

E-ISSN: 2621-654X  
P-ISSN: 2622-8793

*International Journal of  
Organizational Business Excellence*

# IJOBEX

VOL. 2(2) DEC. 2019



International  
Performance  
Excellence Forum

## INTERNATIONAL JOURNAL OF ORGANIZATIONAL BUSINESS EXCELLENCE

### ABOUT IJOBEX

#### OVERVIEW

Business excellence relies heavily on the type of strategies, techniques and tools for measuring and benchmarking the business performance. Subsequently, identifying best practices and their implementation eventually decides excellence in business. Given the importance of business excellence, a journal devoted to performance evaluation and best practices both processes and results, especially in order to be competitive in the global market, is essential. International Journal of Organizational Business Excellence (IJOBEX) addresses new developments in business excellence and best practices, and methodologies to determine these in both manufacturing and service organizations.

IJOBEX focuses on organizational performance with particular areas as the scope—strategic planning, human resource, communication and management that result in improving organizational. Organizational performance excellence is essentially required to improve values to customers and stakeholders that contribute to organizational sustainability, and to develop organizational effectiveness.

#### INDEXING

Currently indexed in Google Scholar, DOI, Crossref, and being submitted to DOAJ and to Elsevier for inclusion in Scopus.

#### FOCUS AND SCOPE

The scope of this journal includes, but not limited to:

- ▶ Leadership for performance excellence
- ▶ Strategic Planning for performance excellence
- ▶ Customer and market focus for performance excellence
- ▶ Information, measurement, knowledge management, and information technology for performance excellence
- ▶ Human Resource for performance excellence
- ▶ Operational Focus for performance excellence
- ▶ Communication for performance excellence
- ▶ Performance measures and metrics in business management
- ▶ Methodologies and tools for performance measurement
- ▶ Benchmarking business performance
- ▶ Business excellence in various functional areas
- ▶ Best practices in business management
- ▶ World class business and operational strategies and techniques
- ▶ Alignment between different levels of strategies
- ▶ Understanding the customer requirements
- ▶ Process design management
- ▶ Knowledge management for improved performance
- ▶ Systems approach for determining the best practices
- ▶ Six-Sigma, QFD, Taguchi methods and TQM
- ▶ Data warehousing and data mining in business excellence
- ▶ Measuring performance in creative industries
- ▶ Best practices in creative economy and industries

All of the topics above are considered to have essential involvement in developing organizational performance excellence.

**LAG TIME**

At IJOBEX, we know the importance of your research being published as quickly and efficiently as possible. With Open Journal System for online submission, we can guarantee a streamlined production process to ensure that your paper can reach the academic community rapidly and with maximum impact.

The elapsed time from submission to publication for the articles averages 3-4 months. A decision of acceptance of a manuscript will be reached in 1 to 2 months (*average 6 weeks*).

**ACCEPTANCE RATE**

Since the first issue, the acceptance rate has been improving significantly and currently acceptance rate is 50%

IJOBEX follows a double-blind peer-review process, whereby authors do not know reviewers and vice versa. Peer review is fundamental to the scientific publication process and the dissemination of sound science.

IJOBEX aspires to select and publish, through double-blind peer-review, the highest quality research globally. To achieve this goal, the entire peer-review process should be thorough, objective and fair. Journal reputation depends heavily on the fairness of the peer-review process.

Peer reviewers are experts chosen by journal editors to provide written assessment of the strengths and weaknesses of written research, with the aim of improving the reporting of research and identifying the most appropriate and highest quality material for the journal.

**REVIEW QUALITY**

IJOBEX considers its reviewers as experts in the scientific topics addressed in the articles they review. They provide written assessment of the strengths and weaknesses of written research with the aims to improve the reporting of research and identifying the most appropriate and highest quality material for the journal. Individuals who do not have such expertise cannot be reviewers.

Ratings of review quality and other performance characteristics is periodically assessed by the Editor-in-Chief to assure optimal journal performance. These ratings also contribute to decisions on reappointment to the IJOBEX Editorial Board and to ongoing review requests. Individual performance data on Reviewers are available to the Editors but otherwise kept confidential.

Reviews are expected to be professional, honest, courteous, prompt, and constructive. What is expected of reviewers? Reviewers are welcome to recommend a particular course of action, but they should bear in mind that the other reviewers of a particular paper may have different technical expertise and/or views, and the Journal's editors may have to make a decision based on conflicting advice. The most useful reports, therefore, provide the editors with the information on which decision should be based. Setting out the arguments for and against publication is often more helpful to the editors than a direct recommendation one way or the other.

The submitted manuscript is a privileged communication; reviewers must treat it as confidential. It should not be retained or copied. Also, reviewers must not share the manuscript with any colleagues without the explicit permission of the Editor-in-Chief.

**COPYRIGHT**

When publishing in IJOBEX Journal, author(s) sign copyright agreement to publish, while the copyright remain solely with the author(s). The author(s) have the right to publish after getting written permission from IJOBEX.

**OPEN ACCESS STATEMENT**

The journal is currently open access and free to download by anyone

**ARTICLE PROCESSING CHARGE**

Currently, there is no charge whatsoever to author to publish his/her good article at IJOBEX.

**CONTENTS LICENSING**

(CC BY)



International Journal of  
Organizational Business Excellence

**IJOBEX**

**Vol. 2 (2) DEC. 2019**

*A scientific journal published by*  
Bina Nusantara University & International Performance Excellence Forum

# IJOBEX

International Journal of Organizational Business Excellence

AN INTERNATIONAL PEER-REVIEWED JOURNAL

## ADVISER AND CONSULTANT

Nayan Deep S. Kanwal

## EDITOR-IN-CHIEF

Bachtiar H. Simamora

## EDITING AND TECHNICAL ADMINISTRATIVE ASSISTANCE

Shavira Sarashita  
Angtyasti Jiwasiddi

## EDITORIAL OFFICE

Performance Excellence  
Research Group  
Bina Nusantara University  
Anggrek Campus, 7<sup>th</sup> Floor,  
R.700  
Jl. Kebon Jeruk Raya No.27,  
Kebon Jeruk, Jakarta Barat,  
Jakarta 11530, Indonesia



## EDITORIAL BOARD

**Craig Anderson (Dr.)**  
*Strategic Planning, Risk  
Management,  
Knowledge Management,  
Business Management,  
Performance Improvement,*  
FEMA, Institute for  
International Studies and  
Training.

**David Reeve (Dr.)**  
*Marketing Strategy and  
Communication Excellence,*  
University of New South  
Wales.

**Dean Parham (Dr.)**  
*Microeconomics, Growth  
Economics,  
Productivity Analysis,  
Efficiency Analysis,  
Economic Policy Analysis,*  
University of Adelaide.

**Helen K. Liu (Dr.)**  
*Inter-organizational Networks,  
Non-Profit Management,*  
University of Hongkong.

**Ishak Ismail (Prof. Dr.)**  
*Leadership Excellence,*  
Universiti Malaysia Pahang

**Opim Salim Sitompul (Prof.)**  
*Computer System and  
Engineering,* University of  
Sumatera Utara.

**Rinda Hedwig (Dr.)**  
*Computer Engineering,  
Photonics, Quality Assurance,*  
Bina Nusantara University

## INTERNATIONAL ADVISORY BOARD

**Arief Yahya (Dr.)**  
*Information Communication  
Technology, Tourism*  
Minister of Indonesia.

**Jayakaran Mukundan  
(Prof. Dr.)**  
*English Language Studies,  
Teaching English as a Second  
Language (TESL), English  
Language Studies,* Universiti  
Putra Malaysia.

**Mark A. Gregory (Dr.)**  
*Network Engineering,  
Telecommunications,  
Internet Security, Software  
Engineering, Project  
Management, Small  
Business Management,*  
Royal Melbourne Institute of  
Technology University

**Paul J. Steel (Dr.)**  
*Operational Excellence,  
Quality System,  
Operations Management,  
Management Consulting,  
Business Strategy, Business  
Process Improvement, Total  
Quality Incorporated.*

**Prajapati Trivedi (Dr.)**  
*Public Policy, Program  
Management,  
Risk Management,  
Performance Management,  
Business Strategy,  
Management Consulting,*  
Boston University.

**Robin Mann (Dr.)**  
*Program Management,  
Strategic Planning,  
Business Excellence,  
Performance Improvement,  
Operations Management,  
Business Development,  
Risk Management,  
Operational Excellence,  
Global Benchmarking and  
Business Excellence  
Research.*



# Foreword

Welcome to the fourth issue of **International Journal of Organizational Business Excellence (IJOBEX)**. IJOBEX is an open-access scientific journal published by **Bina Nusantara University (BINUS)** and **International Performance Excellence Forum (IPEF)** and is independently managed and run on a non-profit basis for the benefit of the world-wide science community. This journal is specifically committed to publish research paper in the area of business management and social sciences that contribute in excellence to business, manufacturing, healthcare and education in both public and private organization. The topics include but not limited to; Leadership, Strategic Planning, Customer and Market Focus, Information, Measurement, Knowledge Management, and Information Technology, Human Resource, Operational Focus, and Communication for Performance Excellence. This fourth issue is a compilation of 5 regular research articles coming from different countries i.e. **Nigeria, Indonesia, Malaysia, United Kingdom and Portugal**.

The first article talks about entrepreneurship educations of prison inmates in Nigeria by finding out the effects on skills acquisition for self-reliance (*Ime Robson Nseobot and Anietie Imo Effiong*). The following articles is about effect of work environment and employee engagement on job performance of public relation staff in luxury hotels in Jakarta (*Yohanes Totok Suyoto and Yosaphat Danis Murtiharso*); awareness of small and medium enterprises on Competition Act 2010 and Malaysian Competition Commission (*Hasnah Haron, Ishak Ismail, Yuvaraj Ganesan and Idris Gautama So*); exploring enablers, barriers and opportunities to digital supply chain management in Vietnamese manufacturing SMEs (*Nguyen Phuc Khanh Linh, Vikas Kumar and Ximing Ruan*). The last article is about exploring quality determinants in airline services, by conducting study of customer experience in Vietnam (*Y Nha Ngoc Hoang, Vikas Kumar and Marlene Amorim*).

We would like to thank the contributors as well as the reviewers for their commitment and patience which made this fourth edition a successful endeavor. It is hoped that this publication would be an encouragement for researchers from around the world to be more active in publishing their research papers many more with good quality research paper that are insightful for academics and practitioners alike.

Special thanks to the Editorial Board Member, International Advisory Board and, Dr Nayan Kanwal as the consultant for the guidance and support in making this publication possible. This will continue to motivate us to do more and better and bring IJOBEX in to international arena sooner.

**Bachtiar H. Simamora, M.Sc., PhD.**

Editor-in- Chief

[bsimamora.ijobex@binus.edu](mailto:bsimamora.ijobex@binus.edu)

December 2019

**International Journal of Organizational Business Excellence**  
**Vol. 2 (2) Dec. 2019**

**Contents**

|                                                                                                                            |     |
|----------------------------------------------------------------------------------------------------------------------------|-----|
| <b>Foreword</b>                                                                                                            | i   |
| Bachtiar H. Simamora                                                                                                       |     |
| Entrepreneurship Educations of Prison Inmates in Nigeria: Effects on Skills Acquisition for Self-Reliance                  | 71  |
| <i>Ime Robson Nseobot and Anietie Imo Effiong</i>                                                                          |     |
| Effect of Work Environment and Employee Engagement on Job Performance of Public Relation Staff in Luxury Hotels in Jakarta | 83  |
| <i>Yohanes Totok Suyoto and Yosaphat Danis Murtiharso</i>                                                                  |     |
| Awareness of Small and Medium Enterprises on Competition Act 2010 and Malaysian Competition Commission                     | 91  |
| <i>Hasnah Haron, Ishak Ismail, Yuvaraj Ganesan and Idris Gautama So</i>                                                    |     |
| Exploring Enablers, Barriers and Opportunities to Digital Supply Chain Management in Vietnamese Manufacturing SMEs         | 101 |
| <i>Nguyen Phuc Khanh Linh, Vikas Kumar and Ximing Ruan</i>                                                                 |     |
| Exploring Quality Determinants in Airline Services: A Study of Customer Experience in Vietnam                              | 121 |
| <i>Y Nha Ngoc Hoang, Vikas Kumar and Marlene Amorim</i>                                                                    |     |



## ENTREPRENEURSHIP EDUCATIONS OF PRISON INMATES IN NIGERIA: EFFECTS ON SKILLS ACQUISITION FOR SELF RELIANCE

Ime Robson Nseobot<sup>1</sup> and Anietie Imo Effiong<sup>2</sup>

<sup>1</sup>Department of Business Administration, Akwa Ibom State Polytechnic, Nigeria

<sup>2</sup>Corporate Institute of Research and Computer Science, Uyo, Nigeria

### Abstract

*The study examined the entrepreneurship educations of prison inmates' in Nigeria: effects on skills acquisition for self reliance. The research design for this study is an Expost Facto design. The population of the study is put at 5629 according to records of the Nigerian Prisons Service, Akwa Ibom State. Simple random sampling technique was used to select 303 respondents out of the population. From the findings of the study, it was revealed that relationship between entrepreneurship educations and skills acquisition for self-reliance among Prison Inmates in Akwa Ibom State have a proportional effect on their skills acquisitions. These will become a source of their livelihood after completing their jail terms, foster quickly integration into the labour market and the society and reduced stigmatization of getting a job or enrolling in apprenticeship. It is recommended that the management of prisons establishments in Akwa Ibom State should give more time and resources to the prisons entrepreneurship education which contribute more to inmates' entrepreneurial skills acquisition.*

**Keywords:** Entrepreneurship Educations, Prison Inmates', Skills Acquisition, Self Reliance

### INTRODUCTION

Every year, thousands of formerly-incarcerated individuals re-enter their communities hoping to make a fresh start (Ravasi & Turati, 2005). Cases of poor employer perception, difficulty in opening bank account, legal restrictions, social stigma, understanding prevailing technology and societal changes, are daunting challenges capable of hindering economic opportunities (Clements, 2004).

According to Agomo (2009) and Bellu (1992), data on recidivism indicates that, 67.8% of ex-convicts are likely to be rearrested within three years and 76.6% within five years. In

terms of re-adjudication, approximately 49.8% of formerly-incarcerated individuals recidivate within three years and approximately 60% do so within five years. Re-incarceration rates among returning individual is 36.2% within three years, and 44.9% within five years. Any community with!a large number of ex-convicts suffer reduced man power and resources, this hinders economic growth.

Due to this, the Federal Government of Nigeria introduced the Prison Entrepreneurship Development Programs in Nigerian prisons. These programs help to provide for the inmates good skills and attitudes to secure employment or be self employed. The prison entrepreneurship development programs include formal education, entrepreneurship education, vocational skills training, and prison agricultural program. The formal education scheme involves teaching and learning for

#### ARTICLE INFO

##### Article history:

Received: 28 July 2019

Accepted: 11 October 2019

##### Email Addresses:

[nseobot857@gmail.com](mailto:nseobot857@gmail.com) (Ime Robson Nseobot)

[anietieimo@gmail.com](mailto:anietieimo@gmail.com) (Anietie Imo Effiong)

\*Corresponding author

inmates using the 6-3-3-4 system of education to expose them to basic skills of reading, writing, social and religious studies. Other subject offered include mathematics, social studies, English Language, biology, physics, chemistry, literature, economics, accounting and the likes. Some of the inmates are enrolled for external examinations like First School Leaving Certificate Examination, Junior Secondary examination and Senior Secondary School examinations. Entrepreneurship education involves teaching the inmates through the rudiments of entrepreneurship such as identifying needs, general business management, marketing, financial management, preparing business plans and proposal.

For the vocational skills training, the inmates are required to make a choice (Asokhia & Osumah, 2013). The chosen vocation cap must be within the limits of the inmates' jail sentence. At completion of the training and jail term, the inmates should be helped by the prison management to secure capital to set up. The prison agricultural program is a scheme that engages the inmates by making them work in the prison farms, thereby aiding them to learn valuable agricultural skills. These skills include all forms of practical farming skills, farm management, financial book keeping, and so on (Asokhia & Osumah, 2013). Therefore, this study seeks to examine the effectiveness of prison entrepreneurship program in equipping prison inmates with entrepreneurship skills.

### **Statement of the Problem**

The entrepreneurship development programs introduced in the prisons is meant to aid successful re-entry into the society and engender productivity among newly released inmates by providing inmates with skills that will make them either employable or self-employed. In view of the above, this study was designed to appraise the effects of prison entrepreneurship program (one of Nigerian educational program) in equipping prison inmates (in Akwalbom State) with entrepreneurship skills.

### **Objective of the Study**

To examine the relationship between entrepreneurship educations and skills acquisition for self-reliance among Prison Inmates in Akwalbom State.

### **Research Question**

What is the relationship between entrepreneurship educations and skills acquisition for self-reliance among Prison Inmates in Akwalbom State?

### **Hypothesis of the Study**

There is no significant relationship between entrepreneurship educations and skills acquisition for self-reliance among Prison Inmates in Akwalbom State.

## **LITERATURE REVIEW**

### **Concept of Entrepreneurship Education**

Entrepreneurship education varies across contexts and includes courses associated with post high school programs as well as traditional 2- and 4-year undergraduate degree programs either within or external to business schools (e.g., in schools of agriculture, engineering, and music; Dooley, Seals & Skarbek, 2014). While most studies focus on entrepreneurship education in a college degree setting (Duwe, 2015), a few also focus on professional programs (Naudé, 2013). First, entrepreneurship education programs provide knowledge about several aspects of bringing a new business to life. These aspects include, for example, the characteristics of an entrepreneurial mind-set, entrepreneurial intention development, opportunity identification and analysis, business planning, new venture finance, and managing and growing the venture (Hisrich, Peters, & Shepherd, 2005).

### **Entrepreneurship and Entrepreneurs:**

#### **Conceptual Understanding and Explanation**

Entrepreneurship is the process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic and social risks and receiving the resulting rewards of monetary and personnel satisfaction and

independence (Hisrich, Peters & Dean, 2008). Jung (2014) defines entrepreneurship as the venture that involves taking up a business enterprise quite distinct from obtaining a paid job. The entrepreneur should therefore possess entrepreneurial skills, idea and management skills, which are necessary for the success of the venture.

Arogundade (2011), views entrepreneur as a human bulldozer, who can convert a stumbling block into a steppingstone, a creative and aggressive innovator. An entrepreneur is a person who takes a business risk, financial responsibility and dictates the pace of the business. He earns the interest alone and also bears the loss alone including his personal assets. Ehis & Frank (2013) defines entrepreneurship as a person who starts or organizes a commercial enterprise, especially one involving financial risk, is enterprising and aims at sustained human endeavor for creation of sustainable wealth contribution to humanity.

However, the success of an entrepreneur depends on several factors such as educational background, quality service/products, organization, availability of funds, vision, environment condition, government regulations, infrastructure availability, cost control, management, discipline and determination.

Cheliotis (2008) says that entrepreneur is creating and building something of value from practically nothing, creation and distribution of something of value and of benefits to individuals, groups, organizations and society. He added that it concerns the persistent pursuit of opportunity to create wealth through innovation, creation of product or services that meet customer's needs, using scarce resources in a way that results to the growth of an enterprise, which satisfies the expectation of stakeholders whose roles sustain the business. Entrepreneurship can be described as a process, which involves the transform atom of innovative and creative ideas into profitable activities especially outside an existing organization.

Entrepreneurship is the willingness and ability of individual to seek out investment opportunities, and to establish and run an enterprise successfully (Katz & Decker, 1982). Entrepreneurship offers its students incentives for creative thinking. Entrepreneur can be defined as a person who has the courage to invest his time and resources in business with the hope of making profit. Olufokunbi (1995) describes entrepreneurship as a function of production, the possession and utilization of those attributes that enable one to first of all recognize the need and opportunities to gain from the success of the business.

Importance of entrepreneur is to give the owner job in his enterprise. The self employed must be diligence because out of diligence that he can marriage the profits and the resources beyond normal wage value. It provides the owner opportunity to take prompt decision regarding the business. There is prestige in ownership of a business outfit. For entrepreneurial success, one has to be innovative in nature and should always look forward to a change even when one is satisfied with the current situation because in business emphasize is not on satisfaction but on maximization. The profits and capital are managed by the owner. This is the ability of an individual to get his goal in business activities struggling to realize them as much as possible through efforts using his own resources for success or loss of the business. The business owner work at his place. Entrepreneurship entails creativity which is acting in the face of uncertainty or doing things in a new way.

### **Prison Entrepreneurship Education in Nigeria**

The United Nations report on the state and conditions of Nigerian prisons as recorded in the Vanguard of Friday, September 1 (2006), observed that; "All the prisons visited had very limited facilities for rehabilitation. Where these exist, they include basic equipments and facilities for such activities as wood work, tailoring/welding, electronics and sewing. Nevertheless, the facilities are extremely limited and in all cases the tools are few and in poor state of repair". According to Orakwe

(2011), the figures from the prisons indicate that we have total of 48,408 prisoners in custody nationwide. Out of this number, 33,552 are awaiting trial while only 14,856 are convicts. About 70 percent of these persons awaiting trial are charged for offences ranging from armed robbery to murder, arson, drugs trafficking, pipeline offences, etc.

A primary cause of this high rate of recidivism is the great difficulty former inmates have in obtaining employment. Without employment, ex-convicts are three to five times more likely to commit a crime than are those who gain employment after leaving prison (Crutchfield & PitchfSeiterord, 1997). Yet ex-convicts find it difficult to obtain employment. Most employers are wary of hiring such individuals, and federal and state laws often bar ex-convicts from certain fields of employment. The resulting costs of recidivism to society are enormous: public safety risks, a weakening of family and community ties, public health risks, and rapidly rising criminal justice costs (Prisoner Reentry Institute, 2006).

Entrepreneurship programs in prisons take numerous forms, from building trades, motor mechanics, fitting and turning, carpentry and upholstery, manufacturing of furniture and clothing to computer training. The premise of Entrepreneurship programs is that inmates who actively participate in these programs have a significantly lower likelihood of being reincarcerated and the acquisition of Entrepreneurship skills increases offenders' legitimate employment opportunities after release. Generally, the available research on Entrepreneurship education indicates that these programs are effective in reducing recidivism. Gerber and Fritsch examined 13 studies and found in nine of the studies that Entrepreneurship education programs are effective and reduce the recidivism of offenders. As an example, Saylor and Gaes (1992, in Gerber & Fritsch, 1994, p.8) investigated Entrepreneurship-technical training in the Federal Bureau of Prisons and found that inmates who received Entrepreneurship training while in prison:

Adjusted better (fewer disciplinary violations) than those who did not receive such training.

Wilson, Gallagher and MacKenzie's research (2000) has shown that programs that begin job search assistance and preparation for employment prior to leaving prison and that continue assistance after release hold promise for reducing recidivism. Andrews et al. (1990), Sampson and Laub (1997) and Sonfield (1992) indicate that offenders released from prison who have a legitimate job (with higher wages or higher quality jobs) are less likely to recidivate. Seiter and Kadela (2003) evaluated two studies done by Saylor and Gaes (1992, 1997) and one study by Gartner (1988) and concluded from the results of the studies that Entrepreneurship training and/or work release programs are effective in reducing recidivism as well as improving job readiness skills. The study by Gartner (1988) indicates that the work release program achieved its primary goal of preparing inmates for final release and facilitating their adjustment to the community. Although there are indications that those who participated in work release programs were somewhat less likely to be rearrested, the results were not statistically significant. Saylor and Gaes (1992, 1997), who compared offenders participating in training and work programs with similar offenders who did not take part.

### **Entrepreneurship Educations and Prison Inmates Economy Development**

Entrepreneurship scheme is a back bone of every man success and as such, an entrepreneurs work in a fast changing, highly complex environment and thereby execute varying roles and tasks dependent on the life-cycle of the entrepreneurial venture (Lumpkin & Dess, 1996). This dynamic environment demands constant learning from the entrepreneur in order to successfully explore and exploit entrepreneurial opportunities towards effective and efficient prison inmate development (Cope, 2005). For instance, younger entrepreneurs face nowadays numerous challenges such as; lack of work and entrepreneurship experience, lack of financial

resources, limited networks and opportunities of social media to access information and connect to other users.

Thus, learning processes, however, depict that younger entrepreneurs remain under-represented in current literature. Especially, the antecedents of entrepreneurs' learning processes which seems drastically unexplored, e.g. *why* do entrepreneurs learn what they learn? Where do they get the information from and which factors are considered in the choice of information source?

Ultimately, research on entrepreneurship has yielded three dominant theoretical perspectives aiming at explaining the nature of entrepreneurship education as a tool for effective prison inmates' development in Nigeria; they include: the functional, personality and behavioral perspective (Sahlman & Stevenson, 1989). The *functional perspective* views the nature of entrepreneurship in an economic sense by regarding actions and responses taken by the entrepreneur in relation to his or her environment. Secondly, the *personality perspective* focuses on personality characteristics of the entrepreneur. Thereby, it is aimed at analyzing 'who' an entrepreneur is and claims that an entrepreneur can be defined by certain character traits. Thirdly, the *behavior perspective* is a process-based view on entrepreneurship regarding the displayed behaviors in relation to its context (Sahlman & Stevenson, 1989; Cope, 2005). The term 'dynamic learning perspective', coined by Cope, (2005), describes a perspective on entrepreneurship which draws from the three perspectives mentioned above and further incorporates 'theories and models from management, adult, and individual learning literature' (Cope, 2005), thereby recognizing contrary to the static approach of the personality perspective, that entrepreneurs constantly learn; not only in the beginning phases but throughout the entire life-time of a venture (Cope, 2005; Lumpkin & Dess, 1996, Reuben and Fischer, 1993).

Moreover, an Entrepreneurial Learning (EL) research has gained momentum since 2001,

with increasing numbers of publications (Cope, 2005; Sonfield and Barbato, 1994). Through this, academic publications in the field are 'diverse, highly individualistic and fragmented' depending on the perspective the respective authors take. Currently, no prevailing, universal definition of EL exists, although most definitions relate to 'what and how individual entrepreneurs learn' (Sonfield and Barbato, 1994). Cope (2005) defined EL as 'learning experienced by entrepreneurs during the creation and development of a small enterprise'. Politis, (2005) defines EL as 'a continuous process leading to the development of knowledge required for starting and managing a firm. In this vein, Parker (2006) refers to EL as 'what entrepreneurs learn about, how they learn, and why they learn.

### **Trends of Entrepreneurship Education in Nigeria: Government Interventions**

Nigeria as a country has numerous business and investment potentials due to the abundant, vibrant and dynamic human and natural resources it possesses. Tapping these resources require the ability to identify potentially useful and economically viable fields of endeavors. Nigerians have made their marks in diverse fields such as science, technology, academics, business and entertainment (Nkechi, Ikechukwu & Okechukwu, 2012).

Thus, entrepreneurship activities and innovative ingenuity in Nigeria have developed enterprises in the following areas: agricultural/agro-allied activities where there are foodstuffs, restaurants, and fast food vending, etc. In the area of solid minerals, there are quarrying, germ stone cutting, polishing and crushing engineering. In power and transport, there are power generations, haulage business (cargo and passengers). In the area of information and telecom business, there are manufacturing and repairs of GSM accessories and the printing and selling of recharge cards. In hospitality and tourism business, there are hotels, accommodation, resort centers, film and home video

production; in oil and gas business, there are construction and maintenance of pipelines, drilling, refining by-products. In the area of environmental and waste management business, there is refuse collection/disposal, recycling and drainage/sewage construction jobs. In the area of financial banking services, there is banking, insurance and stock trading. In engineering and fabrication work, there are machines and tools fabrications. There is also the building and construction, where there are plan and design services and material sourcing (Agbeze, 2012). In spite of the fact that entrepreneurship development has been regarded as the bulwark for employment generation and technological development in Nigeria, the sector nevertheless has had its own fair share of neglect with concomitant unpleasant impacts on the economy. Against this backdrop, entrepreneurship when and if gallantly developed in Nigeria will take its pride of place in quelling unemployment and thus generating employment among Nigerian youths especially the graduates and once again, place the economy on a proper footing (Nkechi et al, 2012).

Moreover, Ogundele and Abiola (2006), revealed that the wide-spread level of unemployment in the country could have been minimized if Nigerians of varying age groups and backgrounds were exposed to entrepreneurial education, training and development across levels. The quest for producing great and dynamic economy, in the 21<sup>st</sup> century, if Nigeria is not to be left behind the rest of the world in the march towards propensity demands that all hands must be utilized to produce entrepreneurial education, training and development for the general populace. In addition, Smith & Miner (1985) asserted that government policies and programs promote entrepreneurship and investment in new ventures. However, he found out that Nigeria's government credit policies and programs have no significant effect on the development of entrepreneurs in the country.

The economic benefits of youth participation in the development process are

varied and have a multiplier effects on the national economy. Since youths constitute about 70% of Nigeria's population, the nation cannot achieve development when there are mostly idle and unproductive. This is basis for their productive engagement in entrepreneurship (Lemo, 2013). Furthermore, over the last decade or so, various efforts had been initiated by the government and other stakeholders to provide employment for the youths in Nigeria. These include the programs on Universal Basic Education, Poverty Eradication, Agricultural Development, Economic Empowerment and Development, Commodity Marketing and Development, as well as Presidential Initiatives, such as the YouWin Program.

Beside this, the National Directorate of Employment (NDE) grooms unemployed youths and retired persons in vocational skills, entrepreneurship/business development, labor-based works, rural employment promotion and job placement guidance and counseling. The Federal Government earmarked on N100 Billion Textile Revival Fund for the Cotton, Textile and Garment Industries, which used to be among the largest employers of labor in the country. The Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) was established to promote the development of the MSMEs sector of the Nigeria economy. Tremendous outcomes have been recorded from its various programs, including the Entrepreneurship Development Program.

The Public Works and Women/Youth Empowerment Scheme (PW/WYE) was launched by the Federal Government to create immediate employment opportunities for women and youths in labor-intensive public works. To be implemented in partnership with the state & local governments and the private sector, the scheme is expected to generate 50,000 skilled jobs and 320,000 unskilled job opportunities. It is a component of the Subsidy Re-investment and Empowerment Program (SURE-P).

The Youth Enterprise with Innovation in Nigeria (You WIN) program is a collaboration of

the Federal Ministries of Finance, Communication Technology and Youth Development to organize an annual Business Plan Competition (BPC) for aspiring young entrepreneurs in Nigeria. The program will provide a one-time Equity Grant of 1 million—N10 million to 1,200 selected aspiring entrepreneurs to start/expand their business concepts and mitigate start up risks; and to further generate some 80,000--110,000 new jobs for unemployed Nigerian youths over a three-year period.

In addition, the Niger Delta Amnesty Training Program has been engaged in the training of youths at various institutes in Ghana, South Africa, the Philippines, Russia, Ukraine, India and elsewhere. Also, more than 5,000 youths have been enrolled in formal educational institutions and vocational centers within and outside the country. To date, over 5,000 beneficiaries have graduated in such skill fields as welding & fabrication, entrepreneurship, pipe-fitting, carpentry & plumbing, oil drilling, electrical installation, ICT, and marine related vocations.

The Petroleum Technology Development Fund (PTDF) was established to promote and upgrade petroleum technology and manpower development through research and training of Nigerians as graduates, professionals, technicians and craftsmen in the fields of engineering, geology, geo-sciences, management, economics and relevant fields in the petroleum and solid minerals sectors, here and abroad.

There are various Micro-Finance Schemes providing financial services to the poor who are traditionally not served by conventional financial institutions. Currently, there are 873 Microfinance banks (MFBs) in Nigeria, employing more than 12,000 Nigerians. Their combined portfolios include 905,099 and 8,241,706 borrowers and depositors respectively. The NYSC Venture Price Competition was introduced by the CBN to sensitize and create awareness in Nigerian youths, awaken their entrepreneurship expertise, and orientate serving youth corps members towards seeking alternative

employment options, in particular, self-employment.

The N200 billion Commercial Agriculture Credit Scheme (CACCS) finances large ticket projects along the agricultural value chain, in addition to the older Agricultural Credit Guarantee Scheme (ACGS).!To date, the CACS has disbursed N158.39 billion for 203 projects owned by 175 private promoters and 27 State Governments and the Federal Capital Territory (FCT), with 5,910 jobs created. The Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL) is a partnership of the Central Bank of Nigeria (CBN), UNIDO and Alliance for a Green Revolution in Africa. It was developed to boost access to bank financing for agriculture by de-risking the agricultural and financial value chains through the adoption of risk-sharing approaches.

The N200 Billion Refinancing/Restructuring of SME/Manufacturing Fund is to enable banks refinance and restructure their existing loan portfolios to SMEs and manufacturing firms. So far, the scheme has improved staff strengths, capacity utilization and turn-over of 499 benefiting companies.!The Power & Aviation Intervention Fund (PAIF) has disbursed some N144.60 billion to Deposit Money Banks (DMBs) for 10 power and 11 aviation projects as well as generated numerous jobs.!The N200 billion Small & Medium Scale Enterprises Guarantee Scheme (SMECGS) of the CBN promotes further SME access to credit. In barely two years, the scheme has disbursed over N1 billion to 20 qualified applicants, with the attendant boosts in their businesses and employment generation.

The Entrepreneurship Development Centers (EDCs) were set up in the six geo-political zones (South-West, South-South, South-East, North-West, North-Central and North-East) to bridge gaps in various elements of youth entrepreneurship development. To date, over 102,000 youths have benefited from the initiative.! Since government cannot solely create for all youths and others, there are imperatives for private sector-driven entrepreneurial development. These include reduction in crime and social vices, improving

economic conditions for business viability, guaranteed future for the country and improved self-worth of Nigerian Youths.

### **The Humanism Theory**

Humanism is a theory developed by thinkers who stress the overriding importance of 'the self as the integrative, consolidating tendency in development that is a source and growth of the individual (De Roberts, 2006). In the words of Sonfield, Lussier & Barbato, (2001), African conceptions of morals would seem generally to be of a humanistic orientation. All value is derived from human interests, and human fellowship is the most important human need. Humanism sees human need, interests and dignity as of fundamental importance and concern.

It is a pervasive and fundamental concept in African socio-ethical thought (Ogbo & Nwachukwu, 2012). Exploring education from the normative point of view Tanimu (2010) affirms that it is a moral concept. From the perspective of African humanism, prison education is to promote humanness in line with the true African virtues and values of *ubuntu* - love, kindness, compassion, forgiveness, care and benevolence. The implication is that through a proper education, people who profess a lack of knowledge and skills, and therefore find themselves on the wrong side of the law could be forgiven and taught relevant socio-economic skills, knowledge, moral norms and virtues of courtesy, compassion, respect for life and the property of fellow humans. From the humanistic point of view, education should inculcate in prison inmates not only economic skills for employment but also the true African values of *ubuntu*, *botho* or *tema* ('humanness' in Zulu, Sotho and Akan respectively). This debate can also be framed in terms of the concepts of retributive versus restorative justice.

Agomo, (2009) argues that restorative justice gives a better lens through which to view the global problem of recidivism. Goldstein (1986) points out that the principles, ideals and themes of living are valued with

personal and cultural meanings; they contain the person's standards and images of self that provide purpose and direction for living; they define the 'ought's', 'should' and obligations of interpersonal relationship; express what is essentially 'good' and 'right' and in countless other ways add to the value and spirit of living.

Thus, despite their offences against humanity, society grants prison inmates pardon and teaches them basic knowledge and skills, they might reciprocate by being kind, law abiding, generous, courteous and show compassion to their fellow humans in the same way as they have been treated. Prison education therefore seeks to redirect and rehabilitate inmates to become better humans and to empower them to live better with fellow humans in society. The education transaction should develop in inmates co-operative skills sustain communal interdependence and concern for the welfare of others. Prison education programs should include a strong foundation of moral philosophy and ethical reasoning to enable students to grapple with social and personal ethical dilemmas (Goldstein, 1986).

## **MATERIALS AND METHODS**

### **Research Design**

Survey design was adopted in the study. This design was appropriate in the study because according to Osuala (2005), survey research focuses on people, the vital facts of the people and their beliefs, opinions, attitudes, motivation and behaviour.

### **Area of the Study**

The study was conducted in the Nigerian Prisons Service, Akwa Ibom State.

### **Population of the Study**

The population of this study was made up of the entire inmate population in prison facilities in Akwa Ibom State that are involved in the prisons entrepreneurship programmes. This population is put at 5629 according to records of the Nigerian Prisons Service, Akwa Ibom State

### **Sample and Sampling Technique**

The study adopted the convenient sampling technique to select 303 respondents out of the population. This sampling technique was adopted due to the regimented nature of the prisons service.

### Research Instrument

The research instrument for this study was the entrepreneurship educations of prison inmates' and skills acquisition for self-reliance questionnaire (EPIISAARQ). It was made up of questions that elicited responses that will aid in the achievement of the study objectives.

### Validation of the Instrument

The questionnaire items were subjected to validation by 2 experts in the Department of Educational Foundation in the Faculty of Education, University of Uyo and 1 expert in test and measurement.

### Reliability of the Instrument

The instrument was face validated. The Cronbach (Alpha) model was employed to test the reliability of the instrument. This was done through a pilot study by applying the test-retest method. Twenty (20) respondents were selected in Uyo prisons for the pilot study. A

Cronbach alpha reliability coefficient of 0.862 was achieved.

### Administration of Instrument

The instruments were administered personally by the researcher to the respondents. This personal administration of questionnaire helped to minimise loss of questionnaire. The respondents were given enough time to complete the questionnaire before they were collected for analysis.

### Method of Data Analysis

Data collected were processed using the Statistical Package for Social Science (SPSS).!One research question was answered using (mean) descriptive statistics; while one hypothesis was tested using the PPMC analysis at 0.05.

## RESULTS AND DISCUSSIONS

### Answer to Research Questions

#### Research Question 1

What is the relationship between entrepreneurship educations and skills acquisition for self-reliance among Prison Inmates in Akwalbom State? Table 1 was used to answer the research question.

Table 1. *Descriptive analysis of the relationship between entrepreneurship educations and skills acquisition for self-reliance among Prison Inmates in Akwalbom State*

| Variable                    | N   | Arithmetic mean | Expected mean | R     | Remarks                         |
|-----------------------------|-----|-----------------|---------------|-------|---------------------------------|
| Entrepreneurship Educations |     | 29.68           | 12.50         |       |                                 |
|                             | 303 |                 |               | 0.96* | *strong to Perfect Relationship |
| Self-Reliance               |     | 14.81           | 5.00          |       |                                 |

Source: Field Survey (2019)

Table 1 presents the result of the descriptive analysis of the relationship between entrepreneurship educations and skills acquisition for self-reliance among Prison Inmates in Akwalbom State. The two variables were observed to have strong perfect relationship at 96%. The arithmetic mean for entrepreneurship educations (29.68) was also observed to be higher than the expected mean

score of 12.50. In addition to that the arithmetic mean for self-reliance (14.81) was observed to be higher than the expected mean score of 5.00. The result therefore means that there is perfection relationship between entrepreneurship educations and skills acquisition for self-reliance among Prison Inmates in Akwa Ibom State.

## Hypotheses Testing

### Hypothesis One

There is no significant relationship between entrepreneurship educations and skills acquisition for self-reliance among Prison Inmates in Akwa Ibom State. In order to test

the hypothesis, two variables were identified as follows:

- Entrepreneurship education as independent variable
- Self-reliance as a dependent variable

Table 2. *PPMC analysis of the relationship between entrepreneurship educations and skills acquisition for self-reliance among Prison Inmates in Akwa Ibom State*

| Variable                   | $\Sigma x$ | $\Sigma y$ | $\Sigma x^2$<br>$\Sigma y^2$ | $\Sigma xy$ | r     |
|----------------------------|------------|------------|------------------------------|-------------|-------|
| Entrepreneurship Education | 9011       |            | 270655                       | 134663      | 0.96* |
| Self-Reliance              | 4486       |            | 67072                        |             |       |

\*Significant at 0.05 level; df =303; N =301; critical r-value = 0.086

Table 2 presents the obtained r-value as (0.96). This value was tested for significance by comparing it with the critical r-value (0.086) at 0.05 levels with 301 degree of freedom. The obtained r-value (0.96) was greater than the critical r-value (0.086). Hence, the result was significant. The result therefore means that there is significant relationship between entrepreneurship educations and skills acquisition for self-reliance among Prison Inmates in Akwa Ibom State.

## CONCLUSIONS AND RECOMMENDATIONS

From the findings of the study, it was revealed that relationship between entrepreneurship educations and skills acquisition for self-reliance among Prison Inmates in Akwa Ibom State. Thus, the acquisition of the entrepreneurship education will have a proportional effect on their skills acquisitions which will become a source of their livelihood after completing their jail terms and also foster quickly integration into the labour market and the society and also reduced stigmatization of getting a job or enrolling in apprenticeship. Based on the data analysis of the study, it was however recommended that the management of prisons establishments in Akwa Ibom State should give more time and resources to the prisons entrepreneurship education which contribute

more to inmates entrepreneurial skills acquisition.

## REFERENCES

- Agbeze, C. (2012). Entrepreneurship: the need to create wealth...why not now. *Ohafia Today*, 2(32), 10 – 20.
- Agomo, C. K., (2009). Justice, punishment, recidivism and the common good: The way forward. *Paper delivered at the Public Seminar on the Church, Crime, Punishment and Social Change. Prison Fellowship Nigeria International Conference*. University of Lagos, Nigeria.
- Andrews, D. A., Zinger, I., Hoge, R. D., Bonta, J., Gendreau, P & Cullen, F. T. (1990). Does correctional treatment work? A clinically relevant and psychologically informed metanalysis. *Criminology*, 28, 369 – 404.
- Arogundade, B. B. (2011). Entrepreneurship education: An imperative for sustainable development in Nigeria. *Journal of Emerging trends in Educational Research and Policy Studies*, 2(1). 26 – 29.
- Asokhia, M. O. & Osumah O. A. (2013). Assessment of rehabilitation services in Nigerian prisons in Edo State. *American International Journal of Contemporary Research*, 3(1), 224 – 232.
- Bellu, R. (1992). Entrepreneurs and managers: are they

- different? *Frontiers of Entrepreneurial Research*, Wellesley, MA: Babson College, 16 – 30.
- Cheliotis, L. K. (2008) Reconsidering the effectiveness of temporary release: A systematic review. *Aggression and Violent Behavior*, 13(3), 153 – 168.
- Clements, P., (2004). The rehabilitative role of arts education in prison: Accommodation or enlightenment? *JADE*, 23(2): 169 – 178.
- Cope (2005). The social dynamics of entrepreneurship. *Entrepreneurship Theory and Practice*, 24(3), 25 – 36.
- Crutchfield, R. D & Pitchford, S. R. (1997). Work and crime: The effects of labor stratification. *Social Forces*, 76, 93 – 118.
- De Roberts, E. M. (2006). Driving a humanistic theory of child development from the works of Carl Rogers and Karen Horney. *Journal of the Humanistic Psychologists*, 34(2): 177 – 199.
- Dooley, B., Seals, A. & Skarbek, D. (2014) The effect of prison gang membership on recidivism. *Journal of Criminal Justice*, 42(3), 267 – 275.
- Duwe, G. (2015). An outcome evaluation of a prison work release program: Estimating its effects of recidivism, employment, and cost avoidance. *Criminal Justice Policy Review*, 26, 531 – 554.
- Ehis, M. T & Frank, A. (2013). Influence of Entrepreneurship Development on Job creation in Nigeria. *AAS JMS*. 4(1), 103 – 117.
- Gartner, W. B. (1988). Who is an entrepreneur? Is this the wrong question? *American Journal of Small Business*, 12(4), 11 – 32.
- Goldstein, H. (1986). Toward the integration of theory and practice: A humanistic approach. *British Journal of Social Work*, 31(5), 181 – 187.
- Hisrich, R. D., Peters, M. P. & Shepherd, D. A. (2005). *Entrepreneurship*. McGraw-Hill.
- Hisrich, R. D., Peters, M. P. & Shepherd, D. A. (2008) *Entrepreneurship*. 7th Edition, McGraw-Hill International Edition, Boston.
- Jung. H. (2014). Do prison work-release programs improve subsequent labor market outcomes? Evidence from the adult transition centers in Illinois. *Journal of Offender Rehabilitation*, 53, 384 – 402.
- Katz, J. & Decker, S. H. (1982). An analysis of work release: The institutionalization of unsubstantiated reforms. *Criminal Justice and Behavior*, 9, 229 – 250.
- Lemo, T. (2013, January 11). Development and the entrepreneurial challenge: Policy and execution. *Thid Day Live Newspaper*.
- Lumpkin, G. T. & Dess, G. G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance. *Academy of Management Review*, 21(1): 135 – 72.
- Naudé, W. (2013). Entrepreneurship and economic development: Theory, evidence and policy. *IZA Discussion Paper*, 7507.
- Nkechi, A., Ikechukwu, E. & Okechukwu, U. F. (2012). “Entrepreneurship development and employment generation in Nigeria: Problems and prospects”. *Universal Journal of Education and General Studies*, 1(4), 88 – 10.
- Ogbo, A. & Nwakchukwu, A. C. (2012) The role of entrepreneurship in economic development: The Nigerian perspective. *European Journal of Business and Management*, 4(8). 95 – 105.
- Ogundele, O. J. K. and Abiola, J. O. (2006). Entrepreneurship and national development: A proposal for evangelistic agenda. *European Scientific Journal*, 8(6), 134 – 148.
- Olufokunbi, B. (1995). *Entrepreneurship within the Nigerian economy today*. Paper presented at the Conference on Entrepreneurship within the Nigeria economy organized CIRD, Obafemi Awolowo University, Ile Ife. Oct 11<sup>th</sup>, 1995.
- Orakwe, A. (2011). *The Reformer*. A bulletin of the Nigerian Prison Service, Abuja, Nigeria, 3(4).
- Parker, S. C. (2006). *A selection-based theory of the transition from employment to entrepreneurship: The role of employer size*. Bonn: IZA Discussion Paper No. 2071.

- Prisoner Reentry Institute (2006). *Entrepreneurship and Prisoner Reentry* (conference), John Jay College of Criminal Justice, City University of New York, Sept. 29.
- Ravasi, D. & Turati, C. (2005). Exploring entrepreneurial learning: A comparative study of technology development projects. *Journal of Business Venturing*, 20(1), 137 – 64.
- Sahlman, W. A. & Stevenson, H. H. (1989). The entrepreneurial process." Chap. 5 in *Small Business and Entrepreneurship*, edited by Paul Burns and Jim Dewhurst, 94–157. London: Macmillan Education.
- Sampson, R. J. & Laub, J. H. (1997). A life course theory of cumulative disadvantage and the stability delinquency. *Advances in Criminological Theory*, 7, 133 – 161.
- Saylor, W. G. & Gaes, G. G. (1992). Post-release employment project: Prison work has measurable effects on post-release success. *Federal Prisons Journal*, 2(4), 32 – 36.
- Saylor. W. G. & Gaes, G. G. (1997). Training inmates through industrial work participation and vocational and apprenticeship instruction. *Corrections Management Quarterly*, 1(2), 32 – 43.
- Seiter, R. P. & Kadela. K. R. (2003). Pridoner reentry: What works, what does not and what is promising. *Crime and Delinquency*. 49(3), 360 – 388.
- Smith, N. & Miner, J. (1985). Motivational considerations in the success of technically innovative entrepreneurs: extended sample findings. *Frontiers of Entrepreneurial Research*. Wellesley, MA: Babson College.
- Sonfield, M. (1992). From inmate to entrepreneur: A preliminary analysis. *Proceedings*, National Conference of the Small Business Institute Directors Association, 39 – 44.
- Sonfield, M. C. & Barbato, R. J. (1994). Testing prison inmates for entrepreneurial aptitude. *Journal of Small Business Strategy*, 5(2), 45 – 52.
- Sonfield, M. C., Lussier, R. & Barbato, R. (2001) The entrepreneurial aptitude of prison inmates and the potential benefit of self-employment training programs. *Academy of Entrepreneurship Journal*, 17(2), 85 – 94.
- Tanimu, B. (2010). Nigeria convicts and prison rehabilitation ideals. *Journal of Sustainable Development in Africa*. 12(3), 140 – 152.
- Wilson, D. B., Gallagher, C. A. & MacKenzie, D. L. (2000). A meta-analysis of corrections-based education, vocation and work programs for adult offenders. *Journal of Research in Crime and Delinquency*, 37(4), 347 – 368.



## EFFECT OF WORK ENVIRONMENT AND EMPLOYEE ENGAGEMENT ON JOB PERFORMANCE OF PUBLIC RELATION STAFF IN LUXURY HOTELS IN JAKARTA

Yohanes Totok Suyoto<sup>1</sup> and Yosaphat Danis Murtiharso<sup>2</sup>

<sup>1</sup>Department of Management, Universitas Pembangunan Jaya, Indonesia

<sup>2</sup>Department of Communication Science, Universitas Pembangunan Jaya, Indonesia

### Abstract

*The aim of this study is to examine the relationship between working environment and employee engagement toward job performance of the employees of public relation (PR) staff in five-star hotels in province of Jakarta, Indonesia. From a preliminary survey of 100 customers to measure customers' perceptions of the performance indicated that 34% of respondents rated the performance of those employees in the is still poor and needs to be improved. This research using structural equation modeling as an analysis tools. Observed variables are work environment (6 indicators) and employee engagement (34 indicators) as exogeneous variable and job performance (15 indicators) as endogenous variable. The structural model analysis that measure the effect of work environment on job performance showed t value and regression coefficient are 4.78 and 0.64 respectively. Analysis result of the effect of employee engagement on job performance, obtained t value and regression coefficient are 5.39 and 0.75 respectively. The  $R^2$  value of 0.565 shows how work environment and employee engagement can play a positive and significant role together to improve job performance of PR staff of five stars hotels in province of Jakarta, Indonesia.*

**Keywords:** public relation, working environment, employee engagement, job performance

### INTRODUCTION

Nowadays, the position of companies and activities of business is difficult because of dynamic and fast changing world (Pavelkova & Knapkova, 2005; Tannady, 2018). Employees' contributions are very important to the success of business organization (Acar & Acar, 2012). Human resources are central and important component within an organization (Rahayu, Rasid & Tannady, 2018). The higher performance of human resources will give

higher performance of the organization (Tannady & Sitorus, 2017). Therefore, it is important for every organization to be supported by employees who have good ability in work and contribute to the organization or company where he works (Tannady et al., 2017). Supportive and productive employee will give an impact over service and satisfaction quality, these factors are important indicators of organization's competitive level (Tannady et al., 2018). Unsupportive condition of the organizations makes the commitment to employees in the organization decrease (Rahayu, Rasid & Tannady, 2019).

Several researches reveal that there exists significant impact from work environment on job performance. Organization which have an adequate work environmental factors both

#### ARTICLE INFO

##### Article history:

Received: 26 July 2019

Accepted: 13 October 2019

##### Email Addresses:

[totok.suyoto@upj.ac.id](mailto:totok.suyoto@upj.ac.id) (Yohanes Totok Suyoto)

[yosaphat.danis@upj.ac.id](mailto:yosaphat.danis@upj.ac.id) (Yosaphat Danis Murtiharso)

\*Corresponding author

physical and psychosocial will lead to increase job performance (Jayaweera, 2015). Some previous studies that discuss how work environment is proven to affect job performance in various industry sectors and organizations, such as hospitality and tourism (Pawirosumarto, Sarjana & Gunawan, 2017; Jayaweera, 2015), education sector (Khan et al., 2011) and financial industry (Samson & Waiganjo, 2015). A number of previous studies also discuss how employee engagement is proven to affect job performance of employees in various industry sectors and organizations, such as retail industry (Kazimoto, 2016), healthcare industry (Lowe, 2012), public sector organization (Sibanda, Muchena & Ncube, 2014), telecommunication industry (Kaliannan & Adjovu, 2015), hospitality industry (Kalia & Verma, 2017) and banking sector (Dajani, 2015).

The purpose of this study is to examine the factors that affect Job Performance of PR staff in five stars hotels in province of Jakarta, Indonesia based on a series of theories and descriptions of what factors affect job performance, the work environment and employee engagement were selected as a independent variable. The study examined the effect of both partially and simultaneously from 2 exogenous variables to the endogenous variable.

## **LITERATURE REVIEW**

### **Work Environment**

Working environment has several physical forms namely space, physical layout, noise, tools, materials and co-worker's relationship; the quality of all of those components has an important and positive impact on the quality of the work performance (Tyssen, 2005). Heizer & Render (2016) stated that work environment is the physical environment where it affects the employee performance, security and quality. Work environment provides security and allows employees to work optimally, it can influence the emotions of the employee. If the employee enjoys his working environment, he will enjoy his time in the workplace to do such activities, he will use his working time effectively and

optimally and his work performance will be high likewise. Besides the physical environment where employees work, work environment includes a working relationship between the fellow employees and the relationship between subordinates and its superiors. Working environment is a place to perform a job, and one of the ways to improve the quality of physical working environment is by implementing 5S method, namely: Seiri (sorting out); Seiton (systematic arrangement of neatness); Seiso (spic and span of cleaning); Seiketsu (standardizing); and Shitsuke (self-discipline) (Pawirosumarto et al., 2017).

### **Employee Engagement**

The verb 'to engage' has many meanings, varying from a straightforward emotional state of being 'in gear', that is being involved and committed, to another transactional state of working in return for a fair economic exchange at workplace (Tannady, 2018). Many researches indicate that employee engagement has positively related with customer satisfaction. Employee engagement as the involvement with and enthusiasm for work (Heintzman and Marson, 2005). Tannady et al. (2019) likens employee engagement to a positive employees' emotional attachment and employees' commitment. Robinson, Perryman & Hayday (2004) define employee engagement as "a positive attitude held by the employee towards the organization and its value. An engaged employee is aware of business context and works with colleagues to improve performance within the job for the benefit of the organization. The organization must work to develop and nurture engagement, which requires a two-way relationship between employer and employee. Dajani (2015) stated that Employee Engagement is conceptualized as the individual's investment of his complete self into a role.

### **Job Performance**

Job performance is one of the key indicators of productivity and profitability, job performance is prioritized by organizations to achieve organization goals. Job performance is

viewed as a measure of success of an employee in his or her employment (Hee & Kamaludin, 2016). Job performance indicates the actions specified and required by an employee's job description. It is also meant to be appraised and rewarded by the employing organization and thus contributes to the organization's excellent performance. In the organizational context, these sets of procedures make work behaviour predictable so that basic tasks can be accomplished to achieve the organization goals (Janssen & Van Yperen, 2004). Job performance is essential in achieving organization objectives in a way that is consistent and effective (Mehmet, 2013). Excellent job performance will decrease personnel costs, increase organizational profitability and build patient loyalty (Earls, 2004).

### Research Model

Depend on paradigm was stated in previous regarding inter-relationship between discussed variables, thus this research design a research model as Figure 1 below:

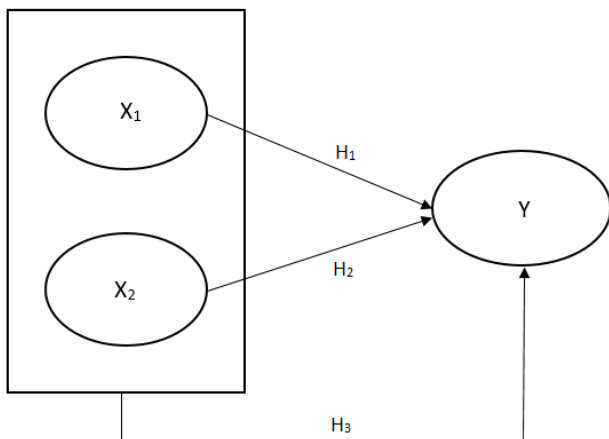


Figure 1. Research Model

Regarding to the model paradigm figure 1, the structural equation can be written as follows.  $Y = PYX_1 + PYX_2 + e$ , where, "X" is exogeneous variable, "Y" is endogenous variable, "P" is path coefficient value, and "e" is an error indicator (Hair.et.all, 2010). According to the phenomenon, theory and concept as references of this research and according to research path model, Hypotheses of the research are formulated in the following

manner: (H<sub>1</sub>) Work environment has an effect on job performance, (H<sub>2</sub>) Employee engagement has an effect on job performance, and (H<sub>3</sub>) Work environment and employee engagement has an influence toward job performance simultaneously.

### MATERIALS AND METHODS

This research employs analytical technique called as Structural Equation Modelling (SEM) which was originally established by Sewall Wright (Wright, 1921). This technique is aimed to analyze existence of effect among several factors under consideration on job performance. These causal variables consist of work environment (X<sub>1</sub>), employee engagement (X<sub>2</sub>) and job performance (Y). X<sub>1</sub> utilizes three dimensions (work facilities, relationship with colleagues and work atmosphere) and six indicators (WE1-WE6) (Pawirosumarto et al., 2017). X<sub>2</sub> utilizes five dimensions (leadership, organizational justice, compensation and benefits, work policies and procedures, and training and development) and thirty-four indicators (EE1-EE34) (Dajani, 2015). Y has seven dimensions (innovation and courage to take risks, paying attention to details, results orientation, employees' orientation, team orientation, aggressive, stability) and fifteen indicators (JP1-JP15) (Pawirosumarto et al., 2017). The population of this study is PR staff who working in five stars hotels in province of Jakarta, Indonesia. The sampling technique of this study was purposive sampling. Data sampling was determined by considering Hair method (Hair et al., 2010), thus the minimum sample size was 275 (5 times 55 indicators). Questionnaire is designed using interval or Likert measurement scale. This research instrument is tested by validity test, reliability test and is analyzed with SEM method divided into confirmatory factor analysis, structural model testing, and path diagram model analysis (Tannady et al., 2017). Test of data quality (validity test and reliability test) was applied in the first step of data processing and using 30 respondents. According Tannady and Sitorus (2017), by using Pearson correlation, if r statistics is larger than r table, it can be

concluded to be valid. A construct (variable) is reliable if the Cronbach Alpha > 0,6 (Tannady and Sitorus, 2017). A data meets multivariate normality assumption if the value of standard error does not exceed 2.58 (CR < 2.58) (Tannady and Sitorus, 2017).

## RESULTS AND DISCUSSIONS

This part explains the result of a series of tests consisting of validation test, reliability

test and analysis result from SEM. If  $r$  statistics  $\geq r$  table (two tail tests with  $\alpha = 0,05$ ), it means the instruments or variables of queries are significantly correlated with total score of variable (valid). With degree of freedom (df) =  $n - 2$  (score of  $r$  table: 0.361), validity and reliability test of each indicators result in the following Table 1.

Table 1. *Validity and Reliability Test Results*

| Work Environment<br>(Reliability : 0.723) |                | Employee Engagement<br>(Reliability : 0.715) |                | Job Performance<br>(Reliability : 0.812) |                |
|-------------------------------------------|----------------|----------------------------------------------|----------------|------------------------------------------|----------------|
| Indicator                                 | Validity Score | Indicator                                    | Validity Score | Indicator                                | Validity Score |
| WE1                                       | 0.525          | EE1                                          | 0.589          | JP1                                      | 0.621          |
| WE2                                       | 0.541          | EE2                                          | 0.586          | JP2                                      | 0.587          |
| WE3                                       | 0.567          | EE3                                          | 0.542          | JP3                                      | 0.574          |
| WE4                                       | 0.588          | EE4                                          | 0.524          | JP4                                      | 0.326          |
| WE5                                       | 0.368          | EE5                                          | 0.389          | JP5                                      | 0.541          |
| WE6                                       | 0.423          | EE6                                          | 0.325          | JP6                                      | 0.547          |
|                                           |                | EE7                                          | 0.326          | JP7                                      | 0.503          |
|                                           |                | EE8                                          | 0.389          | JP8                                      | 0.536          |
|                                           |                | EE9                                          | 0.405          | JP9                                      | 0.314          |
|                                           |                | EE10                                         | 0.684          | JP10                                     | 0.628          |
|                                           |                | EE11                                         | 0.715          | JP11                                     | 0.570          |
|                                           |                | EE12                                         | 0.459          | JP12                                     | 0.481          |
|                                           |                | EE13                                         | 0.586          | JP13                                     | 0.415          |
|                                           |                | EE14                                         | 0.443          | JP14                                     | 0.456          |
|                                           |                | EE15                                         | 0.389          | JP15                                     | 0.426          |
|                                           |                | EE16                                         | 0.304          |                                          |                |
|                                           |                | EE17                                         | 0.489          |                                          |                |
|                                           |                | EE18                                         | 0.476          |                                          |                |
|                                           |                | EE19                                         | 0.325          |                                          |                |
|                                           |                | EE20                                         | 0.435          |                                          |                |
|                                           |                | EE21                                         | 0.489          |                                          |                |
|                                           |                | EE22                                         | 0.569          |                                          |                |
|                                           |                | EE23                                         | 0.587          |                                          |                |
|                                           |                | EE24                                         | 0.311          |                                          |                |
|                                           |                | EE25                                         | 0.456          |                                          |                |
|                                           |                | EE26                                         | 0.305          |                                          |                |
|                                           |                | EE27                                         | 0.396          |                                          |                |
|                                           |                | EE28                                         | 0.485          |                                          |                |
|                                           |                | EE29                                         | 0.489          |                                          |                |
|                                           |                | EE30                                         | 0.567          |                                          |                |
|                                           |                | EE31                                         | 0.526          |                                          |                |
|                                           |                | EE32                                         | 0.314          |                                          |                |
|                                           |                | EE33                                         | 0.528          |                                          |                |
|                                           |                | EE34                                         | 0.539          |                                          |                |

The data processing using Lisrel begins with normality to decide whether the data is normally distributed. Hair et al. (2010) stated it is better for CR which is reflected in relative multivariate curtosis to have a value less than 2,58. In this way, we can conclude that the

data has met the multivariate normality assumption. From the information of table 2, the value of relative multivariate kurtosis is 1.087 (less than 2.58), so it can be assumed that variable indicators are all normally distributed. Six indicators of variable of

employee engagement (EE3, EE11, EE17, EE23, EE28, EE30) and three indicators of variable of job performance (JP1, JP8, JP14) have

skewness score above 2.58. It was indicating that these indicators are all not normally distributed, see Table 2 below.

Table 2. *Normality Test Results*

| Work Environment |                 | Employee Engagement |                 | Job Performance |                 |
|------------------|-----------------|---------------------|-----------------|-----------------|-----------------|
| Indicator        | Normality Score | Indicator           | Normality Score | Indicator       | Normality Score |
| WE1              | 2.12            | EE1                 | 1.84            | JP1             | 2.68            |
| WE2              | 1.58            | EE2                 | 1.78            | JP2             | 1.43            |
| WE3              | 1.79            | EE3                 | 2.91            | JP3             | -1.37           |
| WE5              | 1.76            | EE5                 | -1.76           | JP5             | 1.09            |
| WE6              | 2.09            | EE8                 | -2.45           | JP6             | 1.17            |
|                  |                 | EE9                 | 1.29            | JP7             | 1.67            |
|                  |                 | EE10                | 1.05            | JP8             | -2.98           |
|                  |                 | EE12                | -1.18           | JP10            | -2.19           |
|                  |                 | EE13                | -1.34           | JP11            | 2.34            |
|                  |                 | EE14                | 2.41            | JP12            | -1.56           |
|                  |                 | EE15                | 2.34            | JP13            | 2.45            |
|                  |                 | EE17                | 2.89            | JP14            | 2.78            |
|                  |                 | EE18                | 2.32            | JP15            | 1.35            |
|                  |                 | EE20                | -2.11           |                 |                 |
|                  |                 | EE21                | 1.87            |                 |                 |
|                  |                 | EE22                | 1.16            |                 |                 |
|                  |                 | EE23                | -2.78           |                 |                 |
|                  |                 | EE25                | -1.82           |                 |                 |
|                  |                 | EE27                | 2.01            |                 |                 |
|                  |                 | EE28                | -2.86           |                 |                 |
|                  |                 | EE29                | 2.32            |                 |                 |
|                  |                 | EE30                | -2.79           |                 |                 |
|                  |                 | EE31                | -1.05           |                 |                 |
|                  |                 | EE33                | -1.28           |                 |                 |
|                  |                 | EE34                | 1.98            |                 |                 |

Relative Multivariate Kurtosis = 1.087

From the normality test in table 2 shows the value of Relative Multivariate Kurtosis 1.087 (value below 2.58), multivariate can be concluded that the indicator used has a normal distribution. Variable of employee engagement has five indicators which has Z score skewness above 2.58 so it can be stated not normally distributed so that it will be removed from

further analysis. In variable of job performance, there are three indicators which has Z score skewness above 2.58 so it can be stated not normally distributed. Based on the results of the analysis with the SEM model, results for CFA model of work environment and employee engagements in the following Table 3 below:

Table 3. *CFA Measurement Results of Work Environment*

| No | Indicator           | Estimation Coefficient<br>(Standardized) | T-Value | Significance                                  |
|----|---------------------|------------------------------------------|---------|-----------------------------------------------|
| 1  | Work Environment    | 0.64                                     | 4.78    | Valid <sup>1</sup> , Significant <sup>2</sup> |
| 2  | Employee Engagement | 0.75                                     | 5.39    | Valid <sup>1</sup> , Significant <sup>2</sup> |

NOTE : 1. Estimation Coefficient > 0.50 is categorized as Valid, 2. T value > 1.96 is categorized as Significant

After several test conducted for model measurement, the following step is to verify structural model. The next phase are model adequacy test and hypotheses testing or path coefficients' significance test. Relationship among constructs of the research in the model can be shown with causal relationship of related constructs. This type of test is aimed to test whether the model is finely adequate with empirical data (collected samples). The main and alternative hypotheses can be written as follows.  $H_0$ : there is no significant difference between sample covariance matrix and estimated population covariance matrix.  $H_1$ : there is a significant difference between sample covariance matrix and estimated population covariance matrix. The expectation of experiment in this test is to accept  $H_0$ . It means there is an adequacy between theoretical model with empirical data. The table below consists of information about goodness of fit test's results.

In this model, each latent variable is as a factor that underlies the observed variables involved. In this study using several criteria of goodness of fit index namely absolute fit measurement and incremental fit measurement. Absolute measurement is used to assess the overall suitability of the model. In this study used Chi Square, Probability, GFI and RMSEA statistics. While incremental fit measurement is the measurement used to compare the model produced with another model or base line model. Incremental fit measurement used AGFI, NFI, NNFI, CFI, IFI and RFI (Tannady and Sitorus, 2017) as can be seen in Table 4.

Table 4. *Goodness of fit Index of Modified Structural Model*

| Parameters     | Result              | Criteria     |
|----------------|---------------------|--------------|
| $\chi^2 (P)$   | 245.31 (0.0000)     | Good fit     |
| GFI; RFI, NFI  | 0.835; 0.85; 0.843  | Marginal fit |
| IFI; CFI; NNFI | 0.927; 0.935; 0.921 | Good fit     |
| RMSEA          | 0.0775              | Good fit     |
| AGFI           | 0.76                | Poor fit     |

According to the structural model analysis which testing the effect of work environment on job performance, obtained t value and regression coefficient are 4.78 and 0.64, respectively. The fact that t value > 1.96 and positive regression coefficient indicate the acceptance of the main hypothesis, then this test result show hypothesis 1 accepted. Analysis result of the effect of employee engagement on job performance, obtained t value and regression coefficient are 5.39 and 0.75, respectively, this test result show hypothesis 2 accepted. The  $R^2$  value of 0.565 shows how work environment and employee engagement can play a positive and significant role together to improve job performance of PR staff who working in five stars hotels in province of Jakarta, Indonesia.

## CONCLUSIONS

Partially and simultaneously all independent variables discussed in the study have a significant influence on the dependent variable, therefore it is advisable that the management of five stars hotels in province of Jakarta need to pay attention in making various policies regarding attributes of work environment, such as work facilities, relationship with colleagues and work atmosphere. The management also need to review several actions to elevate the attributes of employee engagement, such as leadership, organizational justice, compensation and benefits, work policies and procedures, and training and development. Suggestions for further research is development of other variables, by using other approaches, further research can use similar variables different objects, so that we can find new theory or concept.

## REFERENCES

- Acar, A. Z. & Acar, P. (2012). The effects of organizational culture and innovativeness on business performance in healthcare industry. *Procedia-Social and Behavioral Sciences*, 58, 683-692.

- Dajani, M. A. Z. (2015). The impact of employee engagement on job performance and organizational commitment in the Egyptian banking sector. *Journal of Business and Management Sciences*, 3(5), 138 – 147.
- Earls, A. (2004). Building patient loyalty. *Computer world*, 38, 41 – 41.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E. (2010). *Multivariate Data Analysis*. New Jersey: Pearson.
- Hee, O. C., & Kamaludin, N. H. B. (2016). Motivaton and job performance among nurses in the private hospitals in Malaysia. *International Journal of Caring Sciences*, 9(1), 342 – 347.
- Heintzman, R., & Marson, B. (2005). People, service and trust: Links in a public sector service value chain. *International Review of Administrative Studies*, 7(4), 549 – 575.
- Heizer, J. & Render, B. (2016). *Operations Management*. New York: Pearson.
- Janssen, O., & Van Yperen, N. W. (2004). Employees goal orientations, the quality of leader-member exchange, and the outcomes of job performance and job satisfaction. *Academy of Management Journal*, 47(3), 368 - 384.
- Jayaweera, T. (2015). Impact of work environmental factors on job performance, mediating role of work motivation: a study of hotel sector in England. *International Journal of Business Management*, 10(3), 271 – 278.
- Kalia, N. & Verma, Y. S. (2017). Organizational culture and employee engagement: An interrelationship study in hospitality industry of Himachal Pradesh. *International Journal of Human Resource Management and Research*, 7(3), 17-22.
- Kaliannan, M., Adjovu, S. N. (2015). Effective employee engagement and organizational success: a case study. *Procedia-Social and Behavioral Sciences*, 172, 161 – 168.
- Kazimoto, P. (2016). Employee Engagement and Organizational Performance of Retail Enterprises. *American Journal of Industrial and Business Management*, 6, 516 – 525.
- Khan, S. H., Azhar, Z., Parveen, S., Naeem, F., & Sohail, M. M. (2011). Exploring the impact of infrastructure, pay incentives, and workplace environment on employees' performance (A case study of Sargodha University). *Asian Journal of Empirical Research*, 2(4), 118-140.
- Lowe, G. S. (2012). How Employee Engagement Matters for Hospital Performance. *Healthcare Quarterly*, 15(2), 29 – 39.
- Mehmet, T. (2013). Organizational variables on nurses' job performance in Turkey: Nursing assessments. *Iran Journal of Public Health*, 42(3), 261–271.
- Pavelkova, D. & Knapkova, A. (2005). *Výkonnost podniku z pohledu finančního manažera [Business performance from the perspective of financial manager]*. Praha: Linde.
- Pawirosumarto, S., Sarjana, P. K., Gunawan, R. (2017). The effect of work environment, leadership style, and organizational culture towards job satisfaction and its implication towards employee performance in Parador Hotels and Resorts, Indonesia. *International Journal of Law and Management*, 59(6), 1337-1358.
- Pratama, P., Tannady, H., Nurprihatin, F., Ariyono, H. B., & Melany, S. (2017). Identifikasi risiko ergonomi dengan metode Quick Exposure Check dan Nordic Body Map [Identification of ergonomic risks with the Quick Exposure Check and Nordic Body Map methods]. *Jurnal Penelitian dan Aplikasi Sistem dan Teknik Industri [Journal of Research and Application of Industrial Systems and Engineering]*, 11(1), 13-21.
- Rahayu, M., Rasid, F., & Tannady, H. (2018). Effects of self efficacy, job satisfaction, and work culture toward performance of telemarketing staff in banking sector. *South East Asia Journal of Contemporary Business, Economics and Law*, 16(5), 47-52.

- Rahayu, M., Rasid, F., & Tannady, H. (2019). The effect of career training and development on job satisfaction and its implications for the organizational commitment of regional secretariat (SETDA) employees of Jambi Provincial government. *International Review of Management and Marketing*, 9(1), 79-89.
- Robinson D., Perryman S., and Hayday S. (2004). *The Drivers of Employee Engagement Report 408*. Institute for Employment Studies, UK.
- Samson, G. N., Waiganjo, M. (2015). Effect of workplace environment on the performance of commercial banks employees in Nakuru Town. *International Journal of Managerial Studies and Research*, 3(12), 76 – 89.
- Sibanda, P., Muchena, T., Ncube, F. (2014). Employee engagement and organizational performance in a public sector organization in Zimbabwe. *International Journal of Asian Social Science*, 4(1), 89 – 99.
- Tannady, H. (2018). Mengkaji kepuasan pelanggan terhadap kualitas layanan e-commerce dengan menggunakan metode Importance Performance Analysis 3 Dimensi [Assessing customer satisfaction with the quality of e-commerce services using the 3 Dimensional Importance Performance Analysis method]. *Journal of Business & Applied Management*, 11(2), 116 – 238.
- Tannady, H. (2017). *Manajemen Sumber Daya Manusia [Human Resource Management]*. Yogyakarta: Penerbit Expert.
- Tannady, H. (2018). *Psikologi Industri dan Organisasi [Industrial and Organizational Psychology]* Yogyakarta: Penerbit Expert.
- Tannady, H., Nurprihatin, F., & Hartono, H. (2018). Service quality analysis of two of the largest retail chains with minimart concept in Indonesia. *Business: Theory and Practice*, 19, 177-185.
- Tannady, H., & Sitorus, T. (2017). Role of compensation, organization culture, and leadership on working motivation of faculty member (Study case: Universities in North Jakarta). *IOSR Journal of Business and Management*, 19(10), 41–47.
- Tannady, H., Ismuhadjar., & Zami, A. (2017). Factors affecting the performance of driver: the experience of transjakarta bus driver. *International Journal of Research Science & Management*, 4(11), 22-28.
- Tannady, H., Tannady, H., Ismuhadjar., & Zami, A. (2019). The effect of organizational culture and employee engagement on job performance of healthcare industry in province of Jakarta, Indonesia. *Quality: Access to Success*, 20(169), 18 – 22.
- Tannady, H., Luin, J. A., & Widhianto, C. W. (2019). *Faktor-faktor determinan performa kerja karyawan ground handling pada industri penerbangan di Indonesia* [Determinants of the work performance of ground handling employees in the aviation industry in Indonesia]. *Prosiding Seminar Nasional Riset dan Inovasi Teknologi (SEMNAS RISTEK)*, 413 – 418.
- Tyssen, T.G. (2005). *Guidance Book for Manager*. Jakarta: Arcan.
- Wright, S. (1921). Correlation and causation. *Journal of Agricultural Research*, 20, 557 – 585.



## AWARENESS OF SMALL AND MEDIUM ENTERPRISES ON COMPETITION ACT 2010 AND MALAYSIAN COMPETITION COMMISSION

Hasnah Haron<sup>1</sup>, Ishak Ismail<sup>2</sup>, Yuvaraj Ganesan<sup>3</sup> and Idris Gautama So<sup>4</sup>

<sup>1,2</sup>Universiti Malaysia Pahang, Pahang, Malaysia

<sup>3</sup>Universiti Sains Malaysia, Penang, Malaysia

<sup>4</sup>Bina Nusantara University, Jakarta, Indonesia

### Abstract

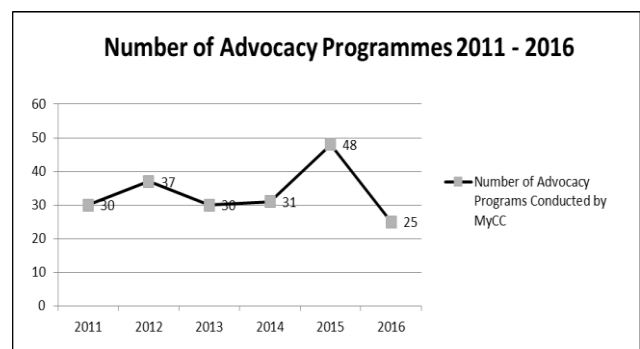
*The objectives of this research are to examine the awareness level of Small and Medium Enterprise (SMEs) and their knowledge of the CA2010 and of the role of MyCC. In addition, further analysis the level of awareness of SMEs by state, market structures and sectors and also compared with baseline study which conducted in year 2013. A total of 154 respondents involved in this study and the results show that increased in SMEs awareness and knowledge about the MyCC and CA2010. The results showed most of states were aware of the existence of MyCC and CA2010. Meanwhile, in term of market structures, the export-oriented businesses have higher level of awareness of compared than the domestic-driven businesses. The study will benefit the relevant authority to strategies the activities plan to enhance to their service quality and knowledge about the competition act.*

**Keywords:** SMEs, Competition Act 2010, effectiveness MyCC, Malaysia

### INTRODUCTION

The Competition Act 2010 was gazetted on June 2010 and came into force on 1 January 2012. The Act is administered by the Malaysian Competition Commission (MyCC) which was established under the Competition Commission Act 2010. Since its establishment, MyCC had conducted advocacy nationwide in an effort to introduce the Competition Act 2010 to Malaysian mainly to business community. Starting from 2011 up to 2016, MyCC had conducted 188 advocacy programs nationwide

as shown in Figure 1.



**Figure 1.** Number of Advocacy Programmes Conducted by MyCC 2011 – 2016.

Source: Chart constructed based on data from MyCC website: [www.mycc.gov.my](http://www.mycc.gov.my)

### ARTICLE INFO

#### Article history:

Received: 12 August 2019

Accepted: 15 November 2019

#### Email Addresses:

[hasnahharon@ump.edu.my](mailto:hasnahharon@ump.edu.my) (Hasnah Haron)\*

[ishakismail@ump.edu.my](mailto:ishakismail@ump.edu.my) (Ishak Ismail)

[yuvaraj@usm.my](mailto:yuvaraj@usm.my) (Yuvaraj Ganesan)

[igautama@binus.edu](mailto:igautama@binus.edu) (Idris Gautama So)

\*Corresponding author

In 2013, MyCC had conducted a baseline study to gauge the level of awareness of the Competition Act 2010 among businesses. Despite having conducted 97 advocacy programs nationwide between 2011 and 2013 as depicted by Figure 1, the Baseline Study (2013) indicated low level of awareness and

knowledge of the Competition Act 2010 among the 14 states in Malaysia especially Perlis, Melaka and Sabah having a zero level of awareness and knowledge of the Act as shown in Figure 2 and Figure 3. This 2013 Baseline Study's (2013) findings set out as a crucial indicator of MyCC's effectiveness and quality of the advocacy and outreach programs carried out. Thus, MyCC should build relevant advocacy programs that could enhance the knowledge requires for Malaysia to have a healthy competitive market which is one of the important agenda in achieving the one Asean community.

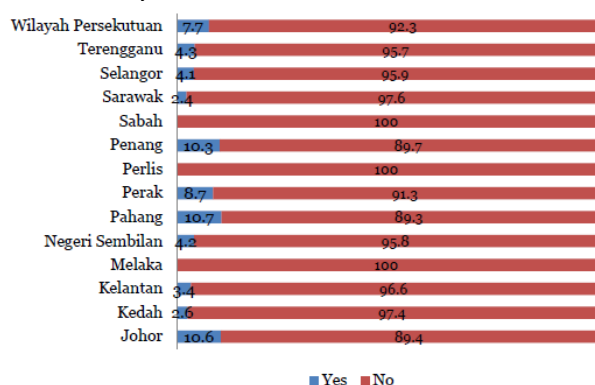


Figure 2. Awareness of CA 2010 by State

Source: Baseline Study on Awareness of CA 2010 in Malaysia for MyCC, 2013.

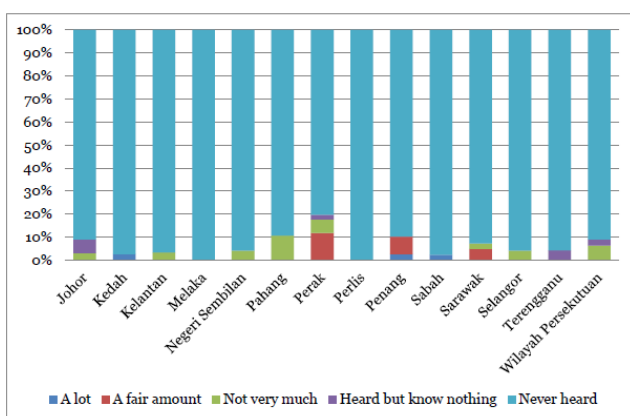


Figure 3. Knowledge about CA 2010 by State

Source: Baseline Study on Awareness of CA 2010 in Malaysia for MyCC, 2013

In this study, SMEs are the primary stakeholders to enable a comparative to be done with the 2013 Baseline Study. SMEs are acknowledged as the backbone of Malaysian's economy as SMEs represents 97% of business

establishments contributing towards 36% of nation's GDP, 65% of the nation's employment and 18% of nation's export (The World Bank, 5 July 2016).

Furthermore, after Baseline Study in 2013, MyCC has undertaken the necessary steps to raise the awareness (knowledge) of the Act. Therefore, it is timely to undertake another study to measure the level of awareness (knowledge) of the public towards the Act if it has increased or not. In addition, the current study should also include the perception of stakeholders on the quality of advocacy and outreach programs and the role of Malaysian Competition Commission (MyCC) and its enforcement effectiveness (quality) of MyCC.

## LITERATURE REVIEW

Various studies in many field of research have shown that education and training are important elements in raising awareness and knowledge (Seay, Carswell, Wilmarth & Zimmerman, 2014; Yap & Ineson, 2010; Hawkins, Madsen & Ulhøi, 2001). Competition authorities, The UK Office of Fair Trading (OFT) for example, in its 2010 study defines that 'knowledge' is inclusive of the general knowledge about OFT's 'role' including its guidance, tools and specific interventions/investigations and the detailed knowledge about competition law (i.e anticompetitive behaviour types). Hoj (2007) found that OECD countries' general competition policy framework has been improving with further improvement needed in promoting competition within the industries. In the year of 2013, study was conducted to ascertain the level of awareness of CA 2010 among business entities in Malaysia after one and half years of CA 2010 being implemented. The report indicated a very low level of awareness of MyCC's existence and CA 2010 among the respondents. Only 8.9% of total respondents were aware of MyCC's existence through internet, business link, newspaper and television/radio as the most important mode of assessing information. Across states in Malaysia, the report indicated respondents from Melaka and Perlis having zero level of

awareness. Only 6.6% of total respondents were aware about CA 2010 through similar channels of business information with addition of trade publications. All states across Malaysia except Perak (11.8%) indicated low knowledge level of CA 2010 (below 10%). Overall, the knowledge level of CA 2010 across states came up lower when compared with the level awareness of MyCC. Further, the report found no significant difference between domestic-driven (7.6%) and export-oriented business (6.2%) in terms of awareness level of MyCC. Also, large sized businesses having a greater knowledge about MyCC and decreases as business gets smaller. This report indicated that business entities had a good understanding of what were legal vs illegal practices with almost half of respondents (38.4% to 50.5%) identified all nine illegal practices and 12.7% to 19.6% identified illegal under certain circumstances. About 17.7% to 26.7% respondents indicated those practices as illegal and 13.5% to 20.3% did not know about the practices.

On other hand, the study conducted in the year 2014 by Competition Commission of Singapore (CCS) found that significant increase in the number of experiences shared with CCS reflecting on the increased level of awareness of competition law and CCS's activities. Further, the study noted that respondents were of the opinion that market was dominated by large players making it difficult for small businesses and SMEs to compete in the marketplace. Also, respondents agreed that businesses were colluding and insufficient competition existed in the marketplace. This study propagated that small businesses and consumers to be given more education clarifying on the roles and responsibilities of CCS and the types of anti-competitive behaviours prohibited in the marketplace. Businesses recognized CCS's enforcement activities as generally effective, rigorous in its analysis and makes objective and sound decisions; however, the rating has fallen for consumers.

Meanwhile, Information Technology (IT) presents a dynamic platform for Competition

Commission worldwide to perform advocacy and outreach work. The common platform that is being used is by having commissions' official websites. To follow suit the development of IT, some competition commissions utilizes social media to to perform advocacy and outreach work such as the Competition Commission South Africa, Competition Commission Singapore and Competition Commission Philippines had created official **Facebook** to reach out to public. Besides, The Competition Commission South Africa uses **Instagram** and UK Competition Commission and European Commission uses **Twitter** and Competition Commission Singapore and The Competition Commission South Africa also utilizes **YouTube** in their course of work. Thus, it is important for MyCC to emphasis in information technology or social media to promote the competition act and the existence of MyCC.

## MATERIALS AND METHODS

A quantitative approach was applied to accomplish the research objectives of this study. Further, this study was utilized cross-sectional design and the unit analysis is organization level. The study was based on primarily data which was collected use questionnaire e-survey. A total of 750 SMEs companies that were chosen as sample size and convenience sampling was utilised for this study. The questions were adapted from Baseline Study 2013 conducted in Malaysia and CCS Stakeholder Perception 2012 in Singapore.

The level of awareness of MyCC and CA 2010 was measured by binary (yes or no) method which requested the respondents to state whether they have heard about MyCC/CA 2010 before this. In addition, the respondents also need to state in overall how much they know about the MyCC/CA 2010 in the scale of 5 which highest is a lot to a never heard of it.

## RESULTS AND DISCUSSIONS

### Business Characteristics and Respondent Background

A total of 154 respondents of SMEs were involved in this research which consist of 94 services (61%), 44 manufacturing (29%), 7

construction (4%), 6 agriculture (4%) and 3 mining (2%) companies as shown in Figure 4.

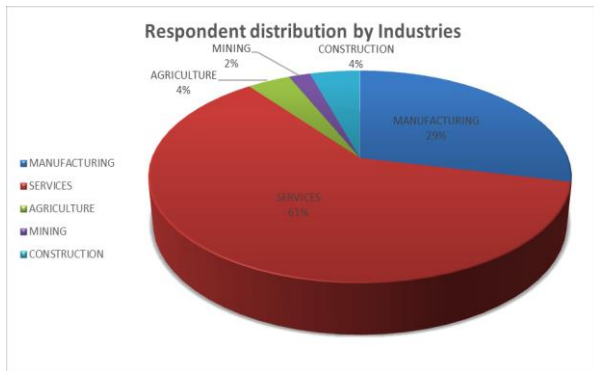


Figure 4. Respondent distribution by Industries

By referring to Figure 5, it is certain that most of the respondents were from Penang (31.8%) followed by Melaka (13.6%).

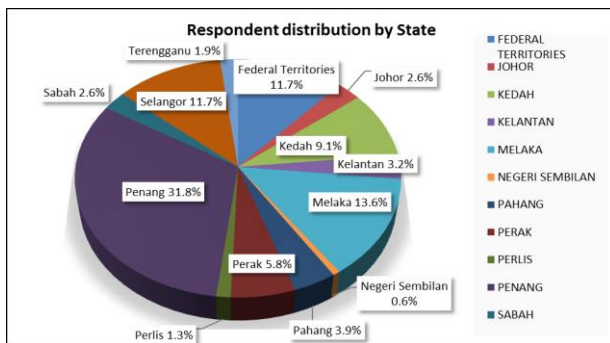


Figure 5. Respondent distribution by state

## Awareness of MyCC and CA 2010

The respondents were asked whether they are aware of MyCC's existence. The survey indicated that only 67.5% of total respondents noticed the existence of MyCC. If the respondents have heard about MyCC, they were further requested to indicate 16 possible sources of obtaining information about MyCC as showed in figure 6. The Internet, MyCC website, newspaper and television/radio were perceived to be the most important mode of accessing of information by businesses.

The high level of awareness on the existence of MyCC also implies a high level of awareness on the CA 2010. Results indicated that 56.5% of the total respondents were aware about CA 2010. Among the 16 sources of information - Internet, MYCC, newspaper, television/radio and MYCC publication were the most important channel of information dissemination rated by the group.

Overall, the level of knowledge on the existence of MyCC and CA 2010 is very high. The scoring for knowledge was combined into five categories: "a lot", "a fair amount", "not very much", "have heard of it but know nothing about it" and "never heard of it". Results indicated that below 50% of the total respondents never heard about MyCC and CA 2010.

Table 1. The level of awareness and knowledge about MyCC and CA 2010

|                | Level of awareness |       | Level of knowledge |               |               |                             |
|----------------|--------------------|-------|--------------------|---------------|---------------|-----------------------------|
|                | Yes                | No    | A lot              | A fair amount | Not very much | Have heard but know nothing |
| <b>MyCC</b>    | 67.5%              | 32.5% | 0.0%               | 9.6%          | 50.0%         | 40.4%                       |
| <b>CA 2010</b> | 56.5%              | 43.5% | 10.3%              | 14.9%         | 40.2%         | 34.5%                       |

Compared to Baseline Study 2013 reported a very low level of awareness of MyCC's existence and CA 2010 among the respondents. Only 8.9% of total respondents were aware of MyCC's existence through internet, business link, newspaper and television/radio as the most important mode

of assessing information. Only 6.6% of total respondents were aware about CA 2010 through similar channels of business information with addition of trade publications. It is revealed that the advocacy and outreach program by MyCC have impact to the business community mainly SMEs.

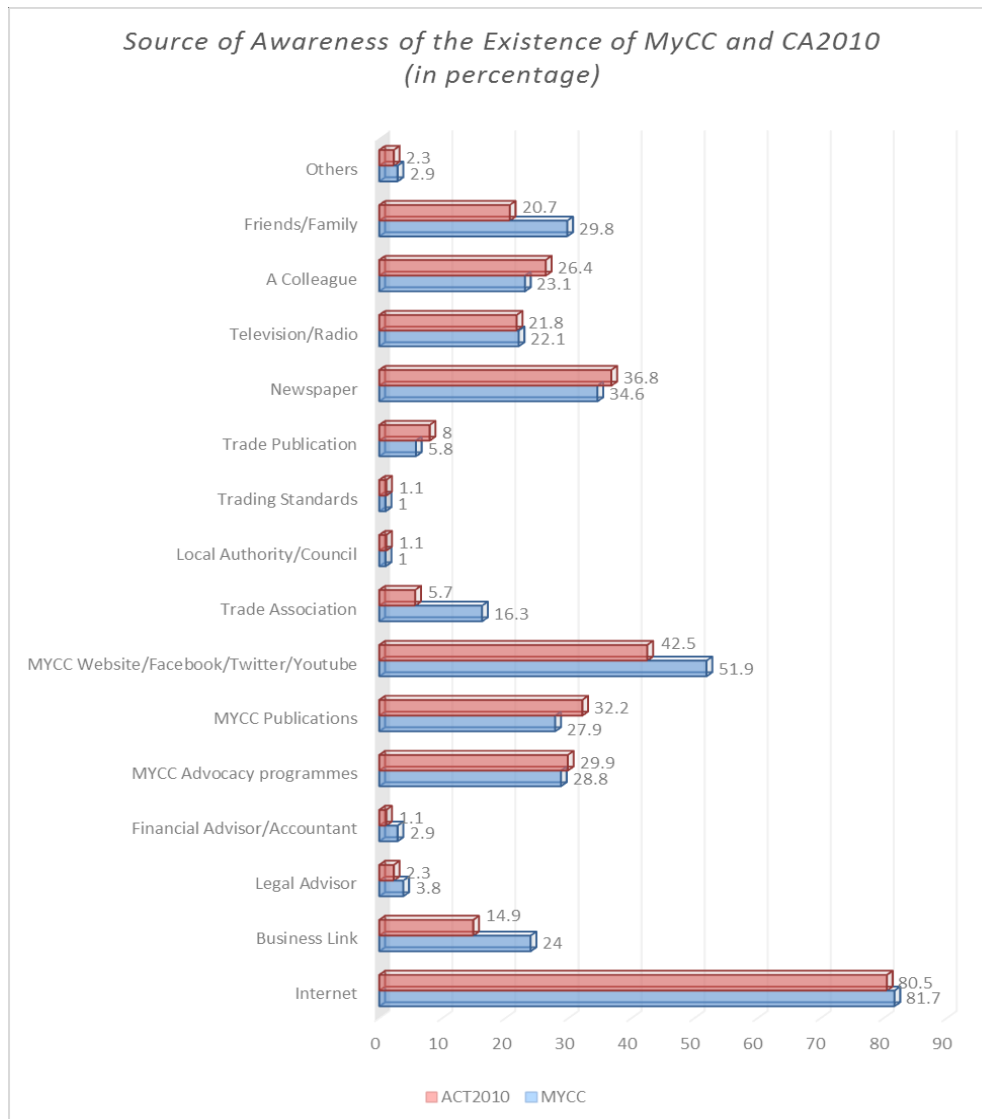


Figure 6. Source of Awareness of the existence of MyCC and CA2010

## Level of Awareness by States, Market Structures and Sectors

Meanwhile, further analysis on the level of awareness of MyCC and CA 2010 follow the across states, market structures and sectors have conducted. The results for the awareness level of MyCC are indicated almost all responding businesses in every state were aware of the existence of MyCC. Extreme observations are coming from Negeri Sembilan and Perlis where 100% of responding

businesses had awareness of MyCC. In reference to Figure 7, the percentage of responding businesses that knew about the existence of MyCC is also high from the following states: Selangor (88.9%), Johor (75%), Penang (73.5%) and Federal Territories (61.1%). However, the highest responding businesses that had is not aware about MyCC is from Terengganu (66.7%). Only 11.1% of responding businesses in Selangor never heard about MyCC and 25% in Johor.

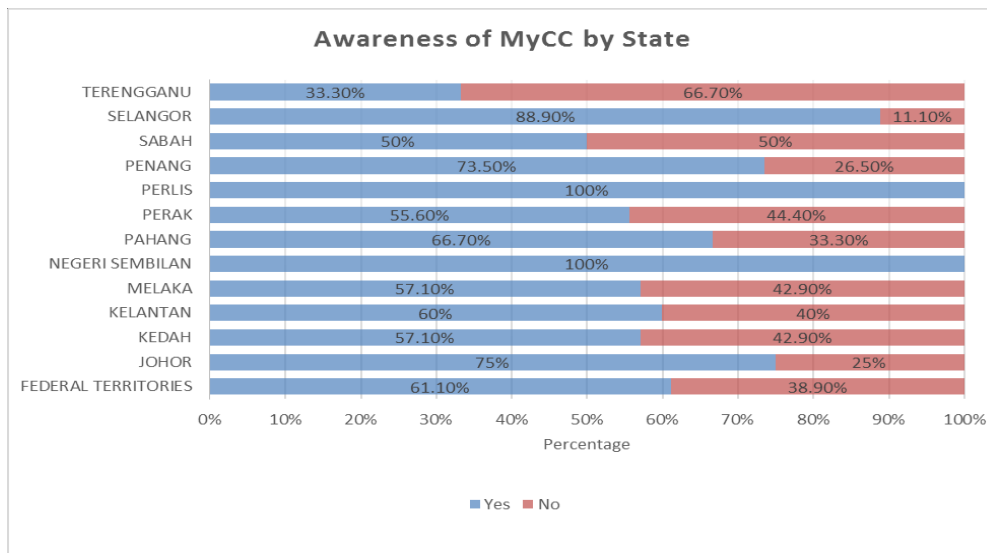


Figure 7. Awareness of MyCC by State

Knowledge about MyCC by state can be seen in Figure 8. All the respondents from Terengganu have heard of MyCC but know

nothing about MyCC. Federal territories, Kedah, Melaka, Perak and Penang have respondents who know a fair amount of MyCC.

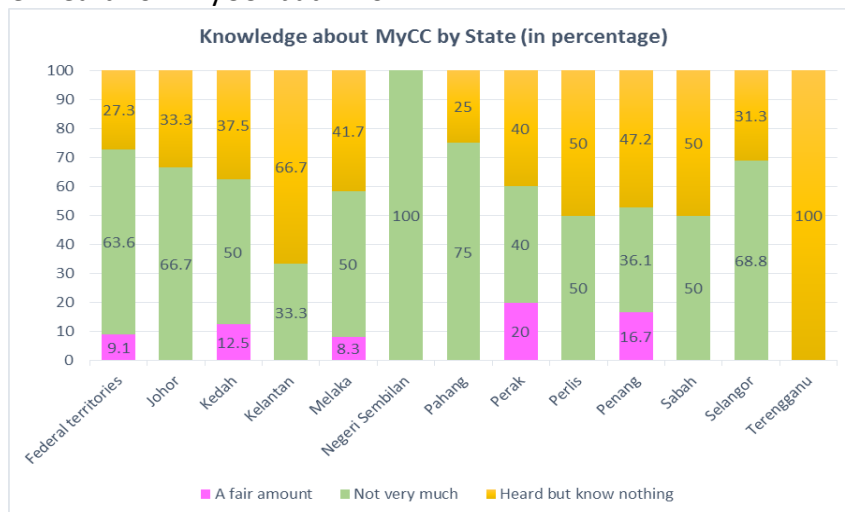


Figure 8. Knowledge about MyCC by State

Meanwhile, awareness level and of MyCC are closely associated with business sizes. Construction industry, medium sized and micro enterprises, has 100 percent level of awareness. Level of awareness is 100 percent for medium small and micro sized enterprises

Agriculture sector. On the other hand, more the 60% of respondents in all categories sized for manufacturing and services sector have awareness level about MyCC. This can be seen in Figure 9.

## Awareness of Small and Medium Enterprises

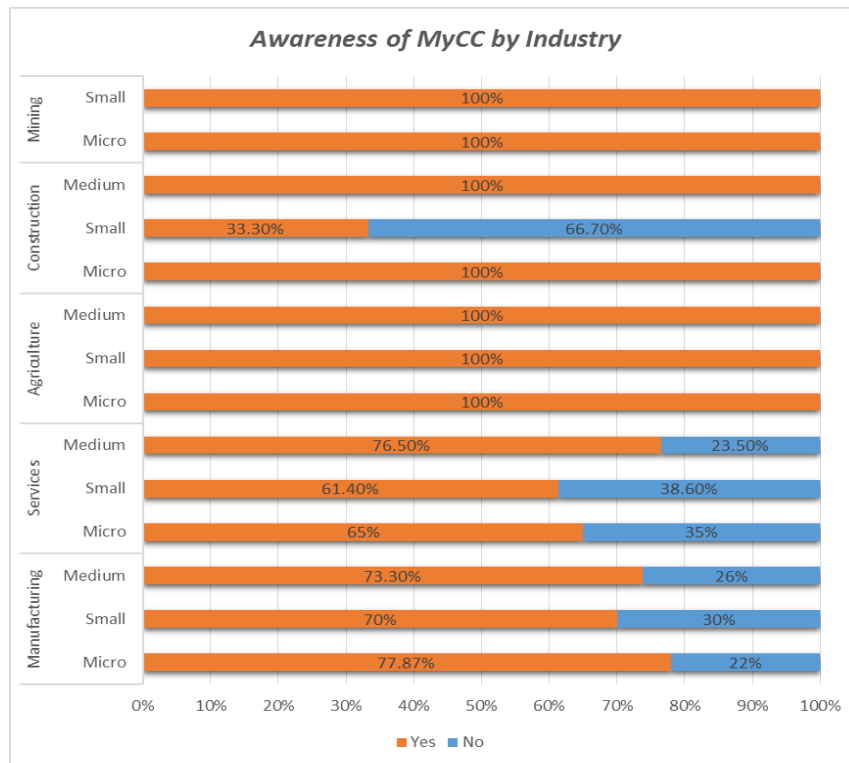


Figure 9. Awareness of MyCC by Industry

The knowledge of MyCC according to Industry as depicts in figure 10. Manufacturing, Services and Agriculture has some of the respondents with a fair amount of knowledge

about MyCC. However, some respondents in the small Mining industry have heard about it but know nothing about it.

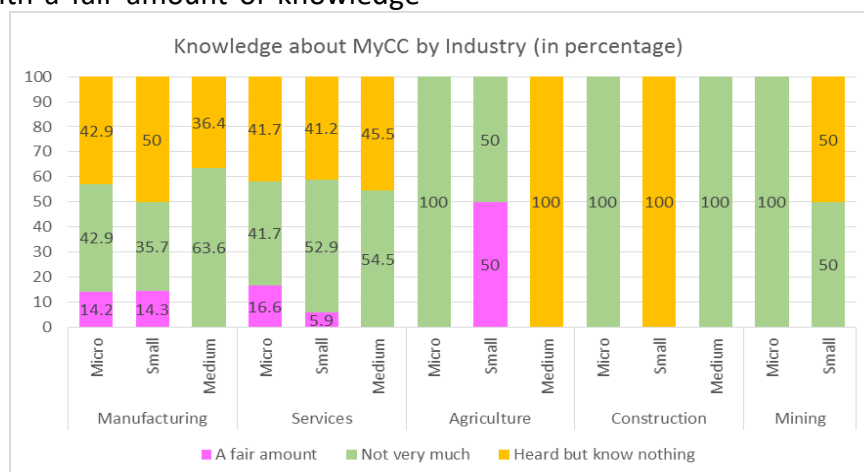


Figure 10. Knowledge about MyCC by Industry

The level of awareness of MyCC for domestic-driven and export-oriented businesses did not differ significantly. Results showed that 66.7% of domestic-driven businesses were aware of MyCC's existence while 87.5% representing the export-oriented businesses. The level of knowledge about MyCC was higher for export-oriented

businesses compared to domestic-driven businesses. Specifically, 28.6% of export-oriented businesses had a fair amount of knowledge with respect to MyCC as compared to only 10.3% for domestic-driven businesses. On the other hand, the results for the awareness level of CA 2010 exposed that that awareness level of CA 2010 across all states is

considerably similar with the level of awareness of MyCC. Figure 11 below depicted the highest percentage score for awareness of CA 2010, 100% from Perlis and followed by three states: Johor (75%), Sabah (75%) and Penang (65.3%).

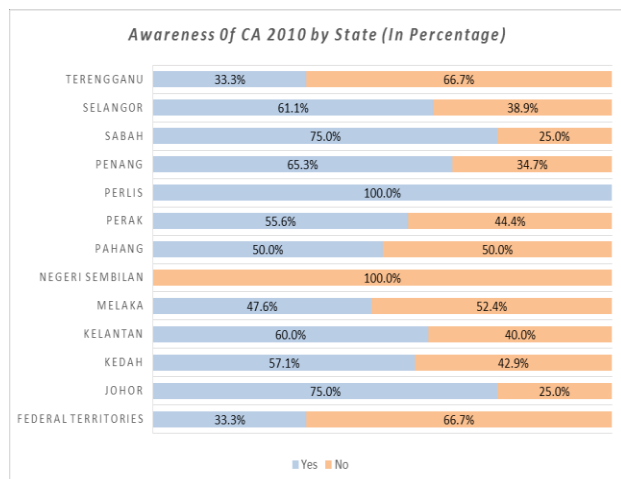


Figure 11. Awareness of CA 2010 by State

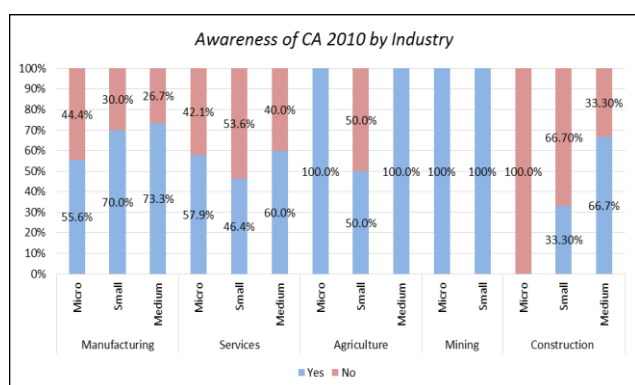


Figure 12. Awareness of CA 2010 by Industry

Figure 13 showed that majority of all states showed that they have knowledge about CA 2010 but not very much of it. Meanwhile, Kelantan (33.3%), Kedah (25%), Federal Territories (16.7%), Penang (12.5) and Melaka (10%) have a lot of knowledge about CA 2010. Surprisingly, all the respondents from Terengganu have heard of CA 2010 but know nothing about the act.

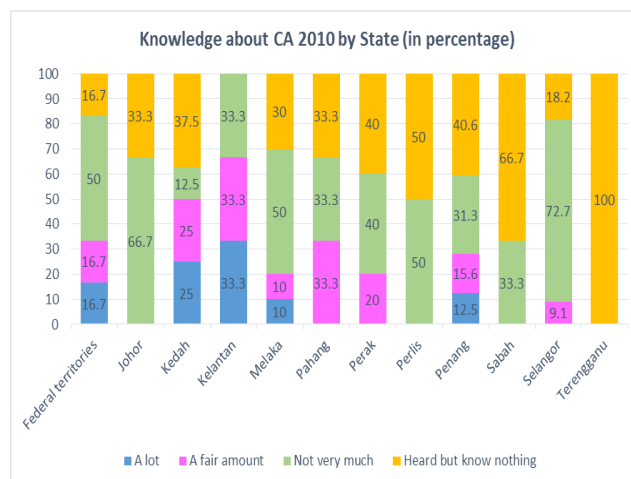


Figure 13. Knowledge about CA 2010 by State

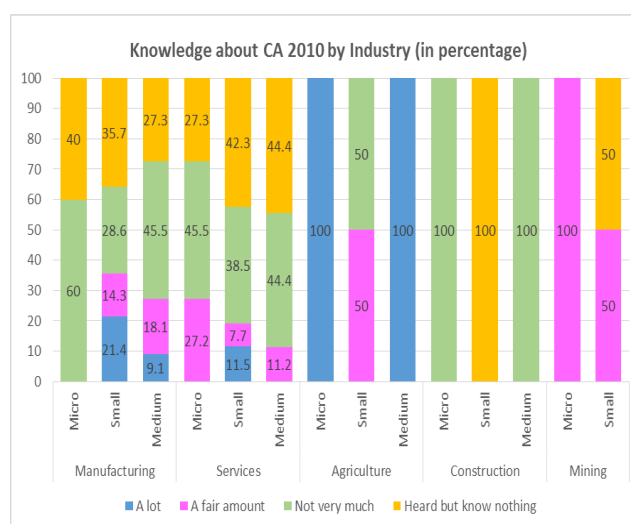


Figure 14. Knowledge about CA 2010 by Industry

Surprisingly, the result display in figure 14 showed that, majority of the business sizes in the industry as being the least knowledgeable about CA 2010. However, for agriculture micro and medium size companies indicated 100% knowledge about CA 2010. Only 50% small companies in the mining sector have heard of CA 2010 but know nothing about it. In addition, the awareness level of CA 2010 for domestic-driven businesses is considerably good as more than half of respondents 53.8% of domestic-driven businesses were aware of the CA 2010. For the export-oriented businesses, the level of awareness of CA 2010 was higher than the domestic-driven businesses. However, the level of knowledge about CA 2010 for domestic-

driven businesses was higher compared to export-oriented businesses with having a lot of knowledge with respect to CA 2010.

As compared to Baseline Study 2013, across states in Malaysia, the report indicated respondents from Melaka and Perlis having zero level of awareness. The report showed that only 6.6% of total respondents were aware about CA 2010 through similar channels of business information with additional information that they obtained from trade publications. All states across Malaysia except Perak (11.8%) indicated a low knowledge level of CA 2010 (below 10%). Overall, the knowledge level of CA 2010 across states came up lower when compared with the level awareness of MyCC. Further, the report found no significant difference between domestic-driven (7.6%) and export-oriented business (6.2%) in terms of awareness level of MyCC. Also, large sized businesses having a greater knowledge about MyCC and decreases as business gets smaller as the 2013 study also reported 85.3% and 86.7% of responding for medium and large size businesses in the service sector were aware of MYCC's existence with 96.9% and 93.2% of micro and small size businesses were not aware of MyCC. However, the level of awareness does not differ significantly between domestic-driven and export-oriented businesses in both study.

## CONCLUSIONS

This study provided evidence that awareness and knowledge on MyCC and CA 2010 have increased maybe due to the MyCC effort via their advocacy programme, publication, sharing the information through the website and social media. In summary, the Information Technology (IT) presents a dynamic platform for MyCC to expand their delivery method and reach the targeted community. In addition, this study help by revealed the current status to the relevant authorities to strategy plan of action or policy designed to achieve their aim.

## Limitation of the Study and Recommendation

The limitation is the size of samples can classified as small due to the time constraint to complete the study. The current study provides valuable insights of the dynamism of various stakeholders in relation to competition legislature and issues in the context of Malaysia. Future research may embark on continuous data collection in order to explore further in understanding and studying the relationships and its influence.

## REFERENCES

- Australian Competition & Consumer Commission (ACCC). (2009). Cartel Deterrence and Detection – A guide for government procurement offices.
- Baseline Study (2013). Final Report: Baseline Study on Awareness of CA 2010 in Malaysia. RKA Consulting Group.
- Competition Bureau Canada (CBC). (2009). Competitor Collaboration Guidelines: Enforcement guidelines.
- Competition Commission of Singapore. (2012). *Stakeholder Perception Survey 2012*.
- Hawkins, S., Yen, D. C., & Chou, D. C. (2000). Awareness and challenges of internet security. *Information Management and Computer Security*, 8(3), 131-143.
- Hoj, J. (2007). Competition Law and Policy Indicators for the OECD countries, OECD Department Working Papers, 568, OECD Publishing. Retrieved on 1 October 2016 from <https://www.innovationpolicyplatform.org/content/state-competition>.
- Madsen, H. & Ulhøi, J. P. (2001). Integrating environmental and stakeholder management. *Business Strategy and the Environment*, 10(2), 77 – 88.
- Office of Fair Trading (OFT). (2010). Drivers of Compliance and Non-compliance with Competition Law (OFT1227). Retrieved on 5 March 2018 from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/284405/oft1227.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/284405/oft1227.pdf)

- Office of Fair Trading (OFT). (2011). Company Directors and Competition Law: OFT guidance.
- RKA Consulting Group. (2013). Final Report: Baseline Study on Awareness of CA 2010 in Malaysia.
- Seay, M. C., Carswell A. T., Wilmarth, M., & Zimmerman, L. G. (2014). Exploring HECM counsellors' fraud awareness and training. *Journal of Financial Crime*, 21(4), 484-494.
- Strategic Plan for Competition Advocacy & Communication 2015-2017. (www.Mycc.gov.my)
- Yap, M. H. T., & Ineson, E. M. (2010). Hospitality managers' knowledge of HIV and HIV education: an exploratory study. *International Journal of Contemporary Hospitality Management*, 22(1), 69-81.



## EXPLORING ENABLERS, BARRIERS AND OPPORTUNITIES TO DIGITAL SUPPLY CHAIN MANAGEMENT IN VIETNAMESE MANUFACTURING SMES

Nguyen Phuc Khanh Linh<sup>1</sup>, Vikas Kumar<sup>2</sup> and Ximing Ruan<sup>3</sup>

<sup>1,2,3</sup>University of the West of England, Bristol, United Kingdom

### Abstract

*This paper examines the enablers, barriers and opportunities of digital supply chain management (DSCM) in manufacturing Small and Medium-sized Enterprises (SMEs) in Vietnam from expert's perspective. The study is a foundational effort to contribute to the establishment of new digital management era in many emerging economies. Applying a systematic literature review (SLR) of relevant studies and a qualitative data methodology this research also aims to explore the factors affecting technology adoption in supply chain management from managerial perspective of Vietnamese manufacturing SMEs. Findings of the research reveal that the enablers and barriers are classified into four main dimensions which are Organisational, Technological, Strategic and Legal – Ethical issues. In addition, our findings also reveal that external factors deeply influence the adoption intention in Vietnamese manufacturing SMEs. The development of digital SCM could be different in each case according to companies' characteristics and business environment. Our study therefore adds to the limited research in the domain of digital technology adoption in SMEs in developing country context.*

**Keywords:** Enablers, Barriers, Opportunities, Digital Supply Chain Management, SMEs, Manufacturing industry, Vietnam.

### INTRODUCTION

Industry 4.0 has been recognised as the new efficient component of an economic strategy that results in lower costs and boosts efficiency in many industries (Frederico, Graza-Reyes, Anosike & Kumar, 2019). More precisely, digital technologies of Industry 4.0 have changed the way supply chain operations are structured (Radanliev, Roure, Nurse, Montalvo & Burnap, 2019). This norm has started gaining considerable attention among researchers and scholars all over the world (Soares, Soltani &

Liao, 2017), however, it is still relatively unfamiliar to developing countries and creates an invisible gap in research for emerging economies' market, especially in the context of SMEs. The literature on digital supply chain management and what can influence it has mainly focused on large multi-national corporates in developed countries as SMEs often have to face more challenges and barriers than Multi-National Enterprises (MNEs) such as lesser scope for the use of modern machinery (Wuest & Thoben, 2011) or disadvantage in the purchase of raw materials and other accessories (Thakkar, Kanda & Deshmukh, 2012).

On the other hand, strategy to adopt digital SCM in SMEs is often missed, particularly when it comes to emerging economies like Vietnam. In Vietnam the manufacturing industry has

#### ARTICLE INFO

##### Article history:

Received: 20 August 2019

Accepted: 26 November 2019

##### Email Addresses:

[khanhlinhg.uk@outlook.com](mailto:khanhlinhg.uk@outlook.com) (Nguyen Phuc Khanh Linh)

[vikas.kumar@uwe.ac.uk](mailto:vikas.kumar@uwe.ac.uk) (Vikas Kumar)\*

[ximing.ruan@uwe.ac.uk](mailto:ximing.ruan@uwe.ac.uk) (Ximing Ruan)

\*Corresponding author

attracted investment in recent years but yet being at the early stages of development and adoption for digital applications. Fundamental to Vietnam's economic growth is a significant rise in manufacturing output. Since 2017, the manufacturing output of Vietnam has increased by 14.4%. The first half of 2018 witnessed Vietnam's continuing manufacturing boom at 12.9%, followed by the industrial and construction sector growth in the economy at 9.1% (Deloitte, 2018). As a result, Vietnam quickly became one of the largest exporters of garments and textiles in the world. The country is having key advantages for industrial development such as stable and substantial foreign direct investment (FDI) flow and low – cost labour workforce. Additionally, the Vietnamese government is taking steps in the right direction to improve factory structure standards and realising the positive influences of manufacturing on the economy (Sourcify, 2019). Therefore, Vietnam has the potential to become the next manufacturing hub in Asia if they are able to capture the right benefits that digital technologies are offering.

Hence, there is a need to explore how digital initiatives have impacted the SCM implementation in the Vietnamese manufacturing industry. The study therefore focuses on answering following research question:

*RQ: What are the enablers, barriers, and opportunities of Digital Supply Chain Management in the manufacturing SMEs in Vietnam?*

The study will therefore first aim to identify the enablers, barriers, and opportunities of digital supply chain adoption from the perspective of manufacturing SMEs in Vietnam, which are conducted from both primary and secondary data analyses. The study will also explore the relationship between digital supply chain management (SCM) and the business success/performance of manufacturing SMEs. Rest of the paper is organised as follows; Section 2 provides a comprehensive overview of the literature; Section 3 highlights the

methodology followed; Section 4 presents the findings

## **LITERATURE REVIEW**

### **Digital Supply Chain Management**

Supply chain has become one of the most significant changes in the prototype of modern business management as individual businesses no longer compete as solely autonomous entities (Lambert, Cooper & Pagh, 1998). Hence, SCM is believed to be one of the most important notions in the extremely competitive business environment since it covers the planning and management of all activities from sourcing, procurement, conversion to logistics (Barutçu & Tunca, 2012) and from original suppliers to end - users such as customers or other stakeholders (Lambert, Cooper & Pagh, 1998). With technologies, supply chain management is enabled with less paperwork, better communication and timesaving implementation (Handfied and Nichols, 1999). Previous studies have indicated that there has been several different definitions of Digital Supply Chain Management (DSCM) throughout history. For example, Kinnet (2015) defines DSCM as an intelligent, value driven network that leverages new approaches with technology and analytics to create new forms of revenue and business value.

However, Büyüközkan & Göçer (2018) stated that most of these definitions share a unifying common concept which is viewed as “an intelligent best-fit technological system that is based on the capability of massive data disposal and excellent cooperation and communication for digital hardware, software, and networks to support and synchronise interaction between organisations by making services more valuable, accessible and affordable with consistent, agile and effective outcomes”. New keys of the manufacturing paradigms consist of large data analysis and knowledge bases, which can be supported by technologies: Integrated manufacturing (3D printing, robotics automation, advanced materials) and intelligent manufacturing (virtual or augmented reality, Industrial

Internet of Things or CPS). As a result, the seller and buyer instead of meeting face-to-face, they can interact digitally through the supply chain.

### **Manufacturing sector and the adoption of Digital SCM: the SMEs' perspective**

In the manufacturing field, the use of new technologies can improve demand forecasting and production planning, which leads to better quality and higher profit margins (WEF, 2017). However, a study by Moeuf et al. (2017) claims that SMEs have not exploited all the resources for implementing technologies in its supply chain and often limited themselves to the adoption of Cloud Computing and the Internet of Things (IoT). Likewise, SMEs seem to have adopted those concepts only for monitoring industrial processes and there is still an absence of real applications in the field of manufactured planning. Consequently, the study concludes that technology development in SMEs remains cost-driven initiatives and there is still no evidence of real business model transformation. The correct integration of digital technologies into a supply chain is believed to rely on a well-designed plan (Wang, 2015).

Moreover, a lot of SMEs actually face difficulties in achieving those plans due to the fact that most SMEs do not have financial resources to invest in new manufacturing technologies and to change the range offered to the customers (Türkeş et al., 2019). In the case of ASEAN, many countries' markets are still in the developing stage where the region's lawmakers might not consider the importance of developing IT in the first place. In addition, ingraining habits and cultures of top management in companies also prevent changes in the supply chain.

According to Martinsuo and Luomaranta (2018), SMEs would need broader networks and support to adopt the new technologies as the digitalisation of manufacturing industries is being carried out differently in distinct nations and they cannot develop the value chain in isolation. They also find that SMEs in different supply chain positions experience similar

operational and external challenges, while experience different technology, strategy, supply chain, and organisational challenges. Moreover, different companies had various different strategies for technology utilisations, embedded between static and low - technology to more dynamic and development oriented.

Martinsuo and Luomaranta (2018) further assert that SMEs should plan strategies to overcome the challenges in digital technology adoption which include a clear identification of the benefits of the technology investment, a selection of focal application areas and decision on "make or buy". In addition, scouting and collaborating with some potentially lead customers or government-funded projects to gather data, increase digitalisation and create demand through innovative paradigms and activate supply chain partners. SMEs could take some proactive actions to overcome the lack of technological knowledge such as reducing technical and material uncertainties through learning, small-scale experiments and research, giving resources to designers to learn and experiment.

A case study of 51 firms in India mostly SMEs shows that firms with more internationally oriented approach have adopted more advanced e-business technologies in the manufacturing sector, as well as wage rates and scale of operations (Lal, 2002). The study also states that it is essential to create proper local, national, and global information infrastructure to derive the maximum benefit from information and communication technologies (ICT) revolution. Overall, a lot of challenges exists for the adoption of technologies in SCM such as cyber security, legislation and lack of standardisation. It is important to notice that the opportunities for digital supply chain initiatives are not just for big corporations. For example, a worldwide famous SME that perfectly seized the opportunity is Alibaba Group. They have been using their own internet-based wholesale programmes as a digital distribution platform to increase the productivity and consumer

markets (Sommer, 2015). According to Radaliev et al. (2019), it is essential for SMEs to carefully plan its adoption to future technologies, in order to reduce costs and ensure compliance with technological updates in their supply chain.

Previous studies including Kehoe & Boughton (2001) and Deloitte & Touche (1998) had assessed the impact of digital revolution on the establishment of supply chains, however, they are mainly focused on more mature enterprises such as leading manufacturing organisations in the UK, US and a certain bias might be included in the analysis. Elements such as cultural or location-based restrictions could not be presented in many pieces of research due to the difference in government systems and economic environments of each nation. Thus, primary data research is required in order to study the impact of digital SCM on Vietnamese manufacturing SMEs. The impact of Digital SCM in SMEs has not been mentioned as much as MNEs in comparison. According to Mittal, Khan, Romero & Wuest (2018), a great number of available academic and consulting studies focused on MNEs and treated SMEs similarly in their development process of technological applications. However, other scholars claimed that SMEs are unlikely, and they have different advantages and challenges (Saad, Kumar, & Bradford, 2017). Hence, this lack of SMEs based research towards digitalisation in manufacturing sector demonstrates a research gap within the current scientific body of knowledge.

### Systematic Literature Review (SLR)

In this study, the Systematic Literature Review (SLR) (Figure 1) has been used (Biel and Glock, 2016; Papadopoulos et al., 2016; Soares et al, 2017) to tease out the enablers, barriers and opportunities of digital SCM. When conducting a literature review, these keywords have been searched: Enables and barriers; Digitalisation and supply chain; Challenges and opportunities; Digital supply chain in SMEs in the manufacturing sector; Digital supply chain management; Digital supply chain in developed

countries; Digital supply chain in developing countries; Vietnamese manufacturing SMEs and digital supply chain management; Application of digital supply chain in manufacturing enterprises. Around 80 articles were shortlisted in the preliminary research however, after carefully screening the articles and applying a set of criteria finally 27 articles were finalized which formed the sample for this study (see Table 1).

Table 1. *Shortlisted articles from SLR*

| Author, Year                         | Type of Journal                                                             | Relevant Key Point           |
|--------------------------------------|-----------------------------------------------------------------------------|------------------------------|
| <b>Clemons and Row (1992)</b>        | Journal of Management Information Systems                                   | Barriers of Digital SCM      |
| <b>Brown et al. (1998)</b>           | International Journal of Quality and Reliability Manage                     | Barriers of Digital SCM      |
| <b>Mukhopadhyay and Kekre (2002)</b> | Management Science                                                          | Barriers of Digital SCM      |
| <b>Julien and Ramangalahy (2003)</b> | Entrepreneur Theory and Practice                                            | Opportunities of Digital SCM |
| <b>Lai et al. (2005)</b>             | Transportation Journal                                                      | Enablers of Digital SCM      |
| <b>Lancaster et al. (2006)</b>       | Information Management and Computer Security                                | Enablers of Digital SCM      |
| <b>Ngai, Chau &amp; Chan (2011)</b>  | The Journal of Strategic Information Systems                                | Enablers of Digital SCM      |
| <b>Zhang et al. (2011)</b>           | International Journal of Operations & Production Management                 | Opportunities of Digital SCM |
| <b>Kagermann et al. (2013)</b>       | Final Report of the Industrie 4.0 Working Group, Forschungsunion.           | Enablers of Digital SCM      |
| <b>Carruthers (2014)</b>             | IEEE Internet of Things.                                                    | Barriers of Digital SCM      |
| <b>Chae (2015)</b>                   | International Journal of Production Economics.                              | Opportunities of Digital SCM |
| <b>DiMase et al. (2015)</b>          | Environment System Decision                                                 | Barriers of Digital SCM      |
| <b>Wang (2015)</b>                   | Computers and Industrial Engineering                                        | Opportunities of Digital SCM |
| <b>Schmidt et al. (2015)</b>         | Proceedings of the International Conference on Business Information Systems | Barriers of Digital SCM      |
| <b>Erol, Schumacher</b>              | International                                                               | Barriers of                  |

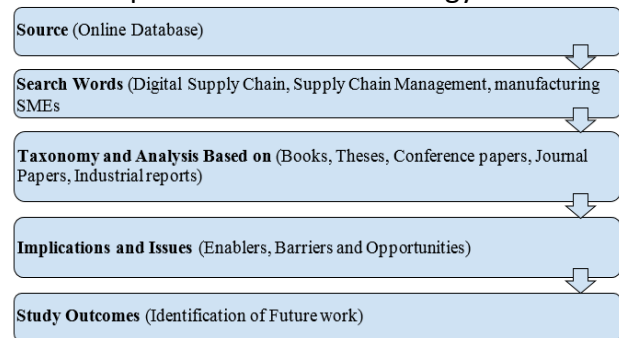
|                                |                                                                                                              |                                                       |
|--------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| <b>&amp; Sihm (2016)</b>       | Conference on Competitive Manufacturing.                                                                     | Digital SCM                                           |
| <b>Hermann et al. (2016)</b>   | 49th Hawaii International Conference on System Sciences                                                      | Barriers of Digital SCM                               |
| <b>Anderson (2016)</b>         | NIST Economic Analysis Briefs                                                                                | Barriers of Digital SCM                               |
| <b>Bruemmer (2016)</b>         | Construction Business Owner Magazine                                                                         |                                                       |
| <b>Schroder (2016)</b>         | The Friedrich-Ebert-Stiftung.                                                                                | Barriers of Digital SCM                               |
| <b>Muller et al. (2017)</b>    | Annual Report on European SMEs 2016/2017                                                                     | Barriers of Digital SCM                               |
| <b>Ras et al. (2017)</b>       | Proceedings of the 10th International Conference on Pervasive Technologies Related to Assistive Environments | Barriers of Digital SCM                               |
| <b>Kiel et al. (2017)</b>      | The International Society for Professional Innovation Management                                             | Barriers of Digital SCM                               |
| <b>Marques et al. (2017)</b>   | Journal of Ambient Intelligence and Smart Environments                                                       | Barriers of Digital SCM                               |
| <b>Mittal et al. (2018)</b>    | Journal of Manufacturing Systems                                                                             | Barriers of Digital SCM                               |
| <b>Speece et al. (2018)</b>    | Proceedings of the 43rd Annual Macromarketing Conference                                                     | Barriers of Digital SCM                               |
| <b>Wyes (2018)</b>             | Economic Research Institute for ASEAN and East Asia                                                          | Enablers of Digital SCM                               |
| <b>Radanliev et al. (2019)</b> | SSRN Electronic Journal                                                                                      | Barriers of Digital SCM, Opportunities of Digital SCM |

Firstly, Google Scholar and Science Direct as two basic and accessible platforms were utilised to search for relevant journals' sources

**Table 2. Enablers of DSC in manufacturing SMEs**

| Enablers                    | Concepts (apply to SMEs)                                                                                                                                                                                                                                                                                                                      | Author/ Source/ Years   |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Enable supply chain agility | IT integration in supply chain helps enhance visibility, efficiently create changes and incorporation with customers. It is driven by the scale of the company or the complexity of the supply chain as the larger the company or the more complex the supply chains are, the higher the value of IT integration to the supply chain agility. | Ngai, Chau & Chan, 2011 |

which then being evaluated in relation to the paper objectives. Precisely, the taxonomy and analysis are based on books, conference papers, published journal articles and industrial reports. Also, other credible and official sources such as World Bank, Deloitte or WTO had been used in this research. In order to understand the legislation affecting the implementation of technology in a nation, official laws report was also reviewed carefully. Furthermore, there were several criteria to examine the shortlisted articles; given as – (i) only the articles written in English will be considered; (ii) the articles belonging to peer reviewed publications and published reports are considered. As a result, 27 journals that met the requirements were finalised. Figure 1 below depicts the SLR methodology.



**Figure 1. Systematic Literature Review Methodology**

### **Enablers, Barriers, and Opportunities to Digital Supply Chain Management**

The study also focused on identification of the enablers, barriers and opportunities of digital supply chain management. Table 2, 3, and 4 below summarises the key enablers, barriers and opportunities to digital supply chain management.

|                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Increase the region's productivity and move up the economic value chain | The digital supply chain helps some ASEAN countries (e.g. Singapore, Malaysia) move up the economic value chain with the increase of labour cost in the manufacturing sector. The Internet of Things and Services allow the networking of the whole factory to form a smart environment.                                                                                                                                                                                                                                                                       | Wyes (2018); Kagermann et al. (2013)       |
| Able to analyse a huge amount of information in SCM                     | An integration of technology sensors and devices with equipment and machinery through the Internet of Thing (IoT), and advances in computational ability allow the analysis of huge information (big data) in a supply chain.                                                                                                                                                                                                                                                                                                                                  | Wyes (2018)                                |
| More flexible, faster operation in manufacturing sector                 | Discrete manufacturing industries such as automotive, electrical or electronics gains operational efficiencies reaped from new technologies. High – value product manufacturing such as printed electronics and miniaturization can undertake a high degree of automation and optimisation. With IoT in place at a factory, employees can get better visibility into their assets worldwide. Standard asset management tasks such as asset transfers, disposals, reclassifications, and adjustments can be streamlined and managed centrally and in real time. | Wyes (2018)                                |
| Agile in managing supply network                                        | IT and Internet help the communication in real time among supply chain members become more convenient and effective, provide the software-platform infrastructure for managing all supply chain activities. Digital SCM allows companies in supply chain to monitor the inventories, improve the utilization of their transportation and warehouse assets, eliminate duplication of effort in performing numerous logistic activities for their user companies.                                                                                                | Lancaster et al. (2006); Lai et al. (2005) |

Table 3. *Barriers of DSC in manufacturing SMEs*

| Barriers                                                                                              | Concepts                                                                                                                                                                                                                                                                                                                                                                 | Author/ Years                              |
|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Lack of organisations' digital vision and strategy to succeed                                         | Digital transformation is an innovative approach to business operations and especially the manufacturing organisations, however, many organisations seem to fail to illustrate its digital vision and strategy. They struggle when transforming the visionary ideas of digital revolution.                                                                               | Erol et al. (2016)                         |
| Constrain of financial resource                                                                       | SMEs rely more on the access to investment and the return on investment than MNEs. Owner of SMEs often are individual and numerous risk factors involved with the small-scale businesses. SMEs often have limited capabilities to invest in innovative technologies.                                                                                                     | Mittal et al. (2018);                      |
| Constrain of technical resources and usage of Advanced Manufacturing Technologies (AMTs), Digital Gap | SMEs often don't have enough resources to test new avenues outside of their core competencies, they are not "early adopters" due to the fear of investing wrong technologies or adopting inefficient practices. Technologies transferred from developed to developing countries rarely include the most advanced one, create a never-closed gap widen in R&D capability. | Mittal et al. (2018); Speece et al. (2018) |

## Exploring Enablers, Barriers and Opportunities

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                    |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| Research and Development on Digital SCM are low | Most business companies are facing different problematic issues such as ineffective adoption of digital technologies and the lack of accurate decision strategies during this business transformation as they do not have enough focused research. SMEs might be limited to access to shared knowledge of technologies and they lack alliances with universities and research institutions to update themselves with the on-going digital revolution.                                                                     | Schmidt et al. (2015); Hermann et al. (2016); Mittal et al. (2018) |
| Standard Consideration                          | The presence of standardisation in SMEs is rarely found due to the shortage of resources to pass the certificate (e.g. ISO 9000 certification).                                                                                                                                                                                                                                                                                                                                                                           | Brown et al. (1998)                                                |
| Cyber resources                                 | Adoption of technologies depends on the SME's cyber resource, as many SMEs do not have the same supply chain resources as large enterprises.                                                                                                                                                                                                                                                                                                                                                                              | Radanliev et al. (2019)                                            |
| Cyber Security Risk Assessment                  | The integration of technologies such as software defined networks, storage, mesh networks, peer-to-peer connectivity, protocols and enterprise grade cloud hosting, artificial intelligence, machine learning and data analytics in supply chains create cyber security risk.<br>As the adoption of smart manufacturing technologies is usually high cost, SMEs could face the dilemma of integrating less secure systems. Thus, integrating cyber element in manufacturing also creates an inherent cyber risk.          | Anderson (2016); Carruthers (2014); DiMase et al. (2015)           |
| Legal Issues                                    | A developed of cyber-physical network where a lot of machines, sensors, facilities and humans are interlinked to the internet and exchange data with each other might lead to the appearance of several complex legal issues. Data privacy and security issues should be considered when adopting modern technological management in business                                                                                                                                                                             | Schroder (2016); Muller et al. (2017)                              |
| Profiling and complexity issues                 | The supply chain is becoming global and characterised by highly complex structure. Hence, employees should be trained to understand the essential processes, dependencies and data interpretation to accept digitisation in the manufacturing environment. Business companies commonly lacks competencies on managing the complex issues related to data analysis, space or time, usage of instructions. Hence, it leads to the uncertain in adopters to follow the digital supply chain.                                 | Erol et al. (2016); Ras et al. (2017)                              |
| Unclear economic benefit of digital investments | The lack of economic discussions and a clearly defined return on investments tends to be one of the major challenges to technologies' implementation in the supply chain.                                                                                                                                                                                                                                                                                                                                                 | Kiel et al. (2017); Marques et al. (2017)                          |
| Transaction risk                                | The focal firm must tailor its digital supply chain system to accommodate the special needs of certain partners, which makes the digital supply chain system more transaction specific and increases transactions risk. Another challenge is the misuse of critical resources such as sensitive information and know-how would be transferred by the partners as part of the relationship and cannot be controlled. All in all, it would lead to the destruction of the focal firm's competitive advantage in the future. | Mukhopadhyay and Kekre (2002); Clemons and Row (1992)              |

**Table 4. Opportunities of DSC in manufacturing SMEs**

| Opportunities                                   | Concepts                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Author/ Years                    |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| More advanced data collecting devices           | Wearable devices with intelligence are potentially used in SCM for data collection soon as the fast development of cutting- edge techniques. With data standardisation, IT companies could produce more reliable and smart devices for SCM such as smart robotic, intelligent adaptive or multi – functional ubiquitous devices.                                                                                                                                            | Wang (2015)                      |
| Reduce costs, risks                             | Cloud-based collaboration technologies lower the risks of out-of-date and incorrect information.                                                                                                                                                                                                                                                                                                                                                                            | Zhang et al. (2011)              |
| Allow real-time feedback from users and markets | Information - sharing between the parties has been recognised as an essential part of SCM to improve performance, responsiveness and flexibility, while declining uncertainties within supply chain partners. And with current research focusing on technology and function aspects, companies can use data from real-time analysis of social media activities as a key source to predict demand and get valuable customer insights and trends for new product developments | Zhang et al. (2011); Chae (2015) |
| Cyber recovery planning                         | SMEs can gain access to existing knowledge to create more resilient systems and processes in the future                                                                                                                                                                                                                                                                                                                                                                     | Radanliev et al. (2019)          |
| Reduce labour costs                             | With the use of robotics and automatic workflows, companies can cut down the labour costs far greater than before                                                                                                                                                                                                                                                                                                                                                           | Bruemmer (2016)                  |
| Create Specialised products                     | Manufacturing specialised products could help SMEs to differentiate themselves from the competitors and adopting technologies allows more competitive opportunity for every business                                                                                                                                                                                                                                                                                        | Julien and Ramangalahy (2003)    |

In addition, to identification of enablers and barriers to digital supply chain management, the study also attempted to identify the opportunities that it presents. Wang (2015) notes that with data standardisation, IT companies could produce more reliable and smart devices for SCM such as smart robotic, intelligent adaptive or multi – functional ubiquitous devices. Studies have shown that cloud-based collaboration technologies lower the risks of out-of-date and incorrect information. Additionally, with the use of robotics and automatic workflows, companies can cut down the labour costs (Bruemmer, 2016). Information sharing and storage becomes central to digital SCM to improve

performance, responsiveness and flexibility, while reducing uncertainties within supply chain partners (Zhang et al. 2011; Chae, 2015). This creates opportunities for SMEs to gain access to existing knowledge and create a resilient system and processes in the future (Radanliev et al. 2019). Moreover, manufacturing specialised products could help SMEs to differentiate themselves from the competitors and adopting technologies allows more competitive opportunity for every business (Julien and Ramangalahy, 2003).

### Research Gap

Through a systematic literature review, it appears that existing research studies do not facilitate a discussion on the effect of cultural

elements or location – based restrictions on the implementation of digital supply chain management in emerging economies. Against this brief outline, it seems hard to identify elements that enable and that prevent the development of technologies in SCM. Overall, a research gap indicated in this study is “elements such as cultural or location – based restrictions that could not be presented in many studies due to the difference in government systems and economic environments of each nation”. Exploring this gap with a more inductive approach seems justified as this allows distinguishing the key issues. As a consequence, the next section will continue with the presentation of the research methodology in order to outline a suitable methodological research approach.

## **MATERIALS AND METHODS**

A combination of primary and secondary data was utilised to generate findings for this research. Using only secondary data as the sole source of information has its disadvantage of being outdated and lack of specific information for this particular study of the Vietnamese market. Hence, a follow-up qualitative data methodology was used to collect primary data for this exploratory research through semi-structured interviews with Vietnamese manufacturing SMEs.

### **Data Collection**

In order to gain insightful opinions from managers’ perspective, interview is the most appropriate method for this study. Semi-structured interview is chosen as it is the type of interview that allows researchers to take the best of both structured and unstructured interview while minimizing the risks (Myers, 2009). The interviews were conducted via Skype, as it was the most appropriate method reflecting the time span of the study, cost, and resources associated with and availability for data gathering. Interviewees had received email one week before the Skype schedule to review the questionnaire instruction, glossary of terms regarding digital SCM and the

questions list. Each online interview required 45-60 minutes for completion. In total six expert industry participants agreed to be interviewed who had managerial positions with expertise in SCM in Vietnam. This included two assistant managers, two vice-presidents, and two chief executive officers. The participant came from different industries such as paint, textile, lumber and software manufacturing industry. The data collection for this study took between July to August 2019.

The interviewee details were obtained through the snowball sampling method, which is the reference from other acquaintance Vietnamese researchers to gain the connection to several SMEs in Vietnam. Using the definition according to the Decree No. 90/2001/CP-ND (2001) by Government of Viet Nam, SMEs "are independent business entities, which have registered their business in accordance with prevailing laws, with a registered capital of VND 10 billion (approximately US\$ 670,000) maximum or an annual average number of labours of up to 300 people". Additionally, SME is an important group of enterprises in Viet Nam at the moment. Following the definitions above and according to an evaluation of ADB (2004), it is estimated that more than 90% of all private Vietnamese enterprises are SMEs. In a nutshell, the manufacturing SMEs from Vietnam are considered to be potential target population in this research. The selection of industries was made on the basis of cost, time constraints and resource requirements. As the outcome of this research is to collect data from the experts’ point of view and as not many SMEs in Vietnam are familiar with the concept of Digital SCM as compared to developed nations, the scope of this qualitative data collection is rather small and focuses on different groups of SMEs in Vietnam. There are various types of Vietnamese SMEs and each interviewee represented a type of business and manufacturing industries (see Table 5).

Table 5. *Interviewee Profile*

| Company (CO) | Number of Employees | Core processes             | Type of industry                     | Digital SCM implementation                                          |
|--------------|---------------------|----------------------------|--------------------------------------|---------------------------------------------------------------------|
| CO1:         | 80                  | Manufacturing              | Paint manufacturing and trade        | Applied (RFID, ERP)                                                 |
| CO2:         | 50                  | Fabrication, Manufacturing | Footwear manufacturing and trade     | Applied at early stage (Internet based communication channel)       |
| CO3:         | 40                  | Manufacturing, assembly    | Software, IT industry                | Applied (RFID)                                                      |
| CO4:         | 50                  | Fabrication, Manufacturing | Textile manufacturing and trade      | Applied at early stage (Productivity quota system)                  |
| CO5:         | 70                  | Manufacturing              | Lumber manufacturing and trade       | Applied at early stage (Monitoring of product delivery by software) |
| CO6:         | 60                  | Manufacturing, assembly    | Paper Tissue manufacturing and trade | Applied at early stage (Internet based communication channel)       |

### Method of Analysis and Data Validation

Since this research adopts the grounded theory approach by Glaser and Strauss (1967) to code the interview data, the coding scheme was created and organised into a three-stage concept hierarchy. The three original stages included (1) Open coding, where text is read reflectively to identify relevant categories (2) Axial coding, where the categories are refined, generated and related (3) Selective coding, where the “core category” in the theory is picked out and related to other categories.

To ensure validation of data, interview participants for this research (mainly managerial employees or executives) were selected from a variety of companies in different industries. Accordingly, the anonymity of participants is also an important ethical issue and all the participants had been informed that their data would be anonymised before the actual interview. The consent form and participant information sheet were sent to the interviewees in advance as the manager might reveal internal information about their business operations. In a nutshell, the given information by the interviewees was strictly confidential and privacy-protected.

### RESULTS AND DISCUSSIONS

After operating coding and classifying procedures for qualitative data analysis based on the ground theory approach, the four highest level conceptual categories presented

by the interviewees are organisational (OR), technological (TE), strategic (ST) and legal, ethical issue (LE). They represent four critical dimensions of concern regarding those participating firms. All interview participants indicated that the elements in those four dimensions could affect their decision toward digital SCM adoption. Out of six companies, two of them had applied technologies in supply chain management and four of them had not fully used the technologies effectively in the management scheme. All of the SMEs participated in the research were aware of digital supply chain and the Industry 4.0 in general but agreed that it was hardly applicable for small companies in developing countries. They expressed that developing cost for digital SCM was a vital issue and could vigorously impact the companies’ operation as SMEs often have constraint resources and they could face high jeopardy of bankruptcy if the investment in digital is not reliable. In each dimension, the enablers, barriers and opportunities were categorised as seen in Figure 2.

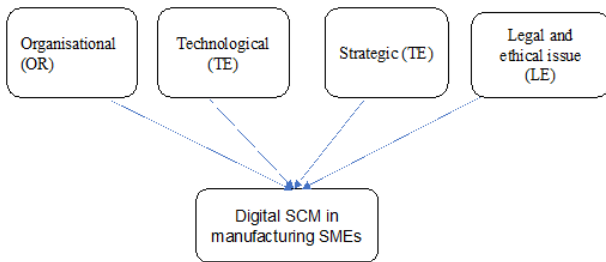


Figure 2. Factors affecting the adoption of digital SCM in manufacturing SMEs

In a nutshell, the key findings from the study are as follows:

- There are four main dimensions to assess the enablers and barriers of adopting digital supply chain management in manufacturing SMEs which are organisational, technological, strategic and legal, ethical issues.
- Manufacturing SMEs in Vietnam are aware of technology implementation in supply chain management but lack of proactive investment for its development due to various barriers from internal and external impacts.
- Financial resource and human resource with technology knowledgeable managerial hierarchy are the main internal impacts for Vietnamese manufacturing SMEs.
- Government support and data sharing standardisation between SMEs are the main external impacts for Vietnamese manufacturing SMEs.
- There are opportunities for the adoption of digital supply chain management in manufacturing SMEs in the future.

Accordingly, six interviews have indicated that Vietnamese manufacturing SMEs were at an early stage in digitalisation and adoption of SCM. Hence, in order to achieve the objectives of the study and answer the research question, the following propositions were formulated and put to test:

*P1: There is a relationship between the adoption of digital supply chain management and the SME's competitive advantage.*

Taking advantage of the modern technologies, as well as coming digital and e-commerce trends, would help to design the country's supply chains and build a more dynamic private sector (Cooper, 2018). The head of Microsoft Vietnam's Corporate Clients and Partners Division, expressed that Industry 4.0 offers many growth opportunities for SMEs as it provides a modern technological foundation, which the enterprises can use to access huge amounts of data on the market easily and to build effective business strategies (Vnexpress.com, 2018). As new websites and digital processing tools can bring services to manufacturing SMEs that were formerly unaffordable, ease a number of resources' cost or human constraints and decrease SMEs' expenditures in a range of aspects, from product development, assembly to insufficient research and development skills training, and insufficient knowledge of foreign markets and regulations. Digital technologies continue to make substantial changes to the economy with implications for expanded globally market. For Vietnam's case, it is common issue for SMEs in manufacturing that not many managers understand about SCM and advanced technology implementation. This was reflected by interviewee from CO1:

*"If the company does not have good management personnel, it will not ensure the system of effective applications, which easily causes the failure of application".*

However, Vietnam targets till 2025 to build a regional logistics hub enterprise with good management of supply chains (VCL Legal, 2018). This will enable mass customisation, allowing companies to meet customers' demands, creating value through constantly introducing new products and services to the market. Additionally, the collaboration between machines and humans could socially impact the life of the workers of the future, especially with respect to the optimisation of decision making. Thus, the ability to adopt DSCM shall bring an SME to a higher level in the market with their technological

competitive advantages. Subsequently, the study proposed a second proposition:

*P2: Technology knowledge and skills have a positive impact on the adoption of digital supply chain management in Vietnamese manufacturing SMEs.*

The benefits constitute the major factor that all companies consider in assessing the adoption of new technology. However, this analysis shows a tendency that Vietnamese manufacturing SMEs do not perceive the investment in digital supply chain management as their priority competitive advantage as there are many barriers in adopting the management system. Most of the participants approved that the reduction of uncertainty in the technology raises the trustworthiness of digitalisation and hence it could build up the SME's intention to adopt digital supply chain management. For example Interview from CO6 stated that:

*"Technology has been considered in the company's communication system as there are more and more employees who understand the implementation of the Internet to business operation and this makes it easier to implement such technologies".*

However, the result also indicated that Vietnamese manufacturing SMEs in traditional industries like textile (CO4) or lumber (CO5) found difficulties in recruiting employees with technological knowledge in an immature economic environment such as Vietnam. Critically, technology knowledge is an extremely crucial factor and enabler for the transformation of traditional supply chain system. Therefore, those companies who target digital SCM as their competitive advantage will require a board range of digital specialists such as data scientists, user – experience designers and software providers who understand how to facilitate and fix the digital applications. However, supply of such experts remains limited, particularly more in the emerging markets like Southeast Asia countries. Besides recruiting new staffs for the digital development, it is necessary for

manufacturing SMEs to engage current employees within the chain to diminish resistance and drive behavioural shifts toward the integration of technology initiatives in the business management. Transformations are difficult, and long – term investments are needed to encourage upgrades in organisational managerial skills. Hence, the manager will need to empower staff with suitable digital tools and skillsets or to reward for their digital performing successes. Given that staff's abundant capacity to experiment with the digital innovation and supply chain management is also a challenge for the executives as there is often a large number of untrained workers in the manufacturing industries. The shifts in the workforce with the impact of digitalisation could also create a challenge for new employment models and structures. Moreover, the idea of "computer replace human" mentioned in the literature review did not convince enough for Vietnamese manufacturing SMEs case.

In consequence, management must be sensitive in dealing with the rearrangement of staffs who mismatched positions or cannot be reskilled or upskilled to work with the new technologies' application. While executives embrace the importance of digital transformation, few probably really comprehend what is required to truly evolve their organisations into effective digital businesses. This is where external expertise can blend strategies and execution with the soft skills for inspiring leadership, and train teams to transform businesses, quickly seize opportunities, and mitigate risks from digital transformation.

Participants of the interview agreed that the support from government played a crucial role in motivate manufacturing SMEs. Therefore, this argument leads to the third proposition:

*P3: Government's policies and economic environment have a positive impact on the adoption of digital supply chain management in Vietnamese manufacturing SME.*

Many high – value creating applications run on the digital supply chains, such as blockchain or RFID trackers that need to obey existing rules and regulations of the government. Policies such as tax breaks, infra-structural support, support to reach maximum customers with multiple numbers of digital retail/electronic transactions can be facilitated to small companies to compete with large companies. However, Vietnam is presently deficient in regulations and governance regarding the transparency of information, data sharing security, the type of data to be shared and kind of technology that could be used. As one of the interviewee stated (CO1):

*“Infrastructure investment for digital supply chain development project is still limited, there are not many policies to encourage investment in this area”.*

A finding from Le and Harvie (2010) indicated that the Vietnamese government’s assistance to firms for land and premises when they start their business and credit during their operations, was found to have a significant negative relationship with the technical efficiency of Vietnamese manufacturing SMEs. The technology implementation requires great investment in a long-term vision as it has become a crucial part of life to be embarked in the digital world in both business and individual users.

The development of DSCM could be different in each country according to environmental factors such as the government or organisational culture. One of the explicit obstacles for Vietnamese SMEs in the digitalised era is the *“lack of alignment with each other”* (CO1), therefore, they do not have any standardisation to follow or any sharing platforms to acquire skill in the adoption of newest digital technologies. The interviewee (CO1) also stated that:

*“In order to apply digital technology, in addition to investing in people, technology systems, businesses need to standardise organisational hierarchy and internal processes so that when applying technology, it will be*

*highly effective, less disturbing the daily activities”.*

Consequently, the lack of standardisation for manufacturing SMEs to develop digital supply chain might be the result of the absence of government’s regulations. As proposed by Hsu et al. (2014), external impacts such as social competition, government regulations or economic condition could have a significant influence on a company’s adoption to digital technology. According to Cooper (2018), when the law on support for SMEs (SME Law, 04/2017/QH14) will come into force at the beginning of 2018, it is hoped to spread a message that SMEs will play a leading role in a dynamic, competitive and innovative private sector to guarantee a solid Vietnam’s future prosperity and growth. The government had shown a desire to help the community of SMEs and it is believed to be the time to turn word into actions.

On the other hand, Vietnamese SMEs in manufacturing industries should also strengthen their organisational and strategic planning as well as corporate governance and risk management. The existing IT prospect of SMEs sometimes cannot support innovative models like additive management, smart manufacturing or smart factory. According to Swierczek & Thai (2003), SMEs owner in Vietnam tend to be motivated by challenges and achievement more than the necessity and economic security. As they maintain a short – term approach based on Net Profit rather than Business Growth, SMEs then need to invest in critical assets, from capital investments to information technology infrastructure and talent and integrate these into customer and business strategies to enable a digital future. Lastly, catching opportunities for cooperation among enterprises to improve creativity, innovation, and participation in the global value chain, to join industry associations to access information about state policies, corporate government experience.

The finding shows that the intention to adopt digital supply chain management can be influenced by four main facets and is highly

considered by the criterion such as benefits and costs, the trustworthiness of technology, and external motivations from the government and economics environment. The four dimensions affecting digital supply chain in manufacturing SMEs can result in both of opportunities and threats because all the different areas are interrelated, with no clear boundaries between them, depending on where it was analysed, it could have a positive or negative connotation.

For each company who was interviewed, there were different reasons for the appearance of enablers and barriers for digital supply chain management. In company 1 (CO1), the technology enablers for them came from the support of one of their subsidiary, which had greater network and financial resources as being a member of a largest Financial Group. Therefore, the Vietnamese partnership of CO1 could take advantage of transferred technologies from foreign enterprises surpassing the others, leading in the market with nearly 20 million USD revenue in the previous 2018 fiscal year as stated in their annual report. The suppliers also trusted the companies who had more creditability in order to cooperate together in the supply chains. Fast-moving consumer goods manufacturers such as footwear company (CO2) or textile company (CO4) could highly

forecast the sales based on analysing consumer behaviours and managing operation processes with the help of digital supply chain. And company such as CO3 who assembled software products usually required great investment in recruiting technicians and engineers, so they can enhance the quality of technologies to catch up with the modern generation. For companies who produce heavy products such as lumber company (CO5), they would consider carefully with the investment in technologies as they could not see the immediate benefits of them. Likewise, company evolved from traditional family profession like company 6 (CO6) used to perceive technology as an addition to business operation and rarely considered adopting digital aspects in manufacturing processes. Hence, through the analysis summary, the results showed unexpected finding that different type of manufacturing industries also affect the digital adopting level of SMEs in Vietnam. Such companies working in software manufacturing industry like Company 3 (CO3) have better chances to pursue digital technologies than other studied industries. For that reason, further research is required which should also test the propositions identified in this study. The summary of the findings is presented in Table 6.

**Table 6. Factor Summarised Findings (enablers, barriers and opportunities) for digital SCM**

| Main Dimensions            | Enablers                                                                                                                                                                                | Barriers                                                                                                                                                                                                                                                                      | Opportunities                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Organisational (OR)</b> | <ul style="list-style-type: none"> <li>• A general standard (All CO)</li> <li>• Understanding of digital implications in SCM (All CO)</li> <li>• Executive's vision (All CO)</li> </ul> | <ul style="list-style-type: none"> <li>• Financial constraints (All CO)</li> <li>• Human resource constraints (All CO)</li> <li>• Risk Aversion (CO4/ CO5/ CO6)</li> </ul>                                                                                                    | <ul style="list-style-type: none"> <li>• Less faults from humans' activities (CO1/ CO3)</li> <li>• Well-oriented management scheme (All CO)</li> </ul>                                          |
| <b>Technological (TE)</b>  | <ul style="list-style-type: none"> <li>• Big data base (CO1/ CO2/ CO3)</li> <li>• Geography proximity (All CO)</li> <li>• Advance digital platform (All CO)</li> </ul>                  | <ul style="list-style-type: none"> <li>• Lack of standards and data sharing protocol (All CO)</li> <li>• Competition from MNEs with better technological ability (All CO)</li> <li>• Lack of infrastructure and Internet - based network (CO1/ CO2/ CO4/ CO5/ CO6)</li> </ul> | <ul style="list-style-type: none"> <li>• Forecast false operation (CO3)</li> <li>• A quicker response to failure (CO1/ CO3)</li> <li>• Allow customers to track their products (CO5)</li> </ul> |
| <b>Strategic (ST)</b>      | <ul style="list-style-type: none"> <li>• Enhance technology knowledge in SMEs (All CO)</li> <li>• Investment in research and development (All CO)</li> </ul>                            | <ul style="list-style-type: none"> <li>• Lack of governmental support and policies (All CO)</li> <li>• Poor research and development (All CO)</li> <li>• Unclear economic benefit of digital investment (CO2/ CO4/ CO5/ CO6)</li> </ul>                                       | <ul style="list-style-type: none"> <li>• Diminish steps in unifying decision (CO1)</li> <li>• Raise companies' awareness (All CO)</li> </ul>                                                    |

---

|                               |                                                                                                                                      |                                                                                                                                                                                                  |                                                                                             |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Legal and ethical issues (LE) | <ul style="list-style-type: none"> <li>• Collaboration between SMEs (All CO)</li> <li>• Supply chains' network (CO1/ CO3)</li> </ul> | <ul style="list-style-type: none"> <li>• Legal issue restricted (All CO)</li> <li>• Lack of coordination and partnership (CO2/ CO3/ CO4/ CO5/ CO6)</li> <li>• Security issue (All CO)</li> </ul> | <ul style="list-style-type: none"> <li>• Protection of customer's security (CO3)</li> </ul> |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|

---

## CONCLUSIONS

This study is built to fill the research gap that allows companies and experts to understand and support manufacturing SMEs in their journey towards the digital era. There are theoretical and managerial contributions from this study to the whole notion of DSCM for further research in Vietnamese context.

### Theoretical Contribution

Findings of the research reveal that enablers and barriers of DSCM are classified into four main dimensions which are Organisational, Technological, Strategic and Legal – Ethical issues. This study is a foundational effort to contribute to the establishment of new digital management era in emerging economies. The findings of this study are aligned with the existing literature review which represented numerous internal and external barriers to SMEs to acquire digital supply chain managements, especially in developing countries. It demonstrates the importance of a clear understanding and an implementation strategy which are crucial for SMEs' managerial governance focusing on gaining technological competitive advantage. The digital transformation could be a competitive game-changer that raises creativity, revenues, efficiency and profitability, and helps SMEs to potentially disrupt more well-known multinational brands. Initiatives require a departure from traditional operating models and legacies to apply new tools and technologies, ecosystems and technology platforms to deliver upgraded products and services.

The development of DSCM could be different in each case according to environmental factors such as the government or organisational culture. The essential of digital technology innovation in business operation, especially in supply chain

management will be the norm for companies to survive the intense and competitive market. Overall, it appears that the Vietnamese discourse on digital supply chain management is still nascent and under-developed. This is, however, understandable, since the digital revolution in Vietnam has started only recently. From this point onwards, contribution to the discourse is most expected from academics, with more in-depth studies that cover a more diverse range of aspects related to digital supply chain management in Vietnamese manufacturing industry. Whether or not these endeavours crystalize into a meaningful policy outcome from the government is a matter of time and effort. Vietnam still has time for the development of digital technology in SMEs management scheme, but such a window of opportunity can easily slip past without adequate focus and serious study.

### Managerial Contribution

The result of this research has significant managerial and practical implications as the empirical analyses of this study offer some guidelines for logistics and supply chain managers in SMEs to examine the adoption of digital technology. On the other hand, IT solution providers can put to good use from the study findings of this work by correcting their solutions to alleviate the digital SCM adoption addressed herein, for example, raising the trustworthiness of digital implementation, reducing the security risk for manufacturing processes or adjusting the cost of facilitating the technology system for SMEs.

This study reveals that external factor deeply influences the adoption intention in Vietnamese manufacturing SMEs. Nevertheless, the development of digital SCM for them implies a great internal effort to overcome a set of major barriers. Participants

of the interview believed that the government support played a crucial role in motivate manufacturing SMEs in Vietnam environment. Besides, the government should not ignore this potential opportunity to support its manufacturing SMEs in the global market. Vietnamese government's policies such as investment in research and development technology institutes could be of great help for their SMEs to explore the digital world. In order to encourage the establishment of new and technically more efficient private manufacturing SMEs and its supply chain management, it is important to reconsider Enterprise Law in Vietnam. Consequently, a reassessment of government financial assistance policies, including that of SMEs assistance, with the aim of distinguishing how these could be more effectively utilised.

Given the requirement to approach the most knowledgeable industry's specialists and companies, the qualitative data collected from six chosen manufacturing SMEs in Vietnam satisfied the purpose of the research. Without the time and cost limitation, a larger sample for the qualitative and quantitative data collection would allow a better validation of the findings, as the impact of research participants, which gave false information accidentally or purposely, could be reduced and more precise information could be obtained. Notwithstanding, despite the limitations, valuable knowledge and analyse of digital SCM and SMEs could be obtained, and the research opens up a valid starting point for further research. Based on the research presented, other managers and researchers are encouraged to investigate the comprehensive technology initiative in supply chain management so the small and start – up companies can enhance their participation opportunity in the global market. This will be beneficial from an academic as well as a managerial standpoint. Government support and the company's business culture and resources are major factors that affect the adoption of DSCM in the future. A digital supply chain is a new trend in the manufacturing industry, and it is confirmed

that interviewed SMEs are aware of the shifts in regard to the use of technologies with opportunities and barriers for their competitive advantage in the global market. Future studies should therefore focus on delving in more detail on implementation of industry 4.0 technologies in supply chains, namely supply chain 4.0 in developing country context and empirically validate the findings using robust statistical techniques.

## REFERENCES

- Anderson, G. (2016) The economic impact of technology infrastructure for Smart Manufacturing. *NIST Economic Analysis Briefs*, 4, 1-6.
- Asian Development Bank (ADB), (2004). *A Proposed Program Loan Cluster and Technical Assistance Grant to the Socialist Republic of Viet Nam for the Small and Medium-Sized Enterprise Development Program*. Manila: ADB
- Barutçu, S. and Tunca, M. (2012). The Impacts of E-SCM on the E-Tailing Industry: An Analysis from Porter's Five Force Perspectives. *Procedia - Social and Behavioral Sciences*, 58, 1047-1056
- Brown A., Van D. W. T., and Loughton K. (1998). Smaller enterprises' experiences with ISO 9000. *International Journal of Quality and Reliability Manage*, 15 (3), 273 – 285.
- Bruemmer, D. (2016). The automation of the Construction Industry. *Construction Business Owner Magazine*.
- Büyüközkan, G. & Göçer, F. (2018). Digital Supply Chain: Literature review and a proposed framework for future research. *Computers in Industry*, 97, 157-177
- Büyüközkan, G. & Göçer, F. (2018). Digital Supply Chain: Literature review and a proposed framework for future research. *Computers in Industry*, 97, 157-177.
- Carruthers, K. (2014). Internet of Things and beyond: Cyber-Physical systems. *IEEE Internet of Things*.
- Chae, B. K. (2015). Insights from hashtag #supplychain and Twitter analytics: considering Twitter and Twitter data for

- supply chain practice and research. *International Journal of Production Economics*, 165, 247-259.
- Clemons, E. K. and M. C. Row (1992). Information Technology and Industrial Cooperation: The Changing Economics of Coordination and Ownership. *Journal of Management Information Systems*, 9(2), 9-28.
- Cooper, G. (2019). What can be done to help Vietnam's SMEs? | Duane Morris Vietnam. Retrieved 2 August 2019, from <https://blogs.duanemorris.com/vietnam/2018/05/15/what-can-be-done-to-help-vietnams-smes/#page=1>
- Deloitte (2018) *Vietnam: Economy continues robust growth in 2018*. Retrieved 2 August 2019, from <https://www2.deloitte.com/insights/us/en/economy/asia-pacific/vietnam-economic-outlook.html#endnote-1>
- Deloitte and Touche. (1998). 1998 Vision in Manufacturing (Global Report). *Global Manufacturing Survey by Deloitte and Touche & Deloitte Consulting*.
- DiMase, D., Collier, Z. A., Heffner, K., Linkov, I. (2015). Systems engineering framework for cyber physical security and resilience. *Environment System Decision*, 35 (2), 291-300.
- Erol, S., Schumacher, A., Sihn, W. (2016). Strategic guidance towards Industry 4.0- A three stage process model. *International Conference on Competitive Manufacturing*.
- Frederico, G. F., Garza-Reyes, J. A., Anosike, A., & Kumar, V. (2019). Supply Chain 4.0: concepts, maturity and research agenda. *Supply Chain Management: an International Journal* (In print).
- Government of Vietnam (2001). Decree No 90/2001/CP-ND
- Handfield, R. B., and Nichols, E. Jr. (1999). Introduction to Supply Chain Management. *Prentice Hall Books*.
- Hermann, M., Pentek, T., Otto, B. (2016). Design principles for industry 4.0 scenarios. In: *2016 49th Hawaii International Conference on System Sciences (HICSS)*, IEEE, 3928-3937.
- Hsu, P., Ray, S. and Li, H.Y. (2014). Examining cloud computing adoption intention, pricing mechanism, and deployment model. *International Journal of Information Management*, 34 (4), 474- 488.
- Julien, P.A., Ramangalahy, C. (2003). Competitive strategy and performance of exporting SMEs: an empirical investigation of the impact of their export information search and competencies. *Entrepreneur Theory and Practice*, 27 (3), 227-245.
- Kagermann, H., Helbig, J., Hellinger, A., and Wahlster, W. (2013). Recommendations for Implementing the Strategic Initiative Industrie 4.0: Securing the Future of German Manufacturing Industry. *Final Report of the Industrie 4.0 Working Group, Forschungsunion.*
- Kansai Corporate Report (2018). Retrieved 23 August 2019, from <https://www.kansai.com/wp-content/uploads/2018/08/Corporate-Report-2018.pdf>
- Kehoe, D. F. & Boughton, N. J. (2001). New paradigms in planning and control across manufacturing supply chains – The utilisation of Internet technologies. *International Journal of Operations & Production Management*, 21(5/6), 582 – 593.
- Kiel, D., Muller, J., Arnold, C., Voigt, K. I. (2017). Sustainable industrial value creation: benefits and challenges of Industry 4.0. In: *ISPIM Innovation Symposium. The International Society for Professional Innovation Management (ISPIM)*.
- Kinnet, J. (2015). Creating a Digital Supply Chain: Monsanto's Journey, Slide Share. Retrieved 28 April 2019, from <http://www.slideshare.net/BCTIM/creating-a-digital-supply-chain-monsantos-journey>
- Lai, K. H., Ngai, E., Cheng, T. (2005). Information Technology Adoption in Hong Kong's Logistics Industry. *Transportation Journal*, 44 (4), 1-10.
- Lal, K. (2002). E-business and manufacturing sector: a study of small and medium-sized enterprises in India. *Research Policy*, 31 (7), 1199 – 1211.

- Lambert, D., Cooper, M. & Pagh, J. (1998). Supply Chain Management: Implementation Issues and Research Opportunities. *The International Journal of Logistics Management*, 9 (2), 1-20.
- Lancaster, S., Yen, D.C., Ku, C.Y. (2006). E-supply chain management: an evaluation of current web initiatives. *Information Management and Computer Security*, 14 (2), 167-184.
- Le, V., & Harvie, C. (2010). Firm performance in Vietnam: evidence from manufacturing small and medium enterprises. *Working Paper of University of Wollongong*, 4-10.
- Londe, L., Bernard, J., and Masters, J. M. (1994). Emerging Logistics Strategies: Blueprints for the Next Century. *International Journal of Physical Distribution and Logistics Management*, 24 (7), 35-47.
- Marques, M., Agostinho, C., Zacharewicz, G., Jardim-Goncalves, R. (2017). Decentralized decision support for intelligent manufacturing in Industry 4.0. *Journal of Ambient Intelligence and Smart Environments*, 9 (3), 299-313.
- Martinsuo, M., & Luomaranta, T. (2018). Adopting additive manufacturing in SMEs: exploring the challenges and solutions. *Journal of Manufacturing Technology Management*, 29(6), 937-957.
- Mittal, S., Khan, M., Romero, D. & Wuest, T. (2018). A critical review of smart manufacturing & Industry 4.0 maturity models: Implications for small and medium-sized enterprises (SMEs). *Journal of Manufacturing Systems*, 49, 194 – 214.
- Moeuf, A., Pellerin, R., Lamouri, S., Tamayo-Giraldo, S. & Barbaray, R. (2017). The industrial management of SMEs in the era of Industry 4.0. *International Journal of Production Research*, 56 (3), 1118-1136.
- Mukhopadhyay, T., and Kekre, S. (2002). Strategic and operational benefits of electronic integration in B2B procurement processes. *Management Science*, 48 (10), 1301- 1313.
- Muller, P., Daniel, H., Sean, M., Viktoriya, P., Karen, H., Laura, K., Jenna, J. (2017). Focus on Self-Employment. *Annual Report on European SMEs 2016/2017*. London: European Commission.
- Myers, M. (2009). *Qualitative research in business & management*. London: Sage.
- Ngai, E., Chau, D. & Chan, T. (2011). Information technology, operational, and management competencies for supply chain agility: Findings from case studies. *The Journal of Strategic Information Systems*, 20 (3), 232-249.
- Radanliev, P., Roure, D., Nurse, J., Montalvo, R. & Burnap, P. (2019). Supply Chain Design for the Industrial Internet of Things and the Industry 4.0. *SSRN Electronic Journal*.
- Ras, E., Wild, F., Stahl, C., Baudet, A. (2017). Bridging the skills gap of workers in industry 4.0 by human performance augmentation tools: challenges and roadmap. In: *Proceedings of the 10th International Conference on Pervasive Technologies Related to Assistive Environments*. ACM, 428-432.
- Saad, M., Kumar, V., & Bradford, J. (2017). An investigation into the development of the absorptive capacity of manufacturing SMEs. *International Journal of Production Research*, 55(23), 6916-6931.
- Schmidt, R., Mohring, M., Harting, H. C., Reichstein, C., Neumaier, P., Jozinovic, P. (2015). Industry 4.0 - Potentials for creating smart products: empirical research results. *Proceedings of the International Conference on Business Information Systems*. Springer, 16-27.
- Schroder, C. (2016). The challenges of Industry 4.0 for Small and Medium-sized enterprises. *The Friedrich-Ebert-Stiftung*.
- Soares, A., Soltani, E. & Liao, Y. Y. (2017). The influence of supply chain quality management practices on quality performance: An empirical investigation. *Supply Chain Management*, 22(2)
- Sommer, L. (2015). Industrial revolution - Industry 4.0: Are German Manufacturing SMEs the first victims of this revolution. *Journal of Industrial Engineering and Management*, 8 (5), 1512-1532.

- Sourcify (2019). *All You Need to Know about Manufacturing & Sourcing in Vietnam* | Sourcify. Retrieved 1 August 2019, from: <https://www.sourcify.com/all-you-need-to-know-about-manufacturing-in-vietnam/>
- Speece, M., Tiangsoongnern, L., & Roenjun, J. (2018). Digitization & globalization for the little players: the view from Thai SMEs. *Proceedings of the 43rd Annual Macromarketing Conference*, 743-763.
- Swierczek, F. & Thai, T. (2003). Motivation, entrepreneurship and the performance of SMEs in Vietnam. *Journal of Enterprising Culture*, 11(01), 47 – 68.
- Thakkar, J., Kanda, A. & Deshmukh, S. (2012). Supply chain issues in Indian manufacturing SMEs: insights from six case studies. *Journal of Manufacturing Technology Management*, 23(5), 634 – 664.
- Türkeş, M., Oncioiu, I., Aslam, H., Marin-Pantelescu, A., Topor, D. and Căpuşeanu, S. (2019). Drivers and Barriers in Using Industry 4.0: A Perspective of SMEs in Romania. *Processes*, 7(3), 153.
- VCL Legal (2018). *Vietnam targets to be a regional logistic hub by 2025 – New legal frameworks* | VCL Legal. Retrieved 8 September 2019, from: <http://www.vci-legal.com/2018/01/vietnam-targets-to-be-a-regional-logistic-hub-by-2025-new-legal-frameworks/>
- Vnexpress (2018). *Lot of Industry 4.0 room for Vietnamese SMEs* - VnExpress International. Retrieved 1 September 2019, from: <https://e.vnexpress.net/news/business/economy/lot-of-industry-4-0-room-for-vietnamese-smes-3835671.html>
- Wang, C. H. (2015). Using the theory of inventive problem solving to brainstorm innovative ideas for assessing varieties of phone - cameras. *Computers and Industrial Engineering*, 85, 227 - 234.
- Wang, C. H. (2015). Using the theory of inventive problem solving to brainstorm innovative ideas for assessing varieties of phone - cameras. *Computers and Industrial Engineering*, 85, 227 – 234.
- Wuest, T. & Thoben, K. (2011). Information Management for Manufacturing SMEs. *International Conference on Advances in Production Management System*.
- Wyes, H. (2018) Connecting Sustainable Lifestyles, Industry 4.0 and the Circular Economy. *Economic Research Institute for ASEAN and East Asia*, 2(6), 56- 61.
- Zhang, X., van Donk, D. P., and van der Vaart, T. (2011). Does ICT influence supply chain management and performance? A review of survey-based research. *International Journal of Operations & Production Management*, 31(11), 1215 – 1247.





## EXPLORING QUALITY DETERMINANTS IN AIRLINE SERVICES: A STUDY OF CUSTOMER EXPERIENCE IN VIETNAM

Y Nha Ngoc Hoang<sup>1</sup>, Vikas Kumar<sup>2</sup> and Marlene Amorim<sup>3</sup>

<sup>1,2</sup>University of the West of England, Bristol, United Kingdom

<sup>3</sup>University of Aveiro, Aveiro, Portugal

### Abstract

*The increasing prices of oil, rank as one of the main threats to airlines. Generally, all airlines will adjust their prices to deal with oil price variations, and this often impacts customer service satisfaction. However, there tends to be gap in research exploring the relationship between the changing oil prices and its impact on customer satisfaction in the airline sector. This research gap widens particularly in the context of an airline operating in the developing country context. This study therefore explores the relationship between oil prices, perceived service quality, customer loyalty and customer satisfaction for a Vietnamese airline. The study reports the findings from a survey of 235 passengers of Vietnam airlines and explores the relationships between prices, service quality, service satisfaction and loyalty. Our findings indicate that increasing oil prices do affect the customer satisfaction negatively however customer loyalty largely remains unaffected.*

**Keywords:** Service quality, airline services, oil prices, customer satisfaction, customer loyalty

### INTRODUCTION

According to West (2015), there is a relationship between oil price and economic strength. Net oil importing countries, where the volume of oil imports is greater than the volume of oil exports, face difficulties from high oil prices. Service industries operating in the transportation sectors such as airlines, railway, watercraft, etc. face the effects of such costs to the extent of their levels of oil consumption (Nandha and Brooks, 2009; Aggarwal et al., 2012). On an annual basis, 243 million tons of fuel are used in the aviation industry, making up 6.3% of the total global

refinery production. In this study we examine the effect of oil prices on customer satisfaction, by exploring (Nygren et al., 2009) the relationship between oil prices and service quality in Vietnam Airlines, as experienced by customers. Research results support that the airline industry faced a difficult year in 2012 (Tyler, 2013). According to the available data, the revenues of the airline industry reached \$638 billion while the total profit was \$7.6 billion due to the record prices of oil that attained \$111.8 per barrel. In contrast, this industry significantly developed in 2003 because the oil price was lower than \$30 a barrel. The negative impacts from higher oil prices in this sector, seem to particularly significant for small airlines (Chung, 2014).

Vietnam Airlines is a national airline that was founded in 1993. It is valued as the youngest and most modern airline in the area. In addition, this is the only traditional airline in

#### ARTICLE INFO

##### Article history:

Received: 27 August 2019

Accepted: 14 November 2019

##### Email Addresses:

[nha\\_y1991@yahoo.com](mailto:nha_y1991@yahoo.com) (Y Nha Ngoc Hoang)

[vikas.kumar@uwe.ac.uk](mailto:vikas.kumar@uwe.ac.uk) (Vikas Kumar)\*

[mamorim@ua.pt](mailto:mamorim@ua.pt) (Marlene Amorim)

\*Corresponding author

Vietnam with a large full-service airline and was established from a state-owned enterprise. The company tries to improve their operation through expanding their route network, developing operations with Skyteam alliance and finding ways of cutting costs (e.g. fuel cost). According to the standards of ASK (e.g. Available Seat Kilometers), their productivity of each employee rises 10% on an annual basis that is an above average degree when compared with other airlines in SkyTeam and Oneworld alliances such as China Southern Airlines, Korean Air and American Airlines. Vietnam Airliens has emerged as a four-star airline and progressively working towards becoming a premium airline service provider (five-star airline) in South East Asia after 2020. Over the last 25 years; they have improved their flight routes from 25 to 57 international routes and from 18 to 37 domestic routes. By August 2015, they had implemented 1.39 million flights (equivalent to serving 160 million customers). Between 2008 - 2014, Vietnam airline experienced low levels of operating efficiency; the majority cause was the effect of fuel prices. As is well known, Jet fuel (Jet A-1) is mainly consumed by aircraft, followed by petrol that is used for vehicles on land. Vietnam Airline's expenses for these fuels made up its highest percentage in their total cost with 37.7% between 2008 and 2013 (BSC, 2014). However, this fuel cost always changes depending on the crude oil price in the world. Vietnam Airlines announced that their jet fuel expenses rose dramatically from 2008 to 2012. According VN airline's experts, the changing of one-unit dollar in fuel price will affect the fuel cost from 150 to 160 billion VND (7.1 to 7.5 million USD). More seriously, fuel costs and international airport fees often rose while the value of VND is decreased. This trend often occurs because of the high inflation rate in Vietnam. In recent years, fuel prices surged sharply in 2018 and reached its peak at USD 92.99/barrel. The average price in 2018 was 85.1 USD/barrel, an increase of 12.1 USD/barrel and equivalent to a 16% rise compared to plan. The increased fuel prices accounted for 24.2% of all airlines' total costs

(up to USD 188 billion). It resulted in a significant drop in airlines' profits and also resulted in passenger volume declining by 3.6% (VA Annual report 2018). This does indicate that there is a need to investigate how oil prices may affect customer's decision to use the airline services due to increased costs and how it affects their satisfaction level.

This study therefore builds on this premise and aims to arrive at a conclusion based on the data collected via survey from the customers of Vietnam Airlines. The survey development build on four main factors, including service price, service quality, customer satisfaction and customer loyalty. Service quality builds on the approach proposed by SERVQUAL framework (Parasuraman, Zeithaml, and Berry, 1988).

## **LITERATURE REVIEW**

### **Oil Price Fluctuations and Airline Service Business**

A number of research contributions have addressed the effect of oil prices in the airline industry. Research results support that that oil prices indirectly impact on airlines' profit, level of competition, customer satisfaction and investment (Assaf, 2011; Tyler, 2013; Tipping, Schmah, and Duiven, 2015). Most of these studies were carried out in large countries such as England, the US, France and China. In this study we offer a contribution to explore these effects in a smaller economy like Vietnam, where these topics have received less attention.

According to (He, Wang, and Lai, 2010), oil is an important cost element in the transportation sector. Oil prices are subject to may fluctuations in recent decades. The effects of such fluctuations can be negative or positive depending on the extent of oil price change. In addition, the level of impact differs across the type of transportation business (Nandha and Brooks, 2009; Aggarwal et al., 2012). The fluctuation of oil prices affects the airline industry at both micro and macro levels. Macro impacts refer to the growth in operational costs, and the consequent decline in gross margins, profit and cash flows, as well as changes in stock prices (Mohanty et al., 2013).

In contrast, decreasing oil prices are reflected in gains in production costs (Finn, 2000). In terms of the micro impacts, high oil prices affect the income of individuals as well as consumer demand due to the depreciation of domestic currency and the rise of living cost (Fofana, Chitiga, and Mabugu, 2009). In what concerns the airline business, traveling is likely to be reduced, particularly in long distance travel (Ringbeck, Gautam, and Pietsch, 2009; Becken, 2011). In addition, passengers tend to choose cheap airline fares that are appropriate to their budget (Euromonitor International, 2010). As a result, the volume of passengers in the traditional airline will be reduced and the extent of competition in the airline industry will be increased (Clark, 2008). Airlines therefore face more challenges with increases in oil prices, namely delaying progress of the firm's investment decisions, raising the level of competition and ticket prices, while customers tend to switch to cheaper airlines (Assaf, 2011).

The oil consumed in Vietnam is mainly sourced from importing refined petroleum products because Vietnam does not have enough of the right conditions and equipment to build more oil refinery plants. Although, Vietnam has some plants, it just meets to one-third in its local consumption. Therefore, Vietnam is vulnerable to the fluctuations of oil prices (Trung, and Vinh, 2011) With a huge oil consumption and a lacking of refining capacity, Vietnam has become a price-taker in the global oil market and, therefore, the global oil price always affects oil prices in the Vietnam market (Van, 2013).

#### **Airline Service Quality, Price, Customer Satisfaction and Customer Loyalty**

Airlines always try to be attractive and retain more clients than their rivals with various tactics (Chen and Hu, 2013). That has led to a strong competition in this industry. Many airlines have used price strategies but it seems to be not enough to become a winner in the market (Tseng and Chiu, 2008). Even though a price or product strategy can bring same good results to service quality, they will be easily imitated, when compared to a service

quality strategy (Prakash and Mohanty, 2013). Customers are now very demanding and airline carriers always keep trying to reach competitive advantage. Therefore, customer expectations and upgrading service quality in this field is significantly growing up (Tsai, Hsu, and Chou, 2011; Kim and Lee, 2011).

In this context, airlines should pursue a permanent effort to understand what their customers need and expect from their service (Huang, 2009). Building on prevalent service quality models (Parasuraman, Berry, and Zeithaml, 1991), a good understanding of customer expectation will help organizations provide excellent services. Moreover, service quality is always at the forefront of an airline's criteria and they offer incentives and special programs for their clients aiming to create loyal customers (Baker, 2013). Numerous researchers support that the SERVQUAL model is an adequate approach to evaluate clients' expectations and perceptions (Pakdil, and Aydm, 2007; Chen, 2008).

SERVQUAL is popularly used in the airline industry for measuring service quality, including five dimensions such as tangibility, reliability, responsiveness, assurance and empathy (Lerrthairakul and Panjakajornsak, 2014). Several researchers have pointed out the benefits of SERVQUAL for improving service quality in an organization. Hirmukhe (2012) stated that this tool helps an organization easily to recognize customers' expectations. As a result, an organization can improve the shortcomings in their service (Mukhtar, Saeed, and Ata, 2013, Yu et al., 2013). In addition, SERVQUAL also supports organizations which have limited resources, helping them to deliver their resources to bring the best services for customers (Purcarea, Gheorghe, and Petrescu, 2013).

According to Johnson and Gustafsson (2000), service quality and customer satisfaction is the same; these elements are even interchanged in both theory and practice. However, some others such as Berry et al. (1988), Dabholkar et al. (2000), Parasuraman et al. (1986) and Schneider and White (2004) believe that there are some differences in the

construct between service quality and customer satisfaction, having some certain generalities between customer satisfaction and service quality (Baker, 2013 and Sureshchandar et al., 2002). According to Zeithmal and Bitner (1996), the concept of satisfaction is broader than the concept of service quality and therefore perceived service quality is an element that belongs to customer satisfaction. Also, service quality significantly affects customer satisfaction (Baker, 2013; Spreng and Mackoy, 1996). This has been also confirmed by Kumar, Batista and Maull (2011) and Kumar et al. (2014) who showed that service quality is correlated with customer satisfaction and customer loyalty. These evidences show that there is a relationship between service quality and customer satisfaction (Bitner, 1990). More correctly, Oliver (1993) points out a specific relationship between them that service quality is the forerunner of customer satisfaction. In other words, the result of good service quality is customer satisfaction (Spreng and Mackoy, 1996). To be more specific, customer satisfaction will be increased by service quality, leading to customer loyalty and their pushing recommendations (Nadiri and Hussain, 2005). Therefore, service quality also impacts on customer loyalty, for example, negative problems related to service quality will reduce 20% in customer loyalty so an organization should focus more on service quality (Goodman, 1989). In airlines, customer complaints are seen to be indispensable and are part of the organization aim to support upgrading service quality and customer satisfaction (Davidow, 2003). To be more specific, airlines solve negative complaints to retain customers and based on positive complaints to improve their service quality as well as satisfaction. These are widely acknowledged and used by many organizations (Strauss and Schoeler, 2004).

Sureshchandar et al., (2002) said that recent studies consider customer satisfaction as a multi-dimensional construct, but the basic element, which is used to measure customer satisfaction, is the same with service quality. In other words, customer satisfaction and service

quality have same configurable dimensions that through similar items spread across the various dimensions. In addition, SERVQUAL is not only good in evaluating service quality when using it to measure the level of organization's service but also good in predicting customer satisfaction about a service when measuring as a function of various experiences within the organization (Sureshchandar et al., 2002). Besides, Lambert and Luiz (2011), who studied the airline industry, found out that the reliability was ranked first in five SERVQUAL dimensions. In other words, reliability is the most important factor to passengers and the least important in dimensions is the tangible factor.

In terms of price and service quality, many researchers mentioned that the price should be appropriate to the level of the service provided because customers always want to use more and better services when they pay more than the normal price (Tolpa, 2012). Airlines apply price structure to define market segments and rely primarily on the price sensitivity of customers because most of the airline's customers are sensitive to airfare (Stern, 1989). Park et al., (2006) highlighted that fare is a key element in affecting the satisfaction and buying behavior of air passengers. For example, the high oil price also impacts on air travel expenses and travel budget (e.g. high airline fare) therefore, customers tend to choose short-haul flights instead of an expensive and a long trip for holidays (Ringbeck et al., 2009). In addition, some researchers pointed out that loyal customers often accept paying more for that service as long as this price increases to an acceptable extent (Consuegra et al., 2007). Surprisingly, the most of passengers in the airline industry want to use the best services on a flight at the most convenient time with the lowest price. However, that seems to happen rarely and, therefore, they should trade-off these conditions to reduce this level of disutility, depending on budget constraints (Belobaba et al., 2009). With respect to airlines, if they just focus only on improving service quality without controlling prices or

vice versa, they cannot retain their customers in the long-term. Therefore, they should find a balance between price and service quality in the most reasonable way (Cao and Goh, 2004).

### Research Model

This study examines whether oil prices indirectly impact on customer satisfaction and loyalty in the Vietnam's traditional airline. This research also investigates whether there is a relationship between oil price and service quality. Based on the discussions presented by the review of the extant literature in the earlier sections this study put forwards the following

research hypotheses in Vietnamese airlines context as also illustrated in Fig. 1.

H1: Customer Satisfaction positive impact on Customer Loyalty

H2: Price has negative impact on Customer Satisfaction

H3: Service Quality is positively correlated with Customer Loyalty

H4: There is a positive correlation between Price and Service Quality

H5: Service Quality has positive impact on Customer Satisfaction

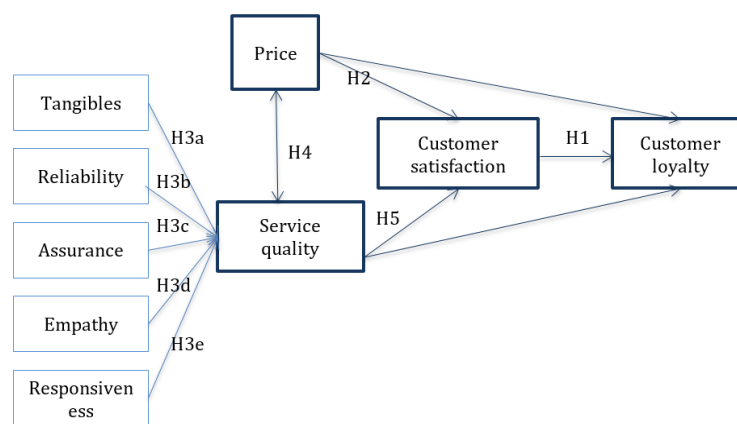


Figure 1. Conceptual Model for Exploring the Relationship Between Oil Prices, Service Quality and Satisfaction and Loyalty Variables

### MATERIALS AND METHODS

This study follows a quantitative survey questionnaire-based approach to collect the data. There are many approaches to collecting data in quantitative research such as by mail or an internet survey, self-administered questionnaire, telephone survey, experimental research, among others. Self-administered questionnaire is the most common tool, also labelled as self-completion questionnaire. This approach requires questionnaires to be designed in a standardized format, in which each question should provide a list of available answers for respondents. More important, these questions should be simple and understandable (Gilbert, 2008). One of the advantages of such method is the ample range for geographic coverage of the study since

distance is not an issue and the researcher can gather a huge volume of data (Self and Roche, 2002). Moreover, this approach is preferred when respondents are busy and want privacy in their responses (Hague, Hague, and Morgan, 2013). In the same vein, it avoids the bias that are inherent to the alternative interviewing process.

The study targeted passengers traveling on Vietnam Airlines, including domestic and foreign service users. The study addressed a representative group of respondents, supported by simple random sampling. A total of 252 passengers were surveyed, covering both genders, and representative of different levels of income, and different profiles in what concerns the frequency of use of the airline service. As for geographic coverage,

questionnaires were sent to customers in South, Middle, North Vietnam and other parts of country.

The questionnaire was organized in several parts. The first part being primarily about general information about the customers, including age, sex and occupation. The second part included three questions focused on customer's evaluation of the Vietnam Airlines fare in the changing oil price. The third part, focused on evaluating the level of customer perception of service quality as well as customer satisfaction with Vietnam Airlines. The survey resorted to an adaptation of the five dimensions proposed in the SERVQUAL scale - tangibility, responsiveness, empathy, reliability and assurance (Parasuraman, Zeithaml, and Berry, 1988). The fourth part included three questions, related to the level of customer satisfaction when using the services of Vietnam Airlines. The final section asks about customer loyalty with this airline. Most of the questions were measured on a Likert five-point scale, following the level of customer assessment. There were also some open-ended questions. Data analysis resorted to descriptive statistics, Cronbach's Alpha test, regressions and correlation analysis using SPSS software.

## RESULTS AND DISCUSSIONS

The data collected included 252 passengers. From these, 235 were fully answered and 17 were incomplete. Therefore, final sample size included full data collected from 235 respondents. The majority of respondents' age ranged from 18 to 29 years (74%), followed by the age range from 30 to 39 (20%), and the smallest proportion corresponded to passenger over 50. The biggest share of users reported to be business people and students, holding 30% and 27% of the answers respectively. Other respondents (28%) included teachers, engineers, bankers, brokers, architects, sales and three groups, which make up a small proportion of the total of respondents are service staff, employees and homebuilders (respectively, 8% 6% and 1%).

### Satisfaction factors

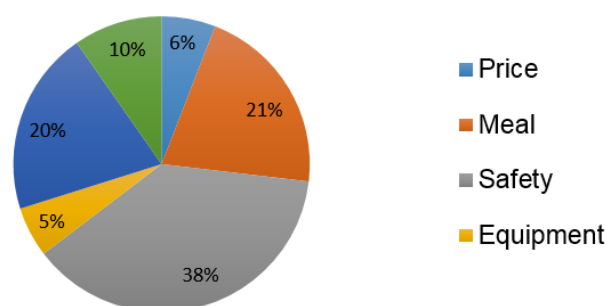


Figure 2. Factors Contributing to Overall Satisfaction with Vietnam Airlines.

### Dissatisfaction factors

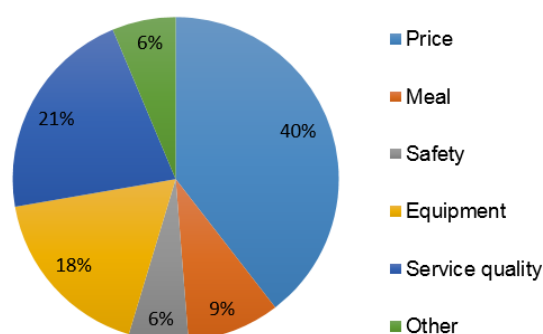


Figure 3. Factors Contributing to Overall Dissatisfaction with Vietnam Airlines.

The factor for which customers expressed higher levels of satisfaction included safety (37.8%) and the quality of meals offered on board (21%) (Figure 2). Customers also declared to be happy with some of the following elements: timeliness of the airline flights, and the offer of many direct flights. The two factors that received less appreciation were service price and company equipment. In what concerns dissatisfaction factors, 39.5 % were not happy with company process (Figure 3). This was followed by the perceptions about the equipment of Vietnam Airlines (17.6 %) and by some reports about being dissatisfied with its staff's attitude and luggage safety.

In order to test the hypotheses, correlation analysis was carried out (see Table 1). The data supported the existence of a strong correlation between Service quality and Customer Loyalty

( $r = 0.757$ ). Similarly, there is a strong correlation between Customer Satisfaction and Service Quality ( $r = 0.754$ ). In addition, some pairs such as Oil Price and Customer Loyalty as well as Customer Satisfaction and Customer Loyalty have a moderate correlation with  $r = 0.441$  and  $0.541$  respectively. However, there is a weak and negative correlation between Customer Satisfaction and Oil price ( $r = -0.166$ ) (H2). With a negative correlation, potentially indicates that if the Oil Price increases, Customer Satisfaction will decrease and vice versa. Regression analysis further verified this as the relationship between customer satisfaction and price is quite weak ( $R = 0.166$ ), typically the price element in the regression

model accounts for 27 per cent of the total variation in the customer satisfaction (Table 2).

Table 1. *Correlation between service quality, oil prices, satisfaction and loyalty variables*

|                       | Service Quality | Oil Price | Customer Satisfaction | Customer Loyalty |
|-----------------------|-----------------|-----------|-----------------------|------------------|
| Service Quality       | 1               |           |                       |                  |
| Oil Price             | .428***         | 1         |                       |                  |
| Customer Satisfaction | .754**          | -.166*    | 1                     |                  |
| Customer Loyalty      | .757**          | .441**    | .541**                | 1                |

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

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

Table 2. *Results of Regression Analysis between Customer Satisfaction and Price*

| Dependent variable: Customer satisfaction |       |          |       |        |        |       |       |
|-------------------------------------------|-------|----------|-------|--------|--------|-------|-------|
| Independent variable                      | R     | R Square | F     | Beta   | t      | Sig   | VIF   |
| Price                                     | 0.166 | 0.027    | 6.647 | -0.166 | -2.578 | 0.011 | 1.000 |

It is well documented in literature that if any organization performs well on five dimensions of SERVQUAL its service quality will increase. Hence if Vietnam Airlines improves these five dimensions, it would lead to improved Service Quality offerings. The results show there is a moderate correlation between Oil Price and Service Quality ( $r = 0.428$ ), supporting H<sub>4</sub>. To further explore the impact of the individual dimensions of SERVQUAL and its impact on Oil price correlation analysis was run between them.

Table 3 shows that SERVQUAL dimensions are also moderately correlated with Oil Prices. The existence of a statistically significant relationship for an airline company indicates that differing dimensions may influence the perceived price gap. Table 4 shows positive and significant correlation of SERVQUAL dimensions with Customer Satisfaction and Customer Loyalty supporting H<sub>3</sub> and H<sub>5</sub>. The Regression analysis suggested that Customer Satisfaction explains 29.3% of the variation in the Customer Loyalty, with significance levels supporting H<sub>1</sub> (see Table 5).

Table 3. *Correlation between Service Quality variables and Oil prices*

|                | Service Quality | Oil Price |
|----------------|-----------------|-----------|
| Tangibles      | .861**          | .422**    |
| Assurance      | .786**          | .391**    |
| Reliability    | .774**          | .386**    |
| Empathy        | .855**          | .383**    |
| Responsiveness | .933**          | .394**    |

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

Table 4. *Correlation between Service Quality variables, Customer Satisfaction and Customer Loyalty*

|                | Customer satisfaction | Customer Loyalty |
|----------------|-----------------------|------------------|
| Tangible       | .633**                | .687**           |
| Assurance      | .614**                | .528**           |
| Reliability    | .608**                | .579**           |
| Empathy        | .624**                | .595**           |
| Responsiveness | .652**                | .684**           |

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

Table 5. *Regression analysis to explore H<sub>1</sub>*

| R     | R square | F      | Beta  | t     | Sig.  | VIF   |
|-------|----------|--------|-------|-------|-------|-------|
| 0.541 | 0.293    | 97.674 | 0.541 | 9.883 | 0.000 | 1.000 |

Independent variable: Customer Satisfaction; Dependent Variable: Customer Loyalty

The relationship between Customer Satisfaction and Price was found to be quite weak ( $R = -0.166$ ), typically the price element in the regression model accounts for 27 per cent of the total variation in the customer satisfaction. Based on significance level, it is smaller 0.05 therefore these variables are significant. More important, its Beta is -0.166 (Table 6). Hence, it can be concluded that price negatively impacts on customer satisfaction, supporting  $H_2$ .

Table 6. *Regression analysis to explore  $H_2$*

| R                                                                      | R square | F     | Beta   | t      | Sig.  | VIF   |
|------------------------------------------------------------------------|----------|-------|--------|--------|-------|-------|
| 0.166                                                                  | 0.027    | 6.647 | -0.166 | -2.578 | 0.011 | 1.000 |
| Independent variable: Price; Dependent Variable: Customer Satisfaction |          |       |        |        |       |       |

The results also shown that approximately 94% of the variance of Service Quality can be accounted for by the combination of the five SERVQUAL dimensions. In addition, VIF of five elements is smaller than 10 therefore multicollinearity problems will not occur. In general, this regression model has statistical significance ( $\text{Sig} < 0.05$ ). A matter of concern was the Beta of all dimensions, which were

positive. To be clear, reliability, assurance, tangibility, empathy and responsiveness have a positive effect on the Service Quality of Vietnam Airlines (Table 7). In particular, responsiveness, which is one of the five SERVQUAL dimensions, mostly affects service quality (Beta = 0.552); followed by the tangible factor (Beta = 0.177). And the factor having the least impact on service quality is assurance (Beta = 0.102).

Table 7. *Descriptive Analysis exploring  $H_3$*

|                                                                                 | Beta | t      | Sig. | VIF   |
|---------------------------------------------------------------------------------|------|--------|------|-------|
| Reliability                                                                     | .123 | 4.855  | .001 | 2.652 |
| Assurance                                                                       | .102 | 3.668  | .000 | 3.194 |
| Tangibles                                                                       | .177 | 5.823  | .000 | 3.846 |
| Empathy                                                                         | .115 | 3.479  | .001 | 4.528 |
| Responsiveness                                                                  | .552 | 19.855 | .000 | 3.202 |
| Independent variables: SERVQUAL dimensions; Dependent Variable: Service Quality |      |        |      |       |

Regression results (Table 8) showed that Service Quality can explain about 56.8% of the change in Customer Satisfaction. With positive Beta (Beta = 0.754), two variables tend to increase or decrease together, therefore supporting  $H_5$ .

Table 8. *Regression Analysis between Customer Satisfaction and Service Quality ( $H_5$ )*

| Dependent variable: Customer satisfaction |       |          |         |       |        |       |       |
|-------------------------------------------|-------|----------|---------|-------|--------|-------|-------|
| Independent variable                      | R     | R Square | F       | Beta  | t      | Sig   | VIF   |
| Service quality                           | 0.754 | 0.568    | 310.354 | 0.754 | 17.617 | 0.000 | 1.000 |

Overall the results allowed for supporting the first hypothesis, suggesting that customer satisfaction positively affects customer loyalty in Vietnam Airlines. This result is aligned with former research studies (Gremler and Brown, 1997; Cronin and Taylor, 1992; Kumar, Batista and Maull, 2011).  $H_2$  was also supported and aligned with literature such as Malik, Ghafoor, and Iqbal (2012); Park, Wu, and Robertson (2006); and Peng and Wang (2006) that highlighted that customers can be unhappy when the price is too high or unreasonable. Some authors referred that all five SERVQUAL dimensions are essential for service quality (Hoffman and Bateson, 2010). However, the most important dimension that

was salient in this study is reliability and the last is tangibles. The results also showed that tangible, responsiveness, empathy, reliability and assurance also positively affect to service quality in Vietnam Airlines. It was hypothesized that there is a relationship between price and service quality. This hypothesis was drawn from some following other researchers. that suggested that organizations should adjust their price to match up the service quality delivered (e.g. good service with reasonable price). In fact, the majority of customers of the airline industry expect to use the service on a flight at the most convenient time with a lowest price (Belobaba, Odoni, and Barnhar, 2009). That seems to happen rarely for

customers because airlines are only able to balance rationally between price and service quality and customers should trade off these two things (Cao and Goh, 2004).

Lastly, Hypothesis 5, was supported suggesting that customer satisfaction in Vietnam Airlines is positively affected by service quality. This hypothesis is based on previous literature such as the work of Newman (2001); Sureshchandar, Rajendran, and Anantharaman, (2002); Seth and Deshmukh (2005); and Kumar et al. (2014), who pointed out that service quality strongly impacts on customer satisfaction. After analyzing the data to test the research hypotheses, this research also found some other interesting results. Service Quality not only positively affects to Customer Satisfaction but also Customer Loyalty towards Vietnam Airlines. This result is similar to previous research (Kumar, Batista and Maull, 2011). In addition, the two dimensions of the SERVQUAL, i.e., tangibles and responsiveness have the strongest effect on Customer Loyalty towards Vietnam Airlines. The findings therefore support all the research hypotheses proposed earlier in this study.

## CONCLUSIONS

The main objectives of this research work were to examine the effect of oil price on customer satisfaction and explore the relationship between oil price and service quality in Vietnam Airlines. The research findings show that oil price indirectly and negatively affect customer satisfaction. To be more specific, an increasing oil price (e.g. fare and surcharge) makes customers unhappy and vice versa. It means the price does not match up to the quality of service delivered. However, customer loyalty was found to be positively impacted by the oil price. This can be attributed to a couple of factors. Firstly, loyal customers often are happy to pay higher price within an acceptable extent as stated by Consuegra, Molina, and Esteba (2007) and therefore the higher price does not negatively affect these customers. Secondly, Vietnam has only one traditional airline offering full service,

which is Vietnam Airlines, and therefore the majority of customers have no choice than to use the services of this airline regardless of the price. Their unhappiness is reflected in the negative correlation with customer satisfaction.

Our findings also show that service quality of Vietnam Airlines strongly and positively affects customer satisfaction and customer loyalty. That means offering a good service quality satisfies customers and retains a good relationship between the customers in the long-term and vice versa. In general, overall customer satisfaction and customer loyalty are mostly affected by the service quality while the price changes do not significantly influence them. Therefore, it can be concluded that the changing oil price does not significantly impact on service quality or customer loyalty. The five SERVQUAL dimensions was found to be strongly and positively impacting the overall service quality in Vietnam Airlines. Responsiveness, tangibles and reliability emerged as significant factors. Our study shows that the best way to mutually benefit an organization should be to find a balance between price and service quality particularly in time of a changing oil prices such as compensating higher price with better service and vice versa.

This study adds to the existing literature on SERVQUAL particularly on the limited literature focused on the airline sector. Moreover, our findings add to the limited evidence from the developing country context. The findings of this study would benefit academics and practitioners alike and improve their understanding of the dynamics of the relationship between the different factors in the airline industry. Practitioners would benefit from the better understanding of the SERVQUAL and its relationship with oil prices and performance outcomes (satisfaction and loyalty) which will help them to make adequate strategies to meet/exceed customer expectations.

As is the case with any research study, this research also has certain limitations. Findings of this research is based on the quantitative

survey-based approach therefore future research can use both qualitative and quantitative approaches to collect more in-depth information to strengthen the findings. Our findings are also based on a limited survey response (235 responses) from a single traditional airline. Future studies can therefore focus on gathering evidences from larger sample and from more airlines who have recently started operating in Vietnam to draw a conclusive discussion which can potentially be generalized across the airline sector in Vietnam. Usage of other robust statistical techniques such as structural equation modeling (SEM), factor analysis and others would further strengthen the findings. Future studies can also focus on comparing different sectors to explore how the relationship between service quality, oil prices, customer satisfaction and customer loyalty varies across different sector.

## REFERENCES

- Aggarwal, R., Akhigbe, A. and Mohanty, A.K. (2012) Oil price shocks and transportation firm asset prices. *Energy Economics*. 34(5), 1370 – 1379.
- Assaf, A. (2011) A fresh look at the productivity and efficiency changes of UK airlines. *Applied Economics*. 43(17), 2165 – 2175.
- Baker, D. M. A. (2013) Service Quality and Customer satisfaction in the Airline Industry: A Comparison between Legacy Airlines and Low-Cost Airlines. *American Journal of Tourism Research*. 2(1), pp. 67-77.
- Becken, S. (2011) Review article A Critical Review of Tourism and Oil. *Annals of Tourism Research*. 38 (2), pp. 359-379.
- Belobaba, P., Odoni, A. and Barnhart, C. (2009) The global airline industry. Wesr Sussex: John Wiley & Sons Ltd.
- BSC (2014) Vietnam Airlines Company Limited. 35 Hang Voi Street, Hoan Kiem District, Ha Noi: BIDV Securities Company.
- Cao, C. L. and Goh, T. N. (2004) Balancing the quality and price of service – a case study. 2004 IEEE International Engineering Management Conference. pp. 1100-1104.
- Chen, C.F. (2008) Investigating structural relationships between service quality, perceived value, satisfaction, and behavioral intentions for air passengers: Evidence from Taiwan. *Transportation Research Part A: policy and Practice*. 42 (4), pp. 709-717.
- Chen, P.T. and Hu, H.H.S. (2013) The mediating role of relational benefit between service quality and customer loyalty in airline industry. *Total quality management & business excellence*. 24 (9), pp. 1084-1095.
- Chung, N. V. (2014) Impacts of international oil price changes on Vietnam's economy – an input-output study. *Asian Economic and Financial Review*. 4 (4), pp. 432-439.
- Clark, E. (2008) Airlines battle to survive soaring oil prices. CNN [online]. 17 June. Available from: <http://edition.cnn.com/2008/BUSINESS/06/17/airline.oilprices/> [Accessed 2 February, 2015].
- Consuegra, D., Molina, A. and Esteban, A. (2007) An Integrated Model of Price, Satisfaction and Loyalty: An Empirical Analysis in Service Sector. *Journal of Product & Brand Management*. 16 (7), pp. 459-468.
- Cronin Jr, J. J., & Taylor, S. A. (1992). Measuring service quality: a reexamination and extension. *Journal of marketing*, 56(3), 55-68.
- Euromonitor International (2010) Travel and Tourism-Vietnam. London: Euromonitor International.
- Finn, M. G. (2000) Perfect Competition and the Effects of Energy Price Increases on Economic Activity. *Journal of Money, Credit and Banking*. 32, pp. 400-416.
- Fofana, I., Chitiga, M. and Mabugu, R. (2009) Oil prices and the South African economy: A macro-meso-micro analysis. *Energy Policy*. 37 (12), pp. 5509-5518.
- Gilbert, N. (2008) *Researching Social Life*. 3rd ed. London: SAGE.
- Gremler, D. D., & Brown, S. W. (1997). Towards a conceptual model of service loyalty. In *Marketing Theory and Applications AMA*

- Winter Educators' Conference, pp. 218-219.
- Hague, P.N., Hague, N. and Morgan, C.A. (2013) Market Research in Practice: How to get greater insight your market. 2nd ed. London: Kogan Page.
- He, Y., Wang, S and Lai, K.K. (2010) Global economic activity and crude oil prices: A cointegration analysis. *Energy Economics*. 32(4), pp. 868-876.
- Hirmukhe, J. (2012) Measuring internal customers' perception on service quality using SERVQUAL in administrative services. *International Journal of Scientific and Research Publications*. 2 (3), pp. 1-6.
- Hoffman, K. and Bateson, J. (2010) Service Marketing: Concepts, Strategies, & Cases. 4th ed. Cengage Learning.
- Huang, Y.K. (2009) The effect of Airline Service Quality on Passengers' Behavioural Intentions Using SERVQUAL Scores: A TAIWAN Case Study. *Journal of the Eastern Asia Society for Transportation Studies*. 8, pp. 265-280.
- Kim, Y.K. and Lee, H.R. (2011) Perceived service quality for South Korean domestic airlines. *Total Quality Management & Business Excellence*. 22 (10), pp. 1041-1056.
- Kumar, V., Batista, L., & Maull, R. (2011). The impact of operations performance on customer loyalty. *Service Science*, 3(2), 158-171.
- Kumar, V., Kumari, A., Ruan, X., Garza-Reyes, J. A., & Akkarangoon, S. (2014, November). Investigating key antecedents of customer satisfaction in B2B information service firms. In *Conference on e-Business, e-Services and e-Society* (pp. 327-337). Springer, Berlin, Heidelberg.
- Lerrthaitrakul, W. and Panjakajornsak, V. (2014) The Airline Service Quality Affecting Post Purchase behavioral Intention: Empirical Evidence from the Low Cost Airline Industry. *International Journal of Trade, Economics and Finance*. 5 (2), pp. 155-158.
- Malik, M. E., Ghafoor, M. M. and Iqbal, H. K. (2012) Impact of Brand Image, Service Quality and price on customer satisfaction in Pakistan telecommunication sector. *International Journal of Business and Social Science*. 3 (23), pp. 123-129.
- Mohanty, S.K., Akhigbe, A., Al-Khyal, T.A. and Bugshan, T. (2013) Oil and stock market activity when prices go up and down: the case of the oil and gas industry. *Review of quantitative finance and accounting*. 41 (2), pp. 253-272.
- Mukhtar, H., Saeed, A. and Ata, G. (2013) Measuring service quality in Public Sector using SERVQUAL: A case of Punjab Dental Hospital, Lahore. *Research on Humanities and Social Sciences*. 3 (22), pp. 65-70.
- Nandha, M. and Brooks, R. (2009) Oil prices and transport sector returns: an international analysis. *Review of quantitative finance and accounting*. 33(4), pp. 393-409.
- Newman, K. (2001) Interrogating SERVQUAL: a critical assessment of service quality measurement in a high street retail bank. *International Journal of Bank Marketing*. 19 (3), pp. 126-139.
- Nygren, E., Aleklett, K. and Hook, M. (2009) Aviation fuel and future oil production scenarios. *Energy Policy*. 37(10), pp. 4003-4010.
- Pakdil, F. and Aydm, O. (2007) Expectations and perceptions in airline service: An analysis using weighted SERVQUAL scores. *Journal of Air Transport Management*. 13 (4), pp. 229-237.
- Parasuraman, A., Berry, L.L. and Zeithaml, V.A. (1991) Understanding customer expectations of service. *Sloan Management Review*. 32 (3), pp. 39-48.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988) SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*. 64 (1), pp. 12-40.
- Park, J. W., Wu, C. L. and Robertson, R. (2006) Modelling the Impact of Airline Service Quality and Marketing Variables on Passengers' Future Behavioural Intentions. *Transportation Planning and Technology*. 29(5), pp. 359-381.

- Peng, L. Y. and Wang, Q. (2006) Impact of Relationship Marketing Tactics (RMTs) on Switchers and Stayers in a Competitive Service Industry. *Journal of Marketing Management*. 22 (1), pp. 25-59.
- Prakash, A. and Mohanty, R.P. (2013) Understanding service quality. *Production Planning and Control*. 24 (12), pp. 1050-1065.
- Purcarea, V. L., Gheorghe, I. R. and Petrescu, C. M. (2013) The assessment of perceived service quality of public health care service in Romania using the SERVQUAL scale. *Procedia Economics and Finance*. 6, pp. 573-585.
- Ringbeck, J., Gautam, A. and Pietsch, T. (2009) Endangered Growth: How the Price of Oil Challenges International Travel & Tourism Growth. In: Blanke, J. and Chiesa, T. (2009) *The Travel Tourism Competitiveness Report 2009*. Geneva: World Economic Forum, pp. 39-48.
- Self, B. and Roche, G. (2002) *Customer Satisfaction Measurement for ISO 9000: 2000*. Oxford: Butterworth-Heinemann.
- Seth, N. and Deshmukh, S.G. (2005) Service quality models: a review. *International Journal of Quality & Reliability Management*. 22 (9), pp. 913-949.
- Sureshchandar, G. S, Rajendran, C. and Anantharaman, R.N. (2002) The relationship between service quality and customer satisfaction - a factor specific approach. *Journal of services marketing*. 16 (4), pp. 363-379.
- Tipping, A., Schmahl, A. and Duiven, F. (2015) The Impact of Reduced Oil Prices on the Transportation Sector. *Strategy & business* [online]. Available from: <http://www.strategy-business.com/article/00312?pg=all> [Accessed 12 February 2015].
- Trung, L. V. and Vinh, N. T. T. (2011). The impact of oil prices, real effective exchange rate and inflation on economic activity: Novel evidence for Vietnam. Discussion Paper Series RIEB Kobe University.
- Tsai, W. H., Hsu, W. and Chou, W. C. (2011). A gap analysis model for improving airport service quality. *Total Quality Management & Business Excellence*, 22 (10), pp. 1025-1040.
- Tseng, M.L. and Chiu, S.F. (2008) A grey-fuzzy approach to the customer perception of in-flight service quality in domestic airlines, Taiwan. *Proceeding of the 9th Asia Pacific industrial engineering & management systems conference*, Nusa Dua, Bali, Indonesia. pp. 722-745.
- Tyler, T. (2013) *Annual Review 2013*. Cape Town: International Air Transportation Association.
- Van, L.T.T. (2013) Review of the Petroleum Price Stabilization Fund in Vietnam. Ha Noi: United Nations Development Programme.
- Vietnam airlines (VA) Annual Report (2018), <https://www.vietnamairlines.com/~media/FilesDownload/AboutUs/Investor-Relations/Bao-Cao-Thuong-Nien/english-bao-cau-thuong-nien-2018.pdf> [Accessed 03rd December 2019]
- West, R. M. (2015) Oil prices and the impact on the economy since 1945. *The Telegraph* [online]. 10 April 2015. Available from: <http://www.telegraph.co.uk/sponsored/finance/investments/climate-environment/11521815/oil-prices-impact-on-economy-since-1945.html> [Accessed 12 November 2015].
- Yu, Z., Ji, L., Yanbo, W., Shuo, W. and Tianyu, S. (2013) SERVQUAL-Based Research on China Railway Passenger Service Quality Evaluation Model. In: Wu, H. (2013) *2013 International Conference on Complex Science Management and Education Science*. Lancaster, Pennsylvania: DEStech Publication, Inc, 245-249.

---

## International Journal of Organizational Business Excellence

---

### INSTRUCTION TO AUTHORS

#### *Manuscript Preparation and Format*

#### MANUSCRIPT PREPARATION

Regular articles are full-length original empirical investigations, consisting of introduction, materials and methods, results and discussion, conclusions. Original work must provide references and an explanation on research findings that contain new and significant findings.

Generally, these are expected to be between 6 and 12 journal pages (excluding the abstract, references, tables and/or figures), a maximum of 80 references, and an abstract of 100–200 words.

Articles must be in **English** and they must be competently written and argued in clear and concise grammatical English. Contributors are strongly advised to have the manuscript checked by a colleague with ample experience in writing English manuscripts or a competent English language editor.

Linguistically hopeless manuscripts will be rejected straightaway (e.g., when the language is so poor that one cannot be sure of what the authors really mean). This process, taken by authors before submission, will greatly facilitate reviewing, and thus publication if the content is acceptable.

**Empirical research** is based on observed and measured phenomena and derives knowledge from actual experience rather than from theory or belief.

Key characteristics to look for:

- **Specific research questions** to be answered.
- Definition of the **population, behavior, or phenomena** being studied.

Description of the **process** used to study this population or phenomena, including selection criteria, controls, and testing instruments (such as surveys).

#### MANUSCRIPT FORMAT

The manuscript should be submitted in one column format with **2cm margins** (top, bottom, left and right) and **1.0 line spacing**. It is advised that authors **use 12pt-sized Times New Roman font**. The manuscript should be organized by following the structure as explained.

##### A. Manuscript Structure

###### ***Page 1: Running Title***

This first page should **only** contain the running title, which an abbreviated or shortened title of your manuscript to be the running head on every page of the manuscript. The running head should be typed NOT more than 60 characters, counting letters, numbers and spaces.

###### ***Page 2: Full title & Author(s) and Corresponding author's information***

This page should start with the **full title** of your manuscript, NOT exceeding 25 words. The title then should be followed by complete names of all authors, institutions of each ones, full address (street names, telephone number including extension, mobile phone number and e-mail address) for editorial correspondence. For manuscript with multiple authors, name of the first author should be indicated by putting it in the first place, followed by the rest of co-authors' names. To indicate the corresponding author, put a (\*) mark after the name.

#### **Authors' addresses.**

Multiple authors with different addresses should be indicated by putting superscript numbers after each of their names as well as on their addresses.

#### **Example:**

Fiona Cownie<sup>1\*</sup>, Palti Marulitua Sitorus<sup>2</sup>

<sup>1</sup>Bournemouth University, Weymouth House W433, Tablot Campus, Fern Barrow, Poole, BH12 5BB, United Kingdom.

<sup>2</sup>Telkom University, Jalan Telekomunikasi, Terusan Buah Batu, Bandung, West Java, Indonesia.

\*Corresponding author

#### **Page 3: Abstract**

This page should begin with repeating the **full title** of your manuscript, followed by the **abstract and keywords**.

Abstract should contain the aim of the study, research methods (data collection procedure, data analysis procedure) and research findings/results. Abstract should NOT be more than 250 words. Use Times New Roman, 12pt. and 1.0 line spacing.

**Keywords:** should be provided in alphabetical order to describe the contents of the research, NOT more than eight words.

#### **Page 4: Introduction and the rest**

This page starts with the **Introduction**, and then followed by the rest of the body text of your manuscript.

### **B. Body Text**

The manuscript should be composed with the headings:

**Introduction**

**Literature Review**

**Materials and Methods**

**Results and Discussion**

**Conclusions**

**Acknowledgement**

**References**

**Supplementary Data** (if available)

**Introduction** should contain the background of study supported by citations taken from books, newspapers, journal articles, internet, etc. Introduction also explains the scope and objective of the study which are related to current knowledge and issues.

**Literature Review** consists of a summary of key sources, usually has an organizational pattern and combines both summary and synthesis with specific conceptual categories. A summary is a

recap of the important information of the source, but a synthesis is a re-organization, or a reshuffling, of that information in a way that informs how you are planning to investigate a research problem. The analytical features of a literature review might include to:

- Give a new interpretation of old material or combine new with old interpretations,
- Trace the intellectual progression of the field, including major debates,

Depending on the situation, evaluate the sources and advise the reader on the most pertinent or relevant research. Usually in the conclusion of a literature review, identify where gaps exist in how a problem has been researched to date. Use Times New Roman font type, 12pt in size and 1.5 line spacing.

**Materials and Methods** of the research should describe how the research is conducted by elaborating materials, participants, data collection procedure (e.g. sampling) and data analysis procedure.

**Results and Discussions.** Elaborate the research results/findings along with the discussions. This generally contains the analysis on the collected data. The analysis may also be supported by equations, formulae, tables, figures and photograph, as well as any related citations from books, journal articles, newspaper, internet, etc.

**Conclusions.** State your brief final conclusions drawn from the results and discussions.

**Acknowledgement.** Individuals and entities that have provided essential support such as research grants and fellowships and other sources of funding should be acknowledged. Contributions that do not involve researching (clerical assistance or personal acknowledgements) should **not** appear in acknowledgements.

List all **References** cited in your research. References should be in their own new page and be listed alphabetically based on first author's last name. Follow the **APA style referencing** (6<sup>th</sup> edition). Use Times New Roman font type, 12pt., and double (2.0) spacing. You may refer to the Publication Manual of the American Psychological Association for further details (<http://www.apastyle.org/>).

#### C. Equations and Formulae

These must be set up clearly and should be typed double spaced. Numbers identifying equations should be in square brackets and placed on the right margin of the text.

#### D. Tables

All tables should be prepared in a form consistent with recent issues of *Pertanika* and should be numbered consecutively with Roman numerals. Explanatory material should be given in the table legends and footnotes. Each table should be prepared on a new page, embedded in the manuscript.

*When a manuscript is submitted for publication, tables must also be submitted separately as data - .doc, .rtf, Excel or PowerPoint files- because tables submitted as image data cannot be edited for publication and are usually in low-resolution.*

#### E. Figures & Photographs

Submit an **original** figure or photograph. Line drawings must be clear, with high black and white contrast. Each figure or photograph should be prepared on a new page, embedded in the

manuscript for reviewing to keep the file of the manuscript under 5 MB. These should be numbered consecutively with Roman numerals.

Figures or photographs must also be submitted separately as TIFF, JPEG, or Excel files- because figures or photographs submitted in low-resolution embedded in the manuscript cannot be accepted for publication. For electronic figures, create your figures using applications that are capable of preparing high resolution TIFF files. In general, we require **300 dpi** or higher resolution for **coloured and half-tone artwork**, and **1200 dpi or higher** for **line drawings** are required.

Failure to comply with these specifications will require new figures and delay in publication.

#### **General rules on Figures and Tables**

- All Figures and Tables should be numbered sequentially (e.g. Table 1, Table 2 etc.) and cite each one in your writing as Table 1 or Figure 1.
- All tables should be referenced in the text of the paper and in the reference list. Each table should have an individual title. Each word in the title should be italicized and capitalized except with, of, in, and, etc.

CONTENTS

|                                                                                                                                                                                                |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>Foreword</b><br><b>Bachtiar H. Simamora</b>                                                                                                                                                 | <b>i</b>   |
| <b>Entrepreneurship Educations of Prison Inmates in Nigeria: Effects on Skills Acquisition for Self-Reliance</b><br><i>Ime Robson Nseobot and Anietie Imo Effiong</i>                          | <b>71</b>  |
| <b>Effect of Work Environment and Employee Engagement on Job Performance of Public Relation Staff in Luxury Hotels in Jakarta</b><br><i>Yohanes Totok Suyoto and Yosaphat Danis Murtiharso</i> | <b>83</b>  |
| <b>Awareness of Small and Medium Enterprises on Competition Act 2010 and Malaysian Competition Commission</b><br><i>Hasnah Haron, Ishak Ismail, Yuvaraj Ganesan and Idris Gautama So</i>       | <b>91</b>  |
| <b>Exploring Enablers, Barriers and Opportunities to Digital Supply Chain Management in Vietnamese Manufacturing SMEs</b><br><i>Nguyen Phuc Khanh Linh, Vikas Kumar and Ximing Ruan</i>        | <b>101</b> |
| <b>Exploring Quality Determinants in Airline Services: A Study of Customer Experience in Vietnam</b><br><i>Y Nha Ngoc Hoang, Vikas Kumar and Marlene Amorim</i>                                | <b>121</b> |