

The Impacts of Sales and Operations Planning Practices on Supply Chain Performance in Textile Sector

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Abstract: The purpose of the study is to find out the existing awareness level of industry about the importance of sales and operations planning to achieve supply chain KPI and awareness level about the importance of supply chain management in the business, secondly to find out how the industry Supply chain is performing in terms of achieving its KPI (Key Performance Indicators) like reduce cost of production, reduced cycle time, on time delivery, good quality and shorter lead time etc. In last it covers the current implementation status of different supply chain models in the industry. This study descriptively analyzed the existing level of awareness about the sales and operation planning importance to achieve supply chain KPI (Key performance indicator) and to find out how the industry supply chain is performing. A questionnaire is designed and distributed to different towel industries four companies selected as sample for the study. It has been examined that the awareness level of industry is on average. Sales and operations planning need to adopt latest models to achieve good results secondly the performance of supply chain required immediate corrective measures to improve the performance in the different supply chain functions to compete in the global market. According to findings it is recommended that industry immediately plan to arrange seminars or workshops to improve the awareness level of industry secondly there is the immediate need to re-organize the supply chain department to improve the performance of supply chain, industry need to adapt sales and operation planning models in the industry for effective supply chain practices to improve the overall performance of supply chain in terms of best communication, coordination, on time shipment, reduced inventory level, good quality, reduced cost of production etc. There is the immediate need to introduce or establish the independent supply chain department in each organization for better competition and performance in the global market.

Purpose & Scope: Objective of this study is to find out the existing awareness level of industry about the importance of sales and operations planning to achieve supply chain KPI. Secondly awareness level about the importance of supply chain management in the business, Thirdly to find out how Supply chain performing in terms of achieving its KPI (Key Performance Indicators) like reduce cost of production, reduced cycle time, on time delivery, good quality and shorter lead time etc. In last provide recommendations for Supply chain performance improvements for terry textile sectors. The study covers the towel manufacturing units of Karachi.

Design / methodology / approach: This study is based on non-experimental descriptive research design with variables and information collected is based on respondent provided data and four companies are selected as sample size from the whole population of Karachi towel manufacturing units. Questionnaire circulated to Planning and Sales Managers. Total 48 participants invited to provide information through e-mail and received 20 e-mails with complete information and the rest of participant not responded or respond with excuses due to busy schedule. This research questionnaire is validated and reviewed by the experts they should have the background of sales and operation planning process on supply chain performance. In beginning a pilot testing performed.

Findings: It has been examined that the awareness level of industry is on average. Sales and operations planning need to adopt latest models to achieve good results secondly the performance of supply chain required immediate corrective measures to improve the performance in the different supply chain functions to compete in the global market.

Originality / Value: From the last two decades Pakistan textile industry is facing supply chain performance issue in terms of lack of effective planning, inaccurate sales forecasting, lack of operations planning and coordination between business processes and resulting the performance of supply chain performance like delays in deliveries, high lead time, and production overrun, high inventory levels and facing continuous deviations between committed quantities vs delivered quantities to customers. Currently the textile sector facing the lack synchronization between demand and supply and it is required collaborative approach for better demand visibility, demand supply balancing and tightly joint or combined process to achieve strategic business goal.

Keywords: Collaborative Supply Chain, Concurrent Engineering, Supply Planning, Informal Organizations, Collaborative Supply Chain.

I. Introduction

Pakistan is the largest manufacture and exporter of textile goods and the total exports earnings of textile industry of Pakistan is about \$ 13.8 Billion per year. The major markets of Pakistani textile goods is United State and European markets and its exports are about more than 63% of the total exports of the country and contributes 8.5% of Gross Domestic Product (GDP) (Pakistan's Ministry of Finance Economic Survey). From the last two decades Pakistan textile industry is facing supply chain performance issue in terms of lack of effective planning, inaccurate sales forecasting, lack of operations planning and coordination between business processes and resulting the performance of supply chain performance like delays in deliveries, high lead time, and production overrun, high inventory levels and facing continuous deviations between committed quantities vs delivered quantities to customers. Currently the textile sector facing the lack synchronization between demand and supply and it is required collaborative approach for better demand visibility, demand supply balancing and tightly joint or combined process to achieve strategic business goal. (Deedar Hussain Pathan 2010). Sales and operation practices provide visibility across the different business functions and enable a seamless flow of materials, information and funds across the organization boundaries. Basically tools for ends to end Sales & Operations planning increase the collaboration for better demand visibility and the organization could be able to balancing the demand supply by tightly coupled or joint all process (Kevin Mcconack 2005). The recent research shows that sales and operations has focused on its definition, processes, activities, implementation, procedures and case study showing the advantages after its implementation (Feng et al, 2008). The sales and operation plays a main role to link between top management and subordinated plan (Accord Stadttler and Kilger 2005) decision taken at this level one of the greatest impact on profitability and competitiveness. Sales and operation helps to align different function in the organization and sometime look like a tool that helps the managing team towards collective decision making (Wallace, 2006). If we manage the sales and operation in effective way the sales and operation process is supposed to generate many benefits to the organization in the form of improved customer service, reduced inventory level, shorter lead time, stabilize production rate, better work with supplier, improve team work among sales, operations, finance and product development as well as possibilities to respond new business opportunities (Wallace, 2004 roll mannet al, 2005 Bower 2006). Other factors like the supply chain power structure (Watson 2001), supply chain requirement (Anderson, 2000) intra-and inter organizational relationships (Hing ley, 2001), risk sharing (Marcellus et al), and supply chain strategy (Frolic and west brook 2001) can affect the level to which supply chain integration can be obtained on both with organization and organization to organization level. There are many supply chain models for the supply chain integration like claret al, 2001; Min and Zhou, 2002) line framework (chui, 1995; Spens and Bask, 2002), and designs (Christopher and Towel. 2001) are available to achieve supply chain integration. The study first discusses the existing awareness level of industry about the importance of sales and operations planning to achieve supply chain KPI and awareness level about the importance of supply chain management in the business, secondly to find out how Supply chain performing in terms of achieving its KPI (Key Performance Indicators) like reduce cost of production, reduced cycle time, on time delivery, good quality and shorter lead time etc. In last it covers the current implementation status of different supply chain models in the industry. In last the study provides recommendations to improve the awareness level about the importance of sales and operations planning for supply chain management practices to achieve supply chain KPI and how industry could improve supply chain performance to compete in the global market.

Objective: Objective of this study is to find out the existing awareness level of industry about the importance of sales and operations planning to achieve supply chain KPI. Secondly awareness level about the importance of supply chain management in the business, Thirdly to find out how Supply chain performing in terms of achieving its KPI (Key Performance Indicators) like reduce cost of production, reduced cycle time, on time delivery, good quality and shorter lead time etc. In last provide recommendations for Supply chain performance improvements for terry textile sectors.

Scope and Limitations: The study covers the towel manufacturing units of Karachi. Due to time and budget constraints the study is limited to karachi and selected four factories as sample.

II. Literature Review

The review of earlier research work on the same subject it provides the basic concepts of the topic and thorough review of the impact of sales and operations planning on supply chain performance and helpful to derived the specific factors to conduct the study on the selected population of the study. The supply chain literature review shows that the better or improved coordination and integration within the organization and organization to organization generates the benefit like supply chain cost reduction (Daniels, 1999) and improve the performance of supply chain like product and market strategies (Narasimhand and Kim, 2002); operation performance (Armistead Mapes, 1993) and cycle time performance (Jayarametal, 2000). Sales and operations

mechanisms the sales and operations planning process are basically about coordination horizontally, across functions, geographic division and supply chain partners. The APICS dictionary (APICS, 2005, P.103) defines sales and operation is process to develop tactical plans that provides management the ability to strategically direct its business to achieve competitive advantage on continuous bases by integration customer focus marketing plans for new and existing products with the management of the supply chain. The process brings together all the plans for the business (sales, marketing, and development, manufacturing, sourcing and financial) into one integrated set of plan. Sales and operation importance will increase in importance as its complexity and the changing rate increases across the industry (Wallace, 2006). The recent research shows that sales and operations has focused on its definition, processes, activities, implementation, procedures and case study showing the advantages after its implementation (Feng et al,2008). The sales and operation plays a main role to link between top management and subordinated plan (Accord Stadttler and kilger 2005) decision taken at this level one of the greatest impact on profitability and competitiveness. Sales and operation helps to align different function in the organization and sometime look like a tool that helps the managing team towards collective decision making (Wallace, 2006). If we manage the sales and operation in effective way the sales and operation process is supposed to generate many benefits to the organization in the form of improved customer service, reduced inventory level, shorter lead time, stabilize production rate, better work with supplier, improve team work among sales, operations, finance and product development as well as possibilities to respond new business opportunities (Wallace, 2004 roll mannet al, 2005 Bower 2006).Sales and operations planning typically follows five steps process 1-forecasting future demand 2- preparing a preliminary delivery plan and setting up goals for inventory or customer order backlog 3- preparing a preliminary production plan 4- adjusting the delivery plan and production plan 5- settle the delivery plan and production plan (Wallace, 2004; Grimson and Pyke, 2007; Jonsson and Mattson, 2009). It also depends on the types of business, current delivery lead time, how rapidly the market changes and the frequency of product renewal. Another factor to take into consideration when conducting the sales and operation planning process is how often is necessary to check off different operations with their budgets and to make budget forecast. In most cases, sales and operation planning process are carried out mutually but can also be carried out more frequently (Grimson and Pyke, 2007). Literature review also showed that there are many supply chain models for the supply chain integration like claret al, 2001; Min and Zhou, 2002) line framework (chui, 1995; Spens and Bask, 2002), and designs (Christopher and Towel. 2001) are available to achieve supply chain integration. Other factors like the supply chain power structure (Watson 2001), supply chain requirement (Anderson, 2000) intra-and inter organizational relationships (Hingley, 2001), risk sharing (Marcellus et al), and supply chain strategy (Frolic and west brook 2001)can affect the level to which supply chain integration can be obtained on both with organization and organization to organization level.

III. Research Methodology

Method: The procedure adopted for data collection is vitally significant to achieve true bottom line results. We could not collect data before deciding the purpose of data collection, population, Sample size selection and research instrument for data collection. Questionnaire circulated to Planning and Sales Managers. Total 48 participants invited to provide information through e-mail and received 20 e-mails with complete information and the rest of participant not responded or respond with excuses due to busy schedule.

Sampling universe: Textile industry of Pakistan was the sampling universe that comprises of Bed sheet, curtains, garments and towel manufacturing units. There is a huge variation in the business scale, volumes, product variety and way of practicing business.

Source List: Source list for this research study were member directories of All Pakistan Towel Manufacturers Association (APTMA, 2015, July)

Sampling Size: The population for present study comprises of eight towel manufacturing units of Karachi

Sampling Technique: Sample collected on the bases Cluster sampling.

IV. Analysis & Findings

According to survey findings it has been observed that 35% of the total industry have all facilities from spinning to weaving while 30% have all facilities except spinning, 20% have facilities from dyeing to packing and 15% of the industry having only stitching and packing facilities. 75% Managers and 25% General Managers were participated in the survey. According to analysis it has been observed that 80% of the industry does not have separate supply chain department. According to response it has been observed that the awareness level varies from one supply chain advantage to other supply chain advantages like for Reduced cost of production 60% and reduced cycle time 80% of industry responded as strongly agreed with these advantages but for good

vendor relationship 60% they agreed at some extent while same they are 60% to 75% rated at agreed at some extent for all advantages including good quality and reduced lead time but 90% strongly agreed for the advantage of on time delivery through good supply chain practices. Respondent rate strongly agreed 80% for better coordination while agreed at some extent 50% to 80% for better compatibility and for best supply chain performance or to achieve KPI. According to response 90% responded that Industry is facing demand and supply synchronization issues at great extent. Communication and coordination performance For communications and coordination no one rate these practices as excellent or good while 60% rate these practices as average but 30% rate them as satisfactory ERP and MIS For ERP and MIS 90% rate them as an average or poor, 50% average and 40% as poor. Physical location of your facilities For Physical location of the facilities 85% rate them as satisfactory or average 50% satisfactory and 35% as an average only 10% rate them as good performer. Coordination between supply chain partners For Coordination between supply chain partners of the facilities 50% rate them as an average and 25% as good coordination between supply chain partners only 10% rate them as poor practices. Proactive approach by good sales forecast Proactive approach by good sales forecast 60% rate them as poor practices and 25% rate them as an average practices in the organization only 10% rate as satisfactory performance in the entire industry Amount or percentage of over run and waste 60% rate satisfactory level and 25% rate it as average no one rate it as excellent only 5% rate as good practices or good performance 60% of total industry is not adopted planning models for better supply chain management while 30% are In-progress of adaptation. 60% of total population is not practicing collaborative system performance for the review while 40% are in the process of adaptation. 60% of total population adopted ECR while 20% are in process of implementation and 20% are not practicing it currently. According to data analysis most of the units are vertically integrated and have all operations facilities except spinning. Currently industry is not focusing on implementation of best supply chain practices data is showing most of the organization does not have the separate independent supply chain department. As well as the awareness of supply chain advantages is concern it varies from advantage to advantage but according to analysis it is on average level. It has been observed that there is the lack of knowledge regarding the awareness of supply chain management especially for good vendor relationship, better quality, reduced lead time etc. Industry is facing demand and supply issues at great extent. According to research findings about the performance of different functions of supply chain, industry is performing on average level like communication and coordination, ERP, MIS performance, coordination level between supply chain partners, and proactive approach for good sales forecasting, amount of over run and short shipments secondly industry is weak in the implementation of new advance models for better sales and operation planning practices while for efficient customer response industry is practicing and growing by ECR (efficient customer response implementation).

V. Recommendations

Study outcomes showing that industry is facing different supply chain issues and requires improvement of existing system or new system implementation. It is recommended that industry could improve the performance of sales and operation by enhancing the awareness regarding the supply chain advantages by conducting trainings and seminars or kick off session on supply chain advantages which will ultimately increase the supply chain practices in the industry. Secondly industry need to adapt sales and operation planning models in the industry as best supply chain practices to improve the overall performance of supply chain in terms of best communication, coordination, on time shipment, reduced inventory level, good quality, reduced cost of production etc. There is the immediate need to introduce or establish the independent supply chain department in each organization for better competition and performance in the global market.

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