

EXAMINING THE EFFECT OF TOP MANAGEMENT COMMITMENT AND END USER PARTICIPATION ON STRATEGIC INFORMATION SYSTEM PLANNING (SISP) SUCCESS FROM SMEs PERSPECTIVE

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Abstract

Effective IS planning is crucial in line with the growing importance of Information System (IS) in most organizations. It ensures better alignment between the IS and strategic business objectives and ultimately lead to greater value of IS to an organization. Despite efforts to understand IS planning in large organizations, works needed to examine IS planning from small and medium enterprise (SMEs) perspective in view of its unique nature of operation and dominant roles played by its top management. Therefore, this research examines the effect of top management commitment and end user participation on IS planning success. Despite various attempts to improve the response rate, only 68 out of 1,500 Malaysian SMEs responded to the questionnaire survey distributed (4.7% response rate). However, only 31 firms reported IS planning activities which were later considered for hypotheses testing. Fitting the model using Partial Least Squares (PLS) demonstrates significant effects of both top management commitment and user participation on IS planning success with top management commitment reported stronger effect than user participation.

Keywords: *Strategic Information System Planning (SISP), Top Management Support, User Participation, SMEs*

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Background

The roles of IS/IT has been constantly evolving to reflect dynamic business environment. Consequently, greater organization's reliance on IS/IT demands for well-structured IS planning activities as to ensure more strategic IS/IT deployment (Blili & Raymond, 1993). IS planning refers to a process of identifying computer-based applications and technologies that potentially facilitate organization to execute its business plans towards achieving the business goals (Lederer & Salmela, 1996) as well as to support its current and future strategic needs (Carlson, 1979). The ultimate aim of IS planning is to enable greater competitive advantage via continuous alignment between IS and the organization's strategic goals (Basu et al., 2002).

In line with increased importance of IS/IT to most organizations and the essence of having effective IS planning, extensive works have been initiated from various contexts such as employees perception on

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IS planning success, determinants for IS planning success, and IS planning practices (for examples: Basu, Hartono, Lederer, & Sethi, 2002; Chi et al., 2005; Newkirk & Lederer, 2007). Nevertheless, most of the earlier works have examined IS planning success amongst large organizations (see for example: Chi et al., 2005; Newkirk & Lederer, 2007). Meanwhile, little efforts have been initiated to understand IS planning practice amongst SMEs. To illustrate, Levy, Powell and Galliers (1999) recommend Information System Strategies (ISS) model that reflects SMEs nature of the operation. Other studies noted that lack of IS planning, particularly on strategic alignment restricts SMEs ability to optimize IS/IT benefit (Levy & Powell, 2003; Garg & Goyal, 2012). Other studies further confirmed positive effect of strategic alignment on IS success and firm performance (Cragg et al., 2002; Hussin & Suhaimi, 2011). IS/ITT

SMEs deploy the IS/IT applications mainly to support their operational functions rather than to use IS/IT strategically (Schubert & Leimstoll, 2007). Owing to various constraints such as lack of top management support, limited IT knowledge or skills (Kurnia, Alzougool, Ali & Alhashmi & 2009; Lip-Sam, 2006), many SMEs have reported difficulties to realize strategic values of IS/IT. For better realization of IS/IT values, its applications must be diffused to wider aspects of the firm's operation. Having said that, IS/IT is now having more central roles in ensuring SMEs' survival (Garg & Goyal, 2012) and therefore more structured IS planning are greatly needed (Blili & Raymond, 1993). Effective IS planning facilitates firms to successfully adapt to highly dynamic business environment (Garg & Goyal, 2012).

By its nature, SMEs are well known for having limited financial resources and IS technical competencies (Thong, 2001). Idiosyncratic nature of operation further distinguishes SMEs' IS practices from larger organizations (Parker & Castleman, 2009). Moreover, active roles of top management and user participation are very much anticipated in the absence of necessary resources. With limited number of employees, the top management will be actively involved in most of the firm's operational and strategic decisions (Premkumar, 2003). Top management commitment also reflects successful IS projects involving SMEs (Devos, Landeghem & Deschoolmeester, 2012). Therefore, it is anticipated that, the extent of top management involvement ensures greater IS success (Scupola, 2009). In another respect, users' participation in IS planning is expected to be more extensive considering the small size of the firm. As such, IS planning will be more effective with active participation of the end users in the planning process (Raymond, Croteau & Bergeron, 2011).

Considering growing importance of IS/IT in one hand, and the challenges to embrace IS/IT strategically, on the other, it is therefore crucial to examine factors contribute to the strategic IS planning success in the context of SME sector. In view of limited empirical studies available, this study examines IS strategic planning on specific industry level, (in this case, from the context of SME sector). Specific focus on the effect of top management support and user participation portrays better insight on successful IS planning practice at the industry level. Moreover, constant changes of firm's strategy in responses to highly uncertain business environment demands for further investigation at the industry level (Gable, 2010).

This paper will be organized as follows. Next section illustrates the proposed research framework and hypotheses development followed by the description of research methods being employed in the third section. The fourth section discusses the results of the study while the last section provides conclusion and future research directions.

Research Model and Hypotheses Development

Top management commitment refers to top management awareness of, involvement in, and proactive advancement of strategic IS planning (Raja Mohd Ali, Mohamad & Tretiakov, 2013). Top management provides information about the organization's strategic direction and goals which serve as a basis to the strategic IS planning development process. Moreover, top management may be allocated to the planning process as a resource (Raja Mohd Ali, Mohamad & Tretiakov, 2013). In the

larger firm context, many firms have reported the significant importance of top management commitment. Premkumar & King (1994) have found that the resources (including top management commitment) affected strategic IS planning success. Meanwhile, Basu et al. (2002) found that senior management involvement affected the strategic IS planning success. Considering its size, top management of the SMEs tends to have substantial roles in most aspects of the firm decision, including IS/IT related matters (Thong, 2001). Based on this argument, this study asserts that:

H1: Higher levels of top management commitment lead to strategic IS planning success.

Apart of top management commitment, user participation affects strategic IS planning success because users provide information about the internal and external environment into the strategic IS planning process (Raja Mohd Ali, Mohamad & Tretiakov, 2013). In SMEs context, Thong (2001) further contends that active user involvement in any IS planning activity nurtures ‘sense of ownership’ among the users as the IS/IT is being developed in accordance with their requirements. Therefore, it is interesting to examine whether, the same prediction applies in SMEs environment. This argument leads to the second hypothesis:

H2: Higher levels of user participation lead to better strategic IS planning success.

Figure 1 illustrates the proposed research framework that reflect the objective of the study.

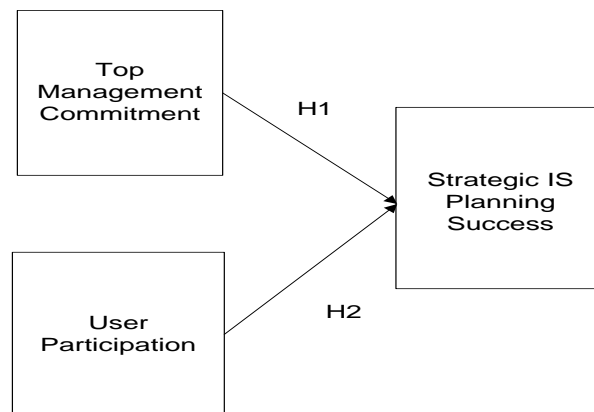


Figure 1: Research model

Methodology

The items employed in measuring each construct were adapted from previous literature. The strategic IS planning success and top management commitment constructs were measured by ten and seven items, respectively (Basu et al., 2002), whilst items representing user participation were measured by five items (Papke-Shields, et al. 200). The list of items for each construct is presented in Appendix A.

The proposed hypotheses were tested using cross-sectional data obtained through questionnaire survey of Malaysian SMEs. Based on National SMEs Development Council’s guideline, this study defines SMEs based on the number of employees (FTEs). This study, however, concentrated only on small and medium-sized firms.

The unit of analysis for this study was an organization. The respondent was the IS manager or other member of the top management. The list of SMEs was obtained from Federation of Malaysia Manufacturers (FMM) 2011 directory that provides the profiles of more than 2,000 FMM’s members. Nevertheless, taking into account the objective of the present study, only companies which fulfil the

SME definition were selected for sampling purpose. After removing micro firms and large firms, 1,500 firms remained for data collection purpose.

After series of follow up with the targeted respondents, a total of 68 responses were received. Nevertheless, only 32 responses were considered usable for hypotheses testing as another 36 responses reported no experience in strategic IS planning. However, their feedback will be considered for descriptive analysis purpose. The final response rate was 4.7% (68/1453).

Result and Discussion

Descriptive Analysis

Table I below presents the descriptive statistics of organizations that have and have not experience in the strategic IS planning development. The result suggests that even a small-sized companies do have their own strategic IS planning. This indicates certain level of awareness on the importance of IS planning among the SMEs. This is an interesting fact to explore further as in some cases, the top management of the SMEs do not even aware that they are informally conducting IS planning activities as their main focus on the financial implication rather than the strategic values generated from such investment (Thong, 2001).

Table I: Companies that have Experience in Strategic IS Planning Development

	Have Experience		No experience	
	n	%	n	%
Number of companies	31	46	37	54
Number of employees				
19 and below	3	10	7	19
20 to 49	5	16	11	30
50 to 149	19	61	17	46
150 and more	4	13	1	3

The study also shows that the larger the size of the organizations, the strategic IS planning is assumed to be of greater importance. As reported, from 52 (76%) of medium-sized firms, 24 firms (77%) do have experience in strategic IS planning. Contrastingly, out of 10 small firms, only three firms (10%) have reported to practice strategic IS planning. This is consistent with the fact that the larger the business, the more complicated the structure will be. Therefore, the need for IT support in various business functions increases in line with the size of the business. Consequently, the management needs to establish more formal and proper IS planning to ensure successful IS deployment.

Table II indicates more than half of the organizations (77%) reported to have more than five years of strategic IS planning experience. This suggests that most of the responding organizations had mature strategic IS planning processes.

Table II: Strategic IS Planning Experience (Years)

	n	%
0 to 4 years	7	23
5 to 9 years	11	36
10 to 14 years	4	13
20 years and above	4	13
No response	5	15

Meanwhile, as the data imply in Table III, most of the organizations (81%) reported that they outsourced the IS planning activities. Only 19% reported that they fully developed their planning in-house. Outsourcing the development of strategic IS planning were dominated by medium-sized organizations. To develop this planning, ones have to know the complete business process of the organizations. In small organizations, the decision maker (owner) dominates most of the decision and is well aware about the IT requirement of the business. In contrast, business processes of larger organizations are expected to be more complicated (Grover, Cheon & Teng, 1996). Thus, more

extensive preliminary IS planning works will be anticipated on assessing the IT requirement of the business. Apart from that, larger organizations tend to follow the resource–dependence perspectives where they tend to outsource certain components or functions which might include the strategic IS planning. Outsourcing the IS planning activities enable firms to concentrate on their core business.

Table III: Strategic IS Planning Experience

	n	%
Outsourcing		
0%	6	19
Between 0% to 20%	12	39
Between 20% to 40%	2	7
Between 40% to 60%	1	3
Between 60% to 80%	4	13
Between 80% to 100%	0	0

Measurement Model

For hypotheses testing, authors have employed Partial Least Square analysis (PLS). Table IV indicates the results of measurement model suggested a good validity and reliability of the constructs.

Table IV: AVE, Composite Reliability and Cronbach’s Alpha

Constructs	AVE	Composite Reliability	Cronbach’s Alpha	SISP Success	Top	
					Management Commitment	User Participation
SISP Success	.57	.99	.91	.76		
Top Management Commitment	.55	.89	.86	.65	.74	
User Participation	.55	.83	.72	.50	.35	.74

Structural Model

Meanwhile, the structural model in Figure 2 presents the results. The result suggests that both user participation and top management commitment affect strategic IS planning success. Comparing the effect of the direct determinants of strategic IS planning success dimensions, the effect of top management commitment was found greater than user participation (the path coefficients were .544 and .304, respectively). Overall, the model predicted about 51% of variance in strategic IS planning success as indicated by the R² values.

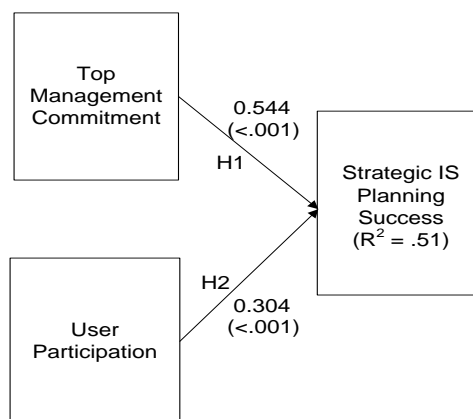


Figure 2. The results for the structural model.

The analysis demonstrated a strong relationship between top management commitments and strategic IS planning success. The relative importance of top management commitment in ensuring IS planning success seems consistent with other related studies involving SMEs (Ifinedo, 2011). This study further demonstrated a strong relationship between user participation and strategic IS planning success. The results were consistent with previous literature suggesting the importance of user participation in strategic IS planning (Premkumar & King, 1994; Chi et al., 2005).

Even though this study found that user participation affects strategic IS planning success, the effect was smaller compared to the effect of top management commitment. This might be because strategic IS planning is driven by top management and can be successful even without user participation. In case of SMEs, the employees (will be the users of the system) tend to be ‘generalist’ rather than ‘specialist’ with somewhat limited capabilities on IT-related fields (Thong, 2001). Hence, inadequate IT competency potentially restrains active employee involvement in IS planning of the firms.

Conclusion and Future Research

Evolution of IS turns to be a potential mechanism for improving business efficiency. Nevertheless, appropriate IS planning process becomes crucial to facilitate organizations in executing their business plans as well as to ensure the IS deployment is in alignment with their business objectives. Regardless of growing importance of IS planning in today’s business, focus has been extensively given on IS planning practice amongst large organizations with limited attempts to explore IS planning practice in SME sector. This study has initiated an investigation on the roles of top management and user participation as long as IS planning is concerned. The results provide insight that there is growing awareness on the importance of IS planning amongst SMEs. In another respect, this is an interesting fact to explore further as in some cases, the top management of the SMEs do not even aware that they are informally conducting IS planning activities as their main focus on the financial implication rather than the strategic values generated from such investment (Thong, 2001). Consequently, in depth investigation can be carried out to further assess SMEs perspective on IS planning.

In view of unique characteristics of the SME with respect to its nature of operation as well as organizational/managerial structure, this study have initiated an investigation on its current practice of IS planning. More specifically, the present study has reported the roles of top management and user participation as long as IS planning is concerned.

Feedback received from 68 firms provide insight that IS planning is quite relevant in the context of SMEs with about 46% of the firms, to some extent practice IS planning in their operation with medium-sized firms are more dominant in IS planning practices. The results further suggest that both top management and user participation play crucial roles in ensuring successful IS planning within the SMEs.

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