

Development of Strategic IS Planning: An Experience of Selected Malaysian SMEs

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Abstract: *Growing dependency on IT in business causes strategic IS Planning (SISP) is getting paramount. Despite extensive works that investigate SISP in large organisations, studies amongst Small and Medium-sized Enterprises (SMEs) are relatively limited. In view of unique nature of the SMEs, firms may not fully consider phases and approaches of IS planning as recommended in large organisations. Thus, this paper tries to gain understanding on the phases involved in developing strategic IS planning and its implementation strategy as practised by SMEs. A case study technique was employed to collect information with regards to objective of the study. Three firms located in Northern part of Malaysia have agreed to participate in the case study. These companies involved in three distinct businesses, namely manufacturing, printing services, and food and beverages. Findings suggest that companies practice different phases of SISP. While some companies adopt complete phases as recommended, others are more selective by merely consider phases that correspond to the most crucial issues the firms are dealing with. Furthermore, companies practise different approach in their implementation strategy. Despite diversity on the approached employed, the main aim of SISP in these firms remain i.e. to ensure that the chosen system/technology could assist the firms in meeting business objectives.*

Keywords: Strategic IS planning, SISP, SMEs, strategic, case study

1. INTRODUCTION

Dominating of more than 98 per cent of total established business, Small Medium Enterprise (SME) sector has been receiving special government's attention in formulating various national strategic plans. SME sector has been identified as one of the key enablers for promoting economic growth in the formulation of the 10th Malaysia Plan (10MP) and New Economic Model 2010 (NEM 2010). SMES are expected to strengthen their capabilities and capacities to embrace globalization and liberalization challenges. The SMEs need to be highly competitive and innovative to be able to become part of the global supply chain and to collaborate with giant business entities worldwide. Nevertheless, SMEs penetration into global competition has been relatively low as indicated by its export contribution.

As outlined in SME Master Plan, six major factors deserve special attention as mechanisms to enhance SME competitiveness

at global arena. These include human capital development, access to financing, market access, legal and regulatory requirement, infrastructure as well as innovation and technology adoption (SME Corp, 2011). To remain highly competitive and survive in their respective industry, SME is under great pressures to respond quickly to the changes surrounding their business. Thus, deployment of appropriate IT/IS, which include IS planning, would facilitate firms with right information at the right time. In response, the SMEs are now getting more dependent over IS to enhance their business effectiveness (Premkumar, 2003; Schubert & Leimstoll, 2007).

Information systems planning (IS planning) is a process of identifying an organization's portfolio of computer based applications and technologies that could help the organization's in executing their business plans and achieving their business objectives (Lederer & Salmela, 1996). Many researchers have highlighted the advantages of IS planning including identifying

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the appropriate applications, databases and technologies, increasing the communication between management and employees, and the IT people. Apart of it, IS planning also could assist the organisations in gaining competitive advantage.

The dependency of business towards the IS practices in their daily operations suggest the organisations to pay more attention on the IS planning. Ultimately, the aim of IS planning is to facilitate the achievement of the organisations business goals (Basu et al., 2002). Therefore, this paper aims to gain understanding on the phases followed by the SMEs in developing their strategic IS planning.

This paper proceeds as follows. In section 2, we describe our research methodology. Section 3 will discuss the research findings, authenticated with quotes from interviews. We conclude this paper with discussion and limitations in Section 4.

2. METHODS

We employed case study technique. Companies located at northern part of Malaysia that falls under the SME guideline were chosen as a targeted sample subject. After a few phone calls, only three companies agreed to participate in the study. The targeted respondent is firm's owner/manager whom is expected to have sufficient knowledge about the firm's strategic direction and IS operation. The three companies that agreed to participate are Company A (manufacturing company), Company B (printing company), and Company C (food and beverages service company).

A standardized open-ended interview method was utilized as it does not predetermine the answers and allow room for the participants to respond in their own terms (Berry, 1999). The questions were as follows:

- 1) *Please describe the activities involved in strategic IS planning at your organization? (Participants were given a set of activities/stages in strategic IS planning process before the interview sessions.)*
- 2) *Who acts as a champion of the strategic IS planning process?*

The sets of phases/stages were adopted from Newkirk, Lederer, and Johnson (2008) which include planning process, analysing the current environment, conceiving strategy alternative, strategy selection, and planning strategy implementation.

3. RESULTS AND DISCUSSION

This section elaborates and compares strategic IS planning that have been practiced by all the three companies. It was found that Company C practiced all the five stages of strategic IS planning, while the other two companies (Company A and Company B) ignore one or two of the suggested stages. Further, all companies examined have not practised any formal strategic IS planning development, where there is no formal team, no formal documentation and even no specific time to develop the planning as stated by Company A's owner:

"We will make a planning when we have to acquire the M [the technology]. We do not make planning for a year or two. When it is needed, then we will make them [the planning]."

(Owner, Company A)

In addition, he believed that there is no need to prepare a planning earlier as the technology growth faster that one can imagine.

3.1 Phases in Developing SISP

3.1.1 Planning

Planning is the first stage in strategic IS planning process. In this phase, the planner determines objectives and reasons of developing the strategic IS plan. It is to ensure that the top management aware and provide support to the planning initiative. The main reason given by the top management of why the strategic IS planning is developed is to solve specific issues that the companies faced. For Company A, the owner identified that they are facing issues related to human resource where most of the workers are elderly. He stated that the youngsters demand for high income as most of them are graduates. As the company also aims to reduce the amount of wages, decision on acquiring a new technology (robotic) with an anticipation that the numbers of workers in the factory may be reduced were taken.

In line with Company A, Company C also develops the planning when they are facing issues with one of their main activities namely the accounting activities. The respondent highlighted the need for a new accounting system as the existing system is no longer able to handle complete accounting functions in food and beverage (F&B) and to support Goods and Service Tax reporting requirements.

Even though this objective is in-line with Company A, which is to solve the issues faced, Company C planning does not involve any changes in business process as reported in Company A.

Unlike Company A and Company C where the issues arose to acquire a new IS or technology, Company B identifies the problems from the users perspective before embarking into any strategic IS planning. The manager asserted,

"... Normally we started with the users' requirements, try to identify the problem from the users itself, then to verify what their requirement we go back to them and suggest and try to get the agreement between both of top management and users what are the best system before we actually invest in the system."

(IS/IT Manager, Company B)

In sum, it could be seen that in a planning phase, only Company B embarked its planning process after taking into consideration feedbacks from employees. The other two companies started its planning process when the top managements encountered issues that likely to affect their core business function. Further, Company A's strategic IS planning involved changes in its main business process while planning for Company C only involved the advancement of current system without changing any business process.

4.1.2 Analysing

In this stage, the information regarding the current internal and external business and information systems (IS) were analysed.

The internal IS in Company C was analysed by looking at the weaknesses and incompatibilities of the IS with the business. The directors were alerted by the manager of any IS issues. The directors then asked the

employees to carry out survey and to analyse available software or applications in the market. Apart from market survey, the employees also investigated the applications used by other companies in the same industry. She then proposed several applications that might fit the company requirements.

Unlike Company C, Company B and Company A only analysed either the internal or the external environment. Company A analysed the supplier credibility and history background. On the other hand, Company B analysed the current information system to identify the real problem and later investigated and match with the users requirement. She said:

"After determining the use requirements, we will go to observe. We help the way they work, whether the system they request will really help them, than we counter propose. Why don't you do like that, than both party agree, than we draft the flow. Then like normal the water flow process is coding, user testing, than plan the date to go release."

(IS/IT Manager, Company B)

In sum, the three companies studied carried out the analysis phase ranging from analysing the internal IS by looking at the weaknesses and incompatibilities of the IS to the analysing the external parties by studying the supplier credibility and company history background.

4.1.3 Conceiving

One of the respondents did identify and evaluate the opportunities for improvements. He mentioned:

"If users find the problem with the system, users will raise the issue in the SRS Software Request Form. It is a way for the users to demand or request for changes or an improvement for the existing system. The users have to input the things that they want to improve as well as the reasons and then the users have to provide ROI because IT/IS manager may consider whether the time consume and monetary involvement is worth for the development. If is not worth, IT/IS manager may have to cancel the development."

(Quality System Engineer, Company B)

Additionally, Company C highlighted that before any decision were made, the company identified the major IS objectives which were to improve work efficiency, to adapt with current trend among companies in the industry and to grab the opportunity offered by the market.

As a summary, only Company B and Company C carried out the conceiving phase ranging from evaluating the opportunities for improvements and identifying the major IS objectives which were to improve work efficiency.

4.1.4 Selection

In this phase, companies selected the information systems and technology that needs to be acquired to assist them in meeting their business objectives. For Company B, the company selected the system to be developed based on how critical the effect of the system to the function of the production of the company. The selection do not only involve the IS only but IT architectures were also identified

For Company A, as the company only makes planning on acquiring a new technology when issues occurred, the selection process does not take place. The top management identified the specific technology that was considered to be the best solution to their knowledge. He asserted,

"The most important is I make the decision. I did discuss and inform the Board of Directors about the technology that I want to acquire."

(Owner, Company A)

Company C focused on systems that are able to solve current transaction issues in F&B and can also adapt with regulatory requirements. In many occasions, the respondent emphasized the importance of having a system that match with the nature of the business. The system must be able to produce reports as required by the top management. She mentioned that,

"If the directors want certain reports, the system must be able to produce it immediately and accurately. This

suggested system is very suitable with F&B".

(Account Executive, Company C)

In sum, the selection phase is based on the likely effect of the system to the functions of the company and the information system's ability to solve current issues. The budget also needs to be taken into account when selection was made.

4.1.5 Implementation

The implementation takes place after the selection process of the new systems or technology has been completed. Company B did follow the system development phase before implementation. She purported:

"Then, like normal the water flow process which is coding, user testing, than plan the date to release."

(IS/IT Manager, Company B)

In contrast, Company C applied a different approach. While in the process of migrating from the old system to the new system, they adopted parallel approach. Full system implementation will be conducted once the users completed their training and received appropriate support from the supplier. In sum, the implementation phase is varied between companies involved based on their needs.

The summary of all the stages involved in all companies participated is shown in Figure 1 below.

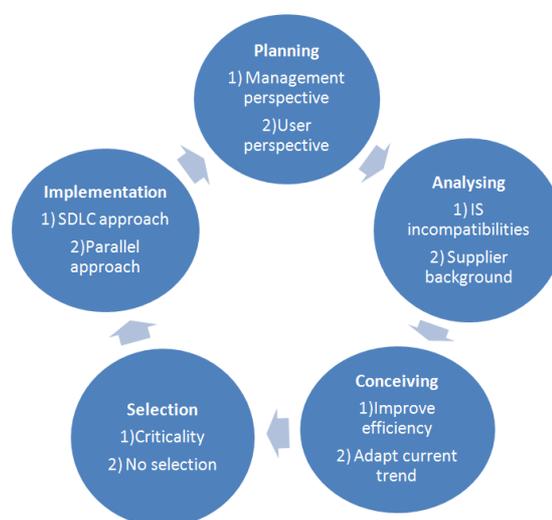


Figure 1: Summary of SIS Stages

In conclusion, as shown in Figure 2, companies practice different phases of strategic IS planning. Some companies do practice complete phases (Company B and C), while others only practise the phases that correspond to the organisations' issues.

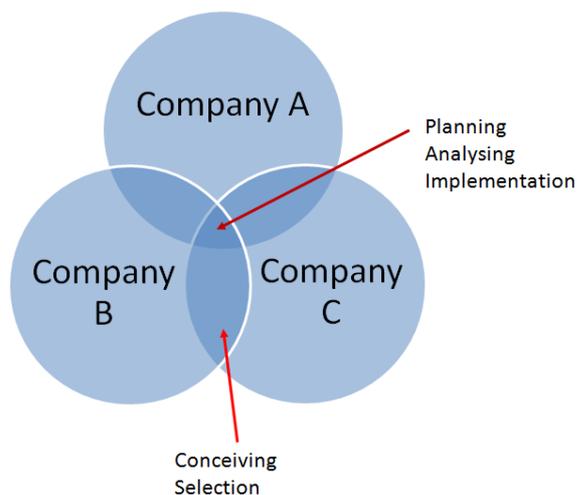


Figure 2: Summary of Stages Based on Companies Participate

Furthermore, companies practise different approach in their implementation strategy such as parallel approach and the system development life cycle approach. Despite varying approached being employed, the main aim is to ensure that the chosen system or technology could assist the organisations in meeting their business objectives.

4.2 The Manager- The Champion

Results from the three participated organizations suggested that the champion of the information systems planning is the top management, namely the owner (Company A), directors (Company C) and the information systems manager (Company B).

As the champion of this planning, the top management decides everything related to acquiring the new information system and technology. The owner asserted,

"Yes, I decides everything, including what to buy. The directors also do not know. I have many directors. What I want to purchase, I need to table (inform) everything in the meeting."

(Owner, Company A)

Even though the top management decides on what needs to be acquired related to the information systems and technology, in Company C, the assistance from the subordinates and colleagues are needed. The respondent from Company C claimed,

"In this informal SISP process, it is not a one player decision. He (the directors) will not make any decision if he is not influenced by others (subordinates, business friends and auditors)".

(Account Executive, Company)

Unlike the other two organizations, Company B's CEO provides authority to IT/IS manager in making final decision. She mentioned,

"Normally we just propose to our CEO. I, myself, will go and propose to our CEO which one to choose. Ultimately, I made the decision. He will give me his opinion if he found something which is not right."

(IS/IT Manager, Company B)

However, there were no formal IS planning team being formed in all companies. The players for the SISP were either the directors and the subordinates or the directors only.

Overall, it could be seen that the champion of the strategic IS planning ranges between the IS managers and the owners or the directors of the organization. Even some decisions were made solely by the directors, other organizations seeks an opinion and assistance from the subordinates and business colleagues.

5. CONCLUSION

This study investigated the phases followed by SMEs in Malaysia in developing their strategic IS planning. Strategic IS planning is important to ensure the alignment between the deployment of IS/IT and the strategic direction of firms. The phases include planning, analysing, conceiving, selection and implementation. While all the phases are equally crucial, not all SMEs deploying complete phases. One firm practices three phases only. Nonetheless, incomplete phase do not impediment the firm to deploy a system or technology that could assist them to meet their business objectives.

One possible limitations of the study is that only one firm represented each of industry examined. Differing characteristics and nature of operation of each industry may affect the result as the importance and the usage of the technology or information system differs from one industry to another. However, the qualitative nature of this study suits the objective to gain in-depth perception strategic IS planning phases as practiced in firms.

REFERENCES

- Basu, V., Hartono, E., Lederer, A. L., & Sethi, V. (2002). The impact of organisational commitment, senior management involvement, and team involvement on strategic information systems planning. *Information & Management*, 39, 513-524.
- Berry, R. S. Y. (1999). Collecting data by in-depth interviewing. Paper presented at the British Educational Research Association Annual Conference, University of Sussex at Brighton, September 2-5. Retrieved July 1, 2013 from <http://www.leeds.ac.uk/educol/documents/000001172.htm>
- Lederer, A. L., & Salmela, H. (1996). Toward a theory of strategic information systems planning. *Journal of Strategic Information Systems*, 237-253.
- Newkirk, H. E., Lederer, A. L., & Johnson, A. M. (2008), "Rapid business and IT change: drivers for strategic information systems planning", *European Journal of Information Systems*, volume 17, pp 198-218.
- Premkumar, G. (2003). A meta-analysis of research on information technology implementation in small business. *Journal of Organizational Computing and Electronic Commerce*, 13(2), 91 - 121.
- Schubert, P., & Leimstoll, U. (2007). Importance and use of information technology in small and medium-sized companies. *Electronic Markets*, 17(1), 38 - 55.
- SME CORP. (2011). SME Annual Report 2009/2010: Transformation to the new economic model. Retrieved from SME Corporation: <http://www.smecorp.gov.my>

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