CHAPTER 6: SUMMARY OF FINDINGS AND RECOMMENDATIONS FOR FUTURE RESEARCH

This chapter discusses
i. Summary of the research findings and conclusions made
ii. Contribution to practice
iii. Contribution to knowledge
iv. Contribution to society
v. Limitations of the research and
vi. Recommendations for future research

6.1 Summary of Findings and Major Conclusions

This research represents one of the first attempts to empirically investigate the relationship between Mckinsey’s Hard S’s, Soft S’s and Performance in the domain of Supply Chain Management and to test the relationship between Supply Chain Performance and Organizational performance with specific reference to Mckinsey’s Seven S framework in the Indian manufacturing industry context. It tries to address important questions like,

1. What are the key dimensions of Supply Chain Performance?
2. What are the key dimensions of Hard S’s in the context of supply chain performance?
3. What are the key dimensions of Soft S’s in the context of supply chain performance?
4. Which Hard S’s are associated with Supply Chain Performance?
5. Which Soft S’s are associated with Supply Chain Performance?
6. Are Hard S’s alone sufficient to achieve desired Supply Chain Performance?
7. Is Organizational Performance associated with Supply Chain Performance?

The answers to above questions were found out by assessing several relationships at construct and sub construct level. As stated in the literature review, empirical research in the domain of supply chain management is at its nascent state in Indian context. This is especially true for Indian manufacturing industry wherein the respondent organizations are well established players having substantial scale. Through this research, the researcher has
developed a model based on Mckinsey’s Seven S framework in the context of Supply Chain Performance. The developed research model has considered both Hard S’s (Supply Chain Strategy Perspective, Supply Chain Structure Perspective, Supply Chain Systems Perspective) and Soft S’s (Supply Chain Staff Perspective, Supply Chain Skills Perspective, Supply Chain Style Perspective and Supply Chain Shared Value Perspective) that are correlated with Supply Chain Performance and Organizational Performance of a firm. It is first time that an empirical study in the domain of supply chain establishing the importance of Soft S’s as the underlying parameter which explain the relationship between Hard S’s and Supply Chain Performance, is done in the Indian manufacturing industry context.

Below are the summarized findings for the entire study:

i. The first important finding validated the importance of Soft S’s in achieving supply chain performance. Through mediation model, it was observed that the Soft S’s act as a mediator between the hard S’s and Supply Chain Performance. This means that the relationship between hard S’s and Supply Chain Performance is driven by Soft S’s. In other words it’s the Soft S’s which make hard S’s work so as to achieve Supply Chain Performance.

ii. The second important finding of the research was that Supply Chain Strategy Perspective, Supply Chain Systems Perspective, Supply Chain Staff Perspective, Supply Chain Skills Perspective, Supply Chain Style Perspective and Supply Chain Shared Value Perspective all are significantly associated with Supply Chain Performance. Whereas Supply Chain Structure Perspective is not significantly associated with Supply Chain Performance.

iii. The third finding of this research empirically established association between Supply Chain Performance and Organizational Performance.

iv. The forth finding showed that there is a significant positive association between Composite Seven S Score (a representative of all the seven S’s in the context of supply chain management) and Organizational Performance. Thus validating the current concentration on supply chain and its performance in industry.

The other findings of this are research based on the qualitative data with subsequent descriptive statistical analysis. These are listed below.
i. For all the respondent organizations, long term relationship with their SCM partners (includes upstream i.e. suppliers as well as downstream i.e. customers) happens to be the topmost reason for which they would like their organizations to be known. This is closely followed by ‘delivers as promised’ (roughly translates to OTIF i.e. On Time IN Full, in SCM parlance) and ‘best value for money’. Thus these organizations’ efforts are directed in building long term relationships with their SC partners and at the same time they are also ensuring that they are responsive and efficient. The responsiveness precedes efficiency by a small margin clearly highlighting the rapid dynamism the industry has to cope with. Product innovations as a priority comes on the last spot. This might be due the fact that SCM Managers are not involved at strategic level when it comes to product innovations and their role is only limited to operational level i.e. execution.

ii. The most important leadership qualities for SCM function, i.e. domain knowledge, decisiveness and overall business understanding highlight the skills needed to tackle challenges in SCM as well as they indicate the ‘the must haves’ for SCM managers who aspire to take up leadership roles in their careers. Flexibility is the least important attribute as suggested by the result. This should not be confused with supply chain flexibility which in fact figures in top three attributes for which the organization would like to be known (delivers as promised). In the context of SCM leadership, flexibility is perceived as ability to change decisions. The fact that this attributes figures at the bottom might be due to end to end connectivity and visibility of supply chain. Majority of the responding organizations have this visibility and hence any change is immediately captured by the system and is corrected at the operational level (responsiveness). Major changes will obviously need SCM leaders’ intervention. If there are changes in major decisions then this might lead to supply chain bullwhip effect which the SCM managers are aware of.

iii. For most of the responding organizations, the supply chain length happens to be between 5 to 10 entities.

iv. Majority of the organizations feel that their SCM structures are tall. The benchmark invariably turns out to be IT firms as Pune also happens to be an IT hub. The thought process seems to be since SCM is a services function, should be as nimble as
possible and hence can be compared with IT. But the other side can be that, majority of these respondent organizations are run in a traditional way where the functional / divisional approach prevails rather than the process approach.

d. In terms of importance of seven S’s, the respondents have ranked strategy, systems and shared value much above others.

e. In terms of priority wise organizational objectives, the respondents have indicated customer satisfaction, cost reduction and overall profitability as the top three. These three have got a clear cut connect with supply chain in the sense, today market decides the price and supply chain performance decides the costs incurred in delivering the product and hence profitability. While doing so, it also has to ensure OTIF and needs to be flexible and accommodative thus ensuring customer satisfaction.

f. The most valued supply chain skills indicate a mix of execution skills (getting things done), business acumen (domain knowledge) and soft S dimension (ability to work with external agencies).

g. Clarity of objectives and alignment of organizational objectives with supply chain objectives are the most important shared values in SCM.

h. Supply chain by nature is end to end. While doing this research, it was often observed that various sub functions of supply chain like materials planning, purchasing, stores, inbound logistics, operations, outbound logistics were grouped under traditional functions.

i. A close look at the educational background of the responding SCM managers reveal that almost all of them (barring an exception of one or two) come from a technical background.

As a part of validation process, the findings derived from hypothesized relationships of this research were shared with three experts in the field of SCM. One, Ex-Director of an American Auto ancillary in India, who is currently working as an independent Supply Chain Consultant, the second a Director of an Indian subsidiary of European Projects
company and third, Ex-CEO of an Indian manufacturing company, who is currently closely working with CII\textsuperscript{16} and providing training to SCM professionals.

Below is the gist of their comments:

i. All the experts unanimously agreed to the findings that in SCM, it’s the Soft S’s which really drive the Hard S’s to achieve Supply Chain Performance. For any organization, people are the backbone and hence the skill, style and capability of people (staff) gets topmost weightage to reach any target / performance. It is through developing a conducive organization culture (shared value) an organization has to ensure that the other three soft S’s are utilized to its fullest. The hard S’s i.e. strategy, structure and systems ensure that the efforts are directed in the right direction and provide a framework / broad outline for execution. So in a way all the efforts put in by employees won’t be that beneficial to the organization as the desired outcome may not be achieved if they don’t have direction, execution outline etc. (Hard S’s). But it is equally important to note that the entire direction, execution outline etc. will only remain on paper if people don’t deliver (Soft S’s). People can make or break the organization. They further opined that, alignment between Supply chain’s goal and employee’s goal can only be achieved through Soft S’s. Dynamic situations will constantly force an organization and its supply chain to change and adapt which can only be done through effectively managing the Soft S’s. Change in mindset in accepting the changes in Hard S’s is only possible through Soft S’s. Thus Soft S’s are the factors that explain as to why Hard S’s impact Supply Chain Performance.

ii. Out of the seven S’s, six have shown significant and positive association with Supply Chain Performance. Whereas Supply Chain Structure Perspective is not significantly associated with Supply Chain Performance. The experts were divided over their opinion on association between Supply Chain Structure Perspective and Supply Chain Performance. The experts agreed that due to evolution in systems, day today routine decisions as well as jobs to a certain extent are taken care off by systems and hence to that extent the role of structure has diminished. They also pointed out that more and more outsourcing in manufacturing organizations have

\textsuperscript{16} CII: Confederation of Indian Industries is a professional body representing Indian Industry

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reduced the headcount even in SCM departments and to that extent the organization structures have now got less hierarchies as they had in the past and hence the linkage between SC structure and Supply Chain Performance is not getting established. Any organization comprises of human beings and these human Beings have to contribute as individuals & also in teams. When it comes to team, SC Structure comes into picture. Accountability as an individual is easily measurable in comparison to team performance & individuals are often rewarded for their individual contribution. Hence they opined that the fundamental premise of structures like grouping based on functions thereby ensuring economies of scale, ensuring decentralization (wherever needed), thereby improving speed to act / react, deciding who will do what etc. are still very much pertinent to Supply Chain Performance. They feel that structure in its format has evolved and will evolve in future too, but the need will still remain.

iii. Through third finding, research empirically established association between Supply Chain Performance and Organizational Performance. All the experts unanimously agreed with this finding reiterating that an organization which improves its supply chain performance also improves its overall performance.

6.2 Contribution to Practice

Through this research, a framework for supply performance based on Mckinsey’s Seven S’s was developed. The framework is reproduced in figure 6.2.1 below.
The framework highlights the importance of Soft S’s and incorporates the same within itself. An attempt was made to demonstrate the mediation effect played by Soft S’s in the relationship between Hard S’s and Supply Chain Performance. Further the proposed framework was validated by professional experts in the field of SCM thereby highlighting the applicability of the same.

The research also highlighted the role of systems as one of the most important S’s in SCM which is may be overshadowing the other hard S i.e. structure. Kaplan and Norton (2006) while explaining the problem of aligning structure with strategy opine that, “the conclusion from our work with hundreds of organizations is clear: organizations should abandon the search for the perfect structure. Instead they should choose a structure that is reasonably compatible with their strategy and which works without major conflicts, and should look to the systems to complete the alignment process”.

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In India, majority of the II\textsuperscript{nd} and III\textsuperscript{rd} tier partners both on upstream as well as downstream of the Supply Chain of a large scale organization are SMEs (Small & Medium Scale Enterprises). Hence, any framework which helps improve performance of end to end supply chain helps these partners too. Such gains are also helpful in enhancing overall livelihood standards of people connected with the supply chain thereby helping in boosting the country GDP.

Yet another advantage of improved supply chain performance of the parent organization (especially if it’s a MNC), to the partner firms is in terms of knowledge about the best practices. Many Indian SMEs who are part of Supply Chains of such MNCs have successfully transformed themselves by becoming supply chain partners at a global level especially on the upstream side through such knowledge acquisition.

The research thus highlighted the need for practitioners to focus on softer S’s. It also provided a glimpse into the priority areas and leadership attributes as perceived by the SCM professionals. The researcher feels that these findings will be of help to practitioners. The major outcomes of the research were shared with SCM practitioners and their comments on the outcomes are incorporated.

6.3 Contribution to Knowledge

First and foremost this research provides inferences based on a qualitatively valid and reliable instrument. The instrument developed for the purpose of this research captures the performance drivers for supply chain classified under the Mckinsey’s Seven S’s. Since a great deal of research is currently happening in the field of SCM, it is felt that this instrument will provide guidelines for researchers in the SCM area.

Secondly the study has come up with a framework for supply chain performance which is based on both hard S’s and soft S’s. Traditionally the supply chain performance was measured along the lines of hard S’s alone, lately a great amount of research has happened wherein other aspects like integration, communication, leadership style are also considered by researchers. This study augments such research and further helps in conceptualizing the softer S’s and their connection with supply chain performance.
Third, this research is unique in the Indian manufacturing industry, in the sense that it tries to study the supply chain performance and organizational performance and empirically test the relationship between the two for organizations of moderate size (sales ₹ 500 Cr and above). The previous studies in SCM domain dealing with supply chain performance, in Indian context have typically focused on SMEs and MSMEs. Thus this research adds to the body of knowledge of supply chain management by empirically establishing the relationship between supply chain performance and organizational performance.

6.4 Contribution to Society
As the number of entities involved in a supply chain are considerable, so are number of people employed throughout the supply chain. Any improvement in supply chain performance is going to be beneficial to generate more business for the organization thereby creating additional employment opportunities throughout the chain. Further, manufacturing organizations typically set up their bases in locations wherein they can easily develop their supply chains. With India’s focus once again shifting to manufacturing, the many Indian organizations are becoming a part of tier I & Tier II supply chains (upstream) of MNCs who are setting up their bases. If these Indian organizations’ are able to deliver on their promises, more and more MNCs will set their manufacturing operation in India, thus benefiting the entire country. This will be possible only if these Indian organizations are competitive. Improvement in supply chain performance can help achieve competitiveness. Hence the proposed framework through this research can help.

6.5 Limitations of Research
This research has built upon the past research by extending the supply chain performance study in Indian manufacturing industry. Although the research has contributed by establishing the importance of Soft S’s in achieving supply chain performance and proposing a supply chain performance framework, it also has some limitations. These are described below,

- First and foremost lack of a standard and comprehensive industry database for supply chain professionals acted as a big hurdle thereby hampering the sampling and overall response rate.
Second, the lack of trust from respondents about misuse of their responses and their perceptions about academic research also impacted in soliciting more number of responses.

Third, limited number of observations (31) posed a problem in the sense that revalidation of constructs could not be done. This limitation can be addressed in future research.

Fourth, in this research, the individual respondents were senior level executives from SCM, purchasing, materials, operations and logistics function. The respondents were asked questions which represented complex dimensions of SCM. However it was very rare that a single person from any of above functions was responsible for the entire supply chain operations. So the purchase professionals were more knowledgeable about the upstream issues whereas the logistics professionals were more knowledgeable about the downstream issues. This may have generated some measurement accuracy.

Fifth, the study was restricted to Pune Industrial belt which doesn’t cover certain manufacturing sectors like commodities (steel, copper, aluminum, cement etc.), chemicals, toys etc. The study covered sectors like auto, auto ancillary, engineering, projects, electrical and consumer durables, and this may limit generalizability of results to uncovered sectors. In future, research can be replicated to cover other sectors so that generalizability is further enhanced.

6.6 Recommendations for Future Research

The recommendations for future research are based upon the limitations which are discussed earlier.

First, the newly formed CSCMP India chapter which is trying to project itself as an apex body or recently formed CII logistics forum could be approached for getting the comprehensive list of supply chain professionals so as to get access to prospective respondent in huge number thereby improving response rate.

Second, more interaction between industry and academia will help develop mutual trust and then the industry might become more forthcoming in terms of responding to such research studies.
• Third, researchers in future can revalidate the scale developed for the purpose of this research by using similar reference populations. Such revalidation will help improve generalizability for this instrument.

• Forth, future research may explore in soliciting multiple respondent response to take care of intra/inter organization wide inaccuracy. Thus utilizing multiple respondents from different functions (purchase, logistics, materials etc.) within SCM will enhance reliability of findings. With sufficient sample size, future research can also do factorial analysis thereby comparing multiple sectors against each other so as to understand the differences if any across sectors. This will also help improve the overall generalizability of the study.

• Fifth, the uncovered sectors could be targeted in the future research and the study be replicated so as to understand the differences if any in the findings.

• Sixth, future research can also think conducting the research not limited to focal organization by including the other upstream and downstream SCM partners and thus enhancing scope of current research.