NOLEGEIN: Journal of Supply Chain and Logistics Management
Vol. 1: Issue 2
www.mbajournals.in

Amazon Supply Chain Management: A Case Study

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ABSTRACT

This purpose of this study is to understand the e-commerce industry and role of supply chain strategies to get the competitive edge. This study describes the e-commerce industry and the supply chain practices adopted by them, specially by Amazon. This study discussed the penetration of internet in India, e-commerce market in the light of Amazon, supply chain in Amazon, IT application, SC (Supply Chain) automation and finally, business strategies application for internet activity.

Keywords: business strategy, e-commerce, retail industry, supply chain management

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INTRODUCTION

The retail industry in India plays a vital role in GDP (gross domestic product) growth. Almost 11% of the GDP come from retail industry and generate more than 8% of the employment. Some of the facts regarding Indian retail industry are given below.

Expected growth target: US$ 1.1 trillion by 2020

Expected growth: 12% per annum

Indian e-commerce market is expected to grow and will reach up to US$ 700 billion by 2020, whereas B2B is estimated to reach up to US$ 26 in next few years.

India e-commerce industry is growing very fast, it may replace China and will become the most promising market in the world and the largest consumer economy by 2025 of around US$ 400. [1]

Some of the fact are given below in Fig 1 & Fig 2:

- Indian e-commerce sales US$ 30 billion in FY2016.
- Indian e-commerce sales are expected to reach US$ 120 billion by 2020.
- In gross merchandise value, Indian market will be expected to reach up to US$ 20 billion.
- In e-commerce, approx. 530 million (in numbers) shoppers till 2025.
- Direct selling industry in India will reach up to US$ 2.5 billion by 2021.

Modern retail in India is expected to be double to US$ 25.7 in next three years.

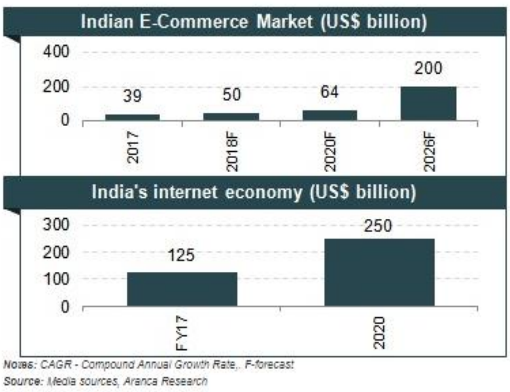

Fig. 1. Indian Market

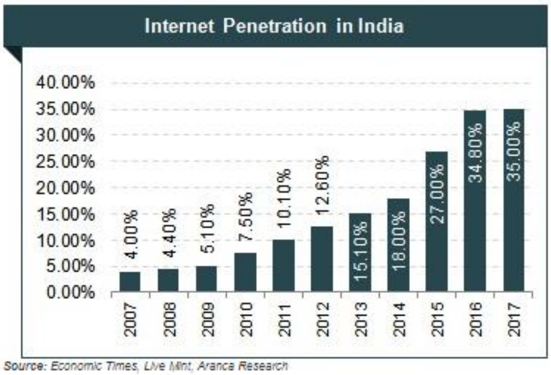

Fig. 2. Internet Penetration in India

RESEARCH PROBLEM AND RESEARCH QUESTION

The success of retail industry is completely depending on supply chain practices adopted by the industry. The aim of this study was to understand the supply chain strategy adopted by the retail business to carry out the business, especially in e-commerce area.

The main research question was formulated as: what strategy Amazon adopted to get the competitive edge over the competitors and role of its supply chain strategy in its success.

METHODOLOGY

For this research, both primary and secondary method were used for data collection. The face-to-face interaction was done to understand the e-commerce market and strategy adopted by e-commerce companies. Whereas, the research paper, magazines, journals, newspapers and textbooks were used as secondary data source for data collection and answer the question in term of why instead of how through qualitative research.

E-COMMERCE KEY FACTS [1]

Table 1. *E-commerce key facts [1]*

Year	2017	2020 (expected)	2026 (expected)
e-commerce market	US$ 38.5 billion	US$ 64 billion	US$ 200 billion

Year	2017	2021 (expected)
Internet Users	481 million	829 million

Year	2017	2020 (expected)
Indian Internet Economy	US$ 125 billion	US$ 250 billion

Year	2007	2017 (approx.)
Internet Penetration	4%	35%
Rural Area	N/A	20.26
Urban Area	N/A	64.84

References for table data: *Media Reports, Press Releases, Deloitte report, Department of Industrial Policy and Promotion website, Union Budget 2017–18*

AMAZON SUPPLY CHAIN MANAGEMENT

Amazon, being an online retail organization focuses on effective, efficient value-added services which finally impact the performance of supply chain and play major role in increasing the customer satisfaction level. To achieve the final objective of the company, Amazon operates all SC components in [2]. The SC function of Amazon helps to implement a strong system that starts from sourcing the material and ends with the delivery of final products to the end consumers.

Logistics and Transportation

Logistics and transportation play a vital role in increasing performance of the supply chain in Amazon and directly impact the customer satisfaction level. This force company to put in place the highly efficient distribution system for the delivery of goods to customer and to reduce lead time. To achieve this objective, Amazon started its own distribution channel and provided 3PL services for the distribution of goods [3] based on its expertise and the knowledge, and to capture the future market. Amazon also invested in innovative delivery system with the help of new technology, "Drone, popularly known as "Amazon Prime Air", for the fast delivery of goods to the customer and to claim 30-minute delivery.

Customer Service Management

The purpose of the efficient Amazon operational activities is to achieve high degree of customer satisfaction. To achieve the high level of customer service, company has developed efficient and effective physical and online customer support network. The customer service executives are trained to provide best possible support to the customer in case of service problem [4]. This will help company to build strong relation with customer and lead to high level of customer satisfaction.

Demand Management/Knowledge Management

The main objective of Amazon knowledge management system is to deal with information regarding the customer and to provide the personalized services to the customers while visiting the online platform. With the help of highly unique online platform, knowledge management system captures the diverse information regarding customer and forward to the Amazon. Amazon management system analyzes the personal demand of the customer with the help of this information and finally provides the value-added customized services to the customer, to make their purchase experience memorable [5]. Knowledge management is an important component and an effective utilization of this component allows the organization to offer innovative and creative products to the consumers.

Inventory Management and Purchasing

Inventory management and purchasing is the important component of supply chain management and it is used as an important tool to increase the performance SC by Amazon. Amazon is having a vast and an effective warehouse network to maintain the sufficient inventory level for growing customer demand. This also helps Amazon to maintain the product range according to the market demand which finally leads to profitability. To maintain this network, Amazon uses various inventory management software, that helps company to optimize the network performance and to reduce the transaction cost. This system also helps Amazon to implement the large scale / bulk buying strategy, which lower down the cost of purchase.

INFORMATION TECHNOLOGY APPLICATIONS AND SUPPLY CHAIN AUTOMATION

Information System

In 1995, the order fulfillment and online platform was used by the Amazon separately in order to improve the security. It was the time when Amazon was having huge database which was running on Digital Alpha Servers. The complete system was renovated by the Amazon in 2000 and for which company invested $200 million and developed a new system. Complete system was established with the

help of logistics software "Epiphany" and the Oracle database.
For communication with suppliers, Amazon was using B2B system "excel on" software that helped Amazon to perform effective communication between nodes. Two more system were developed by the Amazon called Amazon Web Services (AWS) and another was Storage Service (SS) to maintain the data of their products and active customers [5].

Later, Amazon Web Services (AWS) system, reliable, scalable and robust, had become the global online platform for retailers and individuals to sell or buy the product and helped Amazon to become the global leader.

Amazon faced various challenges for their AWS system. Thousand customers were searching different products every second and ordering the product after the selection. For these type of fast transactions, system must be reliable, secured and fast too. The challenge in front of Amazon was to make their system reliable, secured and fast, which was achieved by the Amazon with their knowledge and experience.

The customer relationship management system of Amazon was very efficient which recorded all the information about the customer as and when they login including the information about their product search. Whatever they search or buy, Amazon smart system analyzes the information and provides the service to the customer.

Fraud was another major issue with Amazon. To decrease the chances of fraud and to detect them before hand, one system was developed by the Amazon called "Smart Analysis Search". This system detects the fraud by analyzing the behavior patterns with the help of website.

Recommendation System

The company developed an intelligent system which provided the recommendation regarding the product to the customer and helped them in searching the product they were looking for. For this purpose, recommendation system used the stored information of every customer, including their purchase with the Data mining technique system and then extracted the information and recommended the related products to the customers.

This technique was used by the company to enhance the browsing experience, to provide the interactive platform to the customer and to maximize the customer satisfaction level.

BUSINESS STRATEGIES

Company adopted very simple business strategy in early stage of business. The only strategy was to sell the books to the customer online. In his one of the letter to shareholder in 1997, Jeff P. Bezos says "From the beginning our focus has been on offering our customers compelling value. We realized that the web was and still is the World Wide Web. Therefore, we set out to offer customer something they simply could not get any other way and began serving them with the book." Jeff P. Bezos (shareholder's letter 97) [6]. Increasing the customer value by offering one click shopping in low price was the strategy adopted by the company.

Smart Innovation Strategy

Smart innovation strategy (SIS) was the main reason of the success of the Amazon. They started their business by offering CD's and DVD's along with books. Next year they introduced the auction theme to the customer with the objective to provide best possible experience of auction and to protect them from fraud. The strategy adopted by them was not so effective and did not bring the expected success to the company [6]. The B2C model brought huge success to the company after the transformation from sales business model to sales and service model. With this model, they targeted customer and other business group. They invited small business group to sell their product to their existing customers. This system created eco-system and even increased the profitability of the company.

Under their SIS, they launched "Associate Program" to develop the strong network of businessman and customers. Approx. 200,000 Companies were enrolled in this associate program. The objective of this program was to acquire and retain new customers and to strengthen the business network. With the help of this strategy, the sale was increased with increase in variety of product.

High Margin, Lowest Price

This strategy was adopted by the company keeping in mind the long-term objective of the company. From inspection, the objective was to provide cheaper product to the customer base, but this strategy helped them to take low profit risk to success in the online market. The estimate shows that due to this strategy their product gets sold in 33 days in comparison to the competitor in 70 days. This allowed them to get quick profit than competitor [6]. Another part of the strategy was to own the bestselling stock and leave the longer-term items to the third-party seller.

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