and Statistics*, 81(4), 575-593. <https://doi.org/10.1162/003465399558454>
- Bierbaumer-Polly, J. (2010). *Composite leading indicator for the Austrian economy: Methodology and 'real-time' performance* (WIFO No. 369). Vienna: Austrian Institute of Economic Research (WIFO).
- Bodart, V., Kholodilin, K. A., & Shadman-Mehta, F. (2005). *Identifying and forecasting the turning points of the*

- Belgian business cycle with regime-switching and logit models* (No. ECON Working Papers (2005/06)). Berlin: German Institute for Economic Research.
- Bordoloi, S., & Rajesh, R. (2007). Forecasting the turning points of the business cycles with leading indicators in India: A probit approach. In *Singapore Economic Review Conference*.
- Box, G. E. P., & Jenkins, G. (1970). *Time Series Analysis: Forecasting and Control*. San Francisco, CA: Holden Day.
- Bry, G., & Boschan, C. (1971). *Cyclical analysis of time series, selected procedures and computer programs* (Technical Paper 20). Massachusetts Avenue, Cambridge: National Bureau of Economic Research, Columbia University Press.
- Christiano, L. J., & Fitzgerald, T. J. (2003). *The band pass filter* (NBER Working Paper No. W7257). New York, NY: Columbia University Press.
- den Reijer, A. (2006). *The dutch business cycle: Which indicators should we monitor?* (De Nederlandsche Bank Working Paper, No. 100). Amsterdam: De Nederlandsche Bank.
- Department of Statistics Malaysia. (2017). GDP by State, Putrajaya: Department of Statistics.
- Fichtner, F., Ruffer, R., & Schnatz, B. (2009). *Leading indicators in a globalised world* (European Central Bank Working Paper Series, No. 1125). Frankfurt: European Central Bank.
- Fukuda, S. I., & Onodera, T. (2001). A new composite index of coincident economic indicators in Japan: How can we improve forecast performances? *International Journal of Forecasting*, 17(3), 483-498. [https://doi.org/10.1016/S0169-2070\(01\)00090-5](https://doi.org/10.1016/S0169-2070(01)00090-5)
- Furuoka, F. (2014). *Economic development in Sarawak, Malaysia: An overview*. (MRPA Paper, No. 60477). Kuala Lumpur: MRPA.
- Gandolfo, G. (1981). *Qualitative Analysis and Econometric Estimation of Continuous Time Dynamic Models*. Amsterdam: North-Holland Publishing Company.
- Issler, J. V., Notini, H. H., Rodrigues, C. F., & Soares, A. F. (2013). Constructing coincident indices of economic activity for the Latin American economy. *Revista Brasileira de Economia*, 67(1), 67-96. <https://doi.org/10.1590/S0034-71402013000100004>
- Kholodilin, K. A., & Siliverstovs, B. (2005). On the forecasting properties of the alternative leading indicators for the German GDP: Recent evidence. *Jahrbücher für Nationalökonomie und Statistik*, 226(3), 234.
- Kľúčik, M., & Haluška, J. (2008). Construction of composite leading indicator for the Slovak economy. *Analele Științifice ale Universității Alexandru Ioan Cuza «din Iași. Științe economice*, (55), 363-370.
- Matkowski, Z. (2002). Composite Indicators of Business Activity for Poland Based on Survey Data. In *26th CIRET Conference*, Taipei.
- Mohanty, J., Singh, B., & Jain, R. (2003). *Business cycles and leading indicators of industrial activity in India* (MRPA Paper, No. 12149). India: MRPA.
- Regional Economic Development Authority (RECODA). (2014). *Sarawak's Economy*. Retrieved from <http://www.recodacom.my/inside-sarawak/sarawaks-economy/>
- Sfia, M. D. (2010). *A composite leading indicator of Tunisian inflation* (William Davidson Institute Working Papers Series, No. wp980). Tunisia: William Davidson Institute Working Papers Series.
- The Conference Board. (2000). *Business Cycle Indicators Handbook*. New York, NY: The Conference Board, Inc.
- Vesselinov, R. (2012). New composite indicators for Bulgarian business cycle. *International Journal of Economic Sciences and Applied Research*, (2), 101-111.
- Wong, S. S. L., Abu Mansor, S., Pua, C. H., & Liew, V. K. S. (2012). *Forecasting Malaysian business cycle movement: Empirical evidence from composite leading indicator* (MRPA Paper, No. 36649). Kota Samarahan: MRPA.
- Yap, M. M. C. (2009). *Assessing Malaysia's business cycle indicators* (Monash University Discussion Paper, 04/09). Kuala Lumpur: Monash University.
- Zarnowitz, V., & Moore, G. H. (1986). *Major changes in cyclical behavior. In The American Business Cycle: Continuity and Change* (pp. 519-582). London: University of Chicago Press.

Zhang, W., & Zhuang, J. (2002). *Leading indicators of business cycles in Malaysia and the Philippines*. (Asian Development Bank, Working Paper Series, No. 32). Manila: Asian Development Bank.

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Is Kenya Facing East or West: An Empirical Analysis

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Received: October 11, 2018

Accepted: November 30, 2018

Online Published: December 3, 2018

doi:10.5539/ibr.v11n12p134

URL: <https://doi.org/10.5539/ibr.v11n12p134>

Abstract

In the last two decades China's economic influence in Africa has increased espoused by huge investment in infrastructure like roads, railways, airports and seaports. This has led many scholars to suggest that Africa is facing East away from the traditional West. The Western influence had permeated into governance, education religion and even consumption. Of interest is if China has successfully displaced the west from Africa in such a short time. This study investigates if Africa, in particular Kenya has really faced East (read China). We expect economies near each other geographically or are culturally close because of history e.g. colonialism to have highly correlated GDP growths. This is supported by gravity theory of trade. In this paper, GDP growth rates of Kenya and a selected number of countries from the West and East are correlated for a 50 years period. Analysis is then broken into decades to see the change in patterns. Analysis of correlations during the different Kenyan presidencies then before and after the cold war is carried out. All the data in this paper is sourced from World Development Indicators, a World Bank Data base. The hype about facing East for Kenya is not supported by data. Kenya in the last 20 years has looked East, but did not abandon the West. This dualism may change with Brexit, Trump in White House and envisaged Africa's free trade area.

Keywords: Kenyatta, China, Kenya, Brexit, Africa Free Trade Area

1. Introduction

In the 1970s up to 1980s, the following brands were common in Kenya; Bedford, Anglia, Leyland, Rover and ICL. Made in England was common from home appliances to cars on the road. It was not just in products; schooling in England was prestigious with two of Kenya's four presidents schooling there, Jomo Kenyatta and Mwai Kibaki. Both went to London School of Economics.

In the 1970s and 1980s, being seen around Chinese Embassy would have earned you a jail term in a Kenyan prison after being labelled a communist sympathizer. In the early 1990s perhaps because of economic liberalization and end of cold war, brands from East started appearing in Kenya. They include Faw, KIA, Daewoo, Samsung, Toyota (which had come much earlier, with the first car sold in Kenya 1965), Tata, Haier, Huawei and Tecno. Chinese products became popular while Chinese road contractors replaced well known western firms like Put Sarajevo, Strabag and Mowlem. Now we got Wu Yi, China Road and Bridge Company, Sinohydro and others. The size of Chinese contracts and their frequency raised eyebrows in media and on the streets.

Interestingly, other Easterners like Japanese, Indians, and Koreans never raised much concern at the Chinese arrival in Kenya. Indians had been in Kenya for over 100 years after coming to help Britons build the railway line (Methu, 2014). Rarely discussed is that Indians helped Britain defeat Germany in World War (Willson, 2014). Koreans came through trade mostly in motor industry (Hyundai, KIA, and Sangyong) and electronics (Samsung and LG). They also came through some religious congregations such as Good News Mission Church (Zirulnick, 2014). Koreans mostly followed the Japanese model of focusing on trade.

Chinese have gone beyond trade to cultural influence including setting up Confucius institutes to teach Mandarin in Kenyan Universities. A number of Kenyans have got scholarships to study in China too (Embassy of China in Kenya, 2018). Lately, Kenyans have been going to India for medical treatment (Musyoka, 2012). They had flocked there earlier for higher education when opportunities of the same were limited in Kenya. Lots of pharmaceutical products sold in Kenya are from India.

Since President Kibaki's leadership from 2002-2012, there has been an impression that Kenya is facing east, meaning China. The fear of the dragon, as China is often referred to, appears real (The Economist, Aug 13,

2016). This paper investigates if economically Kenya has shifted to the East. Politically and culturally, Kenya is still very Western with regular polls, English as the official language and children getting very western names like Charlotte, Brian, Catherine and Jayden.

The analysis builds on the work of Baxter & Kouparitsas (2005). They suggest that trade depends on distance, the greater the distance between two countries, the higher are the costs associated with transporting goods, thereby reducing the gains from trade and reducing trade itself. This is supported by (Glick and Rose, 2002). In addition, common border and common language enhances trade between countries. Colonial ties are an important driver of international trade. The paper also borrows from the gravity model, originally from Jan Tinbergen in 1962 shown here.

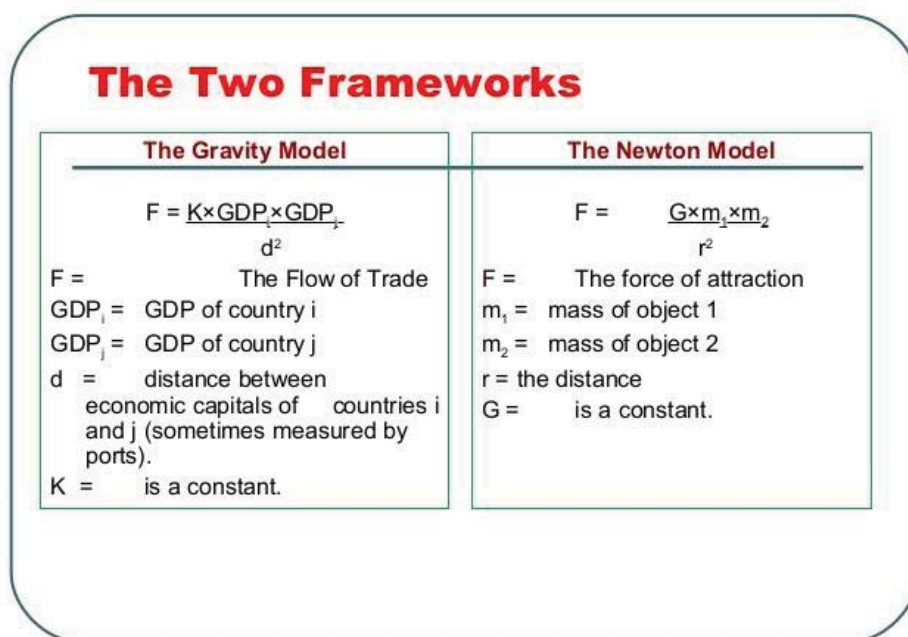


Figure 1. Gravity Model

2. Methodology

We expect economies are near each other or are culturally close because of history e.g. colonialism to have highly correlated growths. In this paper, GDP growth rates of Kenya and a selected number of countries from the West and East are correlated for a 50 years period. Analysis is then broken into decades to see the change in patterns. Analysis of correlations during the different presidencies and before and after the cold war is carried out. In Kenya, end of cold war coincided with advent of multiparty politics.

The choice period after 1963 is informed by Kenya’s independence and control over her political and economic policies. All the data in this paper is sourced from World Development Indicators, a World Bank Data base.

The choice of countries was based on a number of factors. One, UK was Kenya’s colonial power from 1895 to 1963. Germany is the leading Economic power within EU while USA is the world’s biggest economy. India, China and Japan are the leading economic powers in the East and would act as counterweight to the big Western nations. The choice of Tanzania (TZ) and Uganda is based on neighborliness while South Africa is chosen because it’s Africa leading economic power. Other factors such as diplomacy, students exchange and treaties are factored in GDP growth. Negative correlation means the two countries are “facing” away from each other while positive correlation means the countries are facing each other.

3. Results

Data is first analyzed for the whole period then broken into decades, presidencies and pre and post-cold war period. The correlations are calculated and graphed.

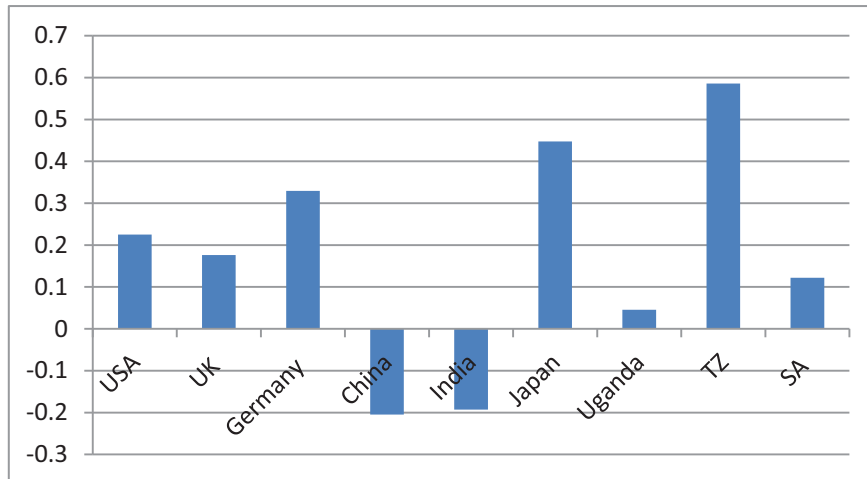


Figure 2. Growth Correlations for whole period: 1964-2013

The data for the 50-year period indicates that Kenya’s economy was closest to USA, UK, Germany, TZ and Japan. The low correlation for Uganda might be attributed to political instability up to 1986. High Tanzania (TZ) correlation is the fruit of East African Community. UK ties are colonial. USA tie is historical with the famous airlift of 1959 when Kenya’s future leaders went to study in USA (Mutu, 2016). That group included President Obama’s father who was not in the original airlift. For Germany, it surprising because the cultures of the two countries are very different. However, Germany was the first country to recognize independent Kenya and its diplomatic cars have the number plate 1CD. Germany has also been cultivating close ties with Kenya: German is taught in a number of Kenyan schools and through, DAAD, cultural exchange programs and scholarships for Kenyan students have been availed. Clearly, Kenya never faced East on average for the 50 years, despite “gravity” effects i.e., the big populations of India and China.

Table 1. Correlation between Kenya’s GDP growth and Growth of selected countries; Decade by Decade

Period	USA	UK	Germany	China	India	Japan	Uganda	TZ	SA
1964-2013	0.2250	0.1763	0.3295	-0.2046	-0.1927	0.4476	0.0456	0.5859	0.1221
1964-1973	0.1048	-0.1705	-0.9002	-0.3126	-0.4032	0.2454	No data	No data	-0.5927
1974-1983	0.3528	0.2019	0.5489	0.1558	-0.2418	0.3532	No data	No data	0.2538
1984-1993	0.1779	0.6509	0.2369	-0.4412	0.3827	0.6431	-0.1048	0.8532	0.2837
1994-2003	-0.2453	-0.2752	-0.0999	0.2310	0.6661	-0.0235	0.4566	-0.1694	-0.1872
2004-2013	0.6033	0.5969	0.5458	0.3964	0.7704	0.6537	-0.1239	0.3756	0.3865

Note. Germany data starts from 1971, Tanzania from 1989, Uganda in 1983.

3.1 Graphical Analysis Decade by Decade

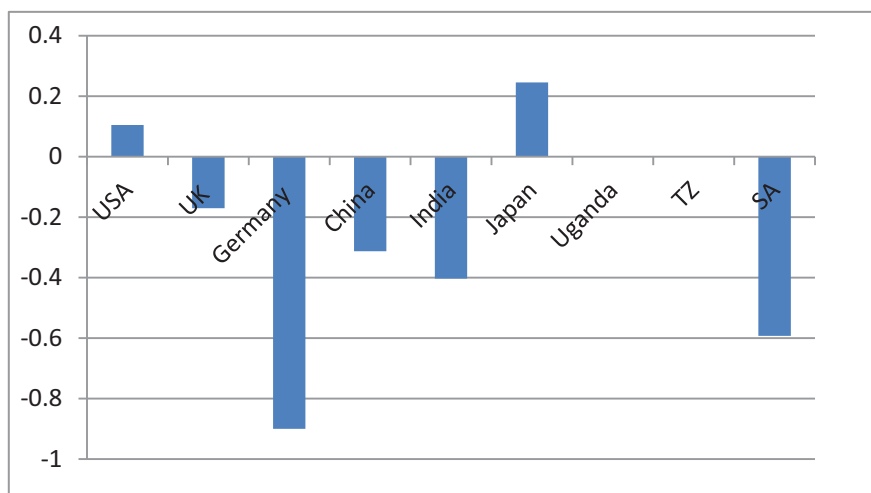


Figure 3. First decade 1964-1973

The negative correlation with Germany in the first decade after independence (uhuru) is because data is available from 1971. It may not reflect the true state of relationship among the two nations. In the first decade of independence, only USA and Japan stand out. East (India and China) were not in our economic lexicon yet. Airlift in 1959 prepared USA for economic ties with Kenya. Japan started selling cars in Kenya in 1965. For TZ and Uganda, no data is available. The negative correlation with South Africa (SA) was because of political isolation despite the presence of Afrikaner farmers in Kenya before independence. Most Afrikaans or Boers left for South Africa before Kenya's independence. List of voters in pre-colonial Kenya has lots of Afrikaners like Kruger, Van Straaten, Van Dyk, Van Blerk, Coetzee and others (Kenya Gazette, 1938). A cemetery and a church at Nyahururu, a town 200km North West of Nairobi is a silent reminder that Afrikaans once farmed there. The negative correlation for Kenya with UK in the first decade is surprising. It could be as result of political upheavals in Kenya that impacted economic growth negatively.



Figure 4. Photo of An Afrikaans Church in Nyahururu, Kenya build in 1952. Photo by Author

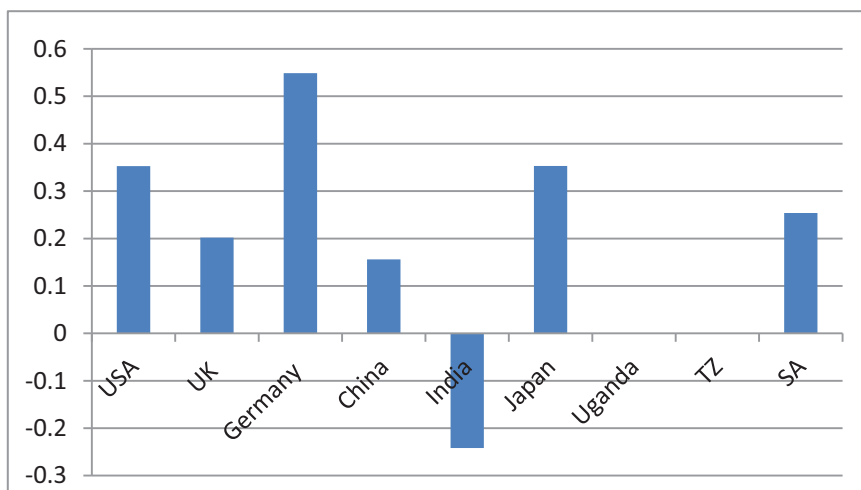


Figure 5. Second Decade (1974-1983)

The second decade can be called the “decade of consolidation”. The correlations went up, except for India. Uganda and TZ have no data. SA is positive. Did Kenya start busting sanctions and trade with South Africa? China correlation is positive. Sanghi and Johnson (2016) observe that China despite the popular misconceptions has benefits to Africa e.g. consumers now have greater variety and choice, create jobs. They conclude, “If Kenya leverages Chinese know-how and uses relatively cheap imports to satisfy the basic needs of the population, it could at the same time jump start its export engine in areas of comparative advantage such as tea, cut flowers, or chemicals.” China greater engagement could have resulted from opening up in 1978 under Chairman Deng Xiaoping (Vogel, 2011).

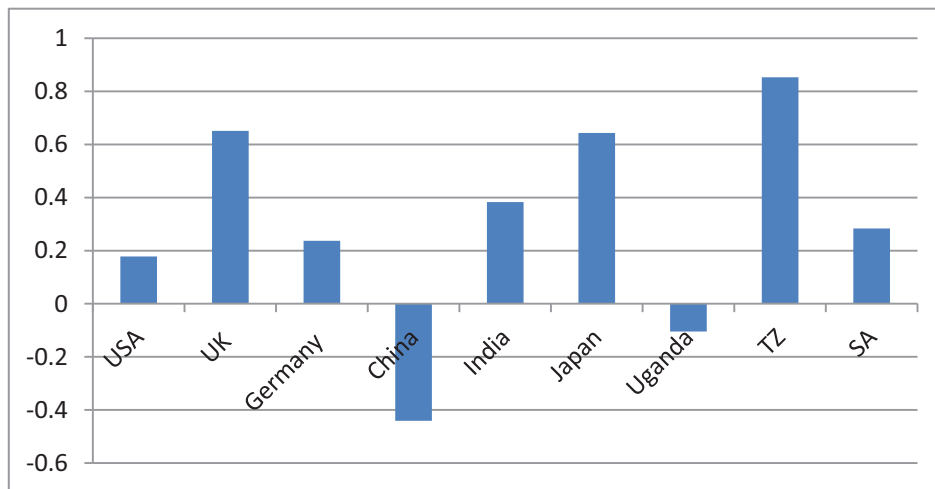


Figure 6. Third Decade (1984-1993)

The negative correlation with China in the third decade is because of her fast growth as Kenya declined, see figure 7. India started shining. Uganda still lacked data. UK, Japan and Tanzania stand out. UK for colonial ties, Tanzania for neighbourliness and India for close proximity and historical ties. We would have expected India to be highly correlated with Kenya because of proximity and history. India is a democracy and talks English like Kenya; both were British colonies. During this decade, East was about Japan and India. China was missing (see high negative correlation).

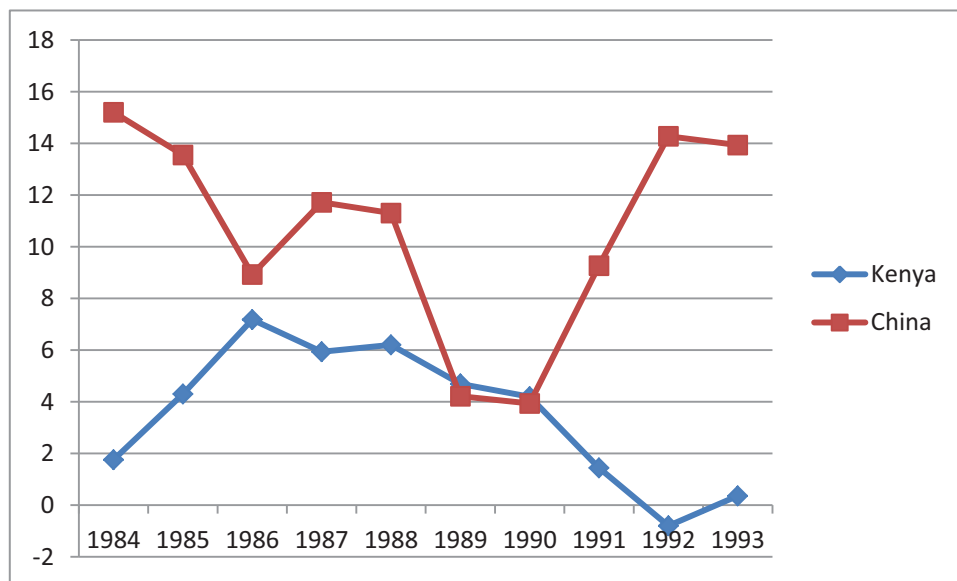


Figure 7. Growth rates between Kenya and China (1984-1993)

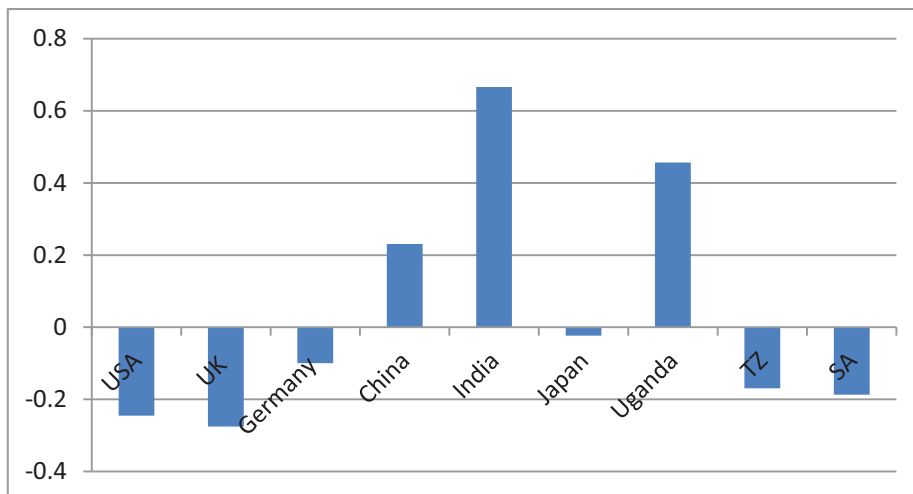


Figure 8. Fourth Decade (1994-2003)

The negative correlation with western countries like USA, Germany and UK might reflect the bad relations with western donors including aid freeze and political instability resulting in political violence. This data reflects decline in Kenya’s economy. The real turning to the East started in this decade. We note the high correlation with India and China while it is negative for Western powers and South Africa. While most Kenyans think turning east started with President Kibaki, it had stated earlier during President Moi era. The Japanese engagement with Kenya declined in this decade perhaps as reflection of Japan’s lost decade and Asian crisis captured by figure 6. Pape(1996) notes “The early 1990s marked the worst time in Kenyan history, in economic development terms. This poor performance was due to drought, structural rigidities, lack of monetary discipline, non-enforcement of banking regulations, and reduced donor assistance. Against this background, the Government went for a comprehensive, IMF-supported structural adjustment programme.”

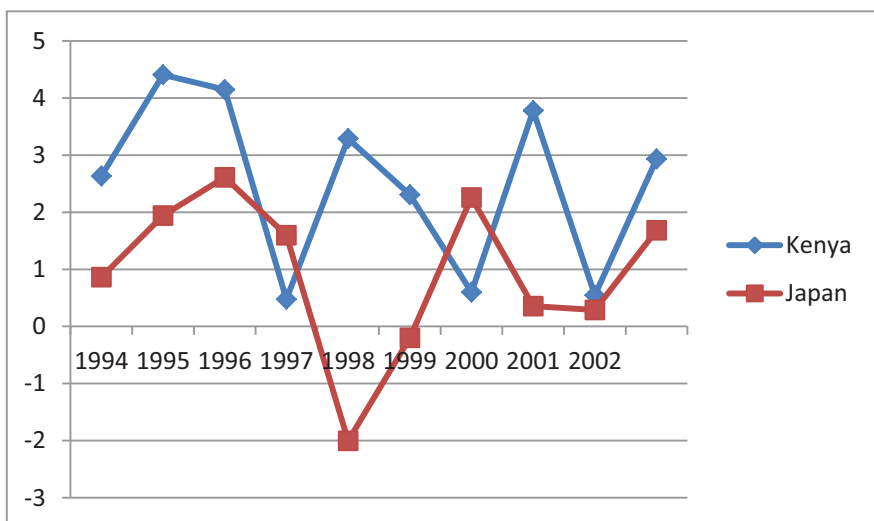


Figure 9. Asian Crisis: Growth in Japan vs. Kenya

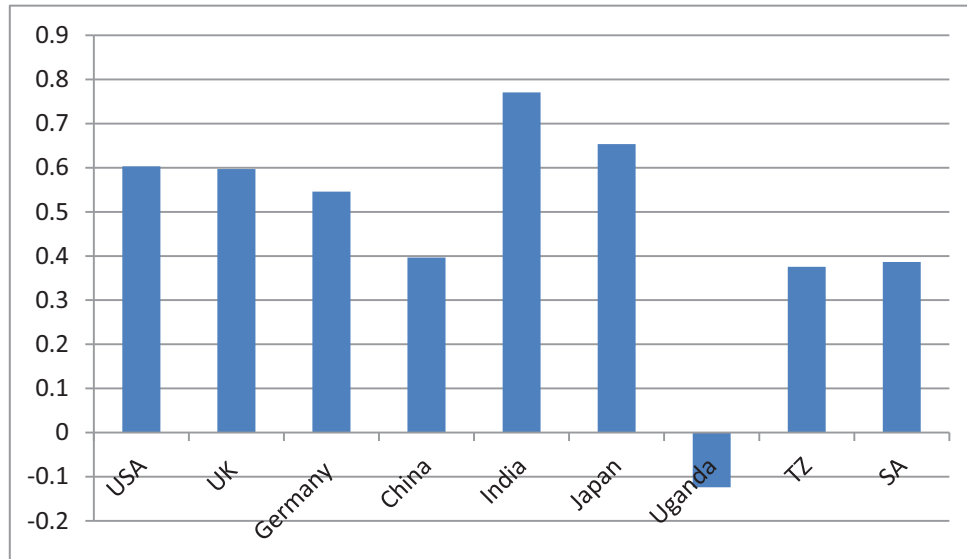


Figure 10. Fifth Decade: 2004-2013

The last decade shows that Kenya faced everywhere, not just East. India and Japan are ahead of China. Sanghi and Johnson (2016) are right in suggesting that the fear of China is a myth, at least from the Kenyan perspective. Brexit might cement the ties with UK further going by the recent visit (2018) to Kenya by British Prime Minister. President Uhuru invitation to USA in 2018 and visit to China there after shows that Kenya is now facing everywhere not just East or West. It is not clear why Kenya and Uganda are not growing in tandem despite close neighbourliness. The section investigates how different regimes in the 50 years have faced east or west.

Table 2. Correlations in GDP growth and presidencies

	USA	UK	Germany	China	India	Japan	Uganda	TZ	SA
Jomo	0.2447	0.1493	0.3358	-0.1720	-0.3440	0.3426	No data	No data	-0.2880
Moi	0.0139	0.1866	0.3187	-0.3124	-0.0811	0.5122	-0.0679	0.3792	0.2809
Kibaki	0.5057	0.4467	0.5883	0.4804	0.7550	0.5844	-0.0470	0.3325	0.4081
Uhuru	-0.5985	-0.9923	-0.5478	0.1465	-0.2795	0.8432	-0.4950	0.6006	0.3478

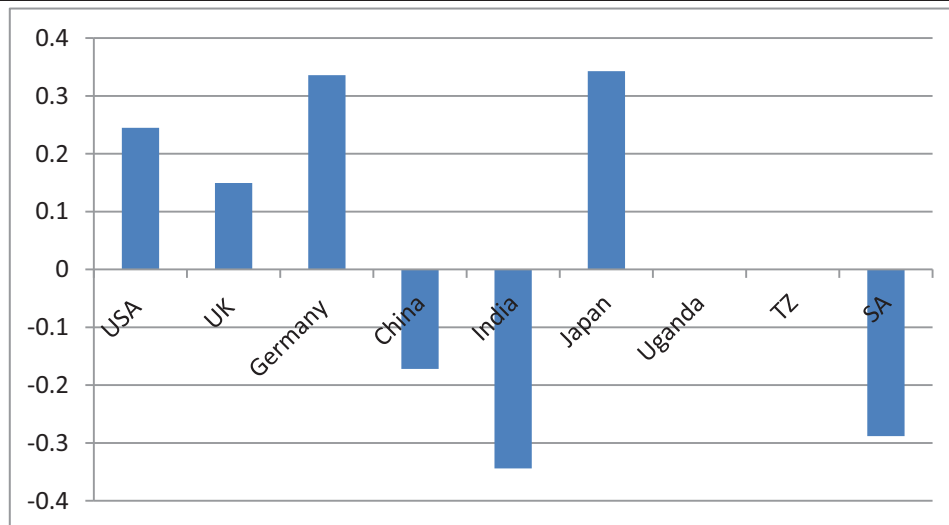


Figure 11. Presidencies: Jomo Kenyatta (1964-1978)

Jomo Kenyatta never faced East (excluding Japan). Jomo faced West most of his political life. South Africa was still a no-go option. Does this reflect the fact that he lived in UK for over 15 years, specifically in UK and even schooled there at London School of Economics?

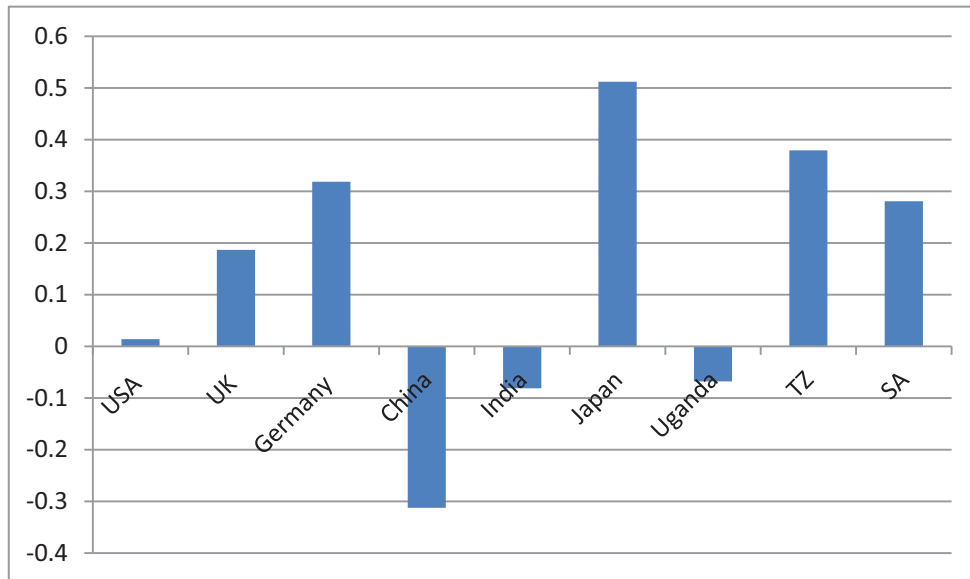


Figure 12. Daniel Arap Moi (1979-2002)

Moi like Jomo Kenyatta never faced East, except Japan. The low correlation with USA can be attributed to financial crisis in the USA in 1980-81, political violence in Kenya in 1997 and agitation for political pluralism(multipartism) in 1991. See figure 13.

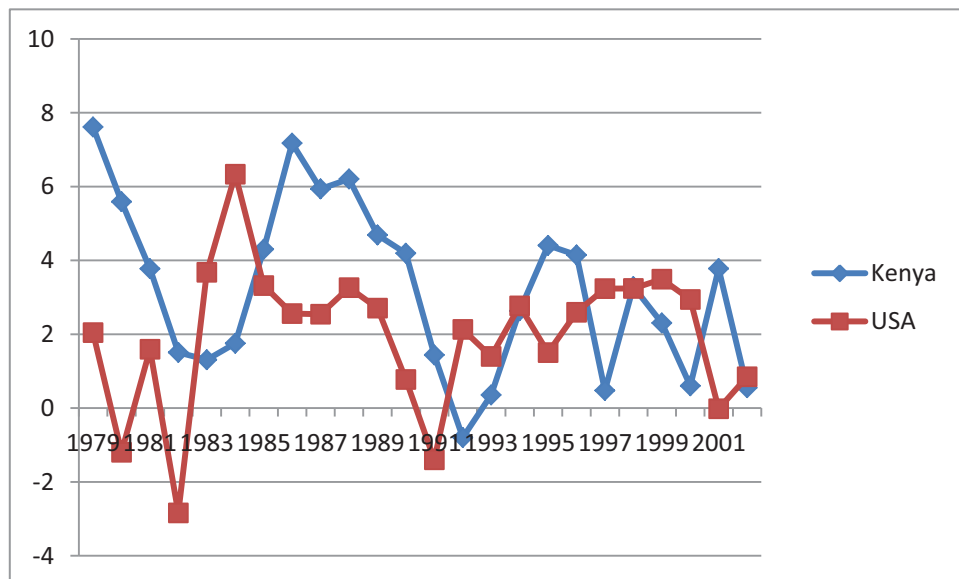


Figure 13. Kenya vs. USA Growth rates (1979-2002)

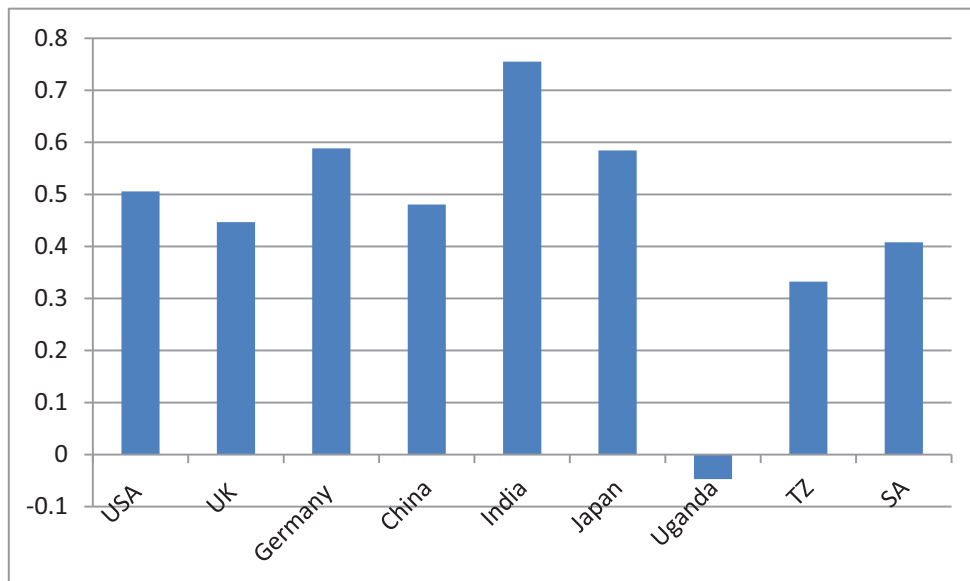


Figure 14. Mwai Kibaki (2002-2013)

Kenya started looking in all directions during Kibaki era; East, West, North and South. India got closer than even China and Japan. Uganda got out of tandem. This graph shows clearly that the claim that Kibaki faced East is a myth, he faced everywhere.

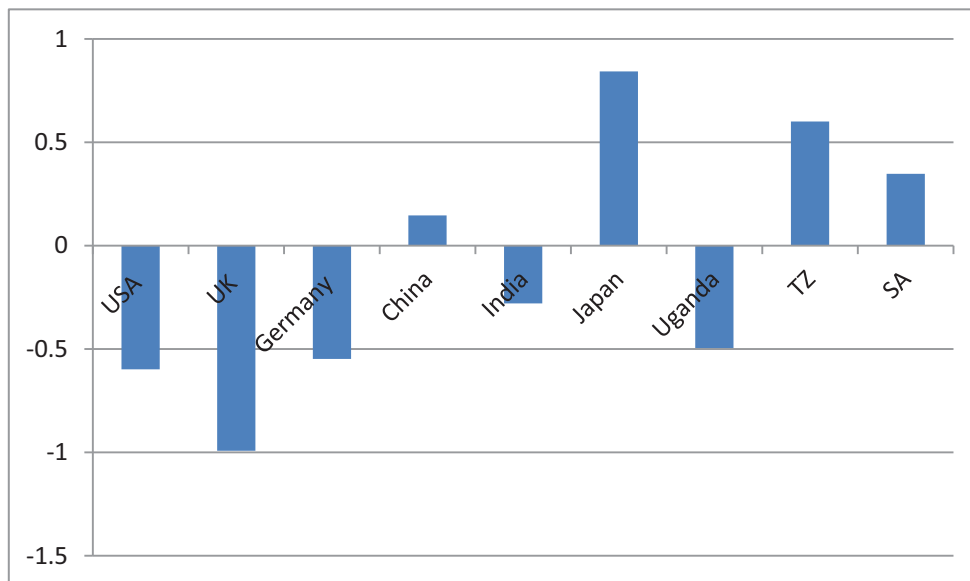


Figure 15. Uhuru Kenyatta presidency (2013 to Present)

The sample here is too small to make any credible conclusion. Using the few data points, Uhuru has looked East, away from West. Is it the International Criminal Court (ICC) effect? Looking at Standard Gauge Rail (SGR) build by Chinese, new container terminal at Mombasa built by Japanese and the number of Kenyans going to India for medical services, we can cautiously conclude we are facing East. The next section looks at the effect of cold war on Kenya economic orientation.

3.2 Cold War and Kenya's Economic Direction

Subtracting correlations after cold war from that before cold war shows that Kenya faced east more after cold war; all western powers show reduction in correlation after cold war and so did Japan. South Africa perhaps because of her independence in 1994 seems to have attracted a lot of Kenyan attention.

Table 3. Kenya and Cold War

Kenya GDP growth correlation with	USA	UK	Germany	China	India	Japan	Uganda	TZ	SA
1964-1990(before Cold War)	0.204	0.146	0.349	-0.190	-0.320	0.382	0.082	-1.00	-0.030
1991-2015(after Cold war)	<u>0.029</u>	<u>0.133</u>	<u>0.203</u>	<u>-0.070</u>	<u>0.736</u>	<u>0.249</u>	<u>0.1384</u>	<u>0.627</u>	<u>0.4194</u>
Correlation after cold war -before cold war)	-0.175	-0.0130	-0.146	0.121	1.056	-0.133	0.057	1.627	0.449

4. Conclusion

The hype about Kenya facing East economically is not supported by data. Kenya in the last 20 years has looked East but has not abandoned the West. The gravity model can explain this dualism. History and language ties Kenya to the West. She was a British colony and English is the official language. Large populations and economies of China, Japan and India are attractive to Kenya as markets. This dualism may change with time as Brexit and Trump in White House starts to take effect. Africa's free trade area might also change the economic orientation of Kenya as the Nigerian president puts it, "We must push ahead to speedily establish the Continental Free Trade Area (CFTA), which will make Africa more integrated, united and prosperous." An interesting observation in Kenya is that county governments are buying USA made cars like Chevrolet and Ford while national government is buying Chinese cars like Grand Tiger and Cherry. While China build standard gauge rail (SGR), Pizza Hut, Subway, KFC, Burger King and other Western (read USA) brands are opening up in Nairobi. Data suggests Kenya will continue facing both directions.



Figure 16. Facing West and East at the same time in Nairobi, Kenya. Photo by author

5. Suggestions for Further Research

Further research on economic orientation of other African countries is necessary. Data analysis can shed some light on whether Francophone, Lusophone and Spanish speaking countries are still economically "facing" towards their former colonial powers. Of greater interest is countries like Ethiopia and Liberia that were never colonized. Simulation can be used to pick data from more samples and see dynamic economic orientation over time.

References

- Akorede, S. (2018). How a single market would transform Africa's economy. *World Economic Forum*.
- Battersby, B., & Ewing, R (2005). International trade performance: the gravity of Australia's remoteness, *Treasury Working Paper*.
- Chaney, T. (2013). The Gravity Equation in International Trade: An Explanation. *NBER Working Paper No. 19285*.
- Embassy of China. (2018). Chinese Government Scholarships 2008/2009. <http://ke.china-embassy.org/eng/old/zt/cs/Scholarship/>
- Flach, L., & Unger, F. (2016). Quality and Gravity in International Trade, *CESifo Conference on Global Economics*, 13-14 May, 2016.
- Glick, R., & Rose, A. K. (2002). Does a currency union affect trade? The time-series evidence. *European Economic Review, Elsevier*, 46(6), 1125-1151, June. [https://doi.org/10.1016/S0014-2921\(01\)00202-1](https://doi.org/10.1016/S0014-2921(01)00202-1)
- Kenya, G. (1938). The Official Gazette of the Protectorate and Colony of Kenya, March 7, 1938, XL(13), Nairobi, Kenya.

- Kouparitsas, M., & Baxter, M. (2006). What Determines Bilateral Trade Flows? Boston University and NBER Federal Reserve Bank of Chicago.
- Magnus, M., Lipsey, R., & Ohlsson, L. (1989). What Do Rich Countries Trade with Each Other? R&D and the Composition of U.S. and Swedish Trade, NBER Working Paper No. 3140 (Also Reprint No. r1551)
- Methu, S. (2014). The Indian migrants who built Kenya's 'lunatic line', CNN <http://edition.cnn.com/2014/12/11/world/africa/kenya-railways-india/index.html>
- Musyoka, C. (2012). Why Kenyans Prefer Indian Medical Treatment, *Daily Nation*, August 13, 2012.
- Mutu, K. (2016). East Airlifts of US: The first Kenyans to study in America. *The EastAfrican*, December 3.
- Noguera, G. (2012). Trade Costs and Gravity for Gross and Value-Added Trade, Job Market Paper.
- Pape, E. (1996). Kenya's Economy in the 1990s, *The Courier* - N°159 - Sept- Oct 1996, UNESCO.
- Sanghi, A., & Johnson, D. (2016). Three myths about China in Kenya, The Brookings Institution. *The Economist*, Asia's scramble for Africa; India, China and Japan are battling for influence Aug 13th 2016.
- Tinbergen, J., & Bos, C. (1962). *Mathematical Models for Economic Growth*, New York: McGraw-Hill Publishing Co., 1962. viii, 136.
- Vogel, E. (2011). *China under Deng Xiaoping's leadership*, East Asia Forum, 27 September.
- Wall, H. (2000). Gravity Model Specification and the Effects of the Canada-U.S. Border, Working Paper 2000-024A, Federal Reserve Bank of St. Louis.
- Willson, J. G. (2014). *Guerrillas of Tsavo*, James Willson, Diani, Kenya.
- Zirulnick, A. (2014). Why are Korean missionaries flocking to Kenya? <http://www.csmonitor.com/World/Africa/2014/1116/Why-are-Korean-missionaries-flocking-to-Kenya>

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The Impact of Social Media on Human Resource Management Scope Activities in Al-Futtaim and Al-Etihad Group UAE

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Received: November 22, 2018

Accepted: December 3, 2018

Online Published: December 6, 2018

doi:10.5539/ibr.v11n12p145

URL: <https://doi.org/10.5539/ibr.v11n12p145>

Abstract

Purpose: Social media (SM) has gotten developing consideration over the most recent couple of years due to public awareness, a new age of organization, knowledge, and technology reasons, the requirement of SM has increased. The present research concentrates on two companies; namely Al-Futtaim and Al-Etihad group. **Design/methodology:** The study has identified various contextual relationships to the identified SM. Therefore, structural models of SM for implement human resource management scope activities (HRMSA). The finding presented that the companies with a larger service network is more affected by SM than the newly established company in HRMSA. Furthermore, the study indicated a positive and high relationship. Reasonable ramifications: Obvious comprehension of these variables will assist associations to organize better and deal with their assets in a productive and powerful way. **Uniqueness:** Contribute to study was identifying the HRMSA to implement SM platforms in (UAE) companies; Moreover, SM has opened a new avenue for HRMSA.

Keywords: employee behavior, HRM, scope activities, smartPLS3, social media

1. Introduction

The world has witnessed another slightly communicating system in the previous decade, which in the least amount of time not only has registered its importance of today's world of communication but also become a radical platform for expression in perspective. We were evident the impact on social media in all aspect of our life whether its politics, entertainment, business, education, etc. Societal issues, ethical dilemmas, and environmental concerns are addressed with the help of social networking sites (Korff et al., 2017). Indicating to business perspective, in traditional approach, SM has spurred despite a new medium of advertisement for products but in the contemporary world, it has registered its presence in all aspects of business whether finance, marketing, logistic or HR with the help of social media, companies can improve their relationship with target customers irrespective of geographical boundaries. These days, organizations are utilizing several social networking sites; Twitter, Facebook, LinkedIn, Pinterest, and Instagram, etc. an increasing brand visibility (Freer, 2011).

Human resources management scope activities have else understood the prominence of SM with current, while the future business world and made serious steps to include social media in its functioning. Today, whether it's about hiring employees or making a communication group of professionals to receiving feedback on the company's policy the social media is used as a first-hand platform (Madia, 2011). The HR department is equally responsible for formulating the social media policy on employees (Kaur, and Zafar, 2014). This is done to monitor them with regard to the usage of social media (whether it is for personal reason or excellent reason.) and its impact on the company's reputation (Rudnick and Wyatt, 2007). The researchers went to two of the companies, namely, Al-Futtaim and Al-Etihad to conduct a survey on the influence of SM over HRMSA. The investigator had conducted an interview concerning HR professionals of both companies and documented the response from the coming paragraph. However, the conclusion in the light of all information collected by researchers from the companies' HR professionals through the interview and the survey conducted the effect of SM respecting HRMSA.

In addition, the problem of study; SM has expanded over last, with company decade, bestowing various

platforms to share task space to cooperate with customers and users and produce main output announcements. SM effectiveness during an HR industry is universally accepted in the corporate world. First, nag and badgering: a few representatives may utilize their online networking account to show their perspectives of work and with their manager or kindred representatives. Second, harm to boss' open notoriety; the representatives got disappointed or upset with a circumstance which has happened up to work, also employees may share on their social media platforms to appear their perspectives about the circumstance. Third, the staff posting negative comments about company business and business clients. Fourth, can the company use information about candidates posted on social media platforms to promote the company when they make recruitment decisions?

1.1 Objectives of the Study

The study will endeavor to reach its aim through the following research questions:

- 1- How social media contributes positively to HRMSA in The United Arab Emirates companies?
- 2- Does there is any relationship between social media and employee activities?
- 3- Does there is any relationship between social media impact on HR and size of the company?
- 4- Does there is any relationship between social media, users, and scope of HRM (employees hiring, remuneration, employee satisfaction, employee maintenance, industrial relations, and prospects of employees)?

2. Literature Review and Hypotheses Development

The topic of the effect of SM over HR has discussed beside various authors. The impact of social media on any issue has been shown its effect of the social crisis in the US (Oh, O. Agrawal and Rao, H., 2013). The SM equally has effectiveness within the performance of the company. Today social media is not limited to the marketing and sales it has its impact on all aspect of the business (Anderson, 2012). The effect of an SM within business is not a new issue history also has witnessed many events when media causes an effect on the business (Edosomwan et al., 2011).

Subsequently, web-based social networking is characterized to be systems which interface huge numbers of clients worldwide for oneself advantages, perspectives, and diversions (Karam, A. A., and Saydam, S. 2015). Web journals, YouTube, MySpace, Facebook are cases of SM that is regular for a scale of clients. (Sin and Al-Agaga, 2012). As per to study, the unique prospect of an SM and a gigantic regularity has inspired business pursuit like promotion along with advertising (Hanna et al., 2011).

The social media platforms represent a developing advancement with the likelihood to think about the versatility, revamping, and utmost flexibility handiness asked for by response association for their information frameworks (Sutton and Shklovski, 2008). The strength of SM web-based social networking promotions to be able to not just ease far-reaching communication and reinforce data streams, yet additionally be adaptable into the necessities of the respondents. Online networking innovations have been beforehand utilized as part of calamity reaction, yet almost no investigation has been directed considering their effect on HRM, and specific information sharing and use amongst the respondent organization. These innovations demonstrate users the capacity to react rapidly to changes in the information about ambiance and give modification, flexibility, ease of use, and adaptability in both the framework and the data. The SM back up the creation from occasional user's technique promising the surge of idea and learning by allowing the proficient time, prevalence, involvement along with modifying/purify from enlightening matter (Constantinides and Fountain, 2008). The expectation of an employee with the services of the HR depends on various variables, namely, diversion, interaction, and function that lead to the satisfaction with the employees with employment (Fodness and Murray, 2007).

The author Tsai and Chou, (2011) introduced a model to evaluate the differences between the expectations of the services provided by the airport to the customer to the effective services in order to adopt the model to discover ways to reduce the differences. The presence of control and responsibility varieties of associations is within reach and a grand idea to be related to certain organizational conditions (Kitana, A., and Karam, A. A. 2017). Most human resource strategy scientists have adopted a behavioral viewpoint (Arthur, 1994). However, the association strategic, inventive HRA are apparently going to pass on a dispatch about authoritative help into workers. This pursuit moves beyond the conventional HRA that select, hold and control operator via administering to and demonstrating a sense of duty regarding representatives (Whitener, 1997). Rendering to Mahmood A., (2012) argue that training influence on regulation, involvement and retention towards operator performance. The data was gathered from 100 workers of the administration area at Rawalpindi Islamabad Regression strategy has been utilized as part of this examination.

The regression analysis affirmed that fulfillment and mode for qualified success have an immediate and valuable impact on organizational responsibility and expands the work effectiveness of representatives. A study utilizing this viewpoint lies on the regularly certain presumption that the effective execution of a business technique requires an interesting arrangement of worker practices and mentalities and attitudes of human resource policies and practices will inspire those practices and states of mind (Cappelli and Singh, 1992). As per Armstrong, M. (2006) before hiring a new employee, the entrepreneur ought to measure a few meditations. The initial step the entrepreneur should take while contemplating an extension of representative finance is to genuinely survey the status of the association itself.

Hypothesis:

H₁: There is a considerable effect on SM accessibility and HRM scope activities.

H₂: There is a considerable effect on SM behavior and HRM scope activities.

H₃: There is a considerable effect on SM building relationships and HRM scope activities.

H₄: There is a considerable effect on SM confidence and HRM scope activities.

H₅: There is a considerable effect on SM credibility and HRM scope activities.

H₆: There is a considerable effect on SM relevance and HRM scope activities.

H₇: There is a considerable effect on SM monitoring and HRM scope activities.

3. Research Methodology

Research Design: The consideration takes over a quantitative and qualitative survey from the elementary implement applied into aggregate a data through survey. The factual strategy utilized as a part of this examination, gathering numerical information about break-down using measurable strategies. While the poll utilized as a part of the present research as a self-designed survey, along with, the analyst alluded to a few examinations, that is comparable for this domain. The questionnaire designed in the English language. Therefore, population and sampling methods of investigation into both approaches; the researcher used a survey to conduct this study. The analysts demonstrated that there are a massive range of sorts of samples; Kothari, C., (2004) demonstrated that fundamentally 2 type of samples, random samples/non-random. On the other hand, the non-random sample is the techniques to collect the data which represent 100 employees distribute over two companies (Al-Futtaim group, and Al Etihad Airways) in the present study.

3.1 Data Collection

The researcher has conducted interview for the HR employees in two companies. The researcher also has carried out a survey to collect a response to employees working there. The specialist encrypted the information gathered over the survey including two sections of question Independent Variable Social Media; Credibility, Relevance, Confidence, Social Media Monitoring, Building relationships, Behavior, and Accessibility, Dependent Variable HRM Scope; Employees hiring, Remuneration, Employee satisfaction, Employee maintenance, Industrial relations, and Prospects of employees played out the required information control and the measurable exploration by Smart-PLS3.

3.2 Study Restriction

As any questionnaire-based examination, present investigation has several restrictions. These impediments fill in as markers for a future investigation contemplate on a similar theme. Some of these constraints identify with idea about a survey as well as identified with an information accumulation method. The specialist was unable to check the precision of gathered information where it expected that answerer was giving exact information. Hence, data collected in the present research by researcher potential, thus the analyst was relied on the participation in responders.

4. Data Analysis and Findings

Interview Regarding Social Media

Interview of HRM professionals at Al Futtaim group:

AL – Futtaim is a conglomerate group operating since 1930. With a long legacy of the company's expansion, it has also understood the importance of social media. The company has appointed social media community manager at a different level to represent the company on this platform. The excerpt of Interview conducted by me with HR professionals of Al – Futtaim group is as follows -

- Do you rely on social networking sites like LinkedIn for searching suitable candidates at the required educational qualification and experience?

Our company has a LinkedIn page as <https://www.linkedin.com/company/al-futtaim>. We have a community network for all employees working or worked with our company. We use LinkedIn frequently for hiring employees with the desired qualification and experience.

Do you exploit social media to stay connected with former employees?

We remain connected to our former employees also through a various forum and community. Our connection with former employees is based making our network rich and more geographically diverse.

- Do you create an online knowledge base for employees that include industrial updates and important events?
Yes, the company has created an online knowledge database and as per feedback, it has been proved helpful for both us and employees.
- Do the employees have a social platform where they can share their stories and experiences?
The company has various community pages of their own namely on a LinkedIn, face book and twitter where they can share their experience with the company. Apart from that employees use the various independent communities as a gal's door, etc to give feedback and share their stories.
- Do you monitor the time spent by employees on social networking sites during office hours as it can hamper their productivity?
Yes, we take a monthly report from the IT department to review the working pattern of employees and the time spends by them on social media.
- Does the company have a social media policy?
We have appointed social media community manager to publish the company's content, but we have yet not come up with any social media policy.

Interview of HRM professionals at Al Etihad Airways:

Al- Etihad Airways has started its operations from the year 2003 in Airlines Industries. The company is the second largest carriage of UAE and has shown a promising growth in last few years. In comparison to Al Futtaim, it's a new company with a disruptive model of business. The excerpts of an interview with its HR professional in a context on social media is as follows –

- Do you rely on social networking sites like LinkedIn for searching suitable candidates at the required educational qualification and experience?
The company does not strongly rely on social media sites for recruitment of its candidate, but we sometimes use it for higher authority jobs.
- Do you exploit social media to stay connected with former employees?
We do not exploit social media, but with different informal communities remain in touch with former employees.
- Do you create an online knowledge base for employees that include industrial updates and important events?
No, we have not created any such knowledge portal yet.
- Do the employees have a social platform where they can share their stories and experiences?
We have our social media pages where employees can share their stories.
- Do you monitor the time spent by employees on social networking sites during office hours as it can hamper their productivity?
Yes, we review reports of our IT department at frequent intervals.
- Does the organization have SM arrangement?
No, the association has not come up with any social media policy yet.

4.1 Survey Descriptive Analysis

The consideration is directed by employees from both companies within the context of the effect of SM they feel on Human Resource Management Scope Activities (HRMSA). The result has been conducted among the various age and income group of both the companies. The result of the survey has been summaries of coming paragraphs. The Quantitative Descriptive Analysis (QDA) was improved by the Tragon Corporation in the

mid-1970s to address the issues of quantifying sensory variety. As methods of measuring variety discernment, an unstructured line scale is utilized that methodologies continuous scales, an imperative property that allows the utilization of standard statistical procedures (Stone et al., 2008). As the Age in (Table 1) shown in the below, the sample based on demographic variables of participants, and relying on the age division, the result shows a high plurality of responders were among (28-34) years old, with (32.0%) and the next highest age category was between (35-41) years old, with (26.0%).

Table 1. Age

	Fre.	%	V. %	Cum. %
21-27	23	23.0	23.0	23.0
28-34	32	32.0	32.0	55.0
35-41	26	26.0	26.0	81.0
42-48	13	13.0	13.0	94.0
48-54	6	6.0	6.0	100.0
Total	100	100.0	100.0	

While, in the item of monthly income (Table 2) in below, the highest was (43%) of responders were a (AED 500-800) with (43.0%), following by (41%) with a (AED 800-above).

Table 2. Monthly Income

	Fre.	%	V. %	Cum. %
AED 300-500	16	16.0	16.0	16.0
AED 500-800	43	43.0	43.0	59.0
AED 800 and above	41	41.0	41.0	100.0
Total	100	100.0	100.0	

Besides, the (Table 3) of social media assisted you to get the desired job you wanted? While, and based on the question categories, the result indicated that the high majority of responders were (Agree on a scale), with (58.0%) and the next highest scale category was (Strongly Agree scale), with (38.0%) the study found that the responders were completely satisfied of social media platforms.

Table 3. Social media helped you to get the desired job you wanted?

	Fre.	%	V. %	Cum. %
D	1	1.0	1.0	1.0
N	3	3.0	3.0	4.0
A	58	58.0	58.0	62.0
S. A	38	38.0	38.0	100.0
Total	100	100.0	100.0	

In regard to question a community on social media helps in grievance addresses (Table 4) which is showing below, Pay hike or HRMS related issues? The table has indicated a majority to heartily agree on a scale of (28.0%) when the respondent has been asked the role of social media in solving HRMSA grievances or Pay hikes most of the respondent has strongly agreed that it is faster medium to communicate with management. Though some of the respondents disagreed with the role and argues the conventional approaches are still at work.

Table 4. Community on social media help in grievance addresses, Pay hike or HR related issues?

	Fre.	%	V. %	Cum. %
S.D	18	18.0	18.0	18.0
D	20	20.0	20.0	38.0
N	9	9.0	9.0	47.0
A	25	25.0	25.0	72.0
S.A	28	28.0	28.0	100.0
Total	100	100.0	100.0	

However, the (Table 5) of a question: which of the social media sites have helped you professionally the most? The most responder was answered (Facebook 42.0%, LinkedIn 23.0%, Instagram 15.0%, Twitter 13.0%, and YouTube 7.0%) respectively, the respondent when asked about the site that helped them most in their professional terms. They had shown a faith in Facebook most apart from that the respondent has a strong faith in their community groups.

Table 5. Which of SMP has helped you professionally the most

	Fre.	%	V. %	Cum. %
Twitter	13	13.0	13.0	13.0
Instagram	15	15.0	15.0	28.0
YouTube	7	7.0	7.0	35.0
Facebook	42	42.0	42.0	77.0
LinkedIn	23	23.0	23.0	100.0
Total	100	100.0	100.0	

Finally, on the (Table 6) indicate of question does company need to have a social media policy? The study found that the most respondent go to (Agree scale) with 44.0%, when asked to the respondent about the need of social media policy 44 out of 100 respondents has shown an affirmation (Agree), and out of 100 (9 Strongly Agree), (21 Neutral) on that while the (2 Strongly Disagree), and (24 Disagree) of the respondent denied the fact on the ground that it is of no help. In concluding from descriptive analysis the reasonable ground to believe that study is dealing with actual respondents that have been visiting the company social media platforms.

Table 6. Do company need to have a social media policy

	Fre.	%	V. %	Cum. %
S.D	2	2.0	2.0	2.0
D	24	24.0	24.0	26.0
N	21	21.0	21.0	47.0
A	44	44.0	44.0	91.0
S.A	9	9.0	9.0	100.0
Total	100	100.0	100.0	

4.2 R Square Analysis

From the (Table 7) quality criteria for latent variable, which is indicated on an appendix, it has been demonstrated an intensity of the connection between autonomous factors; X1 Credibility, X2 Relevance, X3 Confidence, X4 Social Media Monitoring, X5 Building relationships, X6 Behavior, and X7 Accessibility and the Y= Human Resource Management Scope Activities reflected by R-value as subordinate variable. The (R^2) has demonstrated the regression show execution. The most grounded esteem was the efficiency of the entire paradigm. During, the (R^2) esteem has demonstrated autonomous factors were emphatically affecting on the HRMSA a subordinate factor. Along these lines, it has been demonstrated that the (R^2) was showed up (.77118) along with (75.358 %) a variation in DV and this could be illustrated through IV variation, with significant P-value (0.000).

Table 7. Quality criteria for latent variable

	(O.S)	(S.M)	(STDEV)	S.T(O/STDEV)	(P.V)
HRMSA	0.7711	0.7921	0.0405	19.0375	0.0000
R Square Adjusted	0.7535	0.7761	0.0436	17.2742	0.0000

HRMSA; Human Resource Management Scope Activities

4.3 PLS Path Model Estimation

Based on the conceptual model on the (Figure 1), the social media, is dragged to utilize the “repeated indicators approach” factors of slash level, respectively (e.g., Credibility, Relevance, Confidence, Social Media Monitoring, Building relationships, Behavior, and Accessibility) they prevail again for the identical bigger level factor (e.g., Human Resource Management Scope Activities). The PLS-SEM algorithm is controlled by utilizing “Calculate by PLS Algorithm” and effectively assembles with the instruction proposed through (Hair et al., 2013). As per to study, specialists can appropriately evaluate the “path coefficients” in the basic model; the analyst should first look at the pointer dependability, inward consistency reliability, discriminant legitimacy, and the concurrent validity of the reflective estimation paradigm to guarantee they are attractive (Wong, K., 2013).

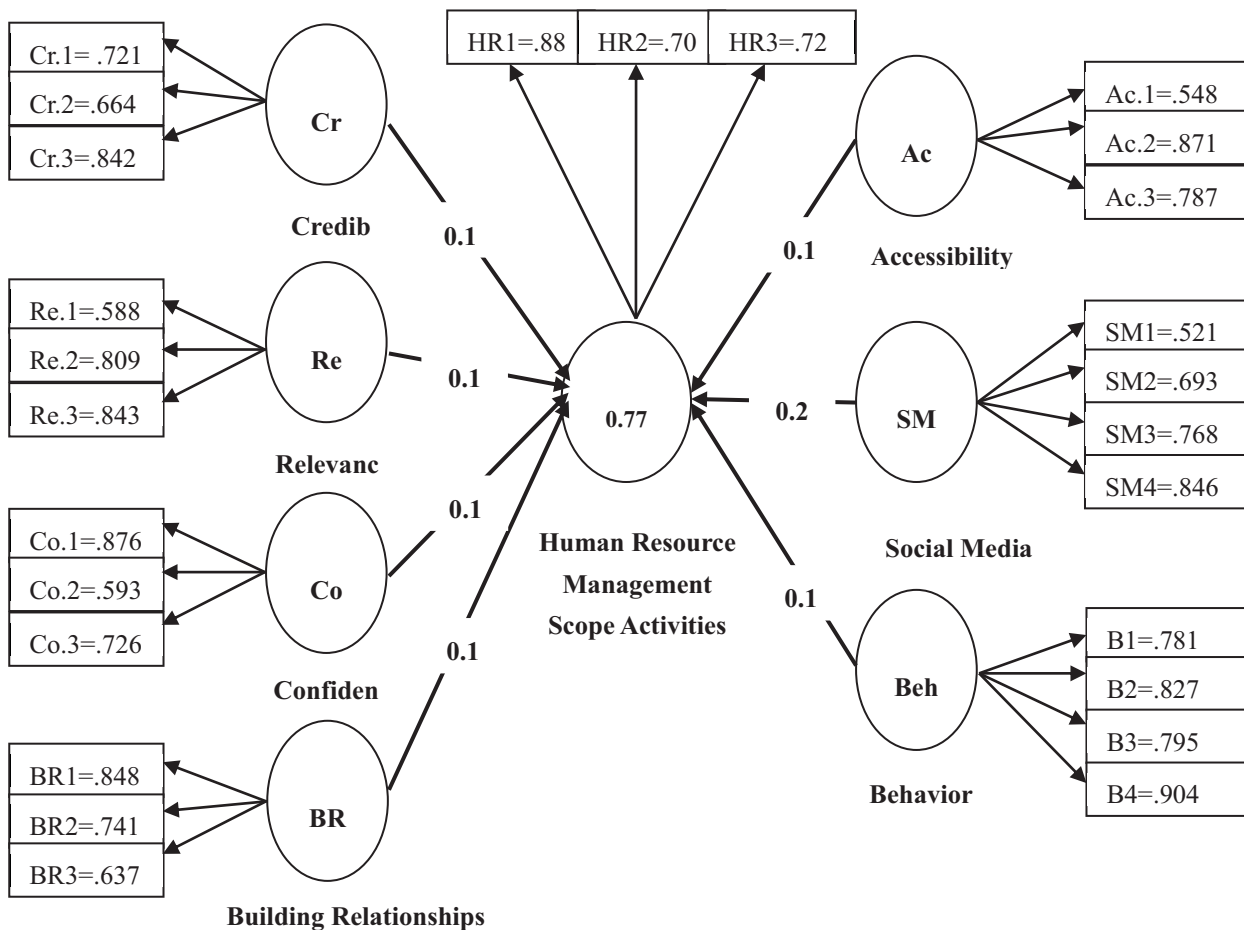


Figure 1. Conceptual Model

Source: Based on AA Karam & A Kitana (2018).

4.4 Reliability of Inward Consistency

Based on the mentioned program, composite dependability, as opposed to “Cronbach's alpha”, is utilized for consider an estimation paradigm inward consistency reliability. An inward consistency is customarily limited utilizing Cronbach's alpha. Nevertheless, it is non-reasonable for PLS-SEM in light of the fact that it is touchy to a quantity of items in the criterion, and this is likewise established to create extreme underrating while connected to the program paradigm (Henson, 2001). In present study, the composite reliability to the constructs Accessibility, Behavior, Building Relationships, Confidence, Credibility, Relevance, Social Media Monitoring and Human Resource Management Scope Activities are indicated to be 0.78654 0.89671, 0.78897, 0.78094, 0.78880, 0.79568, 0.80466, and 0.79348 severally, point out raise altitudes of inward consistency reliability (Osburn, 2000). Earlier investigation proposes that a doorstep altitude of 0.60 or soaring is desired to demonstrate a tasteful composite reliability in investigational study Pereira and Pinto, (1992) but not overrun the (0.95) level. Therefore, so as the rate of the statistic is one yet, it acts not mean completeness in composite reliability due to is a solitary thing feature.

4.5 Validity of Convergent

Convergent validness indicates to a paradigm capability to clarifying the indicator's variation. The average variation extracted ability supply proof of convergent validness (Russell, 1978). Research suggests an average variety extracted doorstep scale of (0.5) as confirmation of convergent validness. However, two of study develops exceeded this grade and the rest are not very far from this scale (Bagozzi, and Yi, 1988). After these build met discriminant legitimacy and latest reliability investigations; they are protected against the paradigm to preserve purport validity. The average variation extracted from the latent variable as shown in (Table 8) summary, of, construct reliability, validity bigger than (0.05), therefore, the (0.5) is the lower standard desired. In this way, the standard of reflective build's proving to gain the abnormal altitude of convergent validity.

4.6 Construct Reliability, and Collinearity Statistics (VIF)

Based on reliability which is a status to validity, loadings accuracy is the essential chequered to include the relevance to measure have much on popular to capture via dormant variables. Subsequent to analyzing the external loadings from each LVs (credibility, relevance, confidence, social media monitoring, building relationships, behavior, and accessibility, and the human resource management scope activities, indicators that are shown exterior loadings bigger from (.4) doorstep altitude (Hair et al., 2013). Therefore, all indicators are establishing to have factors between (.5) to (.9). A factor pertinence experiment is consequently carrying out into these each factor to inform whether they ought to be held in the paradigm. Hence, this could be enough evidence that all indicators indicate extremely dynamic relationships. In an indicator's importance, experiment, dubious factors ought to be erased just if their expulsion from the PLS paradigm prompts an expansion of an AVE and composite reliability (CR) of their builds over the (.5) limits these can be gotten from (Table 8) through review criteria diagram. As the disposal of these, all factor would bring about an expansion of (AVE) and (CR) of their particular dormant variables. The indicators are retained because there (OL, LR, rho_A, CR, and AVE) are all (>0.5) or higher which all are statically significant. The LVs ought to retain the capacity to clarify no less than (half) of every factor's variance. By PLS calculation, the subsequent path-coefficient's paradigm assessment is displayed in (Figure 1) and the OLs of various builds are shown on (Table 8).

Table 8. Summary of Construct Reliability, Validity

	Indicators	Outer Loadings	Loadings Reliability	rho_A	Composite Reliability	AVE	Collinearity Statistics (VIF) SM
Accessibility	AC1	0.54843					
	AC2	0.87095	0.58868	0.64674	0.78654	0.55959	1.85709
	AC3	0.78704					
Behavior	BE1	0.78058					
	BE2	0.82680	0.84612	0.85320	0.89671	0.68530	2.13741
	BE3	0.79474					
	BE4	0.90371					
Building Relationships	BR1	0.84823					
	BR2	0.74066	0.62383	0.66837	0.78897	0.55810	2.55896
	BR3	0.63738					
Confidence	Co1	0.87649					
	Co2	0.59300	0.60967	0.72016	0.78094	0.54916	2.34678
	Co3	0.72635					
Credibility	Cr1	0.72137					
	Cr2	0.66406	0.60130	0.63057	0.78880	0.55702	2.96881
	Cr3	0.84244					
Relevance	Re1	0.58798					
	Re2	0.80935	0.63705	0.70994	0.79568	0.57042	3.03829
	Re3	0.84290					
HRMS	HRMS1	0.82248					
	HRMS2	0.69956	0.61490	0.63792	0.79348	0.56279	DV
	HRMS3	0.72285					
Social Media Monitoring	SMM1	0.52132					
	SMM2	0.69318	0.67975	0.73357	0.80466	0.51445	2.59909
	SMM3	0.76802					
	SMM4	0.84599					

Moreover, the measure of collinearity statistics “variance inflation factor” (VIF) human resource management scope activities dependent variable; therefore VIF compute the effect of collinearity into the ingredients during an inner VIF values in smart-PLS. The VIF is constantly more noteworthy than or equivalent of one, tolerance, it's up to one. There is eternally approved VIF esteem until deciding nearness from multi-collinearity. Estimating about VIF with a view to surpass ten are frequently viewed as multi-collinearity, however, during feeble paradigms admires over two and halves might be a reason into worry. In countless insights, programs, the outcomes are demonstrated both as an individual R^2 esteem (unmistakable from the general R^2 of the model) and a Variance Inflation Factor (VIF). At the point when those R^2/VIF esteems are bigger from each factor of the paradigm, multi-collinearity are likely a matter at the point when VIF is bigger, there is high multicollinearity and unpredictability of the b and beta coefficients. It is regularly compact to deal with this. For more, evidence of all LVs inner VIF values was (between 1-3) as indicated on (Table 8) which is far enough to show statistically significant (Ringle et al., 2015).

4.7 Discriminant Validity

As per Fornell-Larcker Criterion (Table 9) results and specification as the same researcher in (1981) is a familiar while traditionalist method of evaluate "discriminant validity" in Smart-PLS-SEM. An additional way is a cross stacking analysis, the factors stacking to its latent variables ought to be inflated than other constructs. Hence, the square root of each latent factor ought to be bigger of latent factors connection to establish the discriminant validity. As indicated in (Table 8) plainly the discriminant validity will stretch to present study due to the square root of AVE for Credibility, Relevance, Confidence, Social Media Monitoring, Building relationships, Behavior, and Accessibility are much larger than the corresponding LFC. Hence, the numbers are bigger through correlation rates within column about (Accessibility.74806), (Behavior. 82783) (Building Relationships.74706), (Confidence.74105), (Credibility.74634), (Relevance.75526), (HRMS.76772), and (Social Media Monitoring.71725), and likewise higher than those in the (row). An abridged, to each factor, the estimations of square roots are greater than an AVE extricated estimations. Generally, the discriminant validity was well established.

Table 9. Fornell-Larcker Criterion

	AC	BE	BR	Co	Cr	Re	HRMS	SMM
Accessibility	0.748							
Behavior	0.066	0.827						
Building Re.	0.395	0.565	0.747					
Confidence	0.423	0.419	0.656	0.741				
Credibility	0.517	0.540	0.648	0.637	0.746			
Relevance	0.447	0.582	0.561	0.643	0.727	0.755		
HRMS	0.534	0.596	0.721	0.689	0.722	0.738	0.767	
SM. Mo.	0.530	0.482	0.641	0.628	0.591	0.673	0.750	0.717

4.8 Path Coefficients

From the (Table 10) in appendix, path coefficients have specified the intensity of connection with the model latent factors with constant of determination (R^2) was indicated the effect on all LVs to investigate the hypothesis significantly. The significance decision level by researchers refuse (H_0) is self-assertive. Routinely the five percentages (fewer from one out of twenty shot being off-base), 0.1% ($P < 0.05$, 0.01 and 0.001) ranks to have been utilized. This numeral can grant an incorrect discern from a safeguard. Hence, Accessibility H1, Behavior H2, Building relationships H3, Relevance H6, and Social Media Monitoring H7, were showing statistically significant with P-value smaller than (0.05). Whilst the hypothesis of Confidence H4 and Credibility H5 were rejected because of the P-value was higher of (.05).

Table 10. Path Coefficients

	(O.S)	(S.M)	(STERR)	T.S (O/STERR)	(P.V)	Hypothesis
Accessibility ->HRMSA	0.145	0.149	0.063	2.289	0.022	Accepted
Behavior -> HRMSA	0.170	0.172	0.065	2.589	0.009	Accepted
Building R-> HRMSA	0.170	0.161	0.063	2.683	0.007	Accepted
Confidence -> HRMSA	0.115	0.130	0.085	1.345	0.179	Rejected
Credibility -> HRMSA	0.105	0.101	0.074	1.417	0.157	Rejected
Relevance -> HRMSA	0.150	0.15	0.078	1.932	0.050	Accepted
SMM-> HRMSA	0.262	0.258	0.085	3.075	0.002	Accepted

In concluding, during hypothesis testing by path coefficients in smart-PLS, each parameter assessments for identical hypotheses examined. Furthermore, a comprehensive effectiveness to conjecture that is achieved. Thus, a test statistically significant at the different levels, confirmed five from hypotheses, through their criterion valuation. Moreover, a statistical measure which is the (R^2) for clarifying the variance in IV and DV upon paradigm that demonstrated on (Table 7). However, all estimations of (R^2) having demonstrated the intensity of the association with (P-value =.00), from seven inactive factors on a paradigm were interpreted significant levels (1%-5%). As SPLS3 was specified (R^2) into comprehensive framework of a paradigm, this could be a better grade in combination paradigm rather to that if an SPLS discovers several troubles it might not confirm (R^2) to all paradigm.

5. Discussion and Conclusion

While concluding, a role of SM on HRMS is not deniable now, but it is still in its nascent stage. Based on the interview done by a researcher and the survey conducted to the conclusion that the companies which are established several decades ago (like Al-Futtaim) has assembled the effect of social media in a better way than the companies with the less establishment period. Secondly, the study found that as Al Futtaim is a big conglomerate with widespread business, it has a more extensive use of social media and has more concrete plans

in comparison to Al-EtiHAD which mostly take help of social media when needed in HRMSA. Though from the survey and interview the study get to know that no one has still implemented any social media policy but Al Futtaim is in a mood to adapt it while Al- EtiHAD do not see its need in recent years. Specifying the achievement of SM within broadly and their creating application for associations specifically, the investigation theme has likewise turned out to be vital for organizational examination and HRMS. Albeit SM gives numerous open doors, e.g., for a viable undertaking and credibility administration, the study has mentioned out some potential threats. This empowered us to grant numerous exact examinations on the open doors, and dangers of SM utilize a structure that considers reflection from lone occurrences, for which implies it takes into account summing up an HRMS pertinent subject in connection for web-based social networking and, along these lines, for information exchange inside the HRMSA.

Through a testimonial to innovation and socialite construction, the study has indicated how authoritative and singular vigour may change while occurring in simulated environments concerning to HRMS. Firstly, the outline, through the specialized design of SM, limits yet in addition empowers proven activities. This can combination, and the hierarchical body while decides how ordinary activities are facilitated. In this manner, to view innovation as existence firmly identified with a sociable situation, Orlikowski and Scott, (2008), the ability viewed as an interest in resolve post-processing job. Next, the study determined another variety of association in order to counterpart the customary zones of collaborations with organizations as a component of enrollment. One of the study situations, some portion of the association's workforce was expressible inside a shut situation with its own particular principles of conduct. In connection to SM, the study beholds the uniqueness of a specific birth companion as existence applicable to HRMS. Digital locals and post-computerized locals, as the most youthful companions in associations, convene their own particular desires, in research vision, progressively diffuse in associations that will come about, we expect, in some serious variations into communication and conduct.

The HRMS activities spotted out the present study whilst the HRMS academic clarifications consider several functional ramifications during an importance technical framework, organization design, with information systems design. The activities concerning related standards could prompt improvements and usage of extra effective on technical and sociable situations as far as the open doors and threats to utilizing SM. Otherwise, the analysts would prescribe administration should play a dynamic part in the use of SM, for instance, by making a sufficient situation for group building, masterminding the specialized premise, and tuning the principles of conduct through Accessibility, Behavior, Building Relationships, Confidence, Credibility, Relevance, Social Media Monitoring, and Human Resource Management Scope Activities. Subsequently, accordingly leads should be sanctioned in ordinary practices; administrative nearness in SM conditions ought to be compulsory. The study assumes tuning the plan of correspondence pattern and points via partaking in ordinary correspondence is an essential authority task.

Eventually, based on the above survey concludes that an effect of social media has increased from recent times for HRMSA. But the involvement is still very informal and a lot needed to be done to make it a formal and reliable platform for human resource management scope activities. Regardless of the possibility that researching SM outlines has contrasted with exploring vis-a-vis confront, a few points of interest in the information (the discussion is put away as content, which offers the chance to dissect it ex-post), some sort of triangulation with different sources, for example, talk about the information and data from members perception, will even know as a basic. Therefore, in this case, would have gone past the objectives of present survey and should be left to future research.

Acknowledgement

We would like to thank the all members of two companies Al-Futtaim and Al-EtiHAD group UAE for their participation in the survey who supported our work in this way and helped me get results of better quality. We also grateful to the our universities for their patience and support in overcoming numerous obstacles I have been facing through our research.

References

- Anderson, C. K. (2012). The impact of social media on lodging performance. *Cornell Hospitality Report*, 12(15), 4-11.
- Armstrong, M. (2006). Human resource management practice. *London: Kogan page limited*.
- Arthur, J. B. (1994). Effects of human resource systems on manufacturing performance and turnover. *Academy of Management journal*, 37(3), 670-687.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of*

- Marketing Science*, 16(1), 74-94. <https://doi.org/10.1007/BF02723327>
- Cappelli, P., & Singh, H. (1992). Integrating strategic human resources and strategic management. *Research Frontiers in Industrial Relations and Human Resources*, 165, 192.
- Constantinides, E., & Fountain, S. J. (2008). Web 2.0: Conceptual foundations and marketing issues. *Journal of Direct, Data and Digital Marketing Practice*, 9(3), 231-244. <https://doi.org/10.1057/palgrave.ddmp.4350098>
- Edosomwan, S., Prakasan, S. K., Kouame, D., Watson, J., & Seymour, T. (2011). The history of social media and its impact on business. *Journal of Applied Management and Entrepreneurship*, 16(3), 79.
- Fodness, D., & Murray, B. (2007). Passengers' expectations of airport service quality. *Journal of Services Marketing*, 21(7), 492-506. <https://doi.org/10.1108/08876040710824852>
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 382-388. <https://doi.org/10.1177/002224378101800313>
- Freer, T. (2011). Social media gaming—a recipe for employer brand success. *Strategic HR Review*, 11(1), 13-17. <https://doi.org/10.1108/14754391211186269>
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance.
- Hanna, R., Rohm, A., & Crittenden, V. L. (2011). We're all connected: The power of the social media ecosystem. *Business Horizons*, 54(3), 265-273. <https://doi.org/10.1016/j.bushor.2011.01.007>
- Henson, R. K. (2001). Understanding internal consistency reliability estimates: A conceptual primer on coefficient alpha. *Measurement and Evaluation in Counseling and Development*, 34(3), 177.
- Karam, A. A., & Saydam, S. (2015). An analysis study of improving brand awareness and its impact on consumer behavior via media in North Cyprus (A case study of fast food restaurants). *International Journal of Business and Social Science*, 6(1).
- Kaur, T., & Zafar, S. (2014). Impact of Social Media on HR Functions: A Review. *Prabandhan: Indian Journal of Management*, 7(3), 26-34. <https://doi.org/10.17010/pijom/2014/v7i3/59279>
- Kitana, A., & Karam, A. A. (2017). The relationship between work environment into women's career development and job satisfaction in the United Arab Emirates: A large scale sampling. *International Journal of Business and Management Invention*, 6, 22-28.
- Korff, J., Biemann, T., & Voelpel, S. C. (2017). Differentiating HR systems' impact: moderating effects of age on the HR system–work outcome association. *Journal of Organizational Behavior*, 38(3), 415-438. <https://doi.org/10.1002/job.2130>
- Kothari, C. R. (2004). Research methodology: Methods and techniques. *New Age International*.
- Madia, S. A. (2011). Best practices for using social media as a recruitment strategy. *Strategic HR Review*, 10(6), 19-24. <https://doi.org/10.1108/14754391111172788>
- Mahmood, A. (2012). Impact of Training on Commitment, retention and performance. *Islamabad: Foundation University, Islamabad*.
- Oh, O., Agrawal, M., & Rao, H. R. (2013). Community intelligence and social media services: A rumor theoretic analysis of tweets during social crises. *Mis Quarterly*, 37(2). <https://doi.org/10.25300/MISQ/2013/37.2.05>
- Orlikowski, W. J., & Scott, S. V. (2008). 10 sociomateriality: challenging the separation of technology, work and organization. *Academy of Management Annals*, 2(1), 433-474. <https://doi.org/10.5465/19416520802211644>
- Osburn, H. G. (2000). Coefficient alpha and related internal consistency reliability coefficients. *Psychological methods*, 5(3), 343. <https://doi.org/10.1037/1082-989X.5.3.343>
- Pereira, M. V. F., & Pinto, L. M. V. G. (1992). A new computational tool for composite reliability evaluation. *IEEE transactions on power systems*, 7(1), 258-264. <https://doi.org/10.1109/59.141712>
- Ringle, C. M., Wende, S., & Becker, J. M. (2015). SmartPLS 3. Boenningstedt: SmartPLS GmbH, <http://www.smartpls.com>.
- Rudnick, M., & Wyatt, W. (2007). How to integrate new technology and social media into HR processes. *Strategic HR Review*, 6(2), 5-5. <https://doi.org/10.1108/14754390780000944>

- Russell, J. A. (1978). Evidence of convergent validity on the dimensions of affect. *Journal of personality and social psychology*, 36(10), 1152. <https://doi.org/10.1037/0022-3514.36.10.1152>
- Sin, S. S., Nor, K. M., & Al-Agaga, A. M. (2012). Factors Affecting Malaysian young consumers' online purchase intention in social media websites. *Procedia-Social and Behavioral Sciences*, 40, 326-333. <https://doi.org/10.1016/j.sbspro.2012.03.195>
- Stone, H., Sidel, J. L., & Bloomquist, J. (2008). Quantitative descriptive analysis. *Descriptive Sensory Analysis in Practice*, 53-69.
- Sutton, J. N., Palen, L., & Shklovski, I. (2008). *Backchannels on the front lines: Emergency uses of social media in the 2007 Southern California Wildfires* (pp. 624-632). University of Colorado.
- Tsai, W. H., Hsu, W., & Chou, W. C. (2011). A gap analysis model for improving airport service quality. *Total Quality Management & Business Excellence*, 22(10), 1025-1040. <https://doi.org/10.1080/14783363.2011.611326>
- Whitener, E. M. (1997). The impact of human resource activities on employee trust. *Human Resource Management Review*, 7(4), 389-404. [https://doi.org/10.1016/S1053-4822\(97\)90026-7](https://doi.org/10.1016/S1053-4822(97)90026-7)
- Wong, K. K. K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, 24(1), 1-32.

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Reviewer Acknowledgements

International Business Research wishes to acknowledge the following individuals for their assistance with peer review of manuscripts for this issue. Their help and contributions in maintaining the quality of the journal are greatly appreciated.

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