

**INFORMATION COMMUNICATION TECHNOLOGY ADOPTION
AND BUSINESS PERFORMANCE OF TOUR
OPERATORS IN MALAYSIA**

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UNIVERSITI TEKNOLOGI MALAYSIA

INFORMATION COMMUNICATION TECHNOLOGY ADOPTION
AND BUSINESS PERFORMANCE OF TOUR
OPERATORS IN MALAYSIA

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Dedicated to my beloved family and friends

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ABSTRACT

The survival of tour operators depends very much on their adaptation to changes in tourists' preferences and demands. Previous studies have shown mixed findings on the adoption ability of tour operators of different adopter categories namely innovator, early adopter, early or late majority, and laggards, to sustain their business performance with changes in information communication technology (ICT). A review of the literature has also indicated a lack of ICT adoption studies that measure adoption ability of tour operators in identifying their varying characteristics that relate to their business performance. Therefore, this research aims to explore the relationships between ICT adoption, company profiles and adoption characteristics of Malaysian tour operators, and their business performance. A quantitative technique of a structured questionnaire was used to elicit five variable parameters namely company profiles, ICT adoption, the contributing factors, adoption characteristics and business performance. A pilot test was conducted to validate the variables that were adapted into a structural scale to assist in data collection. A total of 285 tour operator companies that were identified from the registered members of the Malaysian Association of Tour and Travel Agents (MATTA) and from the Ministry of Culture and Tourism Malaysia answered the questionnaire. Findings showed little difference between new and older tour operators in terms of ICT adoption. However, in the context of ICT adoption and business performance, there were specific divergences between the two, particularly when focusing on company age and adoption characteristics. Findings also suggest that company profiles, particularly age element and adoption characteristics have a large influence on Malaysian tour operators' ICT adoption towards business performance. Findings also found that there were hidden elements that were not covered in the existing elements of adoption characteristics, namely smartness and the generation gap. This study contributes to the enhancement of the understanding of factors contributing to ICT adoption and business performance among Malaysian tour operators.

ABSTRAK

Kelangsungan perniagaan pengusaha pelancongan adalah sangat bergantung kepada penerimaan mereka terhadap perubahan yang berlaku di dalam permintaan dan pilihan pelancong. Kajian terdahulu telah menunjukkan dapatan yang berbeza tentang kemampuan pengusaha pelancong dari pelbagai kategori iaitu golongan yang berinovasi, pengadaptasian awal, pengadaptasian majoriti awal atau akhir, dan pengabaian pengadaptasian untuk mengekalkan prestasi perniagaan mereka, selaras dengan perubahan teknologi komunikasi maklumat (ICT). Kajian literatur juga telah menunjukkan bahawa terdapat kekurangan kajian pengadaptasian ICT, yang mengukur tahap penerimaan pengusaha pelancongan dalam mengenal pasti ciri-ciri mereka berbeza berkaitan dengan prestasi perniagaan. Oleh itu, tujuan kajian ini adalah untuk mengkaji hubungan antara penerimaan ICT, profil syarikat, ciri-ciri pengusaha pelancongan Malaysia dan prestasi perniagaan mereka. Teknik kuantitatif digunakan melalui soal selidik berstruktur untuk mendapatkan maklumat melalui lima pembolehubah, iaitu profail syarikat, pengadaptasian ICT, faktor yang menyumbang, ciri-ciri pengadaptasian dan prestasi perniagaan. Ujian perintis dijalankan untuk mengesahkan pembolehubah yang digunapakai dalam skala berstruktur bagi membantu dalam pengumpulan maklumat. Sebanyak 285 syarikat pengendali pelancongan yang dikenal pasti daripada ahli berdaftar *Malaysian Association of Tour and Travel Agents* (MATTA) dan Kementerian Kebudayaan dan Pelancongan Malaysia mengambil bahagian dalam soal selidik ini. Dapatan menunjukkan terdapat sedikit perbezaan antara pengusaha pelancongan baru dan lama. Walau bagaimanapun dalam konteks pengadaptasian ICT dan prestasi perniagaan, terdapat perbezaan tertentu antara kedua-duanya, terutama tertumpu pada elemen umur dan ciri penggunaan. Dapatan menunjukkan bahawa profil syarikat yang merupakan elemen umur dan ciri-ciri penerimaan mempunyai pengaruh besar terhadap pengadaptasian ICT pengusaha pelancongan ke arah prestasi perniagaan. Dapatan ini juga mendapati, terdapat elemen tersembunyi yang tidak terungkap dalam unsur-unsur ciri pengadaptasian sedia ada; kecerdasan dan perbezaan generasi. Kajian ini menyumbang kepada peningkatan pemahaman faktor-faktor penggunaan ICT dan peningkatan prestasi pelancongan dikalangan pengusaha pelancongan Malaysia.

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LIST OF ABBREVIATIONS

ICT	-	Information Communication Technology
SME	-	Small Medium Enterprise
DOI	-	Diffusion of Innovation
MATTA	-	Malaysian Association of Tour and Travel Agencies
MOCAT	-	Ministry of Culture and Tourism Malaysia
OTA	-	Online Travel Agencies
GDS	-	Global Distribution System
CRS	-	Computer Reservation System
SSM	-	Suruhanjaya Syarikat Malaysia
ROI	-	Return on Investment
PDA	-	Personal Digital Assistant
CEO	-	Chief Executive Officer
TPB	-	Theory Planned Behavior.
TRA	-	Theory Of Reason Action
TAM	-	Technology Acceptance Model
UTAUT	-	Unified Theory of Acceptance and Use of Technology

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Chapter 1 is divided into ten (10) sections. The first section discusses the broader scope of tour operators and information communication technology (ICT), focusing on the adoption of ICT among tour operators in Malaysia; and how this relates to the adoption characteristics and their business performance. The second clarifies issues or problem statements that relate to tour operators and ICT is emphasised in the third section, and the objectives and research questions of the study are highlighted in the fourth and the fifth sections of this chapter. The following section explains the scope of the study and elaborates on the significance of the study from academic and practical perspectives, and the chapter ends with summary.

1.2 Research Background

Recently, business performance has been influenced by the development of ICT as a digital platform and as tools that have transformed business operations (Soto-Acosta, Guidice, and Scuotto, 2018). Business performance has been impacted particularly by the efficiency of ICT that results in opportunity grabbing, value creation, increased market access and competitiveness (Appiah *et al.*, 2015; Sergon

and Nassiuma, 2017). Moreover, Soto-Acosta, Guidice, and Scuotto (2018), claims that business performance can increase and be sustained with the adoption of ICT, which has a significant impact on cost reduction and the improved efficiency of the business process. Thus, Gerguri-Rashiti, Ramadani, Abazi-Alili, Dana and Ratten, (2017) found that ICT plays a significant role in productivity, profitability, and growth. They indicates that involvement in ICT adoption, to a certain extent, is a self-sustaining process that entails cumulative investment. Therefore, it is becoming increasingly difficult to ignore ICT in the context of business performance in all industries worldwide, and the ICT boom has created a more competitive environment and become a key element in business resilience (Gonzales Garcia-Uceda, and Mugica, 2015).

Travel and tour industries are not an exception, and specifically, they have been affected by the rise in the number of online channels (Dieck *et. al.*, 2018). Through online channels such as online travel agencies (OTA), e-tour operators, e-intermediaries, search engines, review sites, and hotel websites; tourists and travellers can book their travel online directly (Murphy *et. al.*, 2016). This shift from traditionally booking through tour operators or travel agent towards online booking has impacted the traditional tourism distribution channel (Buhalis and Laws, 2001; Kracht and Wang, 2010). Kracht and Wang (2010), demonstrate the changes in tourism distribution channels when various permutations exist, such as additional layers of intermediation or disintermediation and when certain players bypass traditional intermediaries such as OTA. The arrival of OTA has modified the power relationship, the structure of markets, and the production process (Colombo and Baggio, 2017). Recently, OTA also face the challenge of large providers who offer the same inventory but on a larger scale and depth (Colombo and Baggio, 2017).

Therefore, one intermediary that has been affected is older/ traditional tour operators who must retain their competitiveness in the industry (Dieck *et al.* 2018). Hence, the survival of tour operators, particularly older tour operators, is highly dependent on their adoption of ICT changes that have been emerged in the travel and tour industry since the 1970s (Shenaan, 2017). Several studies have revealed that, ICT adoption in the travel industry began with the Computer Reservation System

that was implemented by airlines in the 1970s (Buhalis and Forerste, 2014). Subsequently, ICT adoption evolved with the introduction of the Global Distribution System (GDS) in the 1980s, the rise of the internet in the late 1990s, the emergence of e-commerce since 2001, and extension of social networks and social media from 2009 (Law *et al.* 2018). Mobile devices such as mobile phones and Personal Digital Assistants (PDA) for phone calls and text messaging emerged in the late 1990s (Ngai and Gunasekaran, 2007). Mobile devices have improved significantly in the past few years because of their advanced technology that can be used to conduct various e-commerce activities and increased communication technology (Ngai and Gunasekaran, 2007; Buhalis and Forerste, 2014; Wang *et al.*, 2015; Law *et al.* 2018). Subsequently, all categories of ICT adoption have demonstrated the evolution of ICT in the travel and tour industry.

This evolution has influenced the way different adopter categories of tour operators either older/traditional, new/modern, higher adopter, or lower adopter manage their business performance (Elsherif, 2011; Weber and Kauffman, 2011). Thus, the emergence of OTAs, increased mobile bookings, review sites, social media, and mobile capabilities has resulted in the disappearance of some traditional tour operators who struggled to adapt to the new approach (TourMag, 2014). Tour operators face the difficulty of how to choose the best adoption methods for contacting and connecting with customers. They also struggle to retain or acquire access at minimum cost, while at the same time remaining competitive and differentiated with respect to other companies (Colombo and Baggio, 2017). Colombo and Baggio, (2017) also demonstrate that no operators, including metasearch engines, have found the right balance that allows, for long term sustainable revenues growth; merged with a strong connection to the customer. Therefore, older/traditional tour operators must identify the new opportunities in ICT adoption if they are to survive in the highly competitive market with others adopter categories of tour operators (Vilojen *et. al.*, 2015; Dieck *et. al.*, 2018). In addition, the adoption of mobile technologies in the distribution process could also reduce disintermediation (Law *et.al.*, 2015).

Tour operators in Malaysia are not excluded from the impact of ICT. The preferences of Malaysian travellers has changed from offline services to online services because online travel services are available through numerous mediums such as travel advisory search engines (Yusof, 2015). Figure 1.1 below provides an overview of the statistics of tour operators in Malaysia as of March 2018.

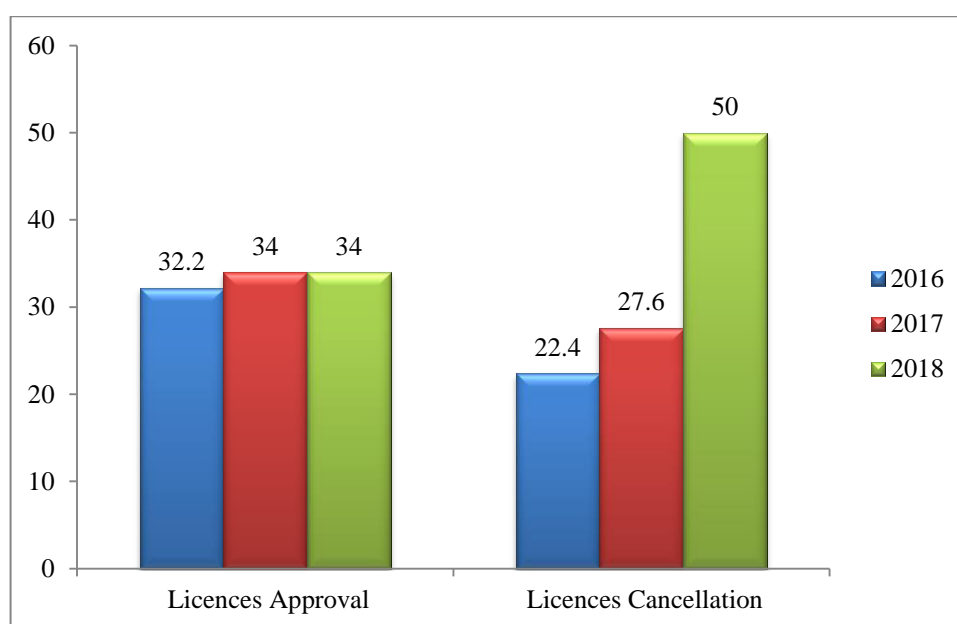


Figure 1.1: Licences Approved and Cancelled among Tour Operators in Malaysia as of March 2018

Source: Licence Department, Ministry of Tourism and Culture Malaysia

As evident in Figure 1.1, although the number of tour operators is growing steadily, with approximately 5,630 (34%) tour operators registered in Malaysia to date, the reasons for cancelling licences is a matter of concern, and besides the fraud cases, the reason remain unclear. Currently, there were 50 tour operator licences have been cancelled in 2018, which is nearly a 50% increased from the 27.6 licences cancelled in 2017. Furthermore, some licences issued have been highlighted in Malaysian newspapers such as the fraud cases of some Umrah tours and budget packages (Halim, 2016; Sukaimi, 2016). These articles revealed the modus operandi of such tour operators via the internet and social media by revealing the use of fictitious company names registered with the *Suruhanjaya Syarikat Malaysia* (SSM). These issues have affected existing tour operators in terms of customers trust in signing up for tour packages.

Additionally, in his presentation at the 2016 Travel tech Conference, the CEO of Creative Advances Technology Sdn Bhd, Mr. Rohizam Md Yusoff, stated that the large and emerging online-based tour operators or OTA such as booking.com, and Expedia, mostly originate from foreign countries. These online tour operators had a large impact on Malaysian travel industry. This situation has been a challenge or a threat to existing Malaysian tour operators sustaining their competitiveness alongside the emerging online tour operators. Therefore, in newspaper articles and campaigns organized by stakeholders such as the Malaysian Association of TTour and Travel Agents (MATTA) and Ministry of Culture and Tourism Malaysia (MOCAT), the issues of ICT adoption among tour operators in Malaysia have been highlighted.

1.3 Problem Statement

Recently, the fast evolution of a tech-savvy generation and technology-dependent tourists from all over the world have emerged from the impact of ICT (Tan, 2018). According to a report by Tourism Malaysia, 89.9% of inbound and domestic tourist used the internet as a source to search for travel information, envision travel destinations, read review and share travel experiences (Tan, 2018). The classification of this utilization is as follows: 28.8% used search engines, 27.0% used websites, 13.9% used travel review sites, 11.8% used social media, 11.1% used an online travel provider, and 3.7% used travel blogs (Tan, 2018). Tourists can engage in online services to plan their travel and receive travelling advice (Fountoulaki *et. al.*, 2015). With the changes in tourist behavior, a strategy that places ICT at the centre of operations is essential for businesses to reach potential customers.

Most tour operators in Malaysia are Small Medium Enterprises (SME), and there are very few large tour operators (Rahmat, 2015). According to an article in The Star newspaper (2016), the Vice President of Research and Technology of MATTA revealed that tour operators and travel agencies that have been MATTA members were not able to keep up with the changes in ICT such as the use of social media. In addition, there has been the argument from previous studies that SME

businesses commonly have less money to invest in ICT and also lack resources and bargaining power (Gerguri-Rashiti, Abazi-Alili, and Ramadani, 2013; 2017). Thus, although tour operators are mostly SMEs, the MATTA president (Term 2017-2019) continuously encouraged Malaysian tour operators to adapt and use ICT to remain competitive and remain relevant in the industry (Tan, 2018).

Although the statistics of Malaysian tour operators demonstrated steady growth as indicated in Figure 1.1, licence cancellations among tour operators have increased compared to previous years. The reasons for the increase in cancelled licences have not been revealed besides the issue of fraud. The bloom in online channels, as well as e-tour operators from foreign countries and the changes in customers' preference towards ICT, has penetrated the tour operator business (Tanti and Buhalis, 2017) specifically with Malaysian tour operators. Although globally and in Malaysia travel is the largest category for e-commerce, there is no Malaysian brand of online tour operator that is similar to the large foreign businesses. Yusoff (2015) also reported that despite many government initiatives, Malaysia still ranks low in e-commerce due to the success of foreign businesses. As mentioned by Colombo and Baggio (2017), instead of tour operators complaining about 'digital' players, it would be more effective to grasp how they operate, which is a great way to use and elevate the different channels, and how they target different customers for different objectives. Tour operators need to reshape their approach under the power of ICT because of the new distribution channels that have emerged (Spencer *et al.*, 2012; Picazo and Moreno, 2018).

There have been many campaigns that have been organised by MOCAT and MATTA to provide knowledge and create awareness on the importance of ICT adoption especially with the latest trends in ICT for tour operators and travel agencies in Malaysia (Tan, 2018). Moreover, as Rahim (personal interview, April 4, 2015) (SUB) pointed out, there is an absence of data related to the pattern of ICT adoption based on different categories of adopters, focusing on Malaysian tour operators and travel agencies. Therefore, it is difficult to change older policies in order to take action when individuals offer travel services over the internet illegally. Rahmat (2016) highlighted that this situation would allow disappointed Malaysia

customers to strive for compensation, but they cannot do so if the business is running only in cyberspace and deceived consumers have no other options. He also stressed that many customers had been tricked over the internet and via social media such as Facebook and these include Umrah tour packages. Nevertheless, the ability of tour operators in Malaysia is still uncertain, i.e. whether they can sustain themselves under the current competitive market and to what extent they can adapt to the changes in ICT. Therefore, aligned to the practical gaps arising among Malaysian tour operators, there is a need to conduct an empirical study that consists of ICT adoption and the business performance of Malaysian tour operators, and this is considered as an immediate requirement as a solution to these issues.

Recently, ICT adoption has been studied in interdisciplinary areas of research in relation to the importance and impact of ICT adoption in creating improved performance. ICT adoption has been debated in various fields such as education (Ranjit and Muniandi, 2012), health (Dearing and Cox, (2018), marketing (Hays and Buhalis, 2013; Law and Wang, 2018), and business management (Ong *et. al.*, 2016; Popa *et.al.*, 2018). Most studies on ICT adoption have focused on carrying out certain types of ICT adoption such as e-commerce (Sobihah *et al.*, 2014), social media (Delerue, Kaplan and Haenlein, 2012; Ainin *et. al*, 2015), mobile devices (Gonz and Pablo, 2018), or Facebook (Buhalis and Neuhofer, 2012). However, little attention has focused on the ICT adoption of five categories of ICT: computer application skills, the internet (websites), e-commerce, social media, and mobile devices. Hence, this study adds to the knowledge and practical gaps by studying the relationship between ICT adoption characteristics and the business performance of tour operators in Malaysia. The related issues to the main area of this study are addressed as follows. Relationship between ICT adoption and business performance.

1.3.1 The Relationship between ICT Adoption and Business Performance

It is difficult to find previous studies that examine ICT adoption and business performance in the context of Malaysian tour operators. Generally, studies related to ICT adoption focused on other fields such as business sectors like SME companies in

general (e.g.; Ong, Habidin, Salleh, and Fuzi, 2016; Abeysekara, 2017), the tourism industry (e.g. Ma *et al.*, 2003), marketing studies (e.g. Setiowati, Hartoyo, Daryanto, and Arifin, 2015), and travel agents with a limited dimension on ICT adoption patterns (e.g. Spencer, Buhalis, and Moital, 2012; Sergon and Nassiuma, 2017; Colombo and Baggio, 2017). Several recent studies changed the focus on ICT adoption itself to include interconnectivity and interoperability (Rihova *et. al.*, 2018; Buhalis and Leung, 2018), online platforms (Molinillo *et. al.*, 2018), destination eWOM drivers (Williams, 2017), and digitally connectivity (Tanti and Buhalis, 2017). Additionally, studies on business performance often emphasise business operations in general and SME companies and few categories of ICT adoption such as e-commerce (e.g. Sobihah, Embat, Amin, and Muda, 2014; Ong *et al.*, 2016), social media (e.g. Ainin, Parveen, Moghavvemi, Jaafar, and Shuib, 2015), and electronic businesses (e.g. Mohamed, 2010; Popa, Soto-Acosta, and Perez-Gonzalez, 2018) have been the focus. Therefore, previous scholars such as Setiowati *et. al.* (2015) suggested that more research is required on dissimilar sub-sectors that will expand the knowledge of ICT adoption and business performance throughout different industries.

Furthermore, previous studies mostly tested the direct relationship between ICT adoption and business performance. In addition, past studies commonly focused on ICT adoption only as a specific or single dimension of ICT (Jehangir *et al.*, 2011; Sobihah *et al.*, 2014). Therefore, in order to enhance the knowledge of the relationship between ICT adoption and business performance, this study will explore the significant effect of ICT adoption on business performance. Additionally, this study also investigates the strongest types of ICT adoption that influence business performance.

1.3.2 The Control Variable of Company Profile on Business Performance

The use of a control variable has some limitations on the perspective of ICT adoption but it is widely used in business performance studies (e.g. Carlson and Wu, 2012; Yilmaz, 2018). Commonly, control variables are used to measure statistical

controls in management and organisational research as well as the effect of the research findings (Carlson and Wu, 2012). Control variables also purposely capture factors that are broadly defined as extraneous to the desired effect (Breaught and Arnold, 2007). Frequently in management research, control variables appear as industry or organisation size (Carlson and Wu, 2012). This study explores company profile, as tour operator characteristics, as the control variable to business performance by using three elements: the company age, size, and equity. Only these three have been used as control variables, and due to this, they are on an ordinal scale.

1.3.3 The Moderating Effect of Adoption Characteristics on ICT Adoption and Business Performance

Few studies focus on the comprehensive pattern of ICT adoption among different types of adopter, i.e. older, new, high, and low adopter tour operators. The Diffusion of Innovation (DOI) curve, also known as adoption characteristics, has been used to identify the differences between the categories of adopters. The DOI curve consists of innovator, early adopter, early majority, late majority, and laggards. These categories represent the level of ICT adoption among tour operators. Hence, researchers that studied adoption characteristics (using the DOI Curve) used descriptive statistics to determine the patterns of different adopters (e.g. Jacobsen, 1998; Hashim, 2007; Keesee, 2010; Oliveira and Martins, 2011; Roy, 2018). Despite this, none of these studies examined the comprehensive relationship between all of the variables involved in this study. Consequently, after reviewing previous studies, a new conceptual framework was integrated and tested empirically including the proposed hypothesis in this study.

1.4 Research Objective

This study aims to explore the relationship between company profile, ICT adoption, and integration with the elements of adoption characteristics (DOI curve), which include innovators, early adopters, early majority, late majority, and laggards

towards business performance. In supporting the main objective of this study, there are three (3) objectives that have been developed as follows:

- a) To investigate the significant relationship between ICT adoption and the business performance of tour operators.
- b) To examine the moderating effect of adoption characteristics on ICT adoption and business performance.
- c) To discover the control variable of a company profile on business performance.

1.5 Research Questions

Furthermore, based on the objective above, to support the direction of this study the following research questions were formulated:

1. Does ICT adoption have significant effect with the business performance of tour operators?
2. Do adoption characteristics, moderating effects of ICT adoption on business performance?
3. Does the company profile act as a control variable on business performance?

1.6 Scope of the Study

This study focuses on the interaction between four major variables, which are company profile, ICT adoption, adoption characteristic (DOI Curve), and business performance. The intention is to explore the relationships between these variables. It also takes into consideration the moderating effect of adoption characteristics on ICT adoption and business performance. The research was conducted in all fourteen (14) states in Malaysia, and the states were clustered according to the region: Central, Northern, Southern, East Coast, and Borneo. There were 4,691 registered tour

operators in Malaysia based on statistics from 2015. From this, only tour operators were selected as respondents for the study. This was based on the criteria of the tour operators, which was determined by their product, i.e. inbound, outbound, a combination of inbound and outbound, or ticketing. If the product was only based on ticketing, they were excluded because they were considered as travel agents. Self-administered questionnaires were distributed from October 2015 to March 2016.

1.7 Significance of the Study

This study ultimately focuses on the adoption of ICT among tour operators in Malaysia and its relationship to the company profile, adoption characteristics, and business performance. The usefulness of this information was divided into two aspects: theoretical and industrial.

The first theoretical contribution is the adaptation or modification of the theory. By testing the adoption characteristics (the DOI curve) as the moderating effect, the study extends the limitation on the existing knowledge and opens new paths for future research. This study attempts to verify the effect of adoption characteristic (the DOI curve) as a moderator between ICT adoption and business performance. Hence, this study also initiates the endeavour to study this theory as a moderating effect of ICT adoption within the framework of the business performance of Malaysian tour operators.

The following theoretical contribution is from the ICT dimensions achieved by using five (5) categories of ICT from previous literature that consist of computer application skills, the internet (websites), e-commerce, social media, and mobile devices. These five (5) categories demonstrate the changes in ICT up until the latest ICT trends. The measurement item for each category adapts the objective answer in order to identify the usage of each category. Commonly, many scholars previously used one (1) or two (2) of any category or component in the category types of ICT. Consequently, by pioneering the use of five (5) important categories of ICT with various components of each item, this demonstrates that this study contributes to the

knowledge by filling a gap in the literature. Thus, the originality of this research will contribute to the enhancement of the knowledge of ICT adoption among tour operators in Malaysia for business performance, and it will contribute to a new point of view as well as the body of literature.

For the industrial aspect, the results of this study and its suggestions may become a point of reference for business continuity practitioners especially for tour operator businesses in Malaysia for enhancing organisational effectiveness through improved availability and enabling the organisation to better explore new opportunities in the context of the adoption of ICT. Furthermore, it also aims to provide information to policy makers for creating better tools to design, monitor, and evaluate ICT strategies in order to assist tour operators in Malaysia to succeed globally.

1.8 Terms and Operational Definitions

The following terms are operationally defined for the purpose of this study.

- a) **ICT adoption:** ICT adoption is defined as any usage technology that supports information sorting, information processing, information distribution and using information (Adu, 2002; Osterwalder, 2003; Beckinsale and Ram, 2006).
- b) **Tour Operators:** These are companies that organise tours in their entirety and sell them through their own brand or through retail travel agencies and retail outlets. These include mass tour operators, specialized tour operators, outbound tour operators, international tour operators, and small or large tour operators (Goeldner and Ritchie, 2009; Pal, Torstensson and Mattila, 2011).
- c) **Business Performance:** In this study, business performance is measured the growths of business performance are using over three years performance that consists of increase sales, improvement in overall performance, and increase in market share. So, it is supports the idea that performance, growth and

success are alternatively used in measuring company performance (Gill and Biger, 2012).

- d) **Diffusion of Innovation Curve (Adoption characteristics):** Rogers (2003) created the DOI curve of DOI in 1962 and this consists of adoption characteristics of innovators, early adopters, early majority, late majority, and laggards. He defined the adopter category as the “classifications of members of a social system on the basis of innovativeness”.
- e) **Company Profile:** Company profile is the number of full time employees of a company, types of product, company age and company equity. The company profile is referred to as the background of tour operators, and it helps to determine the types of tour operators. These include mass tour operators, specialized tour operators, outbound tour operators, international tour operators, and small or large tour operators (Pal, Torstensson and Mattila, 2011).
- f) **Innovator:** Kaminski (2012), notes that Rogers classify the innovators as venturesome, willing to take a risk, high-educated, require the shortest adoption period and appreciate technology for its own sake.
- g) **Early adopter:** The characteristic have a natural desire to be trendsetters, role models, adventurous, and excellent tester subject (Kaminski, 2012).
- h) **Early majority:** Comfortable with only evolutionary changes in practices, avoid risk, prudent, want reliable services and do not like complexity (Kaminski, 2012).
- i) **Late majority:** Late majority will only respond to the peer pressure, skeptical, cautious, often technology shy, very cost sensitive, and rely on single and trusted advisor (Kaminski, 2012).
- j) **Laggards:** A more suspicious of innovation, want to maintain status quo, point of references is in the part, and usually invest in technology only if all other alternatives worse (Kaminski, 2012).

- k) **Computer Application Skills:** According to Spencer (2011), the company that adopt the computer application skill were basically involved in the use of computer terminals and hardware for back office accounting functions or front office functions such as sales. The example of computer application skills used are word processors, spreadsheets, presentation software, database and multimedia skill without having the internet.
- l) **The Internet (websites):** Spencer (2011), revealed in his study that, the internet was mainly used for searching information on the website. He also referred to companies that had formed and used company websites for all-purposes and marketing, and information sharing.
- m) **E-commerce:** This is electronic payment electronic payment methods, electronic marketplaces and exchanges, and these facilities transactions (Alvarez *et al.*, 2007).
- n) **Social Media:** Also known as Social Network Site (SNS), social media is any internet-based applications that builds on the ideological and technological foundations of Web 2.0, and allow the creation and exchange of ‘User-Generated Content’ (Kaplan and Haenlein, 2010).
- o) **Mobile Device:** Most scholars including Boswell and Olson-Buchanam (2007) and Duxbury *et al.* (2013) agree that mobile devices include smartphones, tablets, laptop computers, and personal digital assistants (PDA). The devices have various functionalities for accomplishing work and non-work activities.

1.9 Structure of the Thesis

Overall, this thesis contains six chapters pre-arranged in sequence.

Chapter 1 provides a general overview of the research. It comprises the research background, research gap, problem statement, research questions, and aims,

objectives, scope, and significance of the study. Additionally, there is a brief explanation regarding the thesis structure.

Chapter 2 presents an inclusive review of the literature in the concerned research areas, which consists of tour operators, ICT adoption, a review of the applied theory, and business performance.

Chapter 3 describes the methodology adopted to achieve the objectives of this research in detail. Particular references are made to the adoption of the research strategies with regard to the rationale underlying their adoption and the constraints imposed by the overall research environment. This includes the technique for gathering primary and secondary information. The details in this chapter provide the foundation towards the validity and reliability of the research findings.

Chapter 4 reveals the findings from this study after the completion of the analysis. The significant results are highlighted, and the results are discussed in detail from all aspects.

Chapter 5 summarises the discussion of the results. It serves as a conclusion of the research findings and the implications of the findings on the body of knowledge. The chapter also concludes by detailing the contribution of the research and recommendations for future research.

1.10 Summary

This chapter forms the introduction to this study. It attempts to shed light on the understanding of the topic of this study. By interconnecting the elements stated in this chapter, the identification of the research issues has been made possible.

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