

Chapter 15

Supply Chain Management in Pharmaceutical Industry: Opportunities and Challenges for Retailers

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ABSTRACT

In this research paper, author has studied top pharmaceutical companies around the globe and their relationship with pharmacies. Based on the analysis author has identified current challenges their supply chain is facing and how IT can help them to make their supply chain more responsive and reliable. IT framework which can address the supply chain challenges has also been proposed here. Second part of the paper deals with how retailers can help the industry to overcome these challenges. Pharma companies need to partner with pharmacies for a win-win situation and this partnership can address most of the challenges being faced by the industry. This partnership will help in various ways like getting accurate information across the entire chain at any point and at any location, Instant access to real-time demand by the end user, visibility of all handovers in the supply chain and helps in setting-up seamless collaboration between all parties.

INTRODUCTION

The pharmaceutical industry is responsible for the development, production and marketing of medications. Thus, its immense importance as a global sector is evident. The total level of pharmaceutical revenue worldwide had reached nearly one trillion U.S. dollars. North America is responsible for the largest portion, generating more than 40 percent of these revenues. This is mostly due to the leading role of the U.S. pharmaceutical industry. But as in many other industries, the Chinese pharmaceutical sector shows the highest growth rates over the last years.

Still, the leading pharmaceutical companies come from the United States and Europe. Based on prescription sales, NYC-based Pfizer is the world's second largest pharmaceutical company. In 2013, the company generated some 45 billion U.S. dollars in pure pharmaceutical sales, while total revenue

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stood at nearly 52 billion U.S. dollars. Other top global players from the United States are Johnson & Johnson, Merck and AbbVie. Novartis and Roche from Switzerland, GlaxoSmithKline and AstraZeneca from the United Kingdom, and French Sanofi are the European big five.

Branded, patented medicines by far make up the largest share of pharmaceutical revenues. Humira, an anti-inflammatory drug, generated nearly 10 billion U.S. dollars of revenue worldwide. Oncologics continue to be the leading therapeutic class based on revenue. In 2013, cancer drugs made around 67 billion U.S. dollars of revenue globally. Other major therapy classes were pain drugs, antihypertensives and antidiabetics.

More than any other industry, the pharmaceutical sector is highly dependent on its research and development segment. Pharmaceutical companies invest 20 percent and more of their revenues in R&D measures. The United States is a traditional stronghold of pharmaceutical innovation. Most new substances introduced to the market trace their origin to the United States. Because of the steadily loss of patent protection, the invention of new drugs is of vital importance for the pharmaceutical industry. Revenue losses due to patent expiry often are very significant, as it can be seen with Pfizer's Lipitor.

The pharmaceutical and biotech industry is under severe pressure. Research & Development (R&D) costs are spiralling, development timelines are growing, payer pushback is increasing and consumers are becoming increasingly knowledgeable about care options. The industry is responding driving time out of development, becoming smarter about stopping projects early in the development cycle, and increasing efficiency through rationalization or outsourcing of non-core activities.

As scientific advances enable the industry to move from a 'one-size-fits-all' approach to care, to one of segmentation, personalization and wellness, so the supply chain will need to evolve. The supply chain of the future will be built around flexibility, responsiveness and reliability shifting the supply paradigm from a stock-based model to an order-based model. In this research we highlight and prioritizes the top 10 global health pharmaceutical supply chain challenges and how supply chain help the companies to address some of its immediate concerns.

The largest U.S. companies on the global market are Johnson & Johnson, Pfizer and Merck & Co. Johnson & Johnson generated around 75 billion U.S. dollars of revenue in 2014 and in the same year Japan's pharmaceutical revenue came to about 70.5 billion euros in total. The North American pharmaceutical market was still the world's largest regional market. Japan held 10.8 percent of global pharmaceutical market revenue. This share increased down to some eight percent in 2015.

An IMS report indicated that Biologics (a majority of which would be temperature-sensitive products) would constitute about 19–20% of the total pharmaceutical sales by 2017. Current indications state that Biologics are growing by 18%, compared to the 3–5% growth in pharmaceutical sales overall.

The Indian pharmaceuticals market is the third largest in terms of volume and thirteenth largest in terms of value, as per a report by Equity Master. India is the largest provider of generic drugs globally with the Indian generics accounting for 20 per cent of global exports in terms of volume. The Indian pharma industry, which is expected to grow over 15 per cent per annum between 2015 and 2020, will outperform the global pharma industry, which is set to grow at an annual rate of 5 per cent between the same period. The market is expected to grow to US\$ 55 billion by 2020, thereby emerging as the sixth largest pharmaceutical market globally by absolute size, as stated by Mr Arun Singh, Indian Ambassador to the US. Branded generics dominate the pharmaceuticals market, constituting nearly 80 per cent of the market share (in terms of revenues).

India has also maintained its lead over China in pharmaceutical exports with a year-on-year growth of 11.44 per cent to US\$ 12.91 billion in FY 2015-16, according to data from the Ministry of Commerce

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