

The Study on Retail Supply Chain with Special Reference to Zara's Agile Supply Chain

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ABSTRACT: Supply chain elements are value-added activities in any organization. In the context of textiles, fashion, and clothing industries it plays an important role from procurement to delivery of the product. Any business aims to make money, with the products that satisfy the customers and can provide services like on-time delivery. Which is achieved by Zara, with its supply chain capabilities like it has integrated, information technology, customer inputs, outsourcing, subcontracting, just in time, cost reduction, lean concepts, and the cube. Zara's supply chain is agile, responsive, and flexible. Zara was able to successfully reduce the inventory in the pandemic situation to reduce the costs. Zara also developed its e-commerce application to foster the demand in the lockdown. Zara easily adapted the clothing style according to the customer's taste and preference.

KEYWORDS: Agile supply chain, Push vs Pull supply chain, Technology integration, Zara operations

I. ZARA - THE FAST-FASHION BRAND

Do you believe that a brand does not require marketing to sell its products? Is it easy to produce a product in four weeks when the competitors take six months to produce the same product? How can a supply chain not end? Can a supply chain be in a constant loop? These all are possible by Zara, a vertically integrated supply chain. It is the flagship brand of Spanish largest fashion retailer, Inditex, established in 1975. Zara is one of the eight brands of Inditex group targeting women, men, and youth from infants to the age of 45 with a motive of delivering continuous innovation based on customer desire. Zara presently operates 1,298 stores in Europe, 345 stores in America, 565 stores in Asia, and the rest. In this paper, the above questions are explained.

II. IMPORTANCE OF LOGISTICS IN THE ZARA SUPPLY CHAIN

Vertical integration refers to the ownership of almost the whole supply chain by some firms, in the case of Zara, from design and production through distribution and logistics to shops worldwide. Benetton, The Gap, and Hennes & Mauritz, among Zara's retail apparel competitors, continue to rely on overseas production partners through total or significant outsourcing. The super responsive supply chain is integrated by the central logistics and distribution model of Inditex. The eight brands of logistics, including Zara, are executed by the Inditex Centralized Logistics

platform. The below figure explains the execution of Inditex logistics.

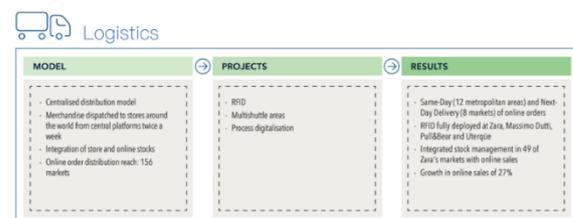


Image source: (Inditex, 2019)

Logistics needs to have a quick transit to be efficient. To keep the distribution expenses for the items as cheap as possible, Inditex optimizes transportation procedures and redefines the routes laid out by the logistics services for each brand of the company. Air transport is the most often utilized mode of delivery because the procedure is quick to get fashion to the market. In the above picture, RFID (radio frequency identification) is used in Zara warehouses; to identify every apparel product by radio frequency, Inditex employs the RFID, which incorporates a chip in the alarm system at Inditex logistic hubs. Then, during all phases of the supply chain, the firm can know where each item is. (Morgado Costa, 2017)

III. ZARA OPERATIONS

Inbound logistics:

1. The raw materials, which European vendors have provided, are obtained within five days of the order, mainly by purchasing fabrics in four basic types and doing the whole cutting and dyeing process in-house. Then, the materials are delivered by rail from the Cube to the manufacturing plants.
2. IT-enabled Just In Time strategy results in raw material being received when needed.
3. Most of the dyes are purchased from its subsidiaries to support JIT's strategy and reduce the cost.

Process Logistics:

1. The fabric's patterns are mix-matched using the software so that machine cutting the fabric leads to maximizing the profit and minimizing the cloth wastage.
2. The cut fabric pieces are transported to workshops that independent subcontractor own. The workshop is arranged as small assembly lines. After

completion of stitching, the garments are transported back to the manufacturing plant.

- The quality control process is initiated; after completion, they are sent to the bagging system machine. Then the products are transferred to the distribution center on an automated system; this system links every manufacturing plant in the same region with the logistics center. (Mozzhukhina, 2015)

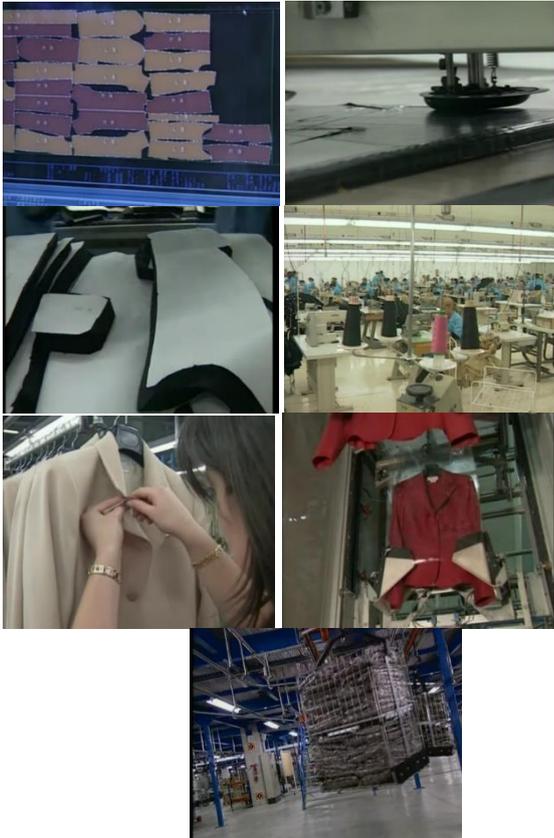


Image source: (We went inside one of the sprawling factories where Zara makes its clothes. Here is how the world's biggest fashion retailer gets it done., 2018)

Outbound logistics:

In 96 countries worldwide, there are 2,238 Zara shops, each getting fresh shipments two times a week. Each clothes item travels via one of the four distribution hubs in Zara throughout Spain. One distribution center is in headquarters, La Coruna, Spain; Zara utilizes state-of-the-art distribution technologies. The Cube (i.e., "center command") is connected to 11 Zara factories in a total radius of 10 miles by underground tunnels. Tunnels with high-speed roof rails are equipped with rails to move garment racks, more than 400 chutes, and conveyor belts.

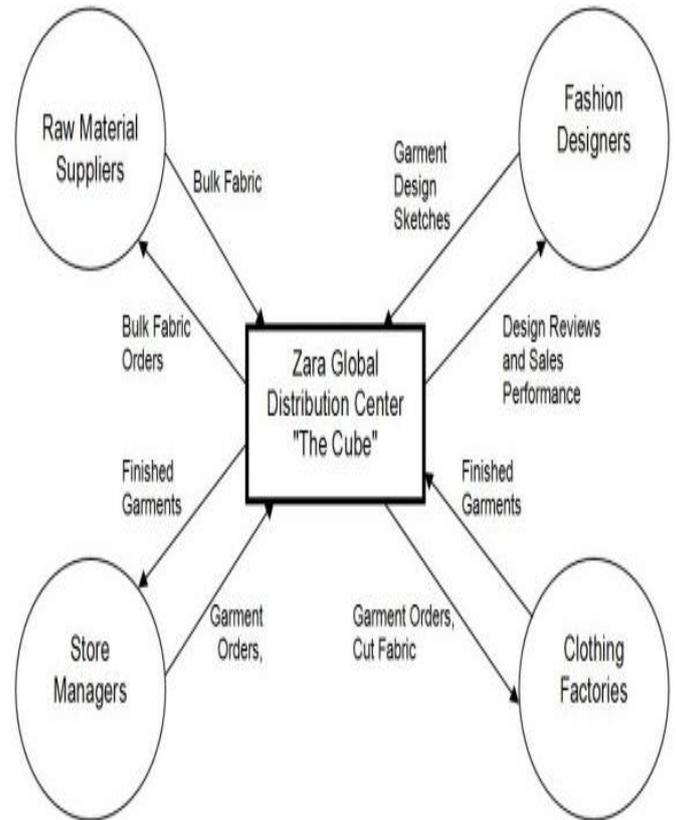


Image source: (Abed, 2017)

The goods passed through sensors with each item given Radio frequency identification (RFID) tags, with more than 60,000 items sorted each hour. It helps to track the item from the distribution center to the sale point.

The distribution facility was entirely automated and had two levels. The folded garment was placed into cardboard boxes on one level. On another level, boxes have been dropped by a shaft to their destination. The clothes on the hooks were on the opposite level.

The garments were categorized according to their style. Two belt systems were available, one for folded and one for hanging clothing. The garment was then automatically routed utilizing routing equipment. All garment was pre-priced, and the lot was marked according to its destination. (Aftab, Yuanjian, Kabir and Barua, 2018)

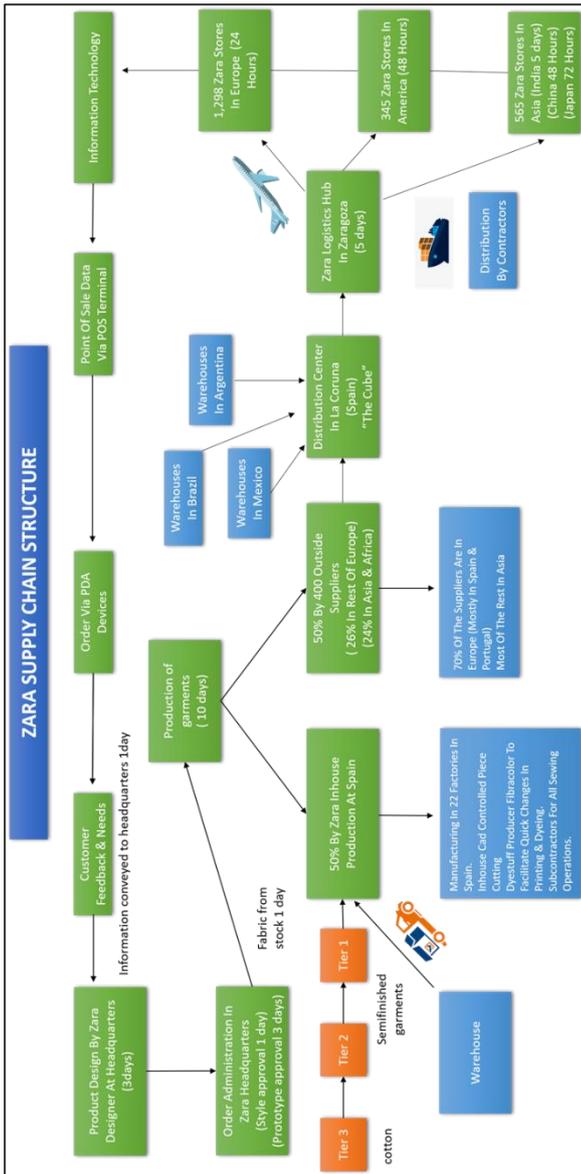


Image source: Self-creation
Sources used: (Situro, 2020), (Aftab, Yuanjian, Kabir and Barua, 2018).

Information Technology:

pyjamas, and tracksuit bottoms. As a result, they are preferred by the consumer during lockdown using the benefit of their short lead times.

The significant change in the supply chain of Zara is Ecommerce development, the online delivery system. The store delivery model should be made adaptable to door delivery to customers. Inventory management, database development, and order fulfillment are areas where the supply chain should be developed. The above figure

The quick response system of Zara is unique which consist of human resources and information technology. This “Fast Fashion” system depends on a constant exchange of information throughout every part of Zara’s supply chain: from customer to store managers, from store managers to market specialists and designers to production staff, from buyers to subcontractors, from warehouse managers to distributors, and so on. The constant flow of updated data mitigates the so-called bull-whip effect, the tendency of supply chain (and all open loop information systems) to amplify small disturbances. The combination of vertical integration, technology-orchestrated suppliers, fine tuned logistics and just in time manufacturing makes zara more competitive.

IV. POST COVID SUPPLY CHANGES

Zara was affected by the coronavirus because of shutdowns and changes in customer choices and spending patterns. Zara either stopped or significantly delayed because of lock-outs due to its ability to supply items to its stores. In the Wall Street Journal, downloads of Zara's app have declined by around 14% in American markets due to the coronavirus epidemic. Consumers gave the purchase of staples and food priority. Due to uncertainties about their work, they kept on discretionary expenses.

Fashion executives plan to employ several strategies to avoid overstock in the future

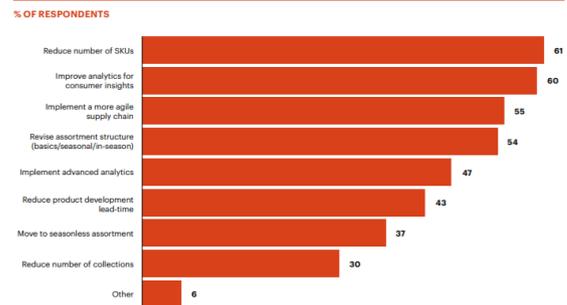


Image source: (Mckinsey company, 2021)
Inditex's covid strategy has three key elements: digitalization, store integration, online channel, and sustainability. Due to its agility and flexibility in production, Zara has reduced its inventory by 10% and its production capacity at the time of the reduced demand. As a result, in the quarter to June 2020, it could also reduce operational costs by 21 percent. In addition, Zara swiftly adapted their clothes to more comfortable products, such as explains the inventory strategies taken by several companies during a pandemic. (Shabir and AlBishri, 2021)

V. PUSH AND PULL BOUNDARIES

Zara produces two types of garments. One is a basic product that does not require customization, so it is stored as a semifinished product. These products are customized based on popular colors and required sizes. For the other fashion products, the designers of headquarters use CAD and CAM techniques to produce the highly customized product. This

product requires information from fashion shows and trends in social media. In this picture, the basic product activities are highlighted with subscript(B) brackets, subscript(F) fashion products, and both basic and fashionable items with subscript activities (B, F).

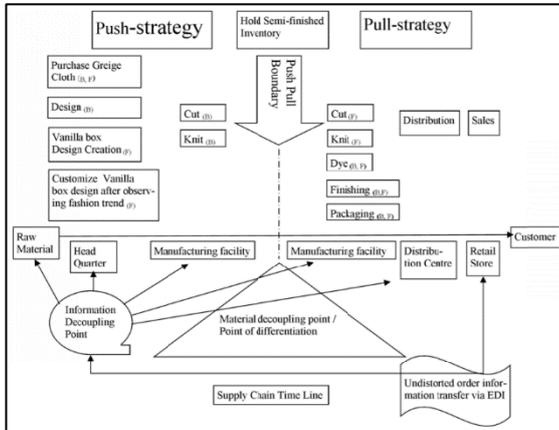


Image source: (Aftab, Yuanjian and Kabir, 2017)

In the above picture, the information decoupling point is placed at the farthest upstream, e.g., the head office, thereby permitting an uninterrupted view of the customer purchasing activity on all four supply chain partners. This supply chain provides transparency before the product is distinguished from the material flow point following market requirements. It illustrates a pipeline of information and is known as the information enhanced model that may be obtained via an Electronic Sales Point (EPOS) to all players at the information point downstream. Using the information decoupling point and material decoupling point techniques allowed the fast-mode merchants to successfully implement postponement but not at the price of increased order delivery time. (Aftab, Yuanjian and Kabir, 2017)

VI. ZARA SUPPLY CHAIN STRATEGY

Zara's supply chain strategy is agile, flexible, and responsive in production and distribution to capture the latest fashion trends. Below are the drivers of the supply chain, which results in responsiveness and flexibility.

- I. Centralized distribution center and 85% capacity of own factories reserved for in-season adjustments
- II. RFID Technology helps to capture fashion trends and improves retail inventory management
- III. Batch manufacturing and just-in-time implementation resulted in a low level of inventory.
- IV. Airfreight to Asia and 75% by trucks in Europe
- V. Most sourcing activities are done through local manufacturers
- VI. Only makes sales twice a year (summer and winter sales), predictable pricing helps in managing the demand

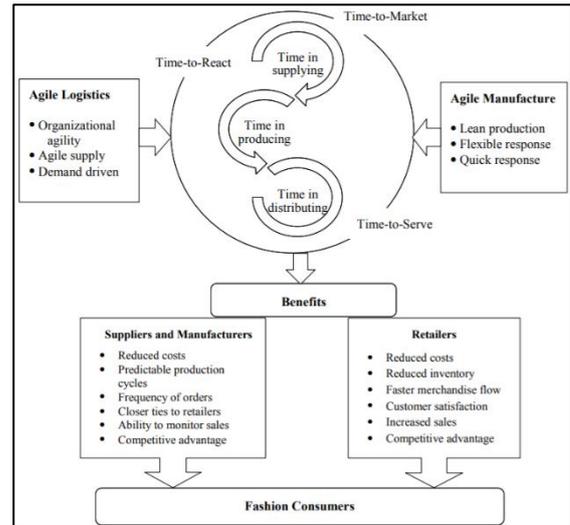


Image source: (Ciarniene and Vienazindiene, 2014)

The above figure depicts quick response time, which is a characteristic of an agile supply chain; it explains three elements:

- Time to market: how long does it take for the company to detect and transform a market opportunity into a product or service and to put it on the market? In short life cycle markets, it is now a must for businesses that can rapidly detect trends and transform them into products in the shop.
- Time to serve: How long does a customer's order need to be processed and delivered to retain satisfaction?
- Time to react - how long is it needed to alter its output to respond to fluctuating requests? Can the tap be easily enabled or disabled? Ideally, a company would like to satisfy consumer requirements for the goods on sale and prioritize customers' demands. (Ciarniene and Vienazindiene, 2014)

VII. CONCLUSION

Zara was able to deliver the fashion products in four weeks and the industry takes six months to bring the fashion products into the market. It is all possible through high integration of the supply chain with information technology, logistic, synchronization, and coordination of the partners in the supply chain. Implementing the right strategies like postponement strategy, delivering twice a week to the retail shops, and just in time manufacturing is one of the reasons for the competitive advantage in the market.

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