



Disintermediation Threat: Do Small Medium Traditional Travel Agencies in Malaysia embrace ICT adequately?

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ABSTRACT

As early as 1999, Werthner and Klein have acknowledged the disintermediation threat of Traditional Travel Agencies (TTA) due to the emergence of Virtual Travel Agencies (e.g. Travelocity, Expedia) and infomediaries (e.g. Travelbids, Priceline). Almost 18 years later, (as of 2017), it is interesting to investigate how TTAs cope with the disintermediation challenges by integrating ICT into their business models. Older and more established institutions (more than 20 years in business) like TTAs were said to be more resistant to change (Institutional Theory). Will it be the case for industries going through disintermediation threat? Qualitative multiple case studies method was used to ensure the issues were explored through multiple lenses. Semi-structured interviews, website content analysis and direct observation are used to collect data from fifteen case firms in Malaysia. The findings suggest a three level ICT adoption model for SME TTA in Malaysia: six were 'low ICT adopters', five were 'intermediate ICT adopter' and four were 'advance ICT adopter'. Low ICT adopter merely use static website and email, while intermediate and advance adopter acquired ICT capabilities almost equivalent to those of Virtual Travel Agencies with interactive website or advanced e-business. This indicated that majority

of SME TTAs in Malaysia were embracing ICT adequately. The study also concluded that non-stage models explained adoption levels more appropriately since some TTAs were found regressing to lower level after advancing to higher level.

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INTRODUCTION

Information Communication Technology (ICT) has had a profound impact on travel and tourism sector globally. The accelerating development of ICT and internet based technologies has created a condition for the emergence of virtual travel agencies (VTA) to become major forces in the industry. It has resulted in new business models in which these VTAs provide suppliers to sell directly via internet by allowing travel buyers to directly access their reservation systems, web-based travel agents and internet portals (Egger & Buhalis, 2008; Werthner & Klein, 1999). As a result, traditional travel agencies (TTA) which are retail businesses selling travel products and services to consumers (Kayani et al., 2015) were the most impacted and thus disintermediation seemed inevitable.

In fact, as early as 1999, Werthner and Klein (1999) had acknowledged the disintermediation threat of TTAs due to the emergence of VTA. Almost 18 years later, it is interesting to find out how TTAs cope with the disintermediation challenges by improving their ICT capability. On one hand, TTAs enjoy upper hands in terms of established customer base. On the other hand, being older and more established, TTAs are more resistant to changes, as proposed by Institutional Theory. This paper investigates ICT adoption among Small Medium TTAs in Malaysia to understand if they embraced ICT adequately to circumvent disintermediation. In the context of this study, the definition of ICT by Manuelli et al. (2007) is adopted, covering various

forms of technologies such as computers, internet, websites, fixed-line telephones, mobile telephones, wireless communication devices, networks, broadband and other specialised devices.

Malaysian traditional travel agencies are not an exception and the trend towards disintermediation is apparent. In early 2000 there were 4,691 registered travel agencies (Fuza et al., 2015) but the current statistics revealed only 3,594 travel agencies are still registered and are actively operating (Malaysian Association of Tour and Travel Agents [MATTA], 2019). Though the reason for the sharp decline is unclear, conversation with MATTA president, Datuk Hj Hamzah Rahmat (personal communication, January 22, 2017) indicated the business uncertainties caused by disintermediation could be the cause.

It is apparent the advancement in technology has provided the means for suppliers and consumers to bypass the TTA and communicate directly leaving the TTA in a vulnerable state. This suggests that the TTA cannot sit back and expect their businesses will be secured. Therefore to remain relevant in the industry, the TTAs have to reposition their traditional role, change their business model and become less dependent on their travel suppliers by recognizing the potential benefits of embracing ICT capabilities similar to VTAs and provide valued services directly to tourists.

Despite the emergence of several ICT growth model little is known which model best describe the ICT adoption for TTAs that

are highly susceptible to disintermediation. Due to nature of the travel business which is prone to the technology advancement (Buhalis & Law, 2008), its adoption pattern may be different from other industry. The understanding of the ICT adoption pattern will be of value to policy makers and travel associations in understanding the different needs of TTAs operating at different stages of ICT adoption in terms of funding, training and human resources. Furthermore, understanding the ICT adoption model is expected to add value to the body of knowledge in tourism research and may assist in identifying the industry and country specific ICT adoption pattern.

With the aim to examine the extent of ICT adoption and the ICT adoption model that best reflect the SME TTAs in Malaysia, the following research questions were developed: (1) To what extent SME TTAs have adopted ICT?; (2) Which ICT adoption model best reflect the SME TTAs in Malaysia?

Stages of ICT Adoption

The development of internet and e-commerce had led to several e-commerce growth models. The studies have divided the e-commerce adoption and implementation into several stages within their models to describe the sequential involvement in progressing towards sophisticated use of ICT in the emerging e-commerce environment (Prananto et al., 2003). This study reviewed 13 models published between the years 1999 to 2015, the models were summarized in Table 1.

The review of literatures in Table 1 revealed some similarities and differences in the number of stages and features used to understand ICT adoption. The diversity in the number of stages is primarily due to the period when the research was conducted and the contextual differences in the country and industry being investigated. The literature divulged four widely used stages (1) use of e-mail and static website, (2) interactive web presence, (3) e-commerce and (4) Electronic integration.

In the early period of internet inception the models proposed by Allcock et al. (1999) and McKay et al. (2000) showed stage one as 'threshold stage' with no internet presence. However, the subsequent models developed included e-mail interaction and static website to provide information about the organization and services as stage one adoption. The 'threshold stage' with no internet presence is no longer applicable at the later period of the study due to somewhat high internet penetration and the essentiality of internet for doing business globally.

Scrutiny of these literatures exposed 'interactive web presence' as stage two adoption. The interactive website supports interaction with customers, order placing and responding to enquiries (Abou-Shouk & Lim, 2010; Al-Somali et al., 2015). Further inquiry into these literature revealed at stage three the firms adopt interactive website to provide added features for online order receiving and processing, online booking and online payment to facilitate 'e-commerce' related activities (Chen & McQueen, 2008; NCC, 2009 as

Table 1

Review of ICT adoption stage and non-stage models

Authors	ICT Adoption Stages Model Description
Earl (2000)	The first stage is static website for “external communication” on organization information. The second stage “Internal communication” the organization prepares for the use internet technologies by deploying various information technologies. Third stage “E-commerce” includes online selling and buying. The “E-Business” stage involves development of new business model to support the “E-enterprise” at the fifth stage. Continuous “transformation” is carried out in the sixth stage
McKay et al. (2000)	At stage one no presence of internet. Static website presence is developed at stage two mainly for one-way communication. At stage three interactive website is developed for two- way communication. At stage four the organization integrates e-commerce features for online selling and buying. In stage five the back and front office activities are integrated for better coordination and efficiency. The last stage is external integration is to achieve collaboration between stakeholder to achieve “extended enterprise concept”
DTI (2001)	The first two stages of this model are ‘e-mail and website’. At this stage organization acquire basic ICT skills and technology to operate e-mail and simple brochure web sites for online marketing. The third stage which is ‘e-commerce’ involves online interaction between B2B and B2C, for placement of an order and online payment processing. The fourth stage, ‘e-business’ stage allows integration of supply chain. The fifth and sixth stage represents, ‘transformed organization’ that enables knowledge sharing between customers, suppliers and business partners.
Rayport and Jaworski (2002)	Stage one “Broadcast” is a static webpage to provide some basic information pertaining to the organization and its products/services offered. In second stage internet technologies to interact with business stakeholders. Third stage integrates internet technologies for e-commerce activities and at fourth stage the internet technologies are used for collaboration and networking with business stakeholder.
Chan and Swatman (2004)	In the first stage the organization embarks on e-commerce adoption and implementation. At the second stage “centralized e-commerce” the e-commerce activity is implement to the whole organization, it involves strategic planning and implementation. Then the organization search for more sophisticated e-commerce technology in third stage “looking Inwards for Benefits”. In the fourth stage “global e-commerce” the organization approaches new e-commerce technology with broader approach by embracing new technology while retaining the old.
Al-Qirim (2007)	Stage one “starters” use internet and e-mail whereas “adopters” in the second stage adopt any of the e-commerce technologies such as intranet/extranet, internet-based Electronic Data Interchange (EDI) and website. The “extended adopters” in third stage adopt intranet and extranet for high collaboration with suppliers and business partners.

Table 1 (Continue)

Authors	ICT Adoption Stages Model Description
Chen and McQueen (2008)	Stage one "E-mail" is used to communicate with customers and suppliers. Static website are adopted for online marketing at the second stage" online marketing". Third stage involves "online ordering with manual payment". In the fourth stage the firm adopts online transaction.
NCC (2009) (as cited in Abou-Shouk & Lim, 2010)	At the first stage the organization doesn't use e-mail neither there is internet access. In stage two the organization adopts a static website for one way communication and online marketing. Stage three is an e-commerce stage, internet technologies are widely used to interact with customers. Fourth stage includes use of internet technologies to extend integration with business partners. In stage five online exchange, e-marketplace are available for business stakeholder.
Abou-Shouk and Lim (2010)	In stage one "static web presence" the organization use internet to search customers and suppliers. In stage two two-interaction is included via company portal "interactive online presence" is spotted. Stage three "Electronic transaction" includes e-commerce features to support online order and payment. In the final stage "electronic integration" the organization adopts advance technology for high level of collaboration.
Al-Somali et al. (2015)	Stage one is "non-interactive adoption" wherein organization only use internet with e-mail for communication without any interactivity. Second stage includes "interactive adoption" that is with and without e-commerce facilities. Final stage "stabilization includes transactional web presence and integrated web status.
Authors	ICT Adoption Non-Stages Model Description
Allcock et al. (1999) (as cited in Mpofu et al., 2013)	The first level is "Threshold" where organizations use computers, but not the internet. This is followed by the second level "Beginner" where organizations use connected computers, but not a website. The third level is "Intermediate" where organizations use e-mail and static websites, but the usage is not aligned with any strategy. The last level is "Advance" which uses interactive web-sites and web-based networks to support business development.
Rao et al. (2003)	In level one the organization establishes its online presence for one-way interaction mainly for online marketing purpose. Two-way communication, place and manage orders via e-mail are conducted in level two. E-commerce features are integrated in level three. In the final level "organization integration" involves web technologies are perfectly integrated at the level of its internal and external processes.

Table 1 (Continue)

Authors	ICT Adoption Stages Model Description
Levy and Powell (2003)	Proposed a “Contingent or transported model” basing on ICT value recognition factor and planned business growth factor, resulted in four adoption approaches: 1. Brochureware (firms that do not plan business growth and see the value of internet as low), 2. Support (firms that are using internet for business support but see little future for their businesses from the internet), 3. Opportunity (Firms that see internet offering high business value but are not planning business growth) and 4. Development (firms that see opportunity in internet as key to their future business development, ready to adopt advance ICT).

Source: Current study

cited in Abou-Shouk & Lim, 2010); Rao et al., 2003; Rayport & Jaworski, 2002). ‘Electronic integration’ was prevalent at stage four in most of the models. At this stage the firm uses ICT-mediated service delivery, intranet and extranet for inter-organizational interaction and high level of collaboration with industry members and after sales services (Allcock et al., 1999; Al-Qirim, 2007; Chan & Swatman, 2004; Chen & McQueen, 2008). On the other hand some models have expanded to fifth and sixth stages to achieve the concept of ‘transformed organization’ (DTI, 2001; Earl, 2000; Mckay et al., 2000; NCC, 2009 as cited in Abou-Shouk & Lim, 2010). From the above it is evidenced that there is little agreement on the number of ICT adoption stages. In the context of Malaysia, some stages like “no presence of internet” (e.g. Allcock et al., 1999; Mckay et al., 2000; NCC, 2009 as cited in Abou-Shouk & Lim, 2010) may not be relevant now that internet penetration rate is as high as 72.2% (The Sun Daily, 2015). Thus, it is reasonable to revisit stages or levels of ICT adoption using more recent data.

Almost three-quarter of the 13 models reviewed suggested “stages” models. Only three proposed non-stage models. Allcock et al. (1999), Levy and Powell (2003), and Rao et al. (2003) in their models identified organizations need not progressively accomplish each stage successfully. The organization could begin with any stage and jump over levels or may regress to a less mature stage. SMEs were not seen progressing from low to high adoption stages since many were found to stay in a particular ICT level (email and static website) for very long time and did not move beyond that level. Thus, it is relevant to investigate if tourism related SMEs are also trapped in the same low adoption level despite the disintermediation threat.

Despite the widely accepted “stages” based ICT adoption model, Levy and Powell (2003) argued that “stages” of ICT adoption was not manifested in their research on 12 SME case firms from various industry as most firms did not move beyond the first stage of email and static website since they were operating in business nature which was less ICT relevance (e.g. Ceramic suppliers

to industry customers) and they did not see internet as being change agent in the industry they are in. In other words, SMEs were not seen progressing from low to high adoption stages. That is, majority of SMEs stop at email and static website level while a few SMEs who see the ICT as key to their future development jump straight into advance ICT (e-business capability) early in their business cycle (Levy and Powell, 2003). Allcock et al. (1999) and Rao et al. (2003) observed the same non-stage models in their studies. Thus, there is a gap to evaluate if ICT adoption of SME TTAs in Malaysia best described by stages or non-stages model.

Furthermore, despite substantial and diverse empirical studies in the field of Information technology little is known about the ICT adoption stages and features offered in the travel agency's website which serves as a critical factor for business success (Jeong et al., 2003). Therefore, to evaluate the ICT uptake and readiness of travel agency's website for online transaction it is crucial to identify the ICT adoption stages and the website features (Abou-Shouk & Lim, 2010). Moreover, travel sector being one of the most impacted by the development of ICTs and disintermediation seemed inevitable (Poon, 2001), its adoption pattern may be different from other industry.

Finally, more comprehensive definition of ICT that includes telecommunication technologies, information technologies and networking technologies proposed by Manuelli et al. (2007) were not often used in explaining adoption levels. Majority of the

models focused on networking technologies and ignored the telecommunication technologies and information technologies differences across levels. Thus there is a gap in defining ICT adoption model using all three ICT components; telecommunication technologies, information technologies and networking technologies.

METHODS

The use of multiple case studies is highly relevant as it can capture 'reality' in substantial details and useful when the research focus is on contemporary events (Mehrtens et al., 2001). Therefore multiple case studies, using non-probability purposive sampling method were seen appropriate for this study. This allows for an in-depth understanding of the complex and dynamic research phenomenon, namely the ICT adoption patterns among the SME TTAs in Malaysia where existing theories may not be appropriate to explain.

In-depth one to two hours case interview were carried out with the chief executive officers (CEOs) from fifteen SME TTAs based in Malaysia. Based on past literatures an interview protocol was prepared to guide the interviews. A significant part of the interview protocol included questions on ICT adoption approaches and features offered in the travel agency's websites, questions on the CEOs-owners personal background and their organization's background.

Though interview is a robust data collection method and widely practiced in qualitative research it is suggested by Yin (2014) that the unique research phenomenon

should be explored through multiple lenses. Consequently an exploratory website content analysis was carried out on the fifteen cases. A checklist of 36 features of e-commerce adoption was adopted from Abou-Shouk and Lim (2010) to identify the ICT adoption stages. The features represent technology adoption and business development driven by ICT uptake. Finally direct observation was carried out to identify the telecommunication and information technologies used in the firms. A simple checklist on the ICT tools commonly used in organizations was developed to gather information pertaining to the types of telecommunication and information technologies.

The cases were SME TTAs in Malaysia which are registered with MATTA; from which fifteen cases were constructed based on in-depth interviews with the CEO-owner who are the key decision makers in the organization. Levy and Powell (2002) asserted that the CEO-owner was undoubtedly the principal force behind the initiation and implementation of ICT adoption decision in SMEs. They can be seen as the single representation of the firm in relation to decision making process within their respective firm and have implications for firm strategy (Glavas & Mathews, 2014).

The cases were carefully selected to provide literal replication (predicts similar results) and theoretical replication (predicts contrasting results but for an anticipated reasons) (Yin, 2014). This approach allows for generating similarities and differences in the research findings. For literal replication,

within the selection criteria all fifteen firms are travel agencies which have been in operation for more than 20 years. For theoretical replication, the sample consisted of SME TTAs at different levels of ICTs adoption, customer orientation (Business-to-Customers (B2C) versus Business-to-Business (B2B) and size of operation (number of employees).

The data analysis in qualitative approach is to develop an understanding or interpretation of the research issues (Kaplan & Maxwell, 2005) and there is no one correct way of organizing, analyzing and interpreting qualitative data. Analytic techniques were adopted to establish internal and external validity; this includes within-case and cross-case analysis, using pattern matching and explanation building techniques. In this study pattern matching was carried out through trawling the evidences seeking corroboration. This is followed by explanation building through iterative search process for causal links in the empirical data which are then presented in narrative form. Within case analysis was performed to understand unique characteristics of each case, where each firm was treated as a separate study.

Cross case analysis was then carried out to identify similarities and differences across cases. In this technique aggregated findings were presented. The unique strength of case study methodology is the data triangulation from the multiple sources that provides a complete and holistic understanding of the research phenomenon and builds validity to the case study (Hesse-Biber & Leavy,

2011; Yin, 2014). In this study interview transcripts, firms' website content analysis and direct observation were utilized to triangulate the results. This allows the researcher to investigate the research issue in-depth and provide a synergistic view of the research phenomenon.

Within Case Analysis

The demographic information relevant to the cases presented in Table 2 shows the firms' age, year of establishment, number of employees, customer orientation, descriptive type and types of ICT used. In this study the name of the cases and its entrepreneurs are not revealed due to confidentiality purpose and hence they are collectively referred to as cases A-O. The sample indicates the year of establishment of each case firm ranged from the earliest, 1976 (case G, case K and case O) to the most recent inception in

1997 (case E), relatively matured sample with 30.5 being the average age of the firm. Based on the classification for SMEs in the context of Malaysia, firms with number of employees between 5 and 30 is classified as small size organization whereas firms with number of employees between 30 and 75 is classified as medium size organization (SME Corp, Malaysia). A scrutiny on the size of employees in Table 2, revealed eight firms fell in the category of small size establishment (case A, case C, case E, case F, case H, case I, case J and case K) whereas the other seven firms fell in the category of medium size establishments (case B, case D, case G, case L, case M, case N and case O). The findings also showed cases A-O depicts variations in their operations in terms of inbound and/or outbound tours, being or not being ticketing agents, and their business focus on both B2B and/or B2C activities.

Table 2

Demographic information of cases

Participant Case number	Job Role of the Respondent	Age of the Firm	Firms year of establishment	Firms number of employees	Firms customer orientation	Firms descriptive type	Types of ICT used
CASE A	Owner and CEO	31	1986	10	B2C	Inbound/ Outbound and ticketing	e-mail, static website & social media networking
CASE B	Owner and CEO	29	1989	50	B2C	Inbound/ Outbound and ticketing	e-mail, static website & social media networking
CASE C	Owner and CEO	29	1989	10	B2C	Inbound/ Outbound and ticketing	e-mail, static website & social media networking

Table 2 (Continue)

Participant Case number	Job Role of the Respondent	Age of the Firm	Firms year of establishment	Firms number of employees	Firms customer orientation	Firms descriptive type	Types of ICT used
CASE D	Owner and CEO	22	1995	55	B2C	Inbound/ Outbound and ticketing	e-mail, static website & social media networking
CASE E	Owner and CEO	21	1997	5	B2C	Outbound	e-mail, &social media networking
CASE F	Owner and CEO	22	1995	5	B2C	Inbound and transport	e-mail & static website
CASE G	Owner and CEO	28	1988	30	B2C	Inbound/ Outbound and ticketing	e-mail, Integrative website (no online booking and payment)& social media networking
CASE H	Owner and CEO	27	1990	30	B2C	Inbound and ticketing	e-mail, Integrative website (no online booking and payment)& social media networking
CASE I	Owner and CEO	41	1976	26	B2C	Outbound and ticketing	e-mail, Integrative website (no online booking and payment)& social media networking
CASE J	Owner and CEO	41	1976	33	B2C &B2B	Inbound/ Outbound and ticketing	e-mail, Integrative website (include online booking and payment)& social media networking

Table 2 (Continue)

Participant Case number	Job Role of the Respondent	Age of the Firm	Firms year of establishment	Firms number of employees	Firms customer orientation	Firms descriptive type	Types of ICT used
CASE K	Owner and CEO	32	1985	10	B2C & B2B	Outbound and ticketing	e-mail, Integrative website (include online booking and payment)& social media networking
CASE L	Owner and CEO	21	1996	60	B2C & B2B	Inbound/ Outbound and ticketing	e-mail, fully Integrated website & social media networking
CASE M	Owner and CEO	30	1987	52	B2C & B2B	Inbound/ Outbound and ticketing	e-mail, fully Integrated website & social media networking
CASE N	Owner and CEO	28	1988	70	B2C & B2B	Inbound/ Outbound and ticketing	e-mail, fully Integrated website & social media networking
CASE O	Owner and CEO	41	1976	50	B2C & B2B	Inbound and ticketing	e-mail, fully Integrated website & social media networking

Source: Interview and website content analysis

Table 2 showed cases A-O have adopted ICTs but the types of ICT adopted differed between cases. Cases A-F have adopted e-mail and static website as the primary mode of communication. Though cases (A-

F) has been established for more than twenty years and two cases (case B and case D) operating with more than 30 employees the uptake of ICT is rather low. Cases G-K have adopted e-mail and an interactive website.

The finding showed case J and case K have included a more sophisticated features such as online booking and payment features on their website compared to case G, case H and case I which have utilized the interactive website primarily for communication purposes. Four cases (cases L-O) have transformed to somewhat VTA capable to serve globally and efficiently using fully integrated e-business website. Finally, social media networks were also used extensively by all the case firms to share information with existing and potential customers regardless of the stages of ICT adoption.

Cross Case Analysis

The outcomes from website content analysis, interview and observation are summarized in Table 3. The analysis reviewed the telecommunication technology, information technology and networking technologies adopted by cases in Malaysia to improve the efficiency and competency of the business. Based on findings in Table 3, fixed line telephone, smart phones, fax machine, desktop computers, laptops and peripherals, e-mail and website are concurrently adopted in all fifteen cases. However the degree of adoption for information technology and network technologies varied across different levels ICT adoption. Low and intermediate adopters used information technologies of desktop computer, laptops and peripherals while advance ICT adopters also used audio visual conference equipment.

In terms of network technologies, three levels of ICT adoption in Malaysian SME

TTAs were evidenced. At low adoption level, the case firms have adopted e-mail and static website to provide information pertaining to the organization and services/product offered. At “Intermediate ICT adopters”, the case firms have adopted interactive website and e-commerce activities. Finally, the ‘Advance ICT adopters’ demonstrated more integrated applications of internet based activities.

‘Low ICT adopters’ use static website merely for communication and online marketing. For example the CEO of case ‘A’ stated *‘my website is very basic, only contain company information, and information on my tour packages just the basic stuff’, if the customers are interested they will call us and we take it from there’*. The broad category of computers adopted for basic innovation adoption such as static website and e-mail for front office and back office function was used to describe ‘Low ICT adoption’ level at which the firms acquire basic ICT skills and technology to operate e-mail and static website for online marketing (Xu et al., 2008). The firms use simple brochure like website to publicize information on the company, products and services offered, the website tend to be static and non-strategic in nature. The finding was found to be consistent with (Abou-Shouk & Lim, 2010; Al-Qirim, 2007; Daniel et al., 2002; DTI, 2001; Xu et al., 2008). They categorize firms that use e-mail and static website as low ICT adopters.

Table 3
Actual ICT adoption stages and ICT systems for SME traditional travel agencies in Malaysia

ICT Adoption Stages	Description	Cases	Category of ICT Systems			
			Telecommunication Technologies	Information Technologies	Networking technologies	Others
Low ICT Adopters	Using a simple website to disseminate company information and product/services brochure to customers and supplier. Hence the website tend to be static and non-strategic in nature. The firm uses company e-mail and social media networks for efficient internal and external communication	CASE A-F	<ul style="list-style-type: none"> -Fixed line telephone -Smart phone -Fax machine 	Desktop computer, laptops and peripherals	Static website, E-mail and social media networks used for internal and external communication extensively	None
Phase I Intermediate ICT Adopters	Using website to provide customers and suppliers with company information and product information (as stage 1) plus virtual brochure, trip planner, online finder, online reservation request form, interactive content and personalized content to place and manage orders. The firm uses company e-mail and social media network for efficient internal and external communication	CASE G-I	<ul style="list-style-type: none"> -Fixed line telephone -Smart phone -Fax machine 	Desktop computer, laptops and peripherals	Interactive website, e-mail and social media networks used for internal and external communication extensively	None

Table 3 (Continue)

ICT Adoption Stages	Description	Cases	Website features	Category of ICT Systems			
				Telecommunication Technologies	Information Technologies	Networking technologies	Others
Phase 2 Intermediate ICT Adopters	Using interactive website to provide added features for online order receiving and processing, online booking and online payment facility. Besides includes more sophisticated version of features found in stage 1 and 2, e.g. more comprehensive information and search engines. Websites provide two way interaction.	CASE J-K	Features include online booking, online payment, Cards accepted. Online account for buyer and order tracking.	-Fixed line -telephone -Smart phone -Fax machine	Desktop computer, laptops and peripherals	Sophisticate Interactive website to facilitate e-commerce, e-mail and social media networks used for two way communication	Credit and debit card system
Advance ICT Adopters	Presence of intranet/extranet for inter-organizational interaction and high level of collaboration with industry members. At this level internet based activities are dominant transforming the overall business model of the firm.	CASE L-O	Features include e-brochure, online booking, enquires, reservation, blogs, extranet/intranet and collaboration with business partners.	-Fixed line -telephone -Smart phone -Fax machine	Desktop computer, laptops and peripherals, audio visual conference equipment (screen projector, TV and training room)	Fully Integrated website application, e-mail and social media networks used for two way communication and to facilitate high level of collaboration,	Credit and debit card system

Source: Website content analysis, interview and observation

'Intermediate ICT adopters' (G-K) used an interactive website with more sophisticated features for two-way interaction for placing and managing order with suppliers. These firms have incorporated more sophisticated features such e-brochure, online finder, trip planner, online booking, enquires, online payment, FAQs for efficient business transaction. This is apparent when the CEO of case 'K' stated *"to us it is a strategy because with this system customers can book 24 hours"*.

At this stage ICT strategy becomes interlinked with the firm's business strategy to build strong cross functional links between business partners. It can be stated the integration begins to pull together the business process and business model (Sadeghein et al., 2012). The features emerged are consistent with the components of level two and three of the studies conducted by earlier researchers (Abou-Shouk & Lim, 2010; Daniel et al., 2002; Levy & Powell, 2002; Rayport & Jaworski, 2002; Sadeghein et al., 2012). Due to the similarity in the website features cases G-K can be classified as "Intermediate ICT adopters" at two different phases. Case G-I are classified as phase one intermediate adopters without e-commerce elements and case J-K as phase two intermediate adopters with e-commerce elements.

Phase 1 intermediate adopters represent firms in which the website is used for two way interaction. At this level the converged findings revealed cases G-I have adopted an interactive website that supports negotiation with stakeholders, place and manage orders.

The features includes e-brochure, FAQs, trip planner, online enquiry form, online reservation form, online finder for hotel, flights and places to visit and database search facility. The findings concur with earlier studies (Abou-Shouk & Lim, 2010; Levy & Powell, 2002; McKay et al., 2000). However, the CEO-owner of these three case firms felt the website was still somewhat static as it did not incorporate e-commerce features such as online reservation and payment gateway.

Phase two intermediate adopters also called e-commerce adopters. The cases in this category represent firms with sophisticated interactive website integrated with electronic transaction for online order receiving and processing, booking and payment. Cases J-K was found to be in this category which used sophisticated interactive website for two way interaction and for actual bookings and payment. The features included are online booking, online payment, cards accepted, and online account for buyer and order tracking. The findings was found to be in accordance to level three of earlier studies (Abou-Shouk & Lim, 2010; Daniel et al., 2002; Rayport & Jaworski, 2002) wherein websites assist online orders, sales and payment integration.

The 'Advance ICT adopters' demonstrated more integrated applications of internet based activities. The case firms have included more advance features such as intranet/extranet for inter-organizational interaction and high level of collaboration with industry members and electronic integration to transform the overall business

model. At this level internet based activities are dominant transforming the overall business model of the firm, indicating the TTA's transformation to VTA's ICT capability. For example the CEO of case 'M' said "*we have developed our own system, my company runs using this platform hundred percent. Currently we have started to market this platform at the respective market in Malaysia as well as in overseas*". Cases L-O were found to be at this level where technology based operations have shaped the organization's business strategies. The features found in cases L-O are consistent with some earlier studies (Abou-Shouk & Lim, 2010; Al-Qirim, 2007; Chen & McQueen, 2008; Levy & Powell, 2002; Rayport & Jaworski, 2002).

The outcome of this study divulged the features found in low ICT adopter's travel agency are basic mainly comprising static information about the organization. The features found in intermediate adopter's travel agency seem to be more sophisticated and interactive preparing the organization for e-commerce activity. At advance adopter's level, the features found to include electronic integration for networking and collaboration with customers and business partners.

The use of social media network is also prominent in all cases this could be due to its capacity to reach the global audience with limited resources. The CEO of case 'D' indicated "*we have website, but we still use facebook, instant messenger, weibo, wechat web to get the information across to the customers, it works for me*". This is

consistent with Tuten (2008) who asserted social media stimulates conversation and engage in way that traditional marketing would by developing loyalty, increasing awareness and interest.

DISCUSSION

Analysis of SME TTAs in Malaysia has led to an assessment that despite having high resistant to changes as proposed by institutional theory (Walsham, 2017), the TTAs had responded positively to the changes and had overcome disintermediation by using ICT to some extent to serve customers directly. The findings showed that all the case firms investigated in this study have adopted ICT for sustainability and growth. This concurs with the findings by Buhalis (2000) and Viljoen et al. (2015) that it is crucial for travel agencies to incorporate ICT along with their traditional business model to reposition their traditional retail role. The results also revealed some TTAs have adopted advance ICT and demonstrated ICT capability similar to those of VTA, indicating TTA's transformation to become VTA as a result of embracing change (internal factor) and industry dynamic (external factor). The differences in ICT adoption levels can be attributed to the various internal (e.g. ability to embrace change, customer orientation; B2B or B2C) and external factors (customers and business partners' expectations and tourism Industry's disintermediation pressure). This concurs with the findings by Baker (2012) and Xu et al. (2008) that internal and external factors seem to have influenced the

way an organization identifies the need for, searches for and adopts new technology.

The fact that all firms in the study have adopted telephone, smart phone, computers and internet exposed that the SME TTAs in Malaysia are familiar with various ICT tools and internet technologies. Consistent with the previous studies, the firms make use of them to improve their marketing activities (Buhalis & Law, 2008; Kozak, 2007), reduce transaction cost (Standing & Vasudavan, 2000) and to increase competitiveness and performance (Yoon et al., 2006).

The three ICT adoption levels found in the context on Malaysian SME traditional travel agencies show that Malaysian SMEs are in par with SMEs in some of the developed countries. This can be attributed to the various initiatives taken by the government and travel associations such as MATTA to create awareness and knowledge on ICT platform and uptake to remain competitive and relevant in the industry. This is evident with one of the respondent's feedback *"to me ICT is the future. If you don't have it you will be left behind, now is the era of technology if you want to survive you must have at least a basic website"*.

Interestingly no cases were found to be only using e-mail. This can be attributed to two main reasons (1) the case firms selected were MATTA members: MATTA's initiatives to educate the members to move forward with ICT, MATTA has carried out a series of initiatives such as tech talk for members to understand and get closer to the valuable digital truth. (2) The tourism industry's disintermediation threat:

emergence of VTAs created the urgency for TTA to embrace ICT (Werthner & Klein, 1999). Recently MATTA's initiative was to develop the travel platform (MATTA.travel) to persuade members to get into digital economy without committing to huge investment had played a crucial role in ICT adoption among its members. MATTA president Datuk Hj Hamzah Rahmat, stated:

"The small traditional travel agents on their own cannot embrace technology to the fullest to be competitive so we from MATTA are providing a platform (MATTA.travel) and work around with them to embrace technology. The member to some extent will be able to benefit at a low cost".

Interestingly, the study also showed ICT adoption need not necessarily be stage by stage adoption process. This was evident from case 'H' and case 'I' wherein the firms had adopted an advanced technology i.e. online reservation and payment gateways for two and five years respectively and had chosen to withdraw such features for various reasons. This clearly indicate the firms can progress to a higher level of ICT adoption and yet at the same time regress to a lower level depending on the capability of the CEO-owner to learn, manage and introduce the changes. This finding concurs with the British library staircase model that suggest organizations may jump over levels or may regress to a less mature stage as a result of some crucial internal or external factors (Mpofu et al, 2013, Rao et al., 2003; Allcock et al., 1999). In short, Contingent Model (non-stage model) of Levy and Powell (2003) seems most closely

resembled the adoption pattern of SME TTA in Malaysia. Evidences that support Contingent Model were: 1) Age of firms did not dictate adoption level: indicating no natural progression from low to high ICT adoption when the TTA matures through years of establishments. 2) Customer orientation (B2C versus B2B) seems to determine adoption level: those serving B2C stays at low adoption level while those serving both B2C and B2B adopted higher ICT level. This indicates that the “Planned Business” and Perceived ICT value factors (Levy & Powell, 2003) whether the TTA plans to venture into B2B and whether they perceive ICT provides values for them in B2B orientation, are key contingent factors in the ICT adoption decision.

CONCLUSION

This research has investigated the ICT adoption level to discover to what extent ICT has been adopted in SMEs TTAs in Malaysia using multiple case study approach. ICT adoption model that integrates telecommunication technologies, information technologies and networking technologies has been proposed. ICT adoption model reviewed did not include such integration, despite the fact such integration is crucial to understand ICT adoption holistically. The proposed model depicts how three adoption levels differ in terms of telecommunication, information and networking technologies. It also indicated that some SME TTAs transformed to VTA’s ICT capabilities while some stayed at low adoption level.

Two research questions were answered. First, in terms of ICT adoption extent among SME TTA in Malaysia, all case firms have found to adopt some extent of ICT ranging from low adoption (email and static website) to advanced adoption (fully integrated ICT solution similar to VTA capability). Advanced adopter firms are more competitive because they have an added advantage from combining the ICT strategies with traditional method such as personal interaction, collaboration and long term relationship with customers and supplier. In general, the study indicates that ICT adoption among SME TTA is satisfactory, as they took some initiatives to keep up with the ICT expectation from customers.

Second, in relation to ICT adoption model that best reflects SME TTA adoption approaches, Contingent Model of Levy and Powell (2003) seems most closely resembled the adoption pattern of SME TTA. In other words, non-stage model is manifested by case firms. Indeed, in the case of SME TTAs, ICT adoption did not follow stage-by-stage progression; many older establishments (e.g. 31 years in business) still remain in low adoption. Also, some young establishments (e.g. 21 years in business) have opted for advance ICT adoption since they recognize the value of ICT and look for future growth. Indeed, adoption decision is contingent upon two key factors: ICT value recognition and planned business growth as proposed by Levy and Powell (2003).

This study adds value to ICT, marketing and tourism literatures in three ways. First,

it uncovers ICT adoption levels among established TTAs, whom existed in the tourism business for more than 20 years. The resultant findings provide holistic picture specific to tourism context. Earlier SME ICT studies focus on multiple industries including construction, education, textile and manufacturing (e.g. Al-Qirim, 2007) in which industry specific pattern may not be apparent. Second, this study focuses on case firms in a developing country context. Earlier studies focused on developed country data, of the 13 models reviewed, only two conducted in developing country context. Third, the study provides empirical evidences on the validity of contingent model (non-stage model) proposed by Levy and Powell (2003). Indeed, “Non-stage” model where adoption level did not progress from low to high was evident in this study. Majority of earlier model (10 out of 13 models reviewed) proposed “stages” model.

Several implications for practice can be derived from the outcome of the study. For example CEOs and managers of SME TTAs to consider the features required to elevate them to the advanced practices of electronic transaction and electronic integration to remain competitive and relevant in the market in the current VTA era. Secondly, the advanced adopters should carry out R&D on the VTAs website features and applications to keep them in line with their own development. Thirdly, it may help CEOs and managers of the travel agencies to understand the systematic approach to ICT adoption levels and determine which levels meet their business strategy needs. Finally,

this research may help the policy makers and travel associations such as MATTA in terms of policy and strategy reviews to support ICT adoption and development in SME TTAs in Malaysia.

Just like any other studies, this study has its own limitations. Firstly, this study only investigated TTAs which are registered with MATTA. These travel agencies are exposed to the importance of ICT uptake and digital platform through various initiatives carried out by MATTA to help its members. Therefore these findings could be valid to travel agencies which are members of a travel association and not for independent travel agencies operating on an individual basis. Secondly, is the ICTs are dynamic wherein the travel agency may upgrade or downgrade the ICT uptake overtime therefore this findings could be valid for short term only. Understanding the drivers and inhibitors at each adoption stage would provide a deeper understanding on the internal and external factors leading to the ICT uptake among travel agencies in Malaysia. Future studies should focus on investigating the driver and inhibitors at each level of ICT adoption.

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