## CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

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CHAPTER 5
CONCLUSIONS AND RECOMMENDATIONS

This research related to a study of supply chain management practices in select engineering units of Gujarat revealed several findings relevant to the industry and academics. The detailed findings based on survey of 44 companies (8 Large Scale, 12 Medium Scale & 24 Small Scale) and financial analysis of these companies has been presented in the previous chapter. Based on this findings and analysis, several conclusions have been drawn and presented in the following section.

5.1 Concluding Notes

During our survey through the questionnaire we have asked the questions to the respondents in the three phases as per following:

1) Details of company and respondents
2) Issues and challenges
3) Perception of about SCMs performance

The response which we had received from the respondents and the conclusion of the same is as per following:

5.1.1 Issues and Challenges

1) The respondents were asked about the implementation of the SCM in their organization. The conclusion of the response is that in the large scale companies out of the samples taken all the companies are more interested to implement the SCM practices. In Medium and Small scale companies out of the samples taken more than 50% of the companies have implemented the SCM practices. Thus, it may be concluded that the implementation of the SCM have no association with their scale of operations.

2) The respondents were asked for the probable objectives/reasons for the implementation of the SCM practices which are concluded as per following:

2.1) The study revealed about the increase in turnover by the implementation of the SCM. By going through the results of the analysis it is proven that majority of
the companies give importance to the implementation of SCM for the increase in the annual turnover. It is concluded by showing the results that the SCM have no association with their scale of operations.

2.2) It was also asked to the respondents that increase in market share by the implementation of the SCM. Overall results of the analysis shows that small and medium scale companies are not giving importance in increasing market share due to the implementation of the SCM where as large scale companies are giving much importance to the implementation of SCM for the increase in the market share. Thus, we can say that the implementation of the SCM have an association with their scale of operations.

2.3) It was discussed with the respondents that increase in export potential by the implementation of the SCM. Analysis of the results shows that the small and medium scale companies are not giving importance in increasing export potential due to the implementation of the SCM where as large scale companies are giving much importance to the implementation of SCM for the increase in the export potential. It may be concluded that the implementation of the SCM have an association with their scale of operations.

2.4) The respondents were asked at the time of personal interview about the increase in quality of the product by the implementation of the SCM. Scrutiny of the data shows that the small scale companies are giving much importance to the implementation of SCM where as medium and large scale companies are not giving much importance to the implementation of SCM for the improvement in the quality of the product. In the large and medium scale companies all the systems are well set and they are not relying only on the SCM for betterment of the company performance. Thus, we can say that the implementation of the SCM have no association with their scale of operations.

2.5) The study revealed about the improvement in working system/operating style of the company by the implementation of the SCM. The results of the analysis show that all the companies are equally interested to improve the working system/operating style by the implementation of the SCM. It is concluded by showing the results that the SCM have no association with their scale of operations.
2.6) It was also asked to the respondents that the reduction in rejection rate during the processes with the help of the implementation of the SCM. Overall results of the analysis shows that the small and medium scale companies are giving more importance to reduce rejection rate than large scale companies based on SCM implementation. Thus, it may be concluded that the implementation of the SCM have no association with their scale of operations.

2.7) It was discussed with the respondents that increase in the productivity of the labour with the help of the implementation of the SCM. By going through the results of the analysis it is proven that the small scale companies are giving much importance to increase productivity of labour on the basis of SCM implementation. Whereas large scale and medium scale companies are not giving much importance to improve the quality of product based on SCM implementation. We can conclude from the above results that the implementations of the SCM have no association with their scale of operations.

2.8) The respondents were asked at the time of personal interview about the increase productivity of the machines with the help of the implementation of the SCM. The results shown in the analysis that the small scale companies are giving less importance to increase productivity of machines in compare with large and medium scale companies. It may be concluded that the implementation of the SCM have no association with their scale of operations.

2.9) The respondents were asked about the reduction in customer complaint with the help of the implementation of the SCM. Scrutiny of the data shows that the small scale companies are giving less importance to reduce customer complaints on the basis of SCM implementation. Whereas large scale and medium scale companies are giving much importance to reduce customer complaints based on SCM implementation. Thus, we can say that the implementation of the SCM have no association with their scale of operations.

2.10) The study revealed about the qualification as a preferred vendor for the buyer companies who are demanding SCM implementation in the company. Overall results of the analysis shows that the small and medium scale companies are giving less importance to qualify as a preferred vendor for buyer companies
who demands implementation of SCM. Whereas large scale companies are giving much importance to qualify as a preferred vendor for buyer companies who demands implementation of SCM. It is concluded by showing the results that the SCM have no association with their scale of operations.

2.11) It was also asked to the respondents about the increase in customer satisfaction with the help of the implementation of the SCM. By going through the results of the analysis it is proven that the large and small scale companies are giving more importance to increase customer satisfaction on the basis of SCM implementation. Whereas medium scale companies are giving less importance to increase customer satisfaction based on SCM implementation. Thus, it may be concluded that the implementation of the SCM have no association with their scale of operations.

2.12) It was discussed with the respondents about the assurance in continuous improvement in the operating procedure with the help of the implementation of the SCM. Scrutiny of the data shows that the small scale and large scale companies are giving more importance and medium scale companies are giving less importance in continuous improvement in the operating procedure with the help of implementation of SCM. Thus, we can say that the implementation of the SCM have no association with their scale of operations.

2.13) The respondents were asked at the time of personal interview about the reduction in the cost of production with the help of the implementation of the SCM. The results of the analysis show that the large scale and small scale companies are giving more importance to reduce cost of production on the basis of SCM implementation whereas medium scale companies are giving less importance to reduce cost of production based on SCM implementation. It may be concluded that the implementation of the SCM have no association with their scale of operations.

2.14) The respondents were asked about the boost up the morale of the employees with the help of the implementation of the SCM. Analysis of the results shows that the medium scale companies are giving more importance to boost up morale of employees on the basis of SCM implementation whereas large scale and small scale companies are giving less importance to boost up morale of
employees based on SCM implementation. Thus, we can say that the implementation of the SCM have no association with their scale of operations.

2.15) The study revealed about the improvement of the cooperation between departments / functional areas with the help of the implementation of the SCM. The results of the analysis shows that all the companies are equally interested and giving more importance to improve co-operation between departments / functional areas on the basis of SCM implementation. It is concluded by showing the results that the SCM have no association with their scale of operations.

2.16) It was also asked to the respondents about the improvement of the coordination between departments/functional areas with the help of the implementation of the SCM. Overall results of the analysis show that all the companies are equally interested and giving more importance to improve co-ordination between departments / functional areas based on SCM implementation. We can conclude from the above results that the implementations of the SCM have no association with their scale of operations.

3) It was discussed with the respondents about the current growth rate based on the operational activities, tactical activities and current programming strategies with the help of the implementation of the SCM. By going through the results of the analysis it is proven that the small scale industries are giving more weightage to operational activities for the current growth rate in compare to large and medium scale companies. Thus, it may be concluded that the implementation of the SCM have an association with their scale of operations.

4) The respondents were asked at the time of personal interview about the problems faced for taking care of the raw material with the help of the implementation of the SCM. Analysis of the results shows that the small scale companies are facing more problems than the large scale and medium scale companies. Out of 24 small scale companies 16 companies are facing the problems during the evaluation of defective raw material. It may be concluded
that the implementation of the SCM have no association with their scale of operations.

5) The respondents were asked about the any case recorded by the supply chain department in which production department complained late delivery of raw material with the help of the implementation of the SCM. Overall results of the analysis show that there is no association between the issues and challenges and scale of operation. All the companies irrespective of their scale of operation face the similar issues and challenges related to the implementation of SCM. Thus, we can say that the implementation of the SCM have no association with their scale of operations.

6) The study revealed about the delivery activity of the departments with the help of the implementation of the SCM. All the companies are agreed that after implementation of SCM the delivery rate is good. It is concluded by showing the results that the SCM have no association with their scale of operations.

7) It was also asked to the respondents about the resistant of the employees for the implementation of SCM software’s in company. By going through the results of the analysis it is proven that for implementation of SCM employees resistant is there in small, medium and large scale companies. It may be concluded that the implementation of the SCM have no association with their scale of operations.

8) It was discussed with the respondents that what they think about the importance of SCM in their organization. Analysis of the results shows that the small scale companies are not giving important for implementation of SCM. Conclusion of the above is that the implementations of the SCM have an association with their scale of operations.

9) The respondents were asked at the time of personal interview about the challenges faced by the companies at the time of improvement of SCM. Scrutiny of the data shows that expectations of the customer’s are going up and due to that small scale companies are willing to improve the processes and
also all the companies have big financial challenges in installing the new software’s and the trainings for the same. We can conclude from the above results that the implementations of the SCM have no association with their scale of operations.

10) The study revealed about the issues that they face as they tried to implement/improve SCM practices. It was found that faced following major issues:
   
   i. Number of locations
   ii. Flow of materials
   iii. Product design
   iv. Scheduling
   v. Routing

   It is also revealed that firms, irrespective of their scale of operations, face all these issues. Thus, it may be concluded that the issues faced by the firms related improvement or implementation of SCM practices have no association with their scale of operations.

5.1.2 Perception of About SCMs Performance

11) It was also asked to the respondents about the perception to implement of SCM in their organization. The results of the analysis shows that the majority of the companies of the three scales are thinking to implement the SCM by developing their own employees by giving in house training and workshops. Thus, we can say that the implementation of the SCM have no association with their scale of operations.

12) It was discussed with the respondents about the perception of the resources in supply chain department. Results of the analysis show that the management perception towards training is more in all the three scales of the companies. Conclusion of the above is that the implementations of the SCM have no association with their scale of operations.
The respondents were asked about the perception of the effectiveness of SCM department on the basis of the current programs in the organization. Results of data show that effectiveness of SCM is good and there are chances of improvement. It is concluded by showing the results that the SCM have no association with their scale of operations.

The respondents were asked at the time of personal interview about the perception of the usefulness of SCM practices in your organization. Scrutiny of the data shows that the SCM practices are useful in the development of their company. It may be concluded that the implementation of the SCM have no association with their scale of operations.

The respondents asked about the perception that the extent of the increased documentation while implementing SCM practices in the organization. By going through the results of the analysis it is proven that for the implementation of the SCM documentation are of moderate level. Thus, we can say that the implementation of the SCM have no association with their scale of operations.

The study revealed about the perception of the extent of cost incurred in implementing the SCM is justified. Analysis of the results shows that for the implementation of the SCM cost incurred is of moderate level. Conclusion of the above is that the implementations of the SCM have no association with their scale of operations.

It was also asked to the respondents about the perception of the customer complaints as a part of non conformity. Scrutiny of the data shows that they treat the customer complaint as non conformity and the results were recorded in all the three scales of the companies. We can conclude from the above results that the implementations of the SCM have no association with their scale of operations.
18) It was discussed with the respondents about the perception that the focus in continuous improvement in process and environment. The results of the analysis shows that all the three scales of the companies are well aware in continuous improvement of the process and environment. Thus, we can say that the implementation of the SCM have no association with their scale of operations.

19) The respondents were asked at the time of personal interview about the perception that they have set different objectives at different levels of the organization including those at individual level. Results of data show that the objectives of the companies are different but they are willing to implement the SCM practices successfully and work efficiently in their companies. It is concluded by showing the results that the SCM have no association with their scale of operations.

20) The respondents were asked for the perception about the implementation of SCM system in their organization which are concluded as per following:

20.1) The study revealed about the perception of increase in the market share due to the implementation of SCM in the organization. The results of the analysis shows that by implementation of SCM market share of the company increased moderately. Thus, we can say that the implementation of the SCM have no association with their scale of operations.

20.2) It was also asked to the respondents about the perception of increase in the turnover share due to the implementation of SCM in the organization. Results of analysis show that by implementation of SCM turnover is increased moderate and somewhat. Conclusion of the above is that the implementations of the SCM have no association with their scale of operations.

20.3) It was discussed with the respondents about the perception of improvement in export orders due to the implementation of SCM in the organization. Results of data show that by implementation of SCM export orders of the company increased moderately. It is concluded by showing the results that the SCM have no association with their scale of operations.
20.4) The respondents were asked at the time of personal interview about the perception of any improvement in quality of products due to the implementation of SCM in the organization. Scrutiny of the data shows that the quality of the products increased moderate to somewhat. Thus, we can say that the implementation of the SCM have no association with their scale of operations.

20.5) The respondents were asked about the perception of any improvement in working system/operating cycle due to the implementation of SCM in the organization. By going through the results of the analysis it is proven that by implementation of the SCM working system of the companies have somewhat improved. It may be concluded that the implementation of the SCM have no association with their scale of operations.

20.6) The study revealed about the perception of reduction in rejection rate due to the implementation of SCM in the organization. Analysis of the results shows that by implementation of the SCM rejection rate is somewhat reduced. Conclusion of the above is that the implementations of the SCM have no association with their scale of operations.

20.7) It was also asked to the respondents about the perception of increase in the productivity of the labour due to the implementation of SCM in the organization. Scrutiny of the data shows that the productivity of the labour increased moderately by implementation of the SCM. We can conclude from the above results that the implementations of the SCM have no association with their scale of operations.

20.8) It was discussed with the respondents about the perception of increase in the productivity of the machines due to the implementation of SCM in the organization. The results of the analysis shows that the productivity of the machines increased by implementation of the SCM. Thus, we can say that the implementation of the SCM have no association with their scale of operations.

20.9) The respondents were asked at the time of personal interview about the perception of reduction in the customer complaints due to the implementation of SCM in the organization. Results of data show that by implementation of
SCM there is reduction in customer complaints. It is concluded by showing the results that the SCM have no association with their scale of operations.

20.10) The respondents were asked about the perception of increase in the number of orders from the customers for which the supply chain is a prerequisite. Results show that demand of the implementation of SCM in organisation is increased and for getting the orders it is prerequisite for the SCM implementation. Thus, we can say that the implementation of the SCM have no association with their scale of operations.

20.11) The study revealed about the perception of any improvement in customer satisfaction due to the implementation of SCM in the organization. Scrutiny of the data shows that customer satisfaction is improved after the implementation of SCM practices in the organisation. Conclusion of the above is that the implementations of the SCM have no association with their scale of operations.

20.12) It was also asked to the respondents about the perception of any experience in continuous improvement in the work processes due to the implementation of SCM in the organization. The results of the analysis shows that by implementation of SCM practices work processes is improved with lesser time and due to that delivery of the material with good quality is increased and due to that customer satisfaction is also increased. We can conclude from the above results that the implementations of the SCM have no association with their scale of operations.

20.13) It was discussed with the respondents about the perception of any reduction in cost of production due to the implementation of SCM in the organization. Analysis of the results shows that by implementation of SCM practices over all product cost is reduced. It may be concluded that the implementation of the SCM have no association with their scale of operations.

20.14) The respondents were asked at the time of personal interview about the perception of any improvement in the morale of the employees due to the implementation of SCM in the organization. Results of data shows that by implementation of the SCM practices in the organisation morale of the
employees is increased. Thus, we can say that the implementation of the SCM have no association with their scale of operations.

20.15) The respondents were asked about the perception of improve cooperation between departments/functional areas due to the implementation of SCM in the organization. The results of the analysis shows that by implementation of SCM inter department cooperation go high. Conclusion of the above is that the implementations of the SCM have no association with their scale of operations.

20.16) The study revealed about the perception of improve coordination between departments/functional areas due to the implementation of SCM in the organization. Results of data show that by implementation of SCM inter department coordination go high. We can conclude from the above results that the implementations of the SCM have no association with their scale of operations.

20.17) It was also asked to the respondents about the perception of increase on timely delivery to customers due to the implementation of SCM in the organization. Scrutiny of the data shows that by implementation of the SCM practices, delivery of the finished product go high and due to that customer satisfaction increases. Thus, we can say that the implementation of the SCM have no association with their scale of operations.

5.1.3 Ratio Analysis of Annual Reports

Ratio analysis of the annual reports reveals the results and it is discussed in detailed in chapter 4. The ratio analysis was limited for only three years span (2008-2009 to 2010-2011) and due to that it is difficult to predict that the outcome are based on the implementation of supply chain management.

5.2 Recommendations

It is found that all the companies irrespective of their scale of operation face the similar issues and challenges related to the implementation of SCM. Therefore it is recommended that the firms should start implementing SCM without worrying about the issues and challenges that they might have to face while implementing SCM.
It is recommended to the firms that they should implement the SCM in order to achieve the following objectives irrespective of their scale of operations:

1) Increase in annual turnover, market share, productivity of labour & machines, customer satisfaction,
2) Improving export potential, quality of products, working system, operating procedure, internal coordination & cooperation and boosting up morale of employees,
3) Reduction in rejection rate, customer complaint & cost of production

It was also supported by the management’s perception to implement the SCM practices in the firm.

For implementing/improve SCM practices companies faced major issues like number of locations, flow of materials, product design, scheduling and routing. These issues are faced by all the companies irrespective of their scale of operation. It is recommended that all the companies should implement/improve the SCM practices to overcome the above issues.

In the process of implementation of SCM practices documentation burden and cost incurred for implementation of SCM is increased. Even though it is recommended to implement the SCM practices as it gives positive and effective results for long time.

The perception about implementation of SCM practices is as follows:

1) Increase in annual turnover, market share, productivity of labour & machines, customer satisfaction,
2) Improving export potential, quality of products, working system, operating procedure, internal coordination & cooperation and boosting up morale of employees,
3) Reduction in rejection rate, customer complaint & cost of production

Above all the perceptions are satisfied and due to that SCM implementation is recommended in the companies apart from their scale of operations.
It is further recommended that the small and medium sized firms should take up the implementation process on priority to improve the working efficiency and customer satisfaction.

By providing suppliers ongoing visibility into their forecast and consumption plans, as well as current inventory status and planned receipts, manufacturers can get their suppliers to improve replenishment lead time and become more responsive to their changing needs. It also allows them to implement programs such as Vendor-Managed Inventory (VMI), cut costs through reduction in inventory and safety stock, reduction in overtimes or expediting costs.

An organization can get consensus on market requirements and business assumptions by incorporating new product introductions, product retirement, upcoming promotions, financial projections, investor commitments and sales forecasts into the demand planning process, and creating a consensus plan around it. Without building consensus, everyone has a different perspective of customer demand and it becomes difficult to synchronize demand and supply.

While one can focus on improving multiple aspects of the supply chain, the greatest impact can be had by focusing on continuously improving on two fronts: increasing the velocity of process and information flow and focusing on activities and actions that can reduce inventory within the system.

5.3 Scope for further Research

The present research is conducted based on a sample size of 44 engineering (light and heavy) products manufacturing companies (Large Scale, Medium Scale & Small Scale) of Gujarat. It is suggested that similar research may be conducted with a little larger sample size and on all India basis.

It is also suggested that similar research should be conducted on different industries / sectors to gain a deeper inside into the subject of implementation of SCM.