Chapter: 5
Discussion and Conclusion
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DISCUSSION AND CONCLUSION

This chapter concludes the thesis. A brief discussion of the descriptive results on the current material procurement practices, the factors affecting adoption of E-Procurement, Mathematic modeling of factors affecting the adoption of E-Procurement and comparison of traditional procurement process with that of E-Procurement process is followed by in depth discussion of implication of the results of various models. Then, the chapter discuss its limitations, and presents suggestion for further research. The chapter ends by stating a conclusion for the whole thesis.

5.1 Current material procurement practices.

Although identifying the current material procurement practice adopted by the SME’s was not a major purpose of my study, the study collected data on the different tools or methods used for selecting the supplier, negotiating with the supplier, Issue of purchase orders, Issue of payments, Track the delivery of the material order and Way they organize their purchasing correspondence. The results pertaining to the main activities in a procurement cycle have been presented in the previous chapter. The following section discusses the key findings about the current material procurement practice adopted by the SME’s.

From the survey results, it is clearly shown that the selection of supplier is based on old records which are categorized under traditional ways of material procurement. The involvement in E-Procurement is relatively low. When it comes to negotiating with their supplier, the people are still using the traditional form of communication methods like Telephone and face to face negotiation. The usage of e-mail as tool by two hundred and forty-nine respondents for negotiation with their suppliers and fourteen respondents using electronic procurement software for negotiating with their suppliers indicates that the people are slowly moving towards the electronic form of negotiation.

e-mail has emerged as the most frequent used method for issuance of purchase order and also for tracking the delivery of material. Again, in case of issuance of purchase orders and track the delivery of material the tradition methods material procurement
are still widely used, but usage of e-mail by respondents is an indicator that company’s are aware of the benefits of electronic communication methods.

The last stage of the procurement cycle which is carried out by the finance department even here also the respondent are still using the tradition method i.e., cheque for issuing payments to their suppliers. Only forty five respondents (45) indicated that they are using Electronic Fund Transfer such e-banking to pay for the material purchased and twenty two (22) respondents indicated that they are using E-Procurement software to issue payment. Again, finding indicated that E-Procurement usage at this stage is low. While, two hundred and six (206) of the respondents are using paper based methods for organizing their purchasing correspondence and hundred and eighty three respondents relied on electronic based methods for organizing their purchasing correspondence is an indicator that company’s are slowly adopting electronic communication methods.

5.2 Factors affecting adoption of E-Procurement.

This section discusses the factors affecting the adoption of E-procurement. first, the section takes a high-level view of the result from the perspective of perceived value, trust on supplier and trust on Information Technology affecting the adoption of E-procurement by SME’s in India. Then, the implication of the results for the factors from the three context of perceived value, trust on supplier and trust on IT frame work are discussed one by one.

The R-squared of 0.658 implies that the three variables perceived value, trust on supplier and trust on Information Technology explain about 65.8% of the variance in the AEP. As depicted in Table 4.9, the Beta value for Trust on Supplier is the highest (0.425), followed by Trust on Information Technology (0.362). The Beta value for Perceived Value is the smallest (0.104) indicating that it has made least contribution.

5.2.1 Trust on supplier.

Among all the factors proposed, trust on supplier is the most significant driver for adoption of E-Proourement. Even though internet has opened a new mode of communication to establish and tighten relationship with their suppliers. But without
trust not even a small value of transaction would not have been done. The level of trust will be more when person on the other side of the trade is familiar. Factors like Contract liability concerns, Quality of product supplied, Quality of services provided and Fear of losing valuable proprietary and confidential information have greater influence on defining the trust between buyer and the supplier.

5.2.2 Trust on information technology.

Trust on information had the second highest influence on the adoption of E-Procurement. The poor security of the internet is one of the major reasons for people staying away from transacting on the internet. Trust on IT is greatly affected by the perceived risk level of using the technology. Among the six items that were used identify the importance of trust on information technology for implementing E-Procurement in the company. Legal legitimacy issues had the highest relative index value of 7.5 followed by internet security concerns with a relative index value of 7.19. From this it can be conclude that lack of strong laws and poor security of internet is greatly affecting the trust on information technology.

5.2.3 Perceived value.

Perceived value had the least contribution towards the adoption of E-Procurement. Some of the benefits that could be derived from the implementation of E-procurement include improved purchasing effectiveness, improved relationships with vendors, reduced inventory-carrying costs, effective and timely order fulfillment, improved service, better prices from key suppliers, and shorter order cycle time Gunasekaran, et al. (2009). Among the five factors that were used to measure the perceived value of implementing E-Procurement. Improves the competitiveness of the company had the highest relative index of 7.84 followed by enhances the company’s image in the market with relative index value of 7.39. majority of the respondents feel that by adopting E-Procurement they can not only enhance their competitiveness but also improve their image in the market.
5.2.4 Company strategy towards implementation of Electronic Procurement and factors hindering its success.

The respondents were asked about their Direction or strategy towards adoption of E-Procurement thirty five percent of them said that they are aware about the developments in E-Procurement and will commit major resources for the adoption of E-Procurement. Thirty percent of the respondents mentioned that they will invest selectively in this expensive business proposition until the best electronic procurement standards are identified. scarce use of electronic business by suppliers and On-going operating and maintenance cost are the major factors that hinder the adoption of E-Procurement.

5.3 Mathematical Modelling for maximizing the adoption of E-Procurement by SME’s.

Based on the information collected through survey and statistical analysis, weight ages were awarded to various parameters influencing the adoption of E-Procurement. A linear programming problem was formulated with objective function as maximization of the adoption behavior. The value of the objective function that is adoption of E-Procurement increases as the constraints perceived value, trust on supplier and trust on information technology move from least important to most important. It is also observed that the slope decreases as the constraints values are increased from least important to most important.

5.4 Simulation of the AS/IS model and TO/BE model.

AS-IS and TO-BE models are developed to represent the procurement system. The AS-IS model represents the traditional procurement process and the TO-BE model represents the E-Procurement process. Both the models are simulated for processing 100 orders with the same inter arrival rate. From this we can conclude that adopting E-Procurement there was 16% and 46% reduction in time and cost for processing 100 orders respectively.

5.5 Limitations of the Research Study.

The present study has the normal limitations of time and other facilities commonly faced by a single researcher. The scope of the study is focused on small and medium
scale industries in India and the survey is restricted to manufacturing industries in around Bangalore.

The conclusions arrived by the study are based on the responses for the questionnaires. Many of such responses are based on the perceptions of the people about the subject focused in the study. An attempt is made in designing the questionnaire that the target group easily understand the questionnaire and give response as near to the reality as possible. Since the perceptions vary from person to person, the study is limited to such perceptions expressed by the respondents.

The research relies heavily on the primary sources of data collected from the respondents. Although due care has been taken to ensure the accuracy of the primary data collected and it is possible that the respondents have intentionally or unintentionally misrepresented the facts or overrated or underrated a particular question. To that extent the accuracy of the primary data relied upon by this study has been affected which in turn affected the accuracy of the final outcomes. However such errors creeping in are negligible.

5.6 Suggestions for Further Research

A single individual responded on behalf of his/her organization. This may have resulted in inaccurate responses or bias, because the response was provided from an individual point of view and because a single individual may not be fully informed regarding the situation throughout the organization. Therefore, it is desirable that in future research, the findings of my study are validated by using information collected from multiple individuals representing different levels and roles for each of the participating organizations.

The survey is restricted to manufacturing industries in around Bangalore. The scope of study can be extended to other geographical areas of the country. Further to this comparative studies can be initiated amongst various geographical regions with in the country.

In this study statistical and regression analysis have been carried out. Further to this factor analysis and testing of hypothesis can be carried out.
5.7 Conclusion

Review of earlier literature it was found that study on adoption of E-Procurement by SME’s was carried out in other parts of the world, but similar studies were not carried out in India. So this study focused on understanding the current procurement practices and the factors affecting the adoption of E-Procurement by SME’s in India. Through the survey, it has been identified that implementation of E-Procurement in the process of material procurement is at a low level and still in initial stage. Also an attempt is made to investigate the factors affecting the adoption of E-Procurement by SME’s. It is found that determinants of E-Procurement adoption by SME’s include trust on supplier, trust on information technology and perceived value in the order of significance. The mathematical model is built to give a better picture of the relationship between the variables affecting the adoption of E-Procurement.

The research findings provide practical suggestion to various stakeholders. E-procurement has already proved its effectiveness in procuring goods and services needed for an organization. SME’s are aware about its strategic value and appreciate the potential impact on organizational performance, but they need to intensify their effort towards embracing E-procurement. The results of this study also provide valuable inputs to the software vendors for devising more effective and efficient promotional strategies. Trust on IT is one of the significant factors affecting the adoption of E-Procurement the software developers should not only enhance the security feature, but also demonstrate trustworthiness of transacting online.

Government an important stakeholder should design appropriate measures to encourage the adoption of E-Procurement. For example, governments through its various agencies conduct programs to build awareness about the benefits of E-Procurement. In summary, this study contributes to the existing literature by providing insight into the current procurement practices and how the following factors trust on supplier, trusts on information technology and perceived value affecting the adoption of E-Procurement by SME’s in India. Further studies can be carried out to examine the influence of other factors like culture, technology, organization and environment etc., associated with the adoption of E-Procurement.