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Adoption and Evaluation of E-business in Thai SMEs:

A process perspective

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ABSTRACT

IS adoption and evaluation remains a problematic area in theory and practice, and this is particularly the case for SMEs. The prior literature on IT/ IS adoption and evaluation has largely considered this area in terms of the factors influencing the decision to adopt. This paper takes the point of view that IT/ IS adoption may be better understood as a process, frequently cyclical, rather than a decision-type event. The research thus set out to explore the linkage between IT/ IS adoption and evaluation from a process perspective. An in-depth case study was conducted with a Thai medium-sized tourism enterprise which adopts e-business technologies to reach and serve its customers as well as to facilitate its back-end processes. Based on the contextualism theory (Pettigrew, 1987) and the appreciative system (Vickers, 1965), an interpretive framework is developed to help capture the dynamic changes occurred throughout the adoption and evaluation cycle. The case reinforces the prior literature that adoption and evaluation are framed by certain contexts. Overall, the research attempts to probe into the on-going process of IT/ IS adoption and evaluation occurring in SMEs and adds into the literature on IS evaluation in SMEs particularly with respect to the process aspect.

Keywords

E-business adoption, evaluation, interpretive IT evaluation, SMEs, travel industry.

INTRODUCTION

The paper aims to discuss the adoption and evaluation issues associated with e-business evaluation from a process perspective, and in doing so to assess the suitability of such a perspective. The research is underpinned by the prior interpretive IT evaluation research (Walsham, 1993; Serafeimidis and Smithson, 1996) that the evaluation should be understood as an organisational change process shaped by and reshaping the organisational context. Of primary interest to this paper is the e-business technology adoption and evaluation processes occurred in SMEs. This is of significance in two ways. Firstly, there is little in the IT evaluation literature that centres on SMEs particularly from a process perspective, and secondly the prior literature suggested the consideration of the on-going nature of the evaluation process.

An in-depth case study of the medium-sized online traveling services enterprise provides a basis for the research. The presentation of this research is structured into six sections. The first section reviews prior literature on e-business adoption in SMEs. It provides fundamental understandings of factors influencing adoption decision. Section two introduces some selected relevant literature on IT evaluation that informed both the empirical design and the subsequent interpretation. Section three and four outline the conceptual framework for the interpretive study and the case based methodology. Section five discusses the evolution of the IT adoption and evaluation process and context of the firm case. Finally, section six summarizes the research findings and their implication.

E-BUSINESS ADOPTION IN SMES LITERATURE

Most recently, Parker & Castleman (2007) highlighted from their analysis of 120 SMEs-eBusiness journal articles from 2003 to 2006 that the extant literature in this area focused mainly on identifying adoption factors. The summary of factors reported as influencing factors or determinants of e-business adoption in some of the early articles is shown in Table 1.

| Authors | Technology | Size of case firm(s) | Factors |
|---|----------------------------------|----------------------|--|
| Cragg and King (1993) | Information System adoption/ use | SMEs | Owner's enthusiasm toward computing |
| Iacovou, Benbasat and Dexter (1995) | EDI adoption | SMEs | Perceived benefits Organisational readiness External pressure |
| Poon and Swatman (1997) | Internet adoption | SMEs | Perceived benefits |
| Poon and Swatman (1999) | Internet commerce adoption/ use | Small | Perceived benefits External pressure (business sector) Owner's enthusiasm |
| Mehrtens et al. (2001) | Internet adoption | SMEs | Perceived benefits Organisational readiness External pressure |
| Mirchandani & Motwani (2001) | E-commerce adoption | Small | Perceived benefits Owner/ top manager enthusiasm to the technology Compatibility of technology to the needs Organisational readiness (IT knowledge) |
| Windrum and Berranger (2002) | E-business adoption/ use | SMEs | Organisational characteristics Business nature Location Internal/ external expertise |
| Riemenscheider, Harrison and Mykytyn (2003) | Website | Small | Perceived benefits External pressure Technology complexity |
| Brown and Lockett (2004) | E-business adoption | SMEs | Application complexity |
| Fillis, Johansson and Wagner (2004) | E-business development | Small | Business characteristics Owner's attitude |
| Grandon and Pearson (2004) | E-commerce adoption | SMEs | Perceived usefulness Perceived ease of use Compatibility External pressure |
| Levy, Powell and Worrall (2005) | E-business adoption/ use | SMEs | Strategic Intent |
| Wymer and Regan (2005) | E-commerce adoption/ use | SMEs | Competitive pressure Perceived need Perceived value |
| Beckingsale, Levy and Powell (2006) | Internet adoption | SMEs | Customer pressure IT suppliers |

| Authors | Technology | Size of case firm(s) | Factors |
|---------|------------|----------------------|-----------------------------------|
| | | | Internal IT Owner/ top manager |

Table 1: Factors influencing IT adoption in organisations

It can be seen from these studies that most factors were derived from the innovation characteristics proposed in diffusion innovation literature (Rogers, 1995). Many papers identified similar factors ; however, some conflicting findings were presented. For example, while Riemenscheider *et al.* (2003) and Brown and Lockett (2004) found technology complexity one of the factors significantly influencing adoption, Grandon and Pearson (2004) found complexity an insignificant factor but confirmed organisational readiness as a significantly influential factor. In contrast, Mirchandani & Motwani (2001) reported organisational readiness as insignificantly influencing adoption. However, the reasons of such conflicts have never been well defined. One possibility could be that these studies were conducted with SMEs in different countries and industries and focused on different e-business technologies for varied purposes. Another interesting note made by Parker and Castle (2007) was that the prior literature tended to treat SMEs as homogenous group categorised only by size and industry, whilst overlooking social and family factors which can also influence the adoption decision.

On the whole, it can be seen that although the literature in this area is growing larger, the majority have concentrated on confirming and/ or disconfirming each other with little attention to explain the discrepancies. This paper therefore attempts to contribute to the gap by looking at the e-business adoption as a process rather than a sequential decision-type event, and by recognising the heterogeneity of SMEs

IS/ IT EVALUATION LITERATURE

IT/ IS evaluation is an area of continued interest for researchers and supports a dedicated journal (Electronic Journal of Information Systems Evaluation); the interest for practitioners, however, is less well understood. The broad problem of evaluation has been termed a 'wicked problem' (Brown, 2005). One of the main reasons for classifying IT/IS evaluation as problematic is the fact that it embraces a broad area including many activities such as determining project priorities, justifying IT investments, managing expected benefits and assessing the risks of the investments to ensure that firms achieve the planned benefits (Ward and Peppard, 2003). Currently, the research findings for IT/ IS evaluation pre and post implementation are diverse. No single evaluation technique or approach is perfectly matched with all types of IT investment (Serafeimidis and Smithson, 1996). The wide variety of findings may partially result from the wide range of information technologies of focus to the research (Smithson and Hirschheim, 1998; Remenyi *et al.*, 2005). Business sector mix is another factor which may account for the variety findings (Martins & Raposo, 2005).

Among various evaluation tools developed by prior studies, a number of researchers have recognised that most of them are traditional, accounting-oriented, cost-benefit based analysis, and these tools are too narrow to adequately evaluate IT/ IS (Farbey, Land and Targett, 1992; Hillam and Edwards, 1999). Responding to the inadequacy of existing evaluation methods, another school of thoughts about IT/ IS evaluation posits that IT evaluation is viewed as a socially embedded process involving formal and informal procedures where actors try to make sense of their situation (Serafeimidis and Smithson, 2000). The authors suggested that it is more insightful to consider IT/ IS issues from the perspective of organizational change. Considering IT/ IS evaluation as an organisational change activity, Brown (2005) also pointed out that the problem of change management and organizational culture should be taken in to evaluation as well. Positing that organisational context should be involved in IT/ IS evaluation studies, the research in this area therefore tended to suggest that the evaluation process itself involves many contextual factors, and therefore different types or purposes of IT adoption in different context require different evaluation approaches. Consequently, to better understand IT/ IS evaluation issues, IT/ IS stakeholders' views (Serafeimidis and Smithson, 2003; Beynon-Davies, Owens and Williams, 2004) as well as the dynamic new business environment resulted from the rapid growth of supply chain management, virtual enterprise and e-business (Gunasekaran, Ngai and McGaughey, 2006) should be taken into consideration in evaluation process. Besides, more attention has been paid on the dynamic changes going on in companies, raising the idea of evaluation having a continual nature in a sense that its context and content can be changed through time.

In terms of IT evaluation in SMEs, this is much smaller literature. Examples include the research by Love and Irani (2004) investigating (by a questionnaire survey) the approaches employed by 126 construction SMEs in Australia to evaluate their IT investments. Rivard *et al* (2005) who based their work on an SME survey sample of 96. Dans (2001) surveyed 1,700 spanish SMEs across business sectors to try to understand the relationship between firm's responsiveness to IT and the ability

to generate revenue. In these studies, one of the main problems of IT evaluation in SMEs is a lack of business and IS/ IT strategy (Ballantine, Levy and Powell, 1999; Love and Irani, 2004). Hillam and Edwards (1999), who looked at evaluation processes, is an example of case-based work, but the paper was based on a preliminary finding from only one case study, and the follow-up paper cannot be found. Recently, Costello, Sloane and Moreton (2007) attempted to review and categorise a number of evaluation frameworks or models in the IT/ IS area, and finally suggested that the use of a multi-framework is in need for all organisations as no single organisation has had or will have exactly the same business and IT/ IS components. Importantly, the author proposed that uncomplicated communication links in SMEs might allow them to a better position than large organisation in applying evaluation frameworks. To date, no previous research on IT evaluation of SMEs specifically in Thailand or developing economies has been found.

In general, the review of existing literature on e-business adoption shows that the studies of adoption factors are the majority, while little attention has been paid on understanding the adoption from the process perspective. A similar trend is found from the literature on IT evaluation; several evaluation methods have been developed from a rationalist view, and the social complexities underlying the judgement were neglected. Therefore, this paper agrees with the emerging school of thought, arguing that IT adoption and evaluation be viewed as a socially-embedded process, and thus attempts to take historical, social accounts into consideration of IT adoption and evaluation.

THE CONCEPTUAL FRAMEWORK

According to the objective to understand the adoption and evaluation decision-making processes holistically, the concept of appreciation (Vickers, 1965; Checkland and Casar, 1986) and the contextualism theory (Pettigrew, 1987) are reviewed and found highly relevant. The main idea of the contextualism theory is that research on organisational change should involve the continuous interplay between ideas about the context, process and content of change. Importantly, the organisational change should be linked to both intra-organisational and broader contexts (Walsham, 1993). It should not be understood as episodes divorced from the historical, organisational or economic circumstances from which they emerge. It is convinced that these historical stories are helpful in developing an understanding of how and why the IT adoption and evaluation processes are conducted in such certain ways. Subsequently, the concept of appreciation was brought in to aid an attempt to understand the decision-making process which affects and is affected by the history of a constantly changing and interacting flux of events and ideas.

Generally, the conceptual framework in figure 1 illustrates how IT/ IS adoption and evaluation processes are going on in a firm shape and are shaped by the internal and external contexts. It attempts to capture the dynamic of interwoven IT/ IS adoption and evaluation decision-making processes, carrying on in the firm which encounters ever-changing macro factors. The two-stranded rope depicts the on-going story of event and idea, interweaving and conditioning both its own future and the future of each other (Checkland, 2000). Herein, the macro context is the tourism industry, where events and ideas going on in the industry can affect and/ or be affected by factors like industry standards/ regulations, customers, firms in the industry (competitors of the firm of focal study), and available technologies. At the firm level, when one or more of the external factors are altered, it is likely that micro contextual factors (e.g. organisational structure, business model, goals, strategies, and roles of IS in firm) are then also affected. Again, the changed factors in the firm could affect the internal on-going events or ideas which will then directly or indirectly cause or change the need to adopt IT/ IS, the current uses of IT/ IS, or the outcomes. Importantly, it should be noted that the adoption and evaluation process is likely to continue but not necessarily has to be in a linear and continuous form. In other words, it could happen in a parallel line as shown by the dot-line boxes.

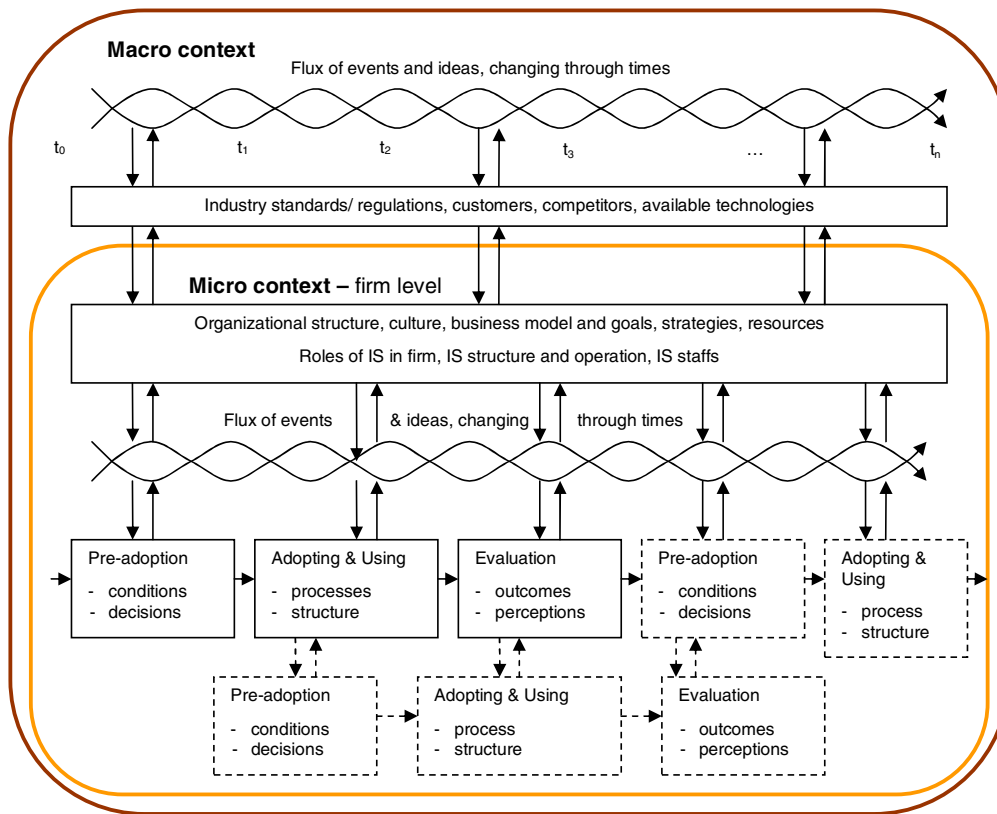


Figure 1. The conceptual framework of IT/IS adoption and evaluation decision-making processes within context

METHODOLOGY

As indicated in the literature survey above IT adoption and evaluation within SMEs from a process perspective has not been well researched. The aim of this study is to develop this understanding and in particular to establish a link between the context and process of IT adoption and evaluation. A key aim of the research is to assess the potential of a process based approach, in particular one based upon the concepts of appreciation and contextualism. In addition, this research considers the IT/IS implementation and evaluation a socially embedded process. From both these considerations, therefore, an interpretive case study was considered an appropriate research approach to study the IS evaluation process within its context and then selected as a main research method (Walsham, 1993; Smithson & Hirschhiem, 1998; Serafeimidis & Smithson, 1999, 2003). According to Yin (1994), case study method is a way of investigating an empirical topic by following a set of pre-specified procedures. Furthermore, the case study allows the researcher to understand the holistic and meaningful characteristics of real-life events such as organizational-focused Information Systems research; it also helps in building an evidence-based theoretical framework by providing the necessary details and richness of data required to support a broad and inductive model-building and testing process (Benbasat, Goldstein and Mead, 1987; Yin, 1994).

The single firm case in this study is a part of a larger body of an on-going research. The case selection is through a personal contact with the firm; the selection method was considered acceptable as the research wanted to direct to the firm which have been using e-technology to operate and/ or facilitate its business rather than email and static website. The selected company is

a medium-sized online travel agency, focusing on hotel booking. It provides online instant confirmation booking, accepts electronic payment and distributes booking confirmations, receipts and vouchers via e-mail. An in-depth case study was conducted with the company. Semi-structured interview was used as a main tool to collect data, involving viewpoints and interpretation of interviewees about how the adoption and evaluation occurred and went on in the organisation. Eight interviews, using semi-structured open-ended questions, were conducted with a Managing Director, a Business development manager, a Reservation manager, an IT manager, a Marketing manager, and some Reservation staffs. Mainly, the adoption story and the resulting changes in either back-end or front-end processes have been explored; additionally the managers were asked to identify the post-adoption impacts of the adopted technology. Besides, the reservation staffs (the main users of the adopted technology) were also asked to show and explain how they use the technology to facilitate their daily tasks, how they perceive the impacts or value of the technology as well as how their work has changed after the adoption. It is expected to gain a better understanding from the e-business adopters on how they are currently using the e-business technologies and being impacted by their e-business adoption. Also, it is designed to include the study of the pre-adoption decision in order to gain a holistic perspective of the adoption within its context, which is believed a better way to understand the IT evaluation in practice (Walsham, 1993; Serafeimidis & Smithson, 1999; Jones & Hughes, 2001). Notes are taken during the investigation and are summarised and written up after each interview. Other sources of data were from local e-business magazines, the company's websites, and informal phone calls. These additional data were considered helpful in enhancing dimensions of data as well as data validity. The conceptual framework (figure 1) was then used to interpret and construct the shape of the case story.

A CASE STUDY OF THAI MEDIUM-SIZED ONLINE TRAVEL AGENT ENTERPRISE

As mentioned earlier, this paper takes the point of view that IT/ IS adoption may be better understood as a process, frequently cyclical, rather than a sequential decision-type event. The section thus describes the linkage between IT/ IS adoption and evaluation from a process perspective. Key events which promoted or restricted the adoption and evaluation are applied as a way of telling and discussing the evolution of e-business adoption in the subject case. Effects and Changes in context, content, or process affected by particular event are then discussed.

The website and database adoption and evaluation

The process of IT adoption was started in 2000 right after the company's establishment. The small-sized IT house which had personal connection with the owner of the company was contracted to develop the website and link it to the database which was designed to contain all detailed information related to tour packages. The website was also required to link to e-payment gateway so that customers can pay online. The formal implementation process as well as project structure have never been established. The process as well as communications between the company and the IT house went on informally as both of them were small-sized business and thus only few people involved. It took approximately two years of collaboration between the company and the IT house. While the company wanted its website to be able to offer completed information of each particular tour package and allow its customers to select and combine their own tour packages, the IT house was small and quite new in dealing with such large project. The website and database was finished and launched around late 2002, and the next project was to develop back-office system to enable operational tasks in electronic format instead of paper format.

Contextually, it was the company's business model of being an online travel agent that determined operational processes as well as the direction of IT adoption. The goal was quite daring as from the point of view of a current Managing Director (MD, at that time was an assistance of the business development manager) the owner was an audacious entrepreneur. Besides, they were enthusiastic about the potentials of the Internet particularly for tourism industry. At the macro context, only few travel agencies in Thailand were offering online services at that time, whilst the tourism promotion was one of the main goals of the government as it usually contributed large amount of money to the country. A successful online travel agent like Expedia.com was also influential in shaping the company's business as well as IT/ IS strategies.

Clearly, the contents of the adoption, namely type of technology, scale, and design, were defined by the context, particularly the e-business model and the company's resources. At the beginning, the evaluation in term of return on investment was not in a plan as to the company developing the website and database was like building a storefront and inventory space. Thus, the outcomes (website with e-commerce features and database) were perceived as a contribution to business strategy and a company's infrastructure, and the post-adoption evaluation was aimed primarily for testing the completion and usability of the implemented technologies. The complexity in term of organisational change was perceived as low, since the company had started with the concept of implementing website and information system since its very first days with few staffs.

The online web development solution adoption and evaluation

After launching the website for selling tour packages for about a year, the slow growth of the company alerted the owner and the management to look for additional ways to generate revenues from existing capacities and resources, including knowledge. Consequently, in mid 2003 the company started to think of offering an online web developer solution and simultaneously building up an internal IT team by recruiting the three main programmers who were working in the previous project. These staffs were considered experienced in online travel business logic. In the macro picture, the online market in Thailand was growing bigger due to the higher penetration of the Internet, albeit in a slower rate than other developed countries. Website was widely implemented at least as a business brochure in many enterprises, not only the large-sized ones. As a result, the company was quite confident that their hosted web solution would be popular in the market.

The decision to implement hosted web development solution was made based on existing resources and simple evaluation of both macro and micro business situation mentioned above. To expand to offering the hosted solution actually required only few extra IT developments since the existing internal system already supported generating web pages which have the same template and also creating links to other pages. Overall, the owner was convinced by the managements about the ASP (Application Service Provider) concept. Plus, the expansion required little work and not much additional financial investment, while an initial expectation was to explore a new intriguing area of the online market and search for the best-fit e-business model for the company. In terms of process and structure, the implementation was again conducted in quite an informal basis. The managements worked closely with the IT staffs in defining requirements and user interfaces. The solution was developed according to the requirements taken from the informal discussion, and cyclical adjustments were made along the implementation process until the managements were completely satisfied. The evaluation process was not explicitly done since the company was still in an investing period, and the perception was that e-business is intriguing, but the company just has to find the right combination of products and services to offer. However, the expectation of the adoption was that the solution would be another service which could make money for the company. During the same period, the online back-office system was also built in parallel with the hosted solution but with the lower priority to better support operation tasks of selling tour packages which was at that time performed in stand-alone applications.

In term of content, the resulting technological and organisational changes were low in the viewpoint of the managements, including the owner. Again, the e-business model and the existing IT infrastructure accounted for such perception. The complexity in implementing the new solution was low as the company already had such solution but used it internally; therefore, the company only needed to adjust and implement some additional features so that the solution become more useful and attractive. The main evaluation condition was the increase of revenues. Nevertheless, for the back-office system, the expectation was a bit different. It was a long term plan that in the future the managements should be able to access into the internal system and work from home, whilst the operational tasks can be done effectively and efficiently with the help of IT. Partially, it was the company culture that new IT is usually beneficially and pleasantly facilitating its work in several ways.

The online hotel booking front and back end systems adoption and evaluation

In late 2004, the company discontinued the application services provided for other travel agents and refocused on building core competencies from its IT resources. The business was shifted once again to offering hotel booking due to the changing internal and external contexts. The reasons for the business change were threefold. First, the company later on perceived offering the web development solution as supporting other companies, which were probably doing business in the same industry and became competitors, to acquire similar IT resources to the company. Second, selling customisable tour packages was found time-consuming in that the company had to deal with many tour operators to close one order transaction. Third, the business development manager resigned, and the new manager (used to be an assistance of the business development manager) was keen more on hotel booking. Furthermore, the existing IT infrastructure, including website and database, can be easily adapted to support hotel booking, and it required less details and less time to close one booking order. At that time, the e-commerce in Thailand, according to the manager, became more active and not limited only within the tourism industry. Many online travel agents had also started up and penetrated into the market. The more active market, albeit a higher competition, was recognised as a good opportunity to expand along with the market. Therefore, so as to increase market share and revenues, the decision was to improve existing internal information systems to better serve future higher demands and implement features required for hotel booking transactions to expand to new potential market. Thus, the IT plans were 1) to adjust the existing database system as well as back-office system to support data relevant to hotel booking and 2) to further develop the back-office system to integrate vertical functions. Although the internal IT team did not have enough capacity, in-house development was a preferred choice. The main reason was that the system would encapsulate all details of transactions and support all internal activities, meaning that in-depth understandings of the business were important. In term of technological complexity, this project was not considered that it required highly complex technology; mostly it was more

about trying to understand details of new work flows and operations and implementing new or adjusting existing features. However, such work was considered complicated for IT team as there were many details to study in order to vertically integrate functions across departments. Full priority was advised to an IT manager to work closely with the MD and the operation manager for user requirements and system flows and designs. To the managements and the IT team, this project was a long term one which involved many details and persons. However, no formal documents for user requirements or system design were created; the new features were implemented based on an understanding of the IT team from discussions with the involved managements. Interface tests and usability tests were conducted by relevant managers and users.

Around mid 2005, the company acquired a small travel agency which owned a good reputation and had established a number of contracts with hotels in Thailand. As a result, the organisation grew from small size (no more than 50 employees) to medium size (more than 50 employees but less than or equal to 250 employees) with around 80 employees, and the organisational structure was adjusted to fit additional functions and products. After the acquisition, the IT team had to integrate the acquired IT system, including database into the company's existing system. This project was not optional, and the decision was that it had to be done as soon as possible. Again, the process and structure were informal, involving a few IT staffs, the reservation managers, and the MD. In this project, the evaluation in terms of usability and reliability of the system was extensively performed as the integration between two systems (existing one and acquired one) was considered important and complicated to the MD and the owner. Another project which was the important step of the company was the implementation of an online instant confirmation feature for hotel booking. The project was started not long after the acquisition, because 1) the number of strong contacts that the acquired company had was transferred, and it enabled the company to obtain room allotment; 2) the owner and the managements saw examples from successful large-sized online travel service companies like Expedia.com and were convinced in such concept. The project was regarded as online query into the company's database to check for availability and connection to payment gateway when booking transaction was completed. The expectation was that the instant confirmation feature will be an important strategic tool to enhance customers' confidence to book with the website and thus create higher revenues. Only a few months after launching the instant confirmation service the company recorded the highest revenue and it was almost double of the revenue before launching the service. The big jump of the revenue was appealing enough that the managements did not care much to evaluate other figures or returns.

In mid 2006, Organisation grew bigger and employed around 120 employees to serve the bigger business, but the IT team remained small with only five staffs. The online back-office system had been completely integrated vertical functions in the organisation and pulled together all data and transactions of every website operated by the company. The company enjoyed the growth, and focus was put on serving the increasing customers. The owner's ambition and confidence on the business also became stronger due to the remarkable growth evidenced very soon after the launch of real-time booking of hotel rooms. At the macro level, the competition in the global market became highly cut-throat, as many hotel chains had started to develop their own online booking system to cut down intermediary costs. Large-sized travel agents partnered with many proprietary hotels, car rents, etc; they also obtained an increasingly strong brand and larger network of customers. Even among the top large-sized online travel agents (i.e. Expedia, Travelocity, e-booker, octopus), the competition was extremely high, and they compete fiercely to penetrate into new markets in developing countries.

In response to the high competition in the global market and the company's strong aim for revenue growth (to cover up the investment lost during the first few years), the MD decided to focus more on e-marketing technology. Search engine optimisation concept and online advertising campaign with well-known search engines were employed. It was realised here that there was an attempt to select the best solution not for the particular situation and need but for the combination of internal social relation (e.g. the owner and the manager, the company and the external industrial context) and situational context. In this case, the best solution was probably to promote the company both via traditional offline and online media. However, it was the owner's preference not to use the offline media which he believed it was difficult to measure the result, while the return from advertising with online media can be measured by the number of clicks and their source. Subsequently, to evaluate the result of online advertisement campaign an online report feature was developed by internal IT staffs to include the tracking system of where the customers came from; the project, including users' requirements and interface designs was initiated by the MD.

A critical review of the evolution of e-business technology adoption and evaluation context and process

Adoption and evaluation context, content and process are closely linked. Macro contextual factors can impact micro (firm-specific) contextual factors, which in turn shape the events or idea related to or informing the adoption and evaluation. This can be seen several times in the case. In fact the company was influenced by successful business models of large-sized online travel agents since its very first days. The company always looks at how the large-sized agents utilises e-business technologies and then evaluates its own resources as well as situation to determine adoption plans. Macro economy is

another example of macro factor which can impact firm adoption decision as well as evaluation. When the overall economy was appealing and the Internet penetration was increasing, the company became more confident in expanding to offering online hotel booking, including further integrating back-end systems. Internally, micro factors such as firm size, business characteristics and limited IT staffs/ capabilities played an influential role in shaping these implementation and evaluation processes. To be more specific, the small size has allowed the company to move quite quickly in term of decision making and also easy to collaborate among teams (i.e. among managements or between managements and IT). Business characteristics, particularly the way all transactions done electronically online, shaped the requirements of each IT implementation project and facilitated the evaluation in a way that the company can easily track, query and compile transaction data from database when making any evaluation. Furthermore, it is important to take 'soft' issues into account when considering the context and process of adoption and evaluation. In many instances, the social relations within the company and the owner's characteristics are found relevant and underlying adoption choices. The preference for online advertisement is a clear example of owner's influence on adoption decision. Changes on business focus to be online hotel booking which in turn created requirements for more IT adoption are also a result of negotiating and influencing each other among the managements and the owner, particularly when the former business development manager resigned and the new manager who are more interested in online hotel booking can exert higher influence on other managements as well as the owners. This echoes Parker & Castleman (2007) that social relationships and other 'soft' issues are factors which help explain how and why one SME is different from another.

The content of technology such as type and capability can also influence the adoption and evaluation process. An example is the capability of the online advertisement tool which allows the management to track its return. This is of interest in two ways. First, the tool is available online in a web-based application model, with which the company is familiar, and therefore it positively influenced the adoption decision. Second, the feature, which allows the company to track its return from each online campaign, facilitates both adoption decision and evaluation process. By adopting this online marketing tool, the company can evaluate return from advertising easier than it could before with the capability of the tracking feature and without much further efforts. Generally, the example shows how the content links with adoption decisions and process outcomes.

Furthermore, the paper attempts to emphasise the cyclical nature of the IT adoption and evaluation processes. From the adoption and evaluation story delineated above, we can see how the adoption has evolved through times and how the post-adoption evaluation affected the ideas or events which in turn caused the need for further adoption. The adoption of online back-office system serves as a clear example. From the case, it can be seen that attempts to improve the back-office system were occurred repeatedly to make the system to better support the ever changing business and operational needs. This is because the post-adoption evaluation of the prior versions of the system had delivered feedbacks or even directly generated the need for further developments or other adoption (e.g. the need to adopt online marketing to penetrate higher to global market).

Considering only evaluation process, we can see that evaluation is actually conducted, albeit in an informal form, at most stages where decision-making involves. At the pre-adoption stage, the company evaluated firstly the business plan and then existing IT resources to determine IT strategy, specify type of technology to adopt, and consider how to implement. As the implementation went on, the designated manager evaluated that developing system/ function by working closely with the IT team about requirements, testing its usability and discussing with the IT team should any changes be required. Usability testing at the end of each project was also performed, but it was regarded as project sign-off rather than evaluation in term of value for money. For the post-adoption evaluation in term of money (return on investment), it was found in form of an on-going perhaps regular evaluation of business performances as to the owner and the managements all e-business applications and IT infrastructure were the investment which built the business capabilities. Looking at the benefits or values gained from the adoption, it can also be seen that the overall business capabilities are increasing, shown in Table 2. They are accumulated through times, making it difficult to evaluate pure return on investment of a particular IT adoption, and this is perhaps why the prior literature (for example, Brown, 2005) found IT evaluation problematic.

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|--|--|---|--|
| Website and Database (2000 – 2002) | Website and Database + Online web development solution (2003 – 2004) | Website and Database + Online web development solution + Online hotel booking front and back end systems (2005 – 2006) | Website and Database + Online web development solution + Online hotel booking front and back end systems + Online marketing and Online report system (2006 - 2007) |
| <ul style="list-style-type: none"> • Enable a business • 24-7 storefront | <ul style="list-style-type: none"> • A wider scope of business • 24-7 storefront • Increase revenue | <ul style="list-style-type: none"> • A wider scope of business • 24-7 storefront • Increase revenue • Competitive advantage (being able to offer instant confirmation) • Productivity (less time, less error, less paperwork) • Convenient (for reservation staffs) | <ul style="list-style-type: none"> • A wider scope of business • 24-7 storefront • Increase revenue (through more bookings gained from advertising) • Higher penetration into worldwide market • Convenient (for managements) |

Table 2: IT values accumulated through times

CONCLUSION AND IMPLICATIONS

The paper is part of a wider research programme set out to explore the e-business technologies adoption in Thai SMEs in the travel service sector, to understand the nature of the processes and how they are shaped by firms' specific contextual factors as well as external factors. To achieve the research objective, the prior literature on IT adoption and evaluation in SMEs was reviewed to understand the issues of interest to the researchers in these areas. Furthermore, the contextualism theory (Pettigrew, 1987) and the concept of appreciation (Vickers, 1965; Checkland, 2000) were reviewed and found helpful in understanding the nature of adoption and evaluation process. An in-depth case study was conducted to investigate the issues in the context of Thai tourism industry.

From a research perspective, the case study demonstrates the dynamic nature of organizations and some useful insights provided by an analysis of the e-business adoption using the conceptual framework. The proposed conceptual framework is found useful and appropriate. The paper supports the idea that adoption and evaluation should be viewed as two activities which link together closely and cannot be divorced from the context (Why so?) and content (What and how is it? e.g. quality, complexity, type, etc.) of each other. Referring to prior literature on interpretive IT evaluation, the case both conforms and challenges the literature. The adoption and evaluation story of the case supports prior interpretive studies in IT evaluation that its process is continuous in nature (Walsham, 1993; Serafeimidis & Smithson, 1999, 2003) and frequently cyclical. The degree of the importance of e-business technology to the company may well be one of the main factors influencing the cyclical nature of adoption and evaluation process. In other words, it is observed in this case that its adoption and evaluation process is cyclical and continuous, mainly because the company needs to keep up with strategic uses of e-business technologies in order to fully utilise the most appropriate technology to the right emerging needs and changing contexts. Furthermore, the case shows that the stakeholders' concerns (e.g. the owner's preference or believe, reservation staffs' comments) play an influential role in shaping the purposes and approach for adoption and evaluation (Serafeimidis & Smithson, 2003; Mcaulay & Doherty, 2002). However, the case does not conform to the finding of some prior literature that post-implementation evaluation is rarely done in practice (Farbey et al., 1999; Ward and Peppard, 2003). Rather, it was found

in this case that the post-adoption evaluation was always deliberately done in form of business performances, particularly revenues and quantitative criteria such as the number of incoming bookings, as for the company the investment in e-business technologies resulting directly in creating more services, wider reach, and higher revenues. It may well be that in an e-business enterprise where e-business technology adoption tied closely with business strategy, the e-business technology usually impacts directly to revenues and overall firm performance especially when it is adopted as a strategic tool of the company.

Nevertheless, the only one case study causes the limited capability to emphasise the importance of context and its influences on the process and content of adoption and evaluation. Thus, it should be noted that the findings and implications are only indicative based on an in-depth case study from a larger research programme. The paper does not generalise but seeks to map the findings on the IT adoption and evaluation literature and to serve as an example of how the process-based framework is appropriate for an investigation into e-business adoption and evaluation. Although the paper has been focused more on understanding adoption and evaluation story better through a process perspective, managers who are interested in e-business adoption can see from this case a holistic story of how e-business technologies are gradually adopted and adjusted to facilitate as well as enhance business. The future research is planned to include more case studies which encountered similar external contexts but obtained different internal contexts in order to better highlight the importance of context. It is expected that more cases can serve as comparisons of how varied contexts can differ the content and process of IT adoption and evaluation. Overall, this research contributes in particular to the interpretive IT evaluation research. The issues of e-technology adoption, application complexity, business value, and evaluation methods in the particular context of the Thai travel sector are also discussed throughout the adoption and evaluation story.

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