

Global Supply Chain Management

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Supply Chain Sustainability & Performance Measurement

The sustainability development of the supply chain is based on the intersection between technology and economy, the ecological environment and the social dimension. In view of the three sectors, the retail industry has to be considered on the basis of these factors (Clift, 2004). The three major retailers in the UK—Tesco, Sainsbury and Asda have to be measured in view or in line of these measures. In that regard, this paper discusses the global supply chain management practices of Tesco, Sainsbury and Asda—the global retail giants, including the global supply chain management of the firms in the retail industry.

The performance of the supply chain in its sustainability efforts is measured with regard to three factors: the people, the environment and the costs (Clift, 2004). The supply chain sustainability can only be as significant as the impact it has on the people, including the workers and the consumers, as well as the impact it has on the environment such as the overall level of greenhouse gases (GHG) that it cuts over the years, and the costs that it reduces in its overall execution or operations. The key retailers in their supply chain efforts are required to work towards reducing emissions of the gases and carbon effluents to the atmosphere. This is by using better transportation methods which are free of the carbon gases, or at least reduce the overall emissions. In addition, there is need to cut on the overall fossil fuel usage that the vehicles use in the transportation.

It is notable that while most of the retailers have embraced the issue of climate change and environmental conservation, there is no notable significant change that has been realized. The retailers often act as passive players in the climate change and environmental activism, albeit promoting these courses in their CSR. The incorporation of the issue of sustainability in

the supply chain has not been extensively developed. The efforts are meagre, with most of the tactics used being those of eliminating UPS in reducing the number of turns that the suppliers take or the routes they lead to reduce the overall fossil fuel consumption per year (Reinartz et al., 2019). This is quite remarkable, even though issues such as plastic disposal, carbon emission and water pollution remain crucial issues that need to be addressed. Ultimately, this can be realized through digital transformation when the supply chains are considered as processes which can feature in the overall value chain innovation. The value chain approach to the supply chain can be useful in integrating some of the radical ideas on digital transformation including forecasting techniques and virtualization in realizing sustainable routes.

In the social dimension, sustainability of a supply chain is evaluated on how it treats its workers, and its core partners. Imperatively, Tesco, Sainsbury and Asda have played a key role in the development of supply chain system in the UK that values workers. The workers are paid decent hourly rates and enjoy other benefits such as healthcare insurance and overtime bonuses. The use of these methods has been crucial in ensuring that all workers in these companies are fulfilled, and lead safe lifestyles. More modern in the supply chain sustainability is the creation of human resource friendly mechanisms aimed at promoting the rights of workers (Jones et al., 2013). This aspect is attained mainly by consulting the workers on their rights and involving them in the decision-making model. Therefore, rather than being secondary appendages in the operations of the company, the workers are actively involved in the decision-making process.

Similarly, supporting supply chain sourcing which protects the suppliers as the essential producers of the products or produces that end up in the market is a key social factor. As Tesco, Sainsbury and Asda are the key companies that provide household goods to the people of UK and generally in the markets they are in, having sustainable suppliers is essential to ensuring that

the markets can rely on the products supplied. Otherwise, the credibility of the company or the retailer as the distributor to the market will be at risk, and third-party implications may be involved which could lead to legal punishments. In this regard, the retailers have established that their suppliers are credible and dependable in the long run. Thus, they have to vet their suppliers in a manner that establishes compliance to the core values that define the market expectations. Given that the retailers are the go-between at the middle of the suppliers and the consumers, they have to protect the consumers.

Further, the most essential workers in the supply chain including drivers, packers, and the front-end cashiers undergo training each year as part of skills improvement and advancement. The essence of this approach is to ensure that the workers are up to date with the latest methods of supply chain efficiency to promote optimal performance (Jones et al., 2013). This shows how essential it is for the supply chain workers to be educated or trained to adhere to the latest standards of practice. Ultimately, with issues such as tech-economy, the workers play a pivotal role in the operations.

In the current model, the supply chain success depends on the ability of the key participants to adjust to the varying supply chain changes. These changes are initiated by external factors such as technological shifts. Similarly, the economic variables that impact on the supply chain practices such as costs are influenced by global price of fuel, and the costs of labour. In addition, the economic power of the end market which is the end purpose of the supply chain is determined by the reigning economic forces such as the consumer tastes, and variables such as the purchasing power, and the economic state.

In terms of environmental supply chain sustainability, the key variables that the supermarkets or main retailers focus on is the type of packaging materials used, the carbon

imprint produced in the transport of the products and the overall environmental courses supported. Tesco has been in the forefront of reducing the plastic used in the packaging of the products, with most of the groceries being packaged with non-plastic containers or bags. This has played a significant role in the reduction of the overall carbon as the manufacture of plastic bags releases more carbon to the atmosphere. In comparison, Sainsburys has been keen on promoting sustainable consumer behaviour which encourages use of less multipacks for fruits and vegetables to reduce the number of plastics used in the packaging process (Jones, 2022). This approach has been useful in Sainsburys' efforts to cut down the use of plastics by 50% by the year 2050 (Jones, 2022).

Further, the performance of the main retailers in the UK – Tesco, Sainsbury, and Asda, has to be measured in the perspective of the economic sustainability or suitability to their respective markets. The indicators of economic success include the purchasing power of the consumers as per their purchasing power parity. Given that the pound is a stable currency, the purchasing power of the Britons is high. While this is commendable, other factors such as inflation play a role in determining how the consumers relate with the markets.

In the case of Sainsbury, the supply chain's performance is designed to meet the specific social factors of the market segment it focuses on. Sainsbury's key demographic for which it aims to address is the family. Anesbury et al. (2020) observes that the key success factors for the retailer is the ability to address the needs of its customers. As such, its acquisition and supply of products is aimed at serving a conscious customer base. Given that Sainsbury's market is keen on the effectiveness or quality of products including the health consciousness, and reliability in both the price stability and consistency on the availability of the products. Sainsbury can thus be noted as a success in addressing its market, as it has consistently been reliable to its domain.

In the case of Tesco, the main indicator of success in its performance is the employee satisfaction which is driven by a conducive working environment and motivational factors (Fadeyi, 2020). Tesco has grown in its scale and size to such an extent that it is the largest retailer in the UK. The growth of Tesco can be attributed to the continuous training of the workers. It is also due to the development of the infrastructure that supports employee growth and efficiency. For example, Tesco has been at the forefront in the adoption of technology in the supply chain. In consequence, the employees have better or accurate records of the inventory, as well as feel secure in their work as the records of the flow of products is well kept. Such measures help in reducing the work stress and improving productivity.

Similarly, Tesco's efficiency of the supply chain with regards to employee performance as resources of internal efficiency can be noted in the reduced operational costs. In effect, there has been significant increase in the operational profits, which is marked by the adoption of a better organizational supply chain structure (Fedayi, 2020). According to a supply chain evaluation study, Tesco has outperformed the market demands by sustaining high operational profits by minimizing the operational costs. This can be defined as the increase in the supply surplus (Donati, 2020). This is arguably the key reason behind the sustained growth that the company has experienced over the years. The other retailers can make use of the strategy established by Tesco on optimization mechanisms that help to reduce the level of unnecessary costs that may occur due to high lead times or return backwards.

With regard to the environmental sustainability which is part of the supply chain sustainability performance is driven by issues such as water use, the level of carbon gas emissions reduction, and the usage of energy. At the moment, the three retailers have almost similar types of sources of energy in the transport of goods, with waterways and road networks

forming the basic means of transporting the consignments of the inventory. As there is no radical innovation, the companies produce carbon emissions to the atmosphere which is indicative of a lax in the extend of their sustainability efforts towards environment.

As to the use of water, there are variations in the extends of water used in the cleaning of products and the pollution made to water ways. The method through which water is sold can also lead to environmental pollution. In the UK, the 2019 and 2020 data indicate that Tesco, and Asda were among the leading retailers which were selling water in plastic containers (Eia-international.org, 2022). Plastic containers are environmental hazards as they are non-biodegradable. On the degree of water that is preserved, it occurs that the retailers have to consult their sourcing to initiate policies that promote development of water conserving household products (Eia-international.org, 2022). Similarly, as the retailers have supermarkets, they should be at the forefront of conservation efforts by reducing wastefulness in their day-to-day operations. These are issues that are implemented at the operational level, even though there is no evidence the degree to which this has been implemented.

It is notable that the key drivers crucial to the performance of the retailers is how they relate to sourcing, transportation, inventory control, use of facilities and information flow. In the time that the three retailers have been in operation even during the chaotic disruption of global supply chains in 2020 occasioned by the Covid-19 pandemic. This is a testament of the effectiveness of the supply chains in being formidable in sourcing, transportation and inventory control. The extends to which the information flow is instituted in the three retailers may differ, as there are differing approaches to communications and organizational transparency issues. It occurs that the common point of convergence is on the data management, with the projections of

the market demands influencing the degree to which the partners in the supply chain supplement the key operators to safeguard against shortages or bottlenecks.

Global Logistics

The source of competitive advantage in the global logistics is the lead time and supply chain surplus. The methodologies through which this is attained is partly through capacity aggregation and collaborative supply chain methodologies. The global logistics involves various parties which serve specific functionalities which are critical to the overall success of a company. In the case of the three retailers—Tesco, Sainsbury and Asda, the efficiency of the supply chain can only be measured on the lead time and the supply chain surplus that is achieved. These performance indicators of the global logistics are barely measures or markers of an array of factors and their effectiveness in a given industry.

All the three companies—Tesco, Sainsbury and Asda have attained supply chain surplus by aggregating their demand through capacity aggregation. In this case, the three companies make use of third parties to execute some of their functionalities. These are the key essential factors to the success of the companies, as the global logistics are costly, and complex in their managerial requirements. One such example is that Sainsbury has maintained its supply chain competitiveness in the globe by relying on Blue Yonder which has created an end-to-end supply chain methodology (Business Wire, 2020). The significance of the use of the third-party collaborative company is the leverage of technological inputs to advance the supply chain process expectations. For example, the Blue Yonder offer the opportunity for Sainsbury to predict the sales by creating forecasting and inventory replenishment techniques. Further the company in charge of the supply chain helps in matters of creating warehouse management, yard and labor management and in harmonizing all the basic operational factors that are critical in the

supply chain. Notwithstanding, Sainsbury has been able to manage its over 2,000 stores and its key supply chain relationships. This is the new dimension of the global logistics (Business Wire, 2020).

Similarly, Tesco is in the process of collaborating with a cloud-supply chain company to run its global logistics operations as this shall lead to better visibility, tracking and execution of the supply chain process (Bradley, 2021). In 2021, Tesco started its initial talks with the E2open company which has specialized in cloud-supply chain systems and logistics to run operations across the globe. Through this method, E2open shall act as the sole logistics coordinator of the key operations that involve logistics management (Bradley, 2021). This includes managing relations with the company partners such as the suppliers and the third-party fulfilment parties in charge of packaging. The company is also in charge of the logistical issues of coordination such as forwarding, and coordination of operations across various regions. The significance of the use of a third-party methodology as the future of the supply chain among retailers is the ability to create better lead times, and increase the supply chain surplus (Bradley, 2021). Thus, the UK retailers are moving from the traditional mode of operation to the new dimension of operation. In the case of Tesco, the overall impact shall be success for the over 4,000 stores of Tesco across the globe (Bradley, 2021).

The other key movement in the industry of retailing is supply chain collaboration, at times with a superior or a greater partner. This is demonstrable in the case of Asda. Asda has made use of the collaboration with the parent company Walmart to attain a more effective global logistics approach. Among the key tenets of the new Asda global logistics strategy is the collective sourcing for products which is aimed at capacity aggregation (Rowse, 2021). In this regard the company is likely to enjoy economies of scale to such a degree that it can increase the

overall supply chain surplus. The supply chain surplus in global logistics is attained when the company makes use of the third-party companies in such a manner that it is able to cut down on the costs, and optimize on the overall returns for a given product (Rowsell, 2021).

In its strategy of attaining an effective global logistics supply chain, Asda applies reverse logistics as some of the key centers for repackaging of its merchandise include the International Produce Limited which is in charge of packaging its international products to suit the local market demands (Rowsell, 2021). The effectiveness of the use of the IPL has been in repackaging common groceries imported from China to the UK in such a manner that the company brand is promoted. In addition, the use of fulfilment centers for the reverse logistics helps in repackaging of the products to the quantities that the common retailer can associate with. Besides, with good packaging processes, the overall package value increases with the quality of the packages appealing to the consumer tastes or desires.

Besides, the use of global merchandising centers has resulted in the reduction of the overall acquisition costs, as the products are collectively sourced in advance and distributed to the various centers. To this extend, the global merchandising centers are in charge of getting the best possible pricing in the global market; ensuring that there are optimal gains in the overall returns on sales. The procedure aims at reducing the marginal costs of acquiring products and eliminating middle men. This has been successful in Asda's global sourcing plans which have been boosted by the involvement of Walmart in the sourcing process. In general, Asda's global sourcing process has employed the use of international merchandising techniques to reduce on the costs of individual sourcing and enjoy the economies of scale that arise from having large merchandises (Rowsell, 2021).

The approach by Asda is also being used by Tesco which has been applying the method albeit by leveraging on its mass scale, and being in the logistical position of what Walmart is in the case of Asda. This demonstrates the essence of collaborative supply chains as they help to maximize on the economies of scale – which reduces the overall input costs. The input costs are likely to create a burden on the entire supply chain.

On the goal of the retailers in having the optimal lead time, there is need to have a clear flow of the consignments with high degree of accuracy and minimization of error. This can be achieved by maximizing the tracking technology. In ensuring that it is easy to track the goods in the global logistics coordination, RFID technology is used in monitoring inventory flow (Musa & Dabo, 2016). The consequence of this approach is that it helps to reduce the lead time by proper communication and inventory tracking. The essence of the RFID technology in the global logistics of the three major British retailers is that it is easy to identify the destination of each consignment including the specific retail destination. In this regard, despite having a large number of consignments to deal with in the global fulfilment centers, the companies can communicate effectively.

Besides, in managing the global logistics, the companies have made use of the enterprise resource planning (ERP) technology in planning for the distribution, sales forecasting and in consolidating suppliers (Ho, 2007). The significance of adoption of the e-technology among these major retailers in their global logistics is that they have attained integrated communication in their operations. The consequence of having an integrated information system is that there is reduction in the bottlenecks that may be experienced when the expectations or inventory is unpredictable. With the global logistics efficiency being reliant on real time data, the use of ERP

and integrated communication systems play a pivotal role in attaining a seamless inventory flow (Ho, 2007).

Tesco has also attained supply chain success revenue of £30.4bn, and experienced a rise of 107.4% percent (Donati, 2021). The impact of the Tesco improvisation of its global supply chain methodology is that supply chain and the depth of supplier partnerships. The significance of the supplier partnerships in the retail chains is that they act as the primary complementing forces in the development of the organization. By having a highly evolved and efficient partnership, the supply chain is capable of attaining faster lead time. As a result of faster execution of the inventory deficits, there is a continuous flow of the key products to the markets, creating a sense of reliability in the markets.

The key concept that the retailers use in their global logistics is supply chain collaboration, where some of the companies link up with other giant suppliers or players. For example, Walmart's involvement in Asda's logistics is majorly collaborative. In this regard, Walmart acts as the key sourcing company for Asda and as such charges Asda a given fee for its involvement (InsightDiy, 2012). At the same time, Walmart consolidates its overall strength or power over the suppliers through these mechanisms as with a larger consignment to order, the economies of scale increase. As a partner in the collaborative partnership, Asda as well gets to enjoy supply chain surplus as the overall prices of commodities sourced from the best suppliers across the globe, and leveraging on Walmart's competitive advantage or links brings in domino effect in terms of overflows.

Similarly, with reliable supply chain partners, the company can attain the optimal pricing mechanism which has a key consequence on price stabilization. The higher the level of price stabilization, the higher the customer reliance or confidence in shopping at the different Tesco

branches. This applies to the other two retail giants, Sainsbury and Asda as the key principles of efficiency of global logistics models apply to all attendant parties.

In the case where the retailers are engaged in a situation where there is need for contrasts, it is essential to have clear terms. As the retailers depend on the trust that the third parties have on their ability to meet their promise or timely payments, honoring up to the financial agreements is critical to sustaining good will. With the establishment of goodwill, and proper communication, the retailers are able to run the global logistics seamlessly – and even when challenges arise, they are solved with ease.

Conclusion

The global supply chain and the global logistics in the retail sector aims at reducing the lead time and increasing the supply chain surplus. These two tenets which are indicative of success are encapsulated in the Tesco, Sainsbury and Asda companies' sustained supply chains over the years. The three entities have experienced growth in their respective operations, with remarkable blossom in profits and optimization. It is interesting that the retailers are embracing collaborative supply chain model, and a delegated global logistics management approach through third party logistics companies.

There is also an intersectionality of technology with the core functions of logistics, and how technology is helping to improve the operations of the companies. The most significant of these being the cloud-supply chain services. It is anticipated that in the future more retail companies shall incur less costs and managerial complexities in running their global supply chain and logistics as they will contract the services of third parties. Outside the scope of technical logistics, it occurs that some of the key issues that promote sustainability of the supply

chain include clear communication, setting clear expectations for parties involved and following the right channels of engagement.

As the retailers act as custodians of the supply chain's goals which is linking the consumers to the markets, they are tasked with the duty of care – in such a manner that they must cross-check the quality of the products sold. Besides, they ought to fully engage in the sustainability models that promote the sustenance of the companies' supply chain models by focusing on tech-economy, the social and the environmental dimensions. In executing their roles, the retailers are gradually accepting the responsibility of developing alternative methods to the most inimical challenge – environmental and climate sustainability. It is impressionable that there has been significant success of the retailers in boosting a strong social and tech-economic environment by caring about the people and adopting new technologies. The future of supply chain and global logistics in the retail sector is hopeful, as Tesco, Sainsbury and Asda indicate this direction.

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