**Amazon.com: Supply Chain Management**

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Group 15

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**Overview**

Supply chain management is a well-known component of most firms and is crucial to both business success and consumer satisfaction. (The Importance of Supply Chain Management, n.d.). The managing of a good or service's full manufacturing flow, from the procurement of raw materials to the delivery of the finished product to the customers, is known as supply chain management. A business uses a network of suppliers to ensure the product reaches from suppliers of raw materials to businesses that deal with customers directly. (What is supply chain management?, n.d.). Keeping up with the supply chain demands of an organization growing at a fast pace can prove to be challenging. It would require pivoting to different and innovative methods to ensure the needs are met as required. One such case is of Amazon.com’s supply chain management.

Amazon.com is an online retailer, manufacturer of electronic book readers, and Web services provider that has become an iconic example of e-commerce (Hall, n.d.). Currently Amazon is America's second-largest private employer (The biggest being Walmart). It facilitates the transportation of goods purchased over the Internet, including on eBay and Etsy, and moves more than a third of all retail goods purchased or sold online in the United States. It also owns Whole Foods. (Duhigg, 2019).

When Amazon first launched, its main goal was to sell books more rapidly and effectively. It resulted in the realization that gathering data about its clients may assist the business in discovering everything and anything. Using what it learned, Amazon has grown to be a retail juggernaut with a wide range of other businesses. Amazon now can be considered as one of the best high-tech companies, which spans a startlingly wide range of industries. (20 years of Amazon's expansive evolution, 2015).

Amazon has prospered despite the Covid-19 outbreak, which had a negative effect on most enterprises. Between 2019 and 2021, their sales rocketed from $280 billion to $469 billion, and their market cap soared to $1.7 trillion. Costs associated with shipping and fulfilment reached $ 151.8 billion in 2021. Costs associated with shipping, which include sortation, distribution hubs, and transportation, totaled $76.7 billion. The total cost of fulfilment, which includes labor costs and operational expenses for fulfilment centers, was $75.1 billion. (Ali, 2022).

All Amazon firms reported having difficulties with the supply chain in 2021. This included 74% of small first- and third-party Amazon enterprises, 93% of ecommerce brand management firms, and 94% of major brands that sell their goods on Amazon. (Polansky, 2022).

**Background**

When one initially looks at Amazon logo the arrow at the bottom seems like a smiley face, but it is more than that. The arrow is pointed from a to z; representing the fact that Amazon offers a sheer variety of products for sale. And the smiley depicts customer satisfaction (Hidden meaning of 11 world's most famous logos, 2017).

Amazon is one of the prevailing retail companies in the world which is conducting its vast trade operations on an ecommerce platform. Amazon has given essential significance to its brand title. Together with this, it points to supply marvelous esteem and a prevalent shopping experience to the clients (Majed et al, 2018). In this way, it could be a customer-centric trade organization that gives value and quality items to the clients. As per the investigation of the investigate ponder of Lai et al (2018), Amazon has stocks of hundreds of millions of items, and half of them are sold by a third-party dealer (Amazon Top 10 Categories, 2019).

Since most of the items are being sold by third party sellers the shipping costs surpassed $21 billion. In the later year, the company was taking more prominent steps to gain control over its supply chain—a methodology that would inevitably put Amazon in direct competition with Allocate Benefit of America Inc. (UPS) and Government Express Corporation (FedEx), combined. After some time, it extended into sea cargo sending, managing cargo centers, built a truck armada, and set up a divide conveyance network.

The company advertised its third-party seller's fulfillment administrations called Fulfillment by Amazon (FBA), which provided services for transportation, warehousing, picking, pressing, shipping, client benefit, and returns for items sold through its site. The company’s most recent activity, Shipping with Amazon, was a modern benefit for advertising package delivery to clients, for items sold on the Amazon site. (Let Amazon Fulfill Your Orders through ShipStation's New FBA Integration, 2022).

The key challenge was how to structure Amazon’s supply chain to back the company’s methodology and development destinations. What supply chain capabilities would Amazon need as its business proceeded to advance?

**Situation Analysis (SWOT)**

A SWOT Analysis is a framework used to evaluate a company’s competitive position and to develop strategic planning. SWOT analysis assesses internal and external factors, as well as current and future potential. It helps to gain a realistic insight within one’s industry, strengths and weaknesses. This is normally fact-based, and data driven. (Keaton, 2022).

***Strengths:***

1. One of the organization's key strengths can be its regional presence in several places. It establishes the company's market penetration and guarantees simple accessibility.

2. The organization’s wide product offerings and competitive prices for the same attract a huge base of customers.

3. Ability to access the raw materials provided by the suppliers at a low-cost can help in improving the business.

4. The locational advantage can boost the company's competitive positioning in several ways, including lower costs, better accessibility, or higher brand recognition.

5. Customer friendly website allowing the customers to place orders quickly, provides stress free checkouts and a platform to give feedback.

6. Integrated platform for communication between third party sellers and the customers.

***Weaknesses:***

1. Poor inventory management techniques and manufacturers spread over a wide geographical location could cause a lack of supply or too much inventory which could make the business less efficient.

2. Internally, weak project management techniques might make it more difficult for the organization to open new locations or to broaden its product offerings.

3. When the organization's leadership style and its primary strategic goals are out of sync, it could affect the supply chain.

4. Technical infrastructure not being strong enough to meet the spike demands.

***Opportunities:***

1. The opportunity to penetrate and expand its presence in developing markets.

2. Amazon can increase brand engagement and become more competitive versus large box retailers by growing its physical store network.

3. In order to differentiate its goods and raise profit margins, it can perform backward integration by increasing production of internal brands like Amazon essentials.

4. More e-commerce company acquisitions can boost Amazon’s market share and reduce competition.

***Threats:***

1. In some nations, government rules may pose a danger to Amazon's corporate operations. Cuba, Iran, North Korea, Sudan, and Syria are some such examples.

2. Amazon may have a difficult time in the future due to aggressive competition from large retail companies and online companies like Walmart, Target, Home Depot, and eBay.

3. The company's network security system may suffer from rising cybercrime.

4. Fake Products - Amazon's earnings are in danger due to the rise in counterfeiting and fake goods.

**Problem Definition**

The fast growing and evolving nature of Amazon’s business can prove to be challenging for managing its supply chain. The problems for the same can be broken down as follows:

***Inability to deliver most orders within the given timelines***

With its widespread online presence, the ease and convenience it provides for placing orders, Amazon has become a go to option for ordering items for most households. However, as the demand for online orders keeps increasing, managing the inventory, and delivering the products in the mentioned timelines can prove to be far-fetched.

***Inability to provide competitive prices due to high shipping costs and manufacturers spread over wide geographical locations***

The possibility of being able to order from anywhere in the world is beneficial but it also comes with the drawback of high shipping costs. This makes it difficult to always provide competitive prices to the customers.

***Difficulty in maintaining inventory levels.***

With the increasing demands ensuring required inventory levels are maintained proves to be a challenge

**Alternatives**

***Expanding and further strengthening FBA in existing and new locations***

Fulfillment by Amazon enables the sellers (first-party, second-party and third-party) to utilize logistics services provided by Amazon. This proves to be helpful as Amazon then has control over the product from the manufacturer’s location to the customer. The time taken to deliver the orders can be reduced using and analyzing this data from time to time. Further, this service can be expanded to new markets to help gain better control over them.

***Automating warehouses to increase efficiency***

Managing the products in the warehouses can be a cumbersome task if not managed properly. Large volumes of products are stored in the warehouses making it difficult to maintain and operate with the human mind only. Automating the entire process with the help of relevant software and forklifts can make the entire process more efficient.

***Partnering with small logistics companies and local entrepreneurs***

Some locations have small logistics companies and local entrepreneurs who are well established and have a strong presence. Their existing strong presence and infrastructure can be helpful if taken over and can help in saving time and capital investment.

***Timely revising the company’s supply chain structure and regular data analysis for stock and centers***

The objectives and strategy of a fast-growing company can change frequently. Regularly revisiting the supply chain structure can help ensure the alignment of both. Regular analysis of the stock and centers data by expert analysts and supply chain professionals.

***Preparing Resources for last mile Deliveries***

Amazon has a terrible time with last-mile delivery of goods, especially during busy times like Black Friday and Christmas. In truth, Amazon experienced a significant logistics failure around Christmas 2013 that prevented many consumers from receiving their items (Amazon's Supply Chain Challenges: What Can You Learn from Them?, 2020).

**Criteria:**

1. Being able to deliver orders placed within given timelines.

2. Reduction in shipping costs incurred by the company.

3. Meeting the requirements of the company’s growth objectives.

**Constraints:**

1. Cost constraint – to ensure that the financial cost incurred does not outweigh the benefits

2. Time constraint – to be able to complete a task successfully within a specified time

3. Organizational culture – existing norms and culture followed in the organization can be difficult to change and needs to be considered while implementing new policies and solutions

4. Talent management – to ensure personnel with the required skillset are hired and retained. Also, necessary training should be provided.

**Screened Alternatives**

***Expanding and further strengthening FBA in existing and new locations***

Expansion of Fulfillment by Amazon to new locations and further strengthening them in the existing locations will not only help cover more areas but also help gain better control over the logistics process. This, if done properly, can help in reducing the shipping costs and time taken to deliver the orders. The constraints in implementing this alternative would be that of cost, time and talent management. Expanding to a new location requires capital investment and ensuring the same is done within the budget in the given timelines. In addition to this people with the required skillset need to be hired to ensure the same is done in an efficient manner.

***Automating warehouses to increase efficiency***

Warehouse management includes a variety of processes and tasks to manage inventory and distribute the required products. Automating the same with the help of software and machine learning will enable make the process more efficient and leave less room for errors. This alternative will help us reduce the delivery timeline. The cost involved will be a major constraint for this as the machine learning and software can be expensive. However, if implemented properly it can prove to be worth the investment.

***Partnering with small logistics companies and local entrepreneurs***

Certain local logistics companies and entrepreneurs have established a strong presence and infrastructure in the local areas. Partnering with them will help us reduce the costs and time involved in the expansion of our logistics services. The constraints for this alternative would be that of talent and organizational culture. To ensure the partnership is done with the essential terms and motives would require the transition to be managed by people with the required capabilities. Also, different organizations have different cultures and the same needs to be considered while partnering. Policies and methodologies need to be fixed to ensure the difference in organizational cultures can be managed.

***Timely revising the company’s supply chain structure and regular data analysis for stock and centers***

Ensuring that the supply chain structure of the company is revisited timely will ensure that the same is on track with the company’s strategy and growth objectives. This will also help us analyze the stock and number of centers and decide on if the same needs any changes. Organizational culture and time will be major constraints for this alternative. The reason being to ensure the organization’s culture keeps changing as required by a fast-paced business can be challenging if the changes are not conveyed properly. Also, ensuring the changes are implemented in the given time can be a difficult task.

***Preparing resources for last mile deliveries***

Bridging the gap for the last mile distance for the deliveries has been a major challenge for Amazon and being able to solve the same will help reduce the time taken to deliver the orders. Allocating resources and funds towards the same is essential to find a solution. However, the same will come with costs and ensuring the resources used towards finding a solution are within the budgeted amount can be a constraint.

**Recommendations**

1. Machine Learning for Forecast Accuracy Improvement

2. Global Delivery Network

3.Training Manpower efficiently

**Implementation**

Consistent model of Simulation is vital for handling supply chain, to improve accuracy, to handle global delivery network and to train the workforce efficiently. Machine learning can be incorporated in warehouse operations once at least 80% of the people involved have acquired the required skill set through rigorous training. This skilled manpower can also help in achieving an efficient global delivery network. For ensuring a smooth operating global network we could begin with increasing our reach into untapped markets. For the same we can first analyze if any local logistics companies are present with a well-established infrastructure. Partnering with them can be ventured into to minimize the cost involved in expansion. Similarly, in case of absence of such local entrepreneurs or companies, Amazon can open their own fulfillment centers in the locations. Also, the focus on finding alternatives to bridge the gap for the last mile deliveries should be continued as this can ensure further reduction of delivery time. Focusing on a global network will help reduce the time taken to deliver orders and help reduce shipping costs. The implementation of all recommendations highly depends on the people involved and multiple other factors. Thus, the implementation of the same should be continuously monitored and re-engineered as required.

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APPENDIX A – We have maintained Minutes of the meetings for all our discussions. Please find below the link to the same – [MOMs](https://mycbu.sharepoint.com/:f:/s/MGSC510110InformationSystemsforManagement-Group15/EiZD8YYuxTlNlYaCPj_3MB4BeLnUuVFvSBhKoQMvfUc2Kg?e=KcYgbS)

APPENDIX B – The link to the brainstorming collaborative WORD document developed in TEAMS is as follows – [Group case work template for collaboration in Teams.docx](https://mycbu.sharepoint.com/:w:/s/MGSC510110InformationSystemsforManagement-Group15/ET6V5Vyf8spMl6cdTp22K-8BtuLlZD05zYbgQHsLSPPWpA?e=mWdupe)