

CHAPTER FIVE: DISCUSSION AND CONCLUSION

5.0 INTRODUCTION

In this final chapter, research objectives and the discussion of the findings are summarized. The results of correlation, regression analysis, pertaining to each of the two (2) main hypotheses that were tested in chapter four are examined to provide detailed remarks based upon the analysis of the research data. Finally managerial implications, limitations of the study and directions for future research are presented.

5.1 KEY FINDINGS – LEVEL OF WBSCM CAPABILITY AND PERFORMANCE

One of the objective of this study was to examine the level (score) of firm's WBSCM capability and their performance. It is found that the mean scores of all independent variables of web based supply chain capability range between 3.74 – 4.04. This indicates that overall web based capabilities in the firms are at moderate on a five-point likert scale. The moderate level of the infrastructure and other resources of web based supply chain management are available at moderate extent in the participating firms.

With regard to firm performance, the mean value of 3.88 on a five- point scale indicates that the firm performance for the last three years has been at somewhat moderate level and, one could judge that, it may increase too, because of great extent of sales volume in the participating firm with compare to their competitors. The findings of moderate extent and higher extent of sales and ROI with respect to profit margin in sales

further justified that firm's ROI increases with the increase of sales volume and profit margin on sales (Narver & Slater, 1994)

5.2 DISCUSSION FROM THE HYPOTHESES RESULTS AND FINDINGS

(RELATIONSHIP AND CAUSAL HYPOTHESIS)

This section emphasizes the key findings of the hypotheses testing done in this research. Based on the findings, discussion and comments are presented for the managerial and business implications in the next section.

5.2.1 Relationships between WBSCMS's capabilities and Performance

Analysis of the data resulted from the Pearson correlation analysis indicates that performance as it would be expected, significantly and positively correlated with the web based supply chain management, WBSCM Communication, WBSCM Commitment from Top Management, WBSCM Security of Data, WBSCM Training and Education, WBSCM Reliable Soft/Hardware. The results of the correlation analysis further suggest that performance is high if firm's WBSCM capabilities, WBSCM Communication, WBSCM Commitment from Top Management, WBSCM Security of Data, WBSCM Training and Education, WBSCM Reliable Soft/Hardware are at their higher extent in the firm.

As expected in hypothesis one (1a) through one (1e), there was a significant and positive relationship between the firm's performance and the five factors of WBSCM's capabilities. However correlation statistics reveals that, despite the relationship reported between five factors of WBSCM's capabilities and the firm's performance, commitment

from top management, data security and the training education of web based supply chain management seemed to be strongly associated with the firm's performance with relatively large coefficient values.

The findings of a strong positive relationship between WBSCM's capability and the firm performance such as data security of internet/intranet and performance were consistent with the previous studies (Zhu, 2004; Sander. & Premus, 2005). Similarly the result between training and education and commitment from top management (Ramayah et al., 2004), Supply chain IT capacity had direct influence on internal and external collaboration and information sharing of manufacturing industry and organizational performance could be significantly improved (Sander et al., 2005), and communication role (Sawfford et al., 2005)) also show consistent result with previous studies.

The result further suggests that training and education as one of the capability of WBSCM is crucial for not only implementation of the electronic supply chain but also, supports the effectiveness of the web based supply chain management. This factor further give insight of the organizational capability as the core function for organization development as managers perceive this function for the improvement of the process of web bases supply chain management systems in the firm. Therefore higher level of the training and education capability for electronic or web based supply chain management would certainly help shaping positive attitude and behavior among employees and will perform effectively on web based supply chain management.

Similarly, transforming data and transactions in web based supply chain management is also one of the capabilities as data security. This allows supply chain management to process all information securely for effective supply chain management

process such as sales transaction, inventory control, supply details and so on. The higher level of this capability must relate positively to the firm performance, using e-supply chain management. This study supports the hypothesis, that data security positively correlates the performance, indicates that higher the data security, it is highly likely that the firm performance would increase (Byrd & Davidson, 2003).

Commitment from top management is also considered as one of the capabilities of WBSCM system. In this study it is found that commitment to launch and implement the supply chain management is found at great extent in the participating firms. This factor of the WBSCM's capability is important and positively relates to firm performance, indicates that top management commitment for the web based supply chain management initiatives to implementation and their involvement is the key for successful web based supply chain management and would yield higher performance for the organization (Ramayah *et al.*, 2004).

5.2.2 Effect of WBSCMS's capabilities and Performance

A multiple regression analysis revealed that training and education is one of the crucial web based supply chain management capabilities that has influenced strongly and largely on performance, followed by top management commitment and data security. The correlation analysis for hypothesis one, indicates that all five dimensions of WBSCM capabilities are strongly and positively associated to firm performance. However this analysis did not give the whole idea that which factors among these capabilities are the stronger predictor to firm performance, multiple regression analyses reveals that training and education of WBSCM is the most strongest predictor to firm performance and

estimated nearly 75 percent variance on performance. This suggests that training and education is one of the key capabilities for web based supply chain management, which ensures the need for smooth and effective operations of web based supply chain management.

The involvement and persuasion of the top management for web based supply chain management training is vital (Narver & Slater, 1994). Since it affects directly to the success of the web based supply chain management system, knowing and understanding of all employees that how to run the web based supply chain management would result in effective WBSCM systems in the firm and enable organization to satisfy their customers and sustain them with the product and services being offered.

Top management commitment is also one of the success factors of the WBSCM and this also influence the performance of the firms. Nearly 6% variance on firm performance has been estimated by this factor, indicates that management commitment for their involvement, persuasion, understanding and implementation of the WBSCM yield positive result and implication to web based supply chain management the firm.

Finally data security of the WBSC has also influenced the performance by approximately 2 percent, though the predictor power of these factors is less, this further call for the improvement of this side of the WBSCM in the firm to ensure that information and transaction management of WBSCM is effective.

5.3 RESEARCH IMPLICATIONS

Using IT to construct competitive advantages and improve organizational performance has become a trend for the firms. The present study validates the web based Supply chain capability construct that has generally been poorly defined and about whose meaning there has been a high degree of variability in people understanding. Although some organizations have realized the importance of implementing SCM information system, they often do not know exactly what to implement, due to a lack of understanding of what constitutes a comprehensive set of Web based-Supply chain capability. By using a multi-dimensional, operational measure of the construct of web based-Supply chain capability, and by demonstrating its efficacy in enhancing organizational performance, the present study provides SCM managers with a useful tool for evaluating the comprehensiveness of their current SCM information construct. This study has shown that Web based-Supply chain capability forms five major dimensions of WBSCM capability. Through the analysis of the relationship of WBSCM's capability construct with Performance (Hypothesis 1 and 2), it was demonstrated that WBSCM's capability may directly impact organizational performance. Therefore, training and education, commitment of top management, data security, communication and reliability of software and hardware used in WBSC management are important capability for greater firm performance, when used WBSCM.

5.4 LIMITATIONS OF THE STUDY

The major limitation is related to the size of the sample that is (78) firms in manufacturing and service sectors.

The study gathered the data from the 78 firms in Kuala Lumpur only. Because of the small size of the sample, it highly likely that the findings of this study may not be generalize to entire industrial set up of Malaysian firms.

Self-administered surveys were used to collect data from the randomly selected sample population. One of the risks associated with this method was the involvement bias, because in quite a few occasions, the researcher involved in helping respondents to make them understand the questions asked, and therefore a bias may be generated in the process of collecting the information. Since the involvement of researcher's in responding questionnaire may influence respondent's selection of particular answers to the questions, therefore a caution must be taken before generalizing the findings of this study.

5.5 RECOMMENDATIONS FOR FUTURE RESEARCH

As the concept of SCM is complex and involves a network of companies in the effort of producing and delivering a final product, its entire domain cannot be covered in just one study. Future research can expand the domain of WBSCM's capability by considering additional dimensions such as planning and return process.

Future studies can also examine the proposed relationships by bringing some contextual variables into the model, such as organizational size and supply chain structure. For example, it will be intriguing to investigate how Web based-Supply chain

capability differs across organization size. It will also be interesting to examine the impact of supply chain structure (supply chain length, organization's position in the supply chain, channel structure, and so on) on Web based Supply chain capability and competitive advantage

An expanded study must include larger sample of Malaysian firms in both public and private sector for greater generalisability of the findings and implications.