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Future of Supply Chain Management in Various food Production.

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Abstract
This paper analyse the case of any production system and the structure of supply chain has evolved progressively over the time of sequential supply chain, to global supply chain. This evolution has reflected the change in business environment from static to dynamic. So the purpose of this paper is to propose an agenda for future research in supply chain management. We also measure the effect of FDI in India to the existing production industries in India.
Index Terms—Component, formatting, style, styling, insert. *(Key words)*

I. INTRODUCTION

Supply chain strategies and management have, of course, always been a vital part of any manufacturer's or distributor's profit picture. Despite this obvious fact, until recently they were generally left to an ad hoc method of planning and execution. Coordination and long range planning were rarely part of the landscape for managers in warehousing and shipping. There was certainly no full-fledged academic approach to logistics management. That is hardly the case today. There now exist full-scale programs at major universities for studying logistics and supply chain management. Although these programs have existed for a while, it is really only with the explosive growth of the Internet that these formal study opportunities have attracted company's attention

II. CURRENT SITUATION OF SUPPLY CHAIN

The research done by John Storey and Caroline Emberson help to compile a picture of current supply chain practice, and have to identify a number of organisational and behavioural barriers to the realisation of the more idealistic depictions of the "seamless, end to end" chain that should be responding to customer demand. Despite the considerable interest among practitioners in the idea of supply chain management – and this interest were certainly found among many of our respondents – its practice usually differs markedly from the idealised prescriptions identified in the previous section. The research into practice also helped us identify the nature of the more significant (real-life) trends in supply chain management today.[1]
We found supply chain practice through a series of four fundamental questions:

- Who was "managing the supply chain" in practice? (That is, which individuals or groups are actually engaged in such practice?)
- What type of "supply chain" activities were they managing?
- What were the key enablers and inhibitors to this process?
- What external factors were driving the strategic imperative of supply chain management?

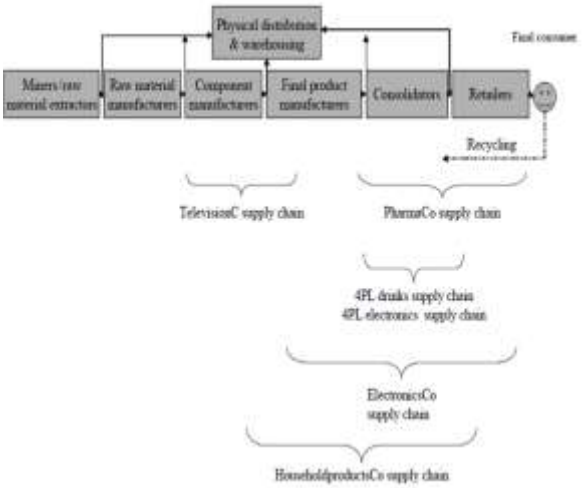

Figure.1 current design of supply chain management

III. A NEW MODEL FOR ENHANCED SUPPLY CHAIN COLLABORATION

Integrating improvement solutions and collaboration concepts into a cohesive model will provide the future supply chain architecture necessary to bring new efficiency and cost reduction to the industry. The future supply chain architecture requires a structural change combining individual improvement solutions and integrated collaboration concepts. This new integrated model represents the

tangible expression of the vision outlined in the earlier "2016" report.[2]

We can reduce the 20% cost of following:

- Transport costs per pallet
- Handling costs per pallet
- Lead time
- CO2 emissions per pallet

The model includes a number of different collaboration concepts that can be pulled together into a cohesive collaboration model, which serves as the new architecture. It is important to understand that this is only one way in which the concepts can work together. Different regions, different markets, different companies will have to assess how these concepts should be combined to realise the maximum effect.

The following four collaboration concepts are at the heart of the overall future supply chain architecture:

- Information sharing – driving the collaborative supply chain
- Collaborative warehousing
- Collaborative city distribution, including home delivery and pick-up

IV. FDI: THE NEXT GENERATION OF SCM

We can see how FDI and their companies like Wal-Mart and its supply and logistics partners are attempting to move the concept of SCM to its next evolutionary step. In a store outside Tulsa Oklahoma (USA), Wal-Mart has installed the latest in SCM computing and data-communications technologies, whereby an Electronic Product Code, which is similar to a bar code but which does not need to be scanned and contains its own power source and antenna, broadcasts by means of radio frequencies to receivers in the warehouse and on store shelves the location of pallets of individually labelled Bounty paper towels. The tracking data is also transmitted up the supply chain to distributors and, finally, the Manufacture. While the cost of these miniature computers today severely limits their application to experiments only, if Moore's Law is true, perhaps in the next few years it will not be surprising to find that manufacturers from Procter & Gamble will be able to label all their products with such information devices. "a trillion new intelligent devices, each with its own Internet address, sending and receiving data through their life spans, creating increasingly complete snapshots of every transaction in every supply chain."[3]

When we talk about supply chain future of FDI in India or we can say bharati wall mart then we have to understand current situation. Its supply chain at present is still nascent owing its small operation. One of the managers of Bharati Wal-Mart in Bangalore observed that they procure vegetables from farmers on daily basis and have some cooling facilities for fruits such as apples which have to be procured from the far north. In the case of farmers located in far off places, they procure vegetables from middle-men (mandis).

Bharati Wal-Mart currently sources its private labels from 120 Indian companies. They have about 70.000 members which include small shop owners, hotels, restaurants, schools, colleges, the police force and even the Indian army. It procures manufactured goods and food grains and pulses at the national level and vegetables from the local farmers through a vendor. Its supply chain in vegetables is still rudimentary. Which need to be improved in the future. [4]

V. CHANGING FACE OF INFORMATION MANAGEMENT

Information provides companies with a window to reality, and the more accurate and the more timely, the better businesses can make the decisions that will assist them to better service their customers, develop their workforces, invest their resources, control their costs, and remain competitive. Today, business concepts and applications like SCM, the

Internet, open computing environments, and the focus on trading partner collaboration should be viewed, first and foremost, as methods to increase information availability. Unfortunately, during the dot-com and B2B bubble, everyone, including seasoned analysts, consultants, and practitioners lost sight of what the new Internet technologies should have been focused on, and that was increasing the utility and visibility of information in the supply chain. Now that the hype has finally cleared, companies can begin the task of sorting out what they need to do to transform their businesses by incorporating today's technologies before their competitors beat them to the finish line.

VI. BARRIERS IN INDIAN FOOD SUPPLY CHAIN MANAGEMENT

India is World's Leading Producer of Fresh fruits and Vegetables, Pulses, Rice and Wheat. Yet Malnutrition is a common phenomenon in India. 60% of children in India are underweight and malnourished and as a total 21% of the total population is malnourished. According to World Bank, productivity losses in India due to stunted growth, iodine deficiencies and iron deficiencies are equal to almost 3% of GDP.

Growth in Agricultural Productivity has increased from 40% to 500% in the past 40 years, yet the availability of food remains a problem for many households in India. Poor Transportation System, Inefficient chain of traders, Absence of sheltered storage and cold storage facilities, Poor Food packaging are said to be the main reasons why Food Distribution in India is so poor.

When Federation of Indian Chambers of Commerce and Industry (FICCI) undertook a survey find out bottlenecks in Indian Food Industry, they found that 44.25% of Respondents quoted Inadequate Infrastructural Facilities as a main challenge. Infrastructural Facilities mainly comprises of Logistics network and Warehousing.

A. Challenges Faced in Indian Agricultural Supply Chain

There are the following challenges which face by the Indian agriculture supply chain:

1. Poor Infrastructure

India has the second longest Road Network in the world. But less than 2% of the entire road length is covered by National Highways. This 2% of the road handles 40% of the Cargo. We can't expect the same vehicles to run in other smaller roads and we need to depend on other modes of transportation. Normal distance travelled by an Indian Truck is 250-300 km/day as against an International norm of 600-800 km/day. Also most of the roads in India can support only 16.2 tons as against an International norm of 36 tons.

Many of the Indian cities have brought in 'Truck Curfews' by blocking the trucks during day time. If the curfew is missed, the trucks have to be parked outside the city and there is a long delay. This type of delay becomes a problem in case of Perishable goods. For instance, it is said that 20% of the Tomatoes get rotten during Transit.

Railway network is not very suitable for transit of Food items as it does not provide end to end delivery in many cases. Port Infrastructure is very important for importing Food Items and the delay caused in the ports can have adverse effect. High dependence on manual labour and low technological presence impacts the supply chain lead time. The cost of an Import Container box in India is USD 500 as against USD 300-350 in foreign ports.

2. Underexposure of Organized Logistics

In India, only 6% of the logistics is organized. The absence of organized logistics paves way for delay in Transportation of food produces from the farm to the end consumer. There are lot of middlemen involved and the time taken for the produce to reach the end consumer results in Food Wastage and price hike.

Recently Government has introduced 100% FDI in Logistics Sector. Organized Logistics firms like DHL, TNT and FEDEX are coming into the markets, but they are limiting themselves to the commercial areas. This is mainly due to the lack of infrastructure in hinterland.

3. *Absence of Adequate Warehouses*

Two types of Warehousing are required for Food Produces. One is a sheltered Warehouse to store Food Grains like Rice, wheat and Cereals. The other one is Cold Storage Facility to store Fruits and Vegetables.

4. *Sheltered Warehouse*

Many of the warehouses have inadequate capacity. The crop production has gone up significantly over the years, but the warehouses have not increased. In 2010-2011, the Food Grain produced was 233 Million Metric Tons. The storage capacity owned by the Government was 91 Million Metric Tons. As a result, many crops are stored in the Open Space and if it rains unexpectedly, then the food grains are damaged. Also due to the absence of Pest Control Mechanisms, 20% of the food grains are eaten by rodents each year.

Figure.2wastage of wheat in open space

Farmers do not have any facilities to store the food produce in their place. So, if the Food Corporation of India procurement team doesn't come on time and it rains, then the farmer is affected. This completely affects the farmer and hence the dominance of middle men comes in. In India, Farmers get one-third of the final price as compared to 66% in Western Countries.

5. *Cold Storage Facility*

Cold Storage Facility is important for storing Fruits, Vegetables and Milk. The existing Cold Storage Facilities can store 21.7 mn tons food produce, but the requirement is more than 31 mn tons. This means that one third of the food produce goes waste each year due to the absence of Storage Faculties.

The absence of Private Players in Warehousing is also a main concern. Most of the warehouses are controlled by Government and they are not able to expand as per the demand. Government Storage Facilities are poorly maintained and it also contributes to loss of Food Produce.

VII. CONCLUSION

The concept of supply chain will be improved effectively when there are minimum breaks of movement between producer and consumers. The main aim of any industry is to maintain a balance between supply and demands. In future new TQM tools and techniques will be used to improve the existing chains.

Better supply chain in any country can improve the efficiency and growth of the country. In India only better supply chain can improve the existing conditions of India it will help to make a proper movement of goods and services effectively and efficiently.

Since FDI has come in India. So it will make a revolutionary step in Indian market. Also in India wall mart will use the techniques for the improvement of supply chain and also it will affect the existing companies

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