



Knowledge Management: An Application Supply Chain in Consumer Goods

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Abstract: Supply chain and knowledge management in consumer goods industry plays a very important role now a day. Supply chain in consumer goods companies are complex while knowledge management plays an effective and efficient role in companies to manage supply chain. The objective of this paper is to understand the effect of knowledge management to supply chain in FMCG industry. The paper also explains the use of knowledge management in challenges and benefits lessons learnt in a real-life case.

Keywords: supply chain, knowledge management, fast moving consumer goods

I. INTRODUCTION

Today's supply chain is the backbone of organizations. Active and well-organized management is crucial for competing supply chains. According to Kumar (2002), Fast Moving Consumer Goods (FMCG) industries is a fast and responsive industry which cover wide variety of products. And confirmed by Unilever (2015:5), which stated that '150 million times a day, in 150 countries, people use our products at key moments of their day'.

A very complex underlying supply chain setup added this industry due to low shelf lifecycle of some products. Some advanced thoughts are produced but there are many encounters that are tackled by FMCG industries (Kumar, 2002) like bullwhip effect (small inconsistency in end-customer demand effects high variability up the supply chain, also known as Forrester or ripple effect).

New optimization methods are accepted by the supply chain managers to address these encounters and risks that also move to new supply chain risks (Ostby, 2009). Using of unsuitable actions to handle supply chain matters also results of the performance pointers the supply chain managers use to achieve and monitor the supply chain (Mishra, 2008). Just-in-time and low-cost nation sourcing are some of the usually used best practices are not recent day encounters (Kumar, 2009).

To backing business development and administration conclusions and make is existing whenever and wherever it is desired, assembly of all applicable knowledge and experience in the firm from all levels gained by education, experience, ideas, rules and conclusions (Sallis and Jones, 2002). Knowledge management can be used to attain long term aids or rewards to the new levels of effectiveness, efficiency and scope of action in an organization.

Organisation's determine and absorb innovative technologies and new openings because of the growth in technology, data and information. But the main issue increases in assembly of information in usable format and in spreading of knowledge in organisation to achieve organisation's mission and vision.

This paper explores this above complication of knowledge management to address the complications in the supply chains.

II. RELATION BETWEEN SCM & KM

Knowledge management, together with SCM, will confirm that knowledge, not information alone, is shared with the transaction partners. Knowledge management assistance to regulate how best to deliver the product is while, information can merely specify what is obligatory in a business. A simple supply chain model is as shown in Figure 1 to consent for the flow of knowledge, along with information, from one end of the supply chain to the other.

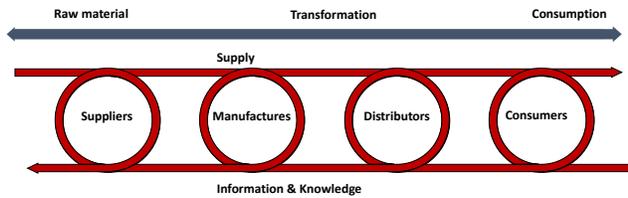


Fig 1: Knowledge exchange in supply chain

According to Bessant et al. (2003) gives reasons of inter-firm knowledge transfer in supply chain:

1. Common interest between supply chain partners, focused on delivering value to a particular customer;
2. Increased in global competition, there is huge motivation for supply chain partners to share knowledge and learn from each other; and
3. Potential benefits of sharing knowledge and the learning experience, including risk reduction, transfer of ideas, shared experiment, etc.

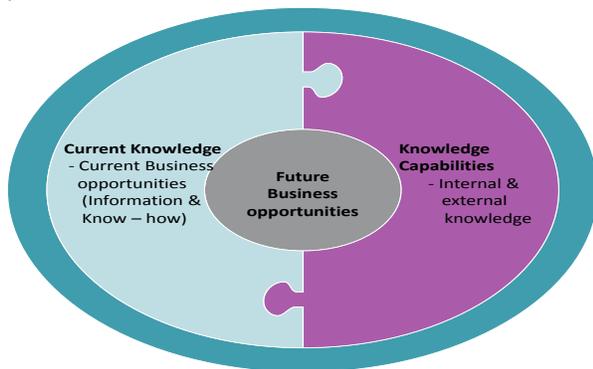


Fig 2: Relationship between knowledge and the firm

III. SUPPLY CHAIN IN FMCG INDUSTRIES

The FMCG industry as one of the major trades in the world with exceptional features as they are non-durable, packaged, branded and used each month straight by the end consumer, as specified by the Confederation of Indian Industry (CII) (2015).

Co-ordinated supply networks as its asset, while low technology initiatives as a weakness and asymmetrical tax structures and imports as a hazard to the industry, is the SWOT analysis for the FMCG industry as published in

Deloitte (2009) and Kumar (2009). Making, moving and storing are less essential functions that are normally contract out while buying and selling are the key functions that typically done by the FMCG organisation, state Kumar (2002, 2004).



Fig 3: Supply chain activities in a consumer goods organisation (Kumar, 2009)

IV. CHARACTERISTICS OF FMCG SUPPLY CHAIN

To understand the difficulties of FMCG supply chains, one wants to know the characteristics of these supply chains. The characteristics are categorized in two sections: functional and structural.

TABLE I
 CHARACTERISTICS OF FMCG SUPPLY CHAIN (KUMAR, 2009)

Functional attributes	
Attributes	Contents
Products procured	Standard (raw material) and specific (packaging material)
Sourcing type	Multiple (raw material); Single/double (packaging materials)
Organisation of the production process	Flow line
Repetition of operations	Batch production
Distribution structure	Three to four stages
Pattern of delivery	Dynamic
Deployment of transportation	Unlimited routes (third stage)
Loading restrictions	Chilled and frozen transports
Relation to customers	Stable
Availability of future demands	Forecasted
Products life cycle	Several years
Products sold	Standard
Portion of service operations	Tangible goods
Structural attributes	
Attributes	Contents
Network structure	Mixture
Degree of globalisation	World wide
Location of decoupling points	Deliver-to-order
Legal position	Intra-organisational
Direction of co-ordination	Mixture
Type of information exchanged	Forecasts and orders

Table 1 shows that FMCG supply chains use complex distribution networks and recognized the kinds of products involved (including their life cycle and shelf life) and the sharing of information among the several supply chain entities.



V. CHALLENGES IN FMCG SUPPLY CHAIN

Kumar and Bala (2009) and Bala et al. (2010) highlight the issues faced by the FMCG supply chains:

- In supply chain complexity rises because in supply chain own several production plants, including of co-manufactures and co-packers.
- Transport problems, logistics firms and warehouse service providers rise burden on relationships, if distribution is handled by the firm.
- The retail sector is the 'dealer-owned brands', which makes them not only the FMCG organisations' customers, but also their opponents. Retail sector is the industry to manufacture and supply at the lowermost possible price and to decline the response time.

VI. KNOWLEDGE MANAGEMENT BENEFITS

Moya K. Mason gave reasons for instituting a knowledge management, like:

- Superior personal development and empowerment, outcomes in rise in employee satisfaction.
- Support to keep employees longer and thereby, decreases the loss of intellectual capital from people leaving the company.
- Saves time and money of an organisation by not reinventing the wheel each time a new project comes along.
- Decreases costs by decreasing and achieving economies of scale in gaining information from external providers.
- Rises productivity by making knowledge available more fast and easily.
- Provides workers with a more democratic place to work by allowing everyone access to knowledge.
- Learn quicker with knowledge management and learning sooner means staying competitive.
- Knowledge management software and technological infrastructures permit for global access to an organisation's knowledge, at a keystroke.

VII. APPROACHES TO KNOWLEDGE MANAGEMENT

There are three stages of approaching knowledge i.e. before, during and after knowledge management related activities.

There are two approaches of knowledge management:

- Push approach: individuals encode their knowledge into a shared knowledge source, such as a database, as well as recovering knowledge they need that other individuals have provided to the repository.
- Pull approach: individuals making knowledge requests of experts associated with a particular subject on an ad hoc basis.

VIII. APPLICATION OF KNOWLEDGE MANAGEMENT IN SUPPLY CHAIN

An Indian FMCG organisation, with its manufacturing setup in North India and supply chain distribution in the whole country has incredible supply chain complexities. The traditional issues with fast moving, short life cycles and high volume – low margin products shaped additional complexities in its supply chain. The organization also has a Middle Eastern setup, concentrating on its international customer segment, ensuing in planning and execution complexities.

Knowledge management was enabled by basic enterprise resource planning (ERP) system with a few add-ons for operations management reporting.

The challenges experienced by supply chain professionals in this case are:

- Access to information is partial
- Redundant and imprecise information available
- Delay in processing information
- Real time decision making is not existing
- No impactful decision making built on the information
- Duplicate and overlapping information requirements and decision-making events
- No clear roles and responsibilities
- Data gaps and missing data points
- No feedback on use of information – no closed loop
- No continuous enhancement in the knowledge management procedure.

Despite of the above acknowledged challenges, knowledge management impacted the working of this supply chain in the following way:

- Awareness to the existing information and decision support process
- End-to-end assessment of the supply chain



- Acknowledged dependencies on supply chain elements
- Internal benchmarking on needs for knowledge management
- Identified areas of enhancement to address the gaps in comprehensive knowledge management process

The identified benefits succeed the challenges, as per the supply chain professionals of this case. The researcher also agrees with the output, representing that the knowledge management allows competitive supply chain setups.

IX. CONCLUSION

Knowledge management is an unending process to understand the organisation aims, requirements and storage of knowledge and the ways to progress knowledge. In other terms, knowledge management is a dynamic approach to help organisation in assembly, processing, storing and dispensing of knowledge. At all working levels, if knowledge is tactically applied, it can result in a healthier decision making not only for top management but for day to day decision making for front lines of the organisation. Recognized challenges, acknowledged within the FMCG industry supply chains might be managed if supply chain managers use suitable measuring standards that are precise to the industry and insert knowledge management in decision making. Improved decisions, hence performance results in the supply chains, can be accomplished by spending less time on information gathering and more time on innovative ways of processing information, as verified by this real-life case.

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