SUPPLY CHAIN MANAGEMENT STRATEGIES FOR COST EFFICIENCY

Abstract

In pharmaceutical company due to inadequate transportation infrastructure supply chain management (SCM) activities account for one-third of the revenue for pharmaceutical companies. A pharmaceutical company's supply chain can save operating costs, increase shareholder value, enhance assets, more effectively satisfy consumer demand, and produce a profit. The difficulties with SCM strategies are identified by applying Goldratt's theory of constraints. Reducing supply chain risk has the potential to have a positive impact on society by lowering product prices for consumers, raising stakeholder satisfaction, and raising living standards.

Keywords: supply chain management, strategies, consumer demand

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Oriental University Indore Opp. Rewati Range, Gate No. 1, Sanwer Road, Jakhya, Indore A company's long-term plan to efficiently manage its supply chain activities in order to meet its objectives is known as a supply chain strategy. It includes planning and organising the production, distribution, transportation, and acquisition of goods and services from suppliers to clients. Due to their intrinsically inadequate transportation infrastructure, pharmaceutical companies in India spend one-third of their revenue on supply chain management (SCM) activities compared to other nations[1].

With the newest research and technological advancements, the pharmaceutical industry has changed to handle both established and new ailments[2]. The sector has evolved in the business realm at the same time as it has changed in terms of its crucial role in treating illnesses. This organization's key components are distribution and production, launch and marketing, drug discovery, and delivery methods.

An overview of the pharmaceutical sector in India is necessary to comprehend the subject of drug distribution in that nation. The thriving pharmaceutical sector in India is the result of multiple reasons. These included changing the laws pertaining to drug registration, patent protection, and medical intellectual property to positive cost/skill ratios[3].

The medical regulatory system in India is divided into national and state authorities within the federal structure of the government regulatory system. The following organisations are the main regulatory organisations in India that oversee the approval, manufacturing, and distribution of high-quality pharmaceuticals[4].

- Central Drug Standards and Control Organization (CDSCO): This organisation establishes guidelines to guarantee the security and calibre of medications, equipment, cosmetics, diagnostics, and drug import oversight.
- National Pharmaceutical Pricing Authority (NPPA): The prices of uncontrolled bulk medications are set by this organisation or updated.
- Ministry of Chemicals and Petrochemicals: This organisation is in charge of the planning, development, and regulatory operations related to chemicals and petrochemicals in the pharmaceutical business.

The supply chain starts with the customer and ends with the product's final user. It then moves through procurement, manufacture, storage, and distribution[5].

TheGoldratt'sTheory of Constraints (TOC) motivates business managers in the healthcare sector to recognise obstacles related to supply chain management (SCM) strategies and devise ways to surmount them[6]. A system-based management concept known as the Theory of Constraints (TOC) aims to comprehend and pinpoint the fundamental reasons that prevent a system from performing better in respect to its objective. According to the TOC paradigm, each and every firm needs to have at least one constraint[3, 7].Pharmaceuticals in India have several obstacles in distribution and logistics, and they may not employ optimal supply chain management tactics to minimize their overall expenses.

As stated by Goldratt, firms must cut costs associated with inventory and operations while also raising productivity in order to function economically.

SCM strategies includes:Supply starts the supply chain management process and continues via procurement, manufacturing, distribution, and storage until coming to a finish at the final customer. As it happens, the difficulties arise at every level[8].

Distribution and logistics challenges involvesselecting the tasks that each level of the supply chain will carry out as well as the structure of the chain. Healthcare organisations trying to supply pharmaceuticals face significant difficulties due to distribution and logistical issues in the supply chain system. The primary causes of the problems with medicine distribution in India are the highly fragmented nature of the developing countries supply chains and the various requirements for drug transportation, including cold chain and augment systems. Special transportation needs for medicines within supply chains are also a problem in developing nations. The function, finance, and performance of supply chains differ in developing and industrialised nations[9].

Due to the fact that every medication has a unique set of transportation requirements, there are additional issues at every stage of the distribution and logistics process. A method for moving and storing medications within a specified temperature range is called the cold chain. For every one of those goods, adjustments must be made to the supplement systems and the cold chain[10].

Every manufactured product has different transportation requirements, like temperature and storage conditions, which pose significant difficulties for leaders in the Indian pharmaceutical industry. There was waste because not all businesses were even aware of the shipping needs. Due to local conditions, supply chains in emerging nations exhibit significant flaws and alignment challenges[11].

The supply chain starts with the supply and ends with the product's final user. It then moves through procurement, manufacture, storage, and distribution. These difficulties are present throughout the entire process, not only in the distribution phase.Examining each physical and operational step in the supply chain is the usual method for gauging its distribution efficiency[12].



Figure 1: Supply chain process

Supplier capacity and minimum/maximum order supply restrictions are examples of logistics constraints in a supply chain. Transportation restrictions, loading and unloading, and storage may also be included. The benefits of system integration are limited by behavioural restrictions that impede cooperative endeavours.Rather than being part of an integrated supply chain ecosystem, buying and providing organizations are thought of as distinct businesses. System integration is a problem that managers face when they combine technical systems from different companies.By reducing overall supply chain expenses, a pharmaceutical supply chain seeks to both meet and surpass client expectations. Businesses need to view an effective supply chain as an interconnected system[2].

Poor communication along the supply chain created a severe risk, particularly during logistics and distribution, thus it was imperative to address this issue at every stage of the supply chain

management process. When the medication that was transported by the moving company and placed at the distribution centre was not within the company's control, communication becomes a serious problem[13]. There is no way for us to take control of a fleet once the drug leaves the facility, therefore we never know where the drug is at any one time. It's hard to follow it. Thus, that presents a huge communication difficulty for businesses[14].

The most important component of the supply chain process for distribution and logistics is transportation. Medication needs to be shipped at specially controlled temperatures and environments. The shipment of medicines must adhere to specific temperature controls, adding still another level of complexity to the distribution process. When communication was hindered or non-existent, problems surfaced[15]. Businesses required dependable transportation partners that could comprehend the demands and difficulties associated with product delivery. This explains why communication played such a crucial role during the entire procedure[16].

Logistics issues with the distribution problems shows that continuous concerns included risk reduction, worldwide expansion, fleet management, communication, and contingency planning (e.g., optimal inventory levels). Negative effects on healthcare companies were caused by distribution and disruption issues. Patients suffer and businesses incur financial losses when drugs are not supplied accurately or on schedule[17]. These challenges persisted because businesses operated in a market that was always evolving, particularly in India where they had to prepare for new distribution channels and developing markets. Research indicates that insufficient inventory of medications or delayed distribution resulted in wastage[18].

Managing the regulatory framework was part of the procurement process as well as the logistics of transporting medication. The movement and sale of medications throughout India are governed by many rules, which provide difficulties for SCM[19]. The government has a various rules pertaining to drug costs for different kind of medications, and it governs the price of pharmaceuticals[20].Government regulations, such as intrastate taxes for product distribution and transfer, are something that businesses have to cope with. Tax and transportation expenses ultimately fall under the financial purview of the businesses, who must factor these expenses into the SCM's overall cost structure[21].

Every healthcare organisation has different and distinct issues as a result of the country's geographic location and variety. For the medication to be released successfully, the logistics and distribution processes need to work together. These difficulties also have to do with fleet management's supply chain component[22]. Another part of the market is created by the expansion of pharmacies and the pharmaceutical industry in India, where fleets deliver medications to newly developed areas that are available for business.

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