

A Study on Recent Trends in the Supply Chain Industry and its Effects

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Abstract: Trends in supply chain is a very fast developing and Because of the always changing elements of the present worldwide commercial center, it is important to look at impending future patterns that might influence organizations. Since supply chains are an important part of any business plan, they need to be checked on all the time. This paper examines the perspectives and contributions of a number of authors who have written about the important topic of managing supply chains. Key trends in supply chain management and their repercussions.

Keywords: trends in supply chain management include integration, responsiveness, risk management strategies, agility, and incentive systems

I. INTRODUCTION

In order to gain market share and a competitive advantage, businesses are placing supply chain excellence at the center of their business strategy. The design evolution of the management and flow of goods and services from the manufacturer or organization to customers using technology and process reengineering to influence performance is known as supply chain excellence (Tim, 2019). Accepting change as a strategic element, looking for opportunities, and putting those opportunities into action effectively and efficiently are all necessary for any business that wants to remain relevant and competitive. Among many other things, technological advancement, unending customer requirements, and process enhancement are the primary drivers of the observed shifts in supply chain strategies and practices. In this essay, five major trends that are influencing the evolution of supply chain management (SCM) design are examined, along with their implications for practice and case studies.

II. KEY TRENDS IN SUPPLY CHAIN MANAGEMENT

Green Supply Chain Management - Green supply chain management, or GSCM, is a relatively new concept in supply chain management that emphasizes minimizing environmental damage and waste during product production and delivery (Tseng, Islam, Karia, Fauzi, and Afrin, 2019). Using environmentally friendly methods and practices, like using less water and less air pollution, in supply chain management, morality is not the only factor; According to Mallikarathna and Silva (2019), it attracts cost-cutting and reputational value to the organization. According to MBASKool (2016), the GSCM has the implications of ensuring the sustainability of the supply chain and safeguarding the environment from climate change. Toyota is one company that has received numerous GSCM awards. According to Toyota (Toyota, 2020), the company's "Toyota Environmental Challenge 2050" campaign aims to cut down on CO2 emissions and water consumption in its transportation, product life cycle, and plant operations. According to MBASKool (2016), Walmart's "Sustainability 360" campaign is another GSCM initiative in which the company promotes the use of environmentally friendly practices among their associates, customers, suppliers, and communities. This campaign will ensure that GSCM strategies are implemented throughout the value chain by reducing the use of non-renewable materials in the products they sell.

The ability of businesses to operate internationally, or globalization llobalisation, has added a new dimension and complexity to supply chain management (Tim, 2019). According to Adenso-Diaz, Mena, Garca-Carbajal, and Liechty (2012), businesses operating on a global scale need to be more adaptable in all aspects of their supply chain in order to integrate and streamline the systems and procedures of external participants in their value chain. One of the empowering agents of globalization are progressions in correspondence mediums and installment advancements (Tim, 2019). Orders can now be placed by organizations through integrated supply chain systems, payments can be received

immediately, and an international courier company can seamlessly carry out delivery. Organizations' networks have grown as a result of globalization, and they are now able to buy easily from low-cost nations or gain access to scarce skills, thereby lowering costs and expanding capabilities (UKEssays, 2015). According to UKEssays (2015), Dell is one tech giant that has utilized globalization to reform its supply chain and expand its supply network. Dell has components from Taiwan, Japan, and Malaysia among other places across the continent, including French soundcards. By maintaining long-term contracts with its suppliers and selecting top-brand PC component suppliers who will adhere to Dell's standards and quality, Dell was strategic in its approach to globalization.

Artificial Intelligence and Automation - According to Dash, McMurtrey, Rebman, and Kar (2019), artificial intelligence (AI) and automation are major shifts in the business world. Because AI makes automation more effective and efficient, the two go hand in hand. Automation is the process of carrying out the decisions that have been made with human intervention (Toorajipour, Sohrabpour, Nazarpour, Oghazi and Fischl, 2021). AI is the capacity of a computer to use existing knowledge and data to make decisions about how to solve problems that were not explicitly programmed into the system. The possibilities for reducing inefficiencies, costs, and human risks are being expanded by incorporating AI and automation into supply chain management. The supply chain, sales forecasting and optimization, production, delivery, and smart manufacturing are all areas where AI and automation can be utilized (Dash et al., 2019). Bots are used by companies like TTEC, a customer service company in the United States, to improve customer experience and satisfaction (Mike, 2019). The bot engages new customers based on previous interactions and outcomes with existing ones, thereby lowering waiting costs and putting less strain on customer service representatives (Mike, 2019). In supply chain management, more advanced technologies like IOT and smart cities are made possible by the application of AI and automation.

Big Data Analytics (Lamba and Singh, 2017) is the application of sophisticated analytical techniques to the study of massive amounts of historical, structured, and unstructured data originating from a variety of sources in order to acquire a greater understanding of the company. According to Lamba and Singh (2017), big data enables businesses to make more precise decisions that either enhance their performance or give them a competitive advantage. According to Jain, Mehta, Mitra, and Agrawal (2017), forward-thinking businesses are currently incorporating big supply chain analytics (BSCA) capabilities into their supply chains. In order to support real-time decision making, data from various supply chain information sources, such as the customer relationship manager (CRM), enterprise resource planning (ERP), and sales information systems, are combined and analyzed (Jain et al., 2017). Innovative approaches to the operations of various supply chain units, including marketing, transportation, point of sale, sales and inventory planning, and sourcing, have resulted from the implementation of BSCA. For instance, UPS, a courier company, developed an "On-Road Integrated Optimization and Navigation" (ORION) system to improve pickup and delivery operations by consolidating and analyzing data from a live navigation system, trucks' geolocation, and CRM (Knut, 2016). According to Knut (2016), ORION has optimized 55,000 routes and saves over \$300 million annually.

VUCA Situations VUCA, or volatility, uncertainty, complexity, and ambiguity, situations like the COVID-19 pandemic disrupted the operations and networks of many organizations' supply chains (Heath, 2020). However, in order to survive, organizations needed to develop strategies that helped them effectively manage the situation (Sean, 2021). To make sure that their customers could get their products at the right time, businesses used new technologies and invented new delivery methods and channels. The COVID-19 lockdown restrictions had an impact on numerous retail establishments worldwide. Checkers, 2021) developed the Sixty60 in South Africa as a means of retaining customers, increasing sales, and encouraging social distance during the lockdown (Checkers, 2021). Clients were expected to download the new Sixty60 application, which permits them to make orders utilizing their cell phones and from the solace of their homes. The app allows for online payment by making assumptions about the availability of the requested goods based on forecasting, predictive analysis, and live in-store customer data. The order is delivered to the customers' homes within 60 minutes (Checkers, 2021). Similar services were also developed by Woolworth and Lancet to maintain competitiveness and business continuity.

The need for environmentally friendly logistics and supply chain procedures necessitates a complete paradigm shift because it presents enormous obstacles in the areas of technology integration, the creation of novel business models, cultural transformation, and job qualification. This paper begins with a brief explanation of how modern logistics and supply chains emerged as a result of industrial production diversification and specialization, resource dispersion around

the world, and increasingly demanding consumer markets. These developments, in conjunction with advancements in freight transportation and communication technologies, have resulted in the current global economy. However, the system's fundamental flaws that ultimately render current practices unsustainable in terms of social, environmental, and economic terms (people, planet, profit) were also revealed by the rapid expansion of trade and consumption. While maintaining competitiveness and meeting high labor quality standards, future supply chains should no longer deplete scarce natural resources, contribute to climate change, pollute the environment, and withstand safety and security threats. This requires not just the use of trend setting innovations to moderate or try and kill these adverse consequences, yet in addition the advancement of brilliant plans of action, new position capability guidelines and comparing (deep rooted) preparing and schooling programs at all levels, including man-made brainpower based learning

Products and services are getting more and more different from what consumers and industrial customers want. The business requires constant replenishment of small batches. The customer desires a wide range of fresh products with acceptable quality, short lead times, and direct delivery options. Supplies are being affected in a variety of ways by these changes in business-to-business (B2B) and business-to-consumer (B2C) markets. Until recently, each supplier was able to meet the needs of their customers in a way that was both efficient and effective. However, the degree to which each industry sector was able to satisfy its customers varied depending on how innovative each sector was. However, the majority of businesses are now realizing that their flexibility has reached its limit: It takes a lot of time and money to meet the needs of customers. Demand-driven supply chain management (DSCM) and demand-driven supply chain management (DSCM) have grown in popularity due to the fact that groups of businesses are able to meet customer needs more effectively and effectively than individuals. By lowering costs, shortening lead times, enhancing service, and increasing the number of satisfied customers, suppliers, manufacturers, and retailers can work together.

II. CONCLUSION

Supply chain management practices are adapting to changes in the business landscape because change is constant. The shift in SCM strategies could be influenced by a variety of factors, including digitisation, demand-driven planning, and the product life cycle. However, the most recent adjustments to the SCM network redesign are discussed in this essay: big data analytics, globalization, green supply chain management, artificial intelligence and automation, and VUCA situations. Organizations must adopt technological advancement, process reengineering, and examining customer needs in order to remain relevant. This includes supply chain management.

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