IMPORTANCE OF SUPPLY CHAIN INTEGRATION IN AUTO INDUSTRY

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ABSTRACT

The Auto Industry plays a significant role in the Indian Economy. The current challenges in manufacturing of Automobile involves the role of Supply Chain Management. The effectiveness of the function could be enhanced by the Integration of SCM especially in Auto industry wherein the research is undertaken. The detailed description of the process, The study deals with integration is given an approach of explanatory design and questionnaire are used as an instrument to capture the main data furthermore the study also uses descriptive statistics with the help of SPSS for quantitative data analysis. To link the dependant and independent variables, a conceptual framework is developed, to stress the needs and importance of integration of SCM. The study reveals the importance of supplies innovative

Key words: Performance Measurement, Higher Educational Institutions (HEIs), Quality in higher Education, Digitization, National Academic Depository (NAD)

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1. INTRODUCTION

The evolution of SCM since 1980, lead to the importance in the firm's business objectives as profit center activity. The management experts also started to focus on the SCM Function. The field of procurement and material control expanded into strategic sourcing, Logistics Management and on time delivery to the end customer. The need for End to End connectivity gave rise to the concept of integration in the field of supply chain management.

The author Tan Crood implies the evolution of SCM from Purchasing and Logistics angles. The seamless manner in which the various wings of SCM activities synergized will result in

profitability to the firm this will eliminate the departmental compartment or silos, practiced in the 1970s.

The evolution of the integrated approach would eliminate the conservative and fragmented approach. The same is true in Auto Industry across the geography as also other industries at large.

The Normal attitude of Production Department is to throw the blame on purchase / materials / to hide their inefficiency, which can be averted through integrated approach. The supply short falls could be identified and trouble shooting is feasible. We will have similar situation with the material controller.

In conflict with production and engineering wing. With respect to the issue of bill of materials etc., further the advances in technology have obliged changes to the SCM concept as per Ross (1998). Thus to configure a more integrated approach in SCM has become a necessity. To practice the profit center approach and activity based costing. Thus the aim of the research as per is to identify the factors and offer feasible solutions in the supply chain integration.

In Auto Industry with a focus in commercial vehicle segment this could enable the firms aim at an integrated business paradigm and innovative solutions. Let us propose the research direction and arrive at conclusions to the concept of supply chain integrations.

2. HERALDING OF A CHANGED ENVIRONMENT IN SCM

The Landscape of supply chain and logistics are transforming based on key factors as

- Vertical Integration
- Globalised trade leading to Globalised supply chain
- Using the SCM as a strategic leverage in business operations. Stoery etal (2006) infer that their work converged with the literature in focussing on outsourcing globalisation and fragmentation as drivers to the concept of SCI. The work of Sweeney 2007 also leads us to the above 3 drivers. The approach and solution of vertical disintegration is a consequence of outsourcing and the fragmentation due to product forfolios and product differentiation. The need of the market is to offer customised products contracting life cycles and managing stock keeping units (SKU), are the outcomes of fragmentation.
- the automobile business depends on largely on effective SCM considering the fact that 65 to 70% of value of business in auto industry is spent on the SCM and in particular on the materials (Inputs - the current business scenario with global players in the field as competitors, are setting up manufacturing bases in India. The competitive nature obliges the firm to scale up their effectiveness in SCM through the integration process, The huge investments in dealer network in auto industry also implies the philosophy of on time delivery and On time after sales service. The result is sharpening of supplier relationship management to the SCM Integration. The digital revolution synergised with advances in communication equipment's and E-commerce, have practically transformed the Vendor management practices in Auto Industry. The computerized research on stocks, movement of materials also plays a significant aspect of the Integration in supply chain. The commercial vehicle manufacturers in India compete in reaching out to the Vendors to meet their targets. The vendors are common to the Manufacturers with an eye on cost control, optimisation of Inventory Management Dictates the activities in Supply Chain Management. The on time delivery pressure on the Management of Manufacturer.

3. THE PROCESS OF INTEGRATION

The process of Integration is the core of the SCM philosophy by Christopher (1992), New (1996), Lambert (2004), Cooper Etal (1997). They attribute SCM itself as an Icon of integration philosophy. The entire concept of SCM is predicted on the integration according to Pagell (2004). In the event SCM is attributed as philosophy in Management.

Then as per Metzger et al (2001) it is concerned with integration in the work on Magnan and Fawelt (2002), They identified four level of integration in practice

- Forward Integration with Tier I Customers
- Backward Integration with Tier I Suppliers
- Internal Cross functional Integration
- Total Backward and Forward integration from suppliers Supplier to the Customers

The Integration between Supply Chain Activities could be classified into 4 levels as per Harland et al (1999) as

- Activities which are internal to the focal company
- Dyadic level which consists of single, two party relationship. EG Supplier and Manufacturer or Manufacturer and Distributor / Retailer
- Chain Level which encompasses a set of Dyadic Relationship
- Network level which focuses on wider network of operations.

Thus as per Magnant and Faweet (2002) we could group as Internal or Micro or Intra Firm Integration.

The other group is External or Macro or Intern Firm Supply Chain Integration process. The framework in the Internal Integration process. Viz Buy-make-move-sell model would include the fifth activity viz store. Herein the importance of ware house, stores have been included.

Thus the importance of storage locations is specified in the internal integration as this will lead to the supply chain orientation approach (SCO) as

Buy Make Store Move Sell

External Integration involves the activity of every product of service delivered to the final consumer. Thus the integration in SCM would avert any inefficiency in servicing the end customer.

The approach in the external integration will be as

Figure 1 Dimensional representation

Thus the 3 Dimensional representation as horizontal structure, vertical structure and horizontal position, would enable the network of reinforce business relationship in the path towards integration.

The Authors Fabre-Costes and Jahre (2007) Have developed a differentiated approach in the SCM integration, which can be company specific factors on integration. If need be we need to realign the activities and processes to meet the demands of the customers the focal firm is dealing with.

4. METHODOLOGY

The study deals with an approach of explanatory design and the questionnaire used as instrument to capture the main data. Furthermore the study uses descriptive statistics with SPSS package for Quantitative data analysis.

The respondents are professional in the field of SCM, auto industry. The reason being they can visualise and perceive the need for integration.

Thus we have addressed the issue in an optimal manner, the study uses the likert scale form and the responses were captured in scale 1 to 5, from strongly agree to disagree.

5. CONCEPTUAL FRAME WORK

To link the dependant and independent variables a frame work has to be developed, with an outcome of the study, thus to convert study into practise we utilise the methodology.

The conceptual framework depicts - technology factors, relationship with vendors competitive forces coordination discrepancy vendor commitment fluctuation in demand / Schedule, Market Trends Consumer Attitude Choices on time delivery

The dependant variable is the effective supply chain integration process.

5.1. Independent Variables

Figure 2 Independent Variables

6. HYPOTHESIS OF STUDY

- H1 - Technology Factors
- H2 - Vendor Relation
- H3 - Coordination Deficiency
- H4 - Competition
- H5 - VENDOR COMMITMENT
- H6 - SCHEDULE VARIANCES
- H7 - MARKET TRENDS
- H8 - CONSUMER CHOICES
- H9 - ON TIME DELIVERY

All these have impact on the integration effectiveness in SCM.

7. DISCUSSION

Skills Enhancement, Training, Changed process are continuously developed to ensure effectiveness of the integration, thus the importance of integration is to ensure fulfilment of on time delivery to the end customer, thereby sharpening the customer focus approach by the firm. The Integration process would enable identification of supplier needs in training.

Technology update, quality requirements and the seamless integration to the end objectives of the firm. Thus the importance of integration is a tremendous value addition to the firm

8. CONCLUSIONS

The conclusion of the study reveals that the hypothesis set is confirmed to be true with the data collected, discussed and analyzed the challenges in implementing the integration in SCM. Thus the approach adds to the strategic intent and profit center objectives in the firm. It also paves clear cut ways to adopt activity in the firm

9. FUTURE RESEARCH DIRECTION

The effectiveness in integration could be sustained through research in supplier relationship management, which would enable, ease of importance flows across the levels of SCM in any firm. The increased focus on time delivery imperatives, product life cycle study, innovations in technology and communication revolution will lead to lasting reforms in the area of Supply Chain Integration.

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