

AN OVERVIEW OF WAL-MART, AMAZON AND ITS SUPPLY CHAIN

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ABSTRACT

In the highly world of the twenty-first century, when innovations are consistently re - engineering systems and processes, the role of the most demanding technologies, such as RFID (Radio Frequency Identification) as well as robotics, has piqued the interest of organizations and researchers in supply chain management. Although RFID and robotic technologies have a number of drawbacks, they may help companies connect their supply chains with their business partners, reduce inventory and process times, improve logistics, increase customer loyalty, and reduce overall costs. This study attempts to examine how technological advances such as RFID tags and robotics assist Wal-Mart and Amazon in managing their supply chains. There has been considerable study in the area of supply chain management to address current difficulties, but the issues are always changing as a result of technology advances and the fast growth of consumers. Despite the fact that considerable research has been done in this area, there is still a practical need for additional research to effectively address the current issues in supply chain management.

KEYWORDS: Amazon, Supply Chain, Robotics, RFID, Wal-Mart, Process Management, Business Growth.

1. INTRODUCTION

Due to technology advances, logistics management has become a very difficult problem all over the globe these days. The businessman is always attempting to resolve current supply chain management problems in the most effective and pragmatic manner possible. This good supply chain management and supply chain strategy is a critical job that affects a company's success. Web technologies are controlling and playing an important part in supply chain management in the contemporary day. Supply chain management is the practice of effectively managing and controlling goods and information throughout the logistics process, from raw material procurement through delivery to a final customer. Various approaches and strategies have been studied for efficient supply chain management, but robots and Radio Frequency Identification (RFID) are currently becoming more popular throughout the world for a variety of reasons[1].

The usage of RFID and robotics technologies in Wal-Mart and Amazon's worldwide supply chain management is steadily growing. These two technologies, robots and RFID, have opened

the door to a new era in supply chain, which is also very difficult to achieve with current barcode technology. Leading companies have recognized the inherent advantages of RFID and have lately pushed to integrate supply chain management technology by making RFID a requirement for manufacturers. In the corporate world, there is still apprehension about investing large amounts of money in new technologies that have yet to be proven. Furthermore, these technologies have been shown to be the most helpful in Wal-Mart and Amazon's supply chain management[2].

Wal-Mart is one of the largest retailers in the world, with operations in fifteen different countries. According to their case study, efficient supply chain management is the main basis on which the Wal-Mart company rises and achieves this position. They also claim that other retailers are copying their retail and supply chain methods, such as sharing supplier sales data, using RFIDs and bar codes, allowing in-house transit self-distribution, using a fully digital point of sale to manage inventory levels. Some responsibilities in the supply chain management process should be prioritized, such as purchasing products from manufacturers and wholesale wholesalers. The next stage is delivery, which requires a methodical strategy to save expenses and utilize the most cost-effective means of transportation. Any company's supply network is critical to its success. Although there are many phases in the ultimate manufacturing of a product, each stage of the product life cycle has an impact on supply chain management. Wal-distribution Mart's strategy in China's different areas. The logistic distribution facilities of different causes in China are linked to the Wal-Mart China headquarters in this diagram. Due to the growing need to include environmental thinking into supply chain management, supply chain management is now acknowledged to have a significant impact on the natural environment. With the assistance of supply chain technology, many businesses across the globe are continuously shifting their tactics to more successful methods and using maximum resources more effectively[3].

The contemporary world is essentially an e-commerce era. E-commerce has evolved into a contemporary method of doing business and effectively growing it. In the area of supply chain management, recent technology advances in the fields of RFID and robots play a critical role in improving current business processes. E-commerce is a platform that satisfies the needs of businesses, customers, and suppliers at the lowest possible cost, with the quickest possible delivery, and the highest possible quality. The main elements of the supply chain technology strategy. The main components include strategic analysis, planning and decision support, as well as operation and transaction management[4].

Computer networks, as well as communication-related technologies, are continuously evolving, particularly in internet applications. During the previous decade, marketing techniques were used to manage the connection between customers and the supply chain. During the past decade, a number of academics have looked at a variety of methods for resolving supply chain management issues. The supply chain is mainly a collection of diverse organizations and business processes for selecting raw materials, converting them into intermediate and final products, and distributing the end product to customers.

Furthermore, the supply chain links a variety of suppliers, different industrial facilities, various distribution nodal points, transportation means, retail shops, raw material choices, and many other entities. the most important elements of supply chain technology strategy The main

components include strategic analysis, planning and decision support, as well as operation and transaction management. During the past decade, Wal-Mart and Amazon have grown in popularity across the globe. Amazon provides a wide range of services and facilities to their consumers, which are well-known among the sellers that visit Amazon.com to keep their products in a warehouse and send them out after they have been purchased. Amazon charges different fees to clients depending on the services they use, and they offer world-class facilities to its customers all around the globe. Amazon and Wal-Mart are both attempting to adapt to new technology in order to grow their businesses in the most efficient and pragmatic manner possible. In contrast to other technologies, RFID technology is the most efficient and well-known[5], [6].

Wal-Mart is one of the most well-known and well-known retailers in the world. This business offers a wide range of services and facilities to customers throughout the world, depending on their needs. The success of Wal-Mart companies may be attributed to a number of elements and excellent tactics, like identical relationship management and the finest impact of E-commerce. This company is using a variety of cutting-edge technology to keep the supply chain running as smoothly and effectively as possible all around the globe. There are many reasons why Wal-Mart is growing more popular in comparison to others, including universal ideals, excellent administration, and corporate philosophy, all of which have contributed to Wal-Mart's success in a variety of countries. The impact of E-commerce on relationship management.

1.1 Technology's Functions Scanning that is completely automated:

The RFID technology offers a wide range of smart benefits, including the essential characteristic of not requiring line-of-sight in order to comprehend RFID tags. The broad implication is that no object, such as barcodes, has to be scanned in any specific orientation. The inherent technical characteristics act as a facilitator, resulting in many benefits at different stages along the supply chain management process. The RFID scanners can provide a communication connection with the tags in a matter of microseconds and can scan several objects at the same time. This comprehensive feature greatly aids the robots of various supply chain management that were previously reliant on labors such as verifying or scanning any arriving goods[7].

1.2 Reduced Labor:

RFID and robots have proven to be the backbone of business organizations in the contemporary world owing to a variety of benefits, including lower labor costs and quicker working times, which are both necessary in the modern world. RFID is a technology that promises to assist in the development of an automated supply chain at unprecedented levels while also reducing labor costs throughout the process. Various cost components have been found that need additional consideration, such as the total labor cost for every distribution facility. Several case studies have been performed over the last decade that are very much linked to the total labor cost as well as the time delay in any corporation's supply chain.

1.3 Wal-Mart shops throughout the world from 2008 to 2018:

Due to a variety of reasons, Wal-Mart has become one of the fastest-growing businesses in the past decade. From 2008 to 2018, this business established a total of 11,501 shops across the globe. This company was formerly known as Wal-Mart shops. During the past decade, this business has quickly established itself as a brand among a number of well-known retail brands. This business began as a single bargain shop in the United States (US). Currently, the Walmart

Corporation operates a number of shops, supercenters, and local markets throughout the world. Furthermore, this business has grown into the world's largest retail corporation.

1.4 Overall, Wal-Mart stores in the United States are as follows:

Wal-Mart is a fast expanding retail company with locations all over the world. Figure 5 depicts the total number of Wal-Mart locations globally in 2019. Various reasons are debated in the open literature as to why the Wal-Mart Corporation's expansion is accelerating dramatically. When many countries were struggling with bar code awareness, the Wal-Mart Corporation went ahead and successfully adopted them. The Wal-Mart Corporation initially announced its desire to integrate RFID technology into supply chain management in June of 2003, and many suppliers were unaware of this until January of 2005. While the plans called for enforcement from the top 100 suppliers, around 129 suppliers stepped into the fight, fearful of being left behind in the pursuit. The RFID technology was first investigated in 1969 and awarded a patent in 1973, after which the Wal-Mart Corporation received a request for its introduction after a 30-year wait. Although there are high expectations, RFID technology is still in its infancy[8].

1.5 Globally, the following are the largest retailers.

As illustrated in Figure 6, there are many major stores across the world, including Amazon, Walmart, Costco, and many more. Wal-Mart is one of the largest retail companies in the world, according to a study done in the year 2020. According to the poll, Amazon came in second place. The flexibility of the newest technology, like as robots and RFID, is the secret to these companies' success. These companies are quickly extending their operations throughout the globe. The producers' constant struggle to get the appropriate goods to the right retailer is the greatest problem in the contemporary world, according to different studies from across the globe during the past decade.

RFID and robotics technologies are a realistic option for resolving this problem, such as reducing inventory stages as well as distribution or managing total expenses by immediately providing the necessary real-time data. The most recent technology, such as RFID and robots, are more flexible and appropriate for improving the supply chain management of the world's top retailers, such as Wal-Mart, Amazon, and other major businesses. Amazon's top rivals throughout the globe. This table shows the headquarters and yearly income of the different top-ranked companies.

1.6 Commonalities in the Supply Chains of Wal-Mart or Amazon.com:

Wal-Mart but instead Amazon.com are two very distinct businesses. Wal-Mart is the world's biggest retailer, with thousands of retail outlets where consumers may choose products from shop shelves to buy. Amazon.com is the world's biggest online retailer, delivering products to individual consumers from its own distribution facilities and partner stocks. Despite their differences, Wal-Mart as well as Amazon.com both use the same supply chain management concepts to support their business objectives. Wal-Mart and Amazon.com both emphasize the one-stop shopping experience, whether it's via on-shelf availability in stores or having goods ready for delivery to online retail consumers through their distribution networks. In order to encourage growth, the two businesses also concentrate on operational efficiency to reduce expenses and then pass those savings on to consumers. They also recognize the value of profiling in balancing supply chain efforts to reduce costs while maintaining a high level of service.

Finally, their supply chain's success is attributed to their capacity to utilize scale through using IT capabilities for improved visibility and efficient process enablement, vendor cooperation efforts, and the ability to exploit scale. These themes demonstrate that, despite the fact that Wal-Mart as well as Amazon.com have distinct operating models, supply chain themes such as on-shelf availability, operational efficiency, process profiling, partner cooperation, IT capabilities, or leveraging scale are shared by both businesses.

2. LITERATURE REVIEW

Nair et al. studied about The goal of this review paper is to look at Amazon's position in the retail sector, which it has acquired mainly via high-level supply chain or logistical innovations. It covers Amazon's supply chain methods as well as a slew of new products and services, including anticipatory shipping, Amazon's Chaotic Storage Model, and Amazon's Logistics Network Plan. Constant innovation in the supply chain has more broad and important long-term impacts on business performance than high profit numbers, it becomes clear. When comparing Amazon to Walmart and other comparable businesses, it becomes clear that Amazon's supply network is more varied, indicating that Amazon and its supply chain integrate many of the services provided by rivals. Amazon's production line may be characterized as having efficient and flexible inventory control, quick delivery fulfillment, successful partner partnerships, smart acquisitions of supporting technologies and businesses, and a high degree of customer care. The findings of this review article may be used to guide future research into Amazon's further comparative advantages, as well as how possible threats and weaknesses in the supply chain may be addressed[9].

Mujtaba et al. conducted research on Wal-Mart is one of those businesses that has been affected by change at all levels as it conducts business and expands its operations across the world. Wal-Mart has also benefitted significantly from strongly held global ideals, philosophies, and managerial methods that have helped it succeed in a variety of nations. This business has become the envy of every big organization in the globe in a matter of approximately forty years. This case discusses how Wal-Mart has achieved such tremendous success, as well as its best practices in the worldwide retail sector, international growth trends and difficulties, and different lessons gained through its international development. The case focuses on delivering consumer value via cheap pricing, technology, and an organizational culture that values continual learning[4]. Amazon has one of the most complex supply-chain systems around the world, and it was developed from the ground up, according to Bacheldor et al. Warehouse management, freight forwarding, incoming and outgoing shipping, demand predictions, inventory planning, and more are all handled by homegrown programs. Amazon has sought to reduce the need for human involvement in its supply-chain operations, such as manually entering sales predictions into an inventory-management system, during the past four years. When most businesses have to combine a number of software tools as well as manual procedures, such as phone and fax orders, Amazon's supply-chain applications interact in real time, which is a rarity[10].

3. DISCUSSION

In the same way, Wal-Mart and Amazon.com are rivals. These companies prioritize variety, convenience, or affordability. Despite their techniques being similar, Wal-operational Mart's goal is supply chain efficiency to reduce costs and promote their everyday low price (EDLP) strategy. Amazon. com's primary goal is to provide a high level of service in which consumers can always

find what they're searching for and select the amount of delivery and price they're willing to spend. Furthermore, distinct supply chain architecture and processes are required to support Wal-Mart and Amazon.com's varied operating models. Wal-investments Mart's in information services and equipment, vendor relationships, and commitment to process efficiency via product profile research all contribute to the company's efficiency, service, and asset utilization goals. Amazon.com offers a wide range of products, convenience, and a low price by utilizing its scale, breadth, and service via new operating models, partnerships, and supply chain process efficiency. Both of these companies achieve supply chain excellence by focusing their supply chain activities on specific goals that support and reinforce their long-term competitive business strategy. In the contemporary world, technologies play a very important and vital part in the growth of companies. The enormous commercial development of well-known companies such as Wal-Mart, Amazon, and others is largely dependent on cutting-edge technology like as robots and RFID. These technologies are gaining popularity across the world owing to their simplicity of adaptation in a cost-effective way.

4. CONCLUSION

Nowadays, company development is largely dependent on companies' capacity to adapt to new technology. New technologies are being used by a variety of top-ranked companies in the twenty-first century, such as Amazon and Wal-Mart, to grow their operations in the most efficient and pragmatic way possible. This article offers a comprehensive review of the newest technology, such as RFID and robots, as well as their benefits for addressing a variety of supply chain management problems. This case study offers a comprehensive literature analysis on Wal-Mart and Amazon, as well as current supply chain management issues and how the newest technology improves supply chain management globally in less time. Furthermore, this report discusses the success of Walmart shops and how many were opened globally between 2008 and 2020. Various researchers have studied a variety of technologies over the last decade, such as RFID or robots, but there is a great potential to study more in this area to address the current supply chain management challenges.

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