

Supply Chain Sustainability Project

Group L

Principles of Supply Chain Management 3040

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7 December 2021

Introduction

Many years ago, shopping for clothing was an occasional event. It was an event that occurred when one outgrew clothing and was in need of new clothing. However, within recent years, shopping for clothing has become a hobby in which many shoppers buy clothing daily, weekly, or monthly. This happened because clothes became cheaper, and clothes are being released due to shopping trends as opposed to seasons. This method of shopping for clothing has dominated global supply chains because the clothes being made are trendy but cheap, this type of production is called fast fashion.

Before we take a dive into the supply chain sustainability aspect of fast fashion, one must examine the history of how it came to be fast fashion. In the 1800s, fashion was not popular as it is today because people had to make their own clothing with material, they sourced such as raising sheep to get wool. Then the industrial revolution happened in which “textile machines, factories, and ready-made clothing began” (Idacavage, 2018). Additionally, during this period, sewing machines were invented which allowed for clothing to be made quickly. Then in the 1960s is when clothing began to become fast fashion, because the young generation used clothing as personal expression so they would buy cheap clothing to keep up with fashion trends. Then in the 1990s to the early 2000s is when the “low-cost fashion... phenomenon caught on” (Rauturier, 2021).

Detailed Description of Fast Fashion Supply Chain

Supply chain management is key in fast fashion because it is the “process of tracing each step of the clothes manufacturing process, from sourcing of the raw materials to the factories where those materials are made into garments; and the distribution network by which the clothes are delivered to consumers” (Zoltkowaki, 2021). The Fast Fashion Supply Chain is worth 2.5

trillion (Nilsson, 2020) and employs more than 60 million people (Zoltkowaki, 2021). With the fast fashion supply chain being very enormous, it is greatly important to have a sustainable supply chain. The importance of a sustainable supply chain is for companies and organizations to consider the environmental and human impact of the products they are manufacturing and providing to their consumers.

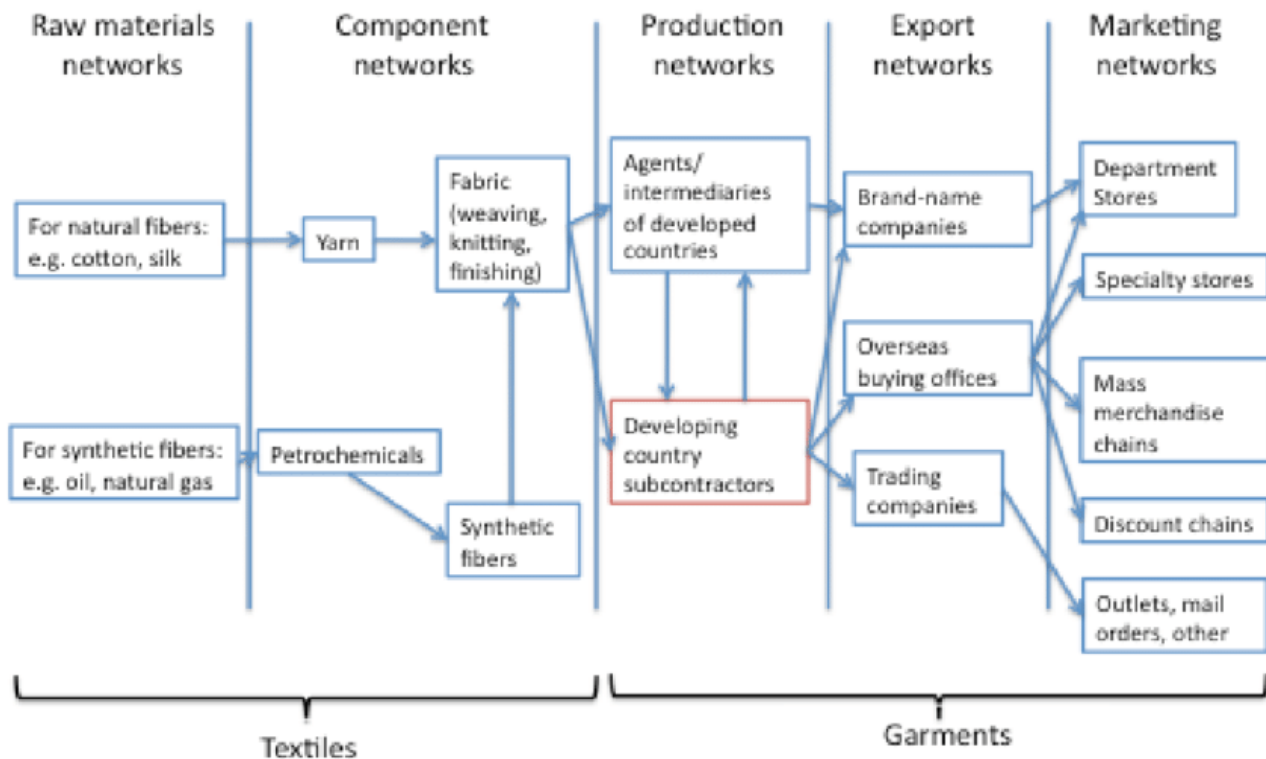
As for the fast fashion supply chain it is one of the worst sustainable supply chains. For starters, since the price of clothing has dropped over the past twenty years, consumers now have five times more clothing compared to twenty years ago. The fast fashion industry is “the second largest polluter in the world [and] the environmental damage is increasing as the industry grows” (Charpail, 2017). The sustainable issues with the fast fashion supply chain are that 80 billion garments are produced each year but only 20 to 30 percent of clothing in each women’s wardrobe are being worn. The fast fashion industry contributes to water pollution because “most of the countries in which garments are produced, untreated toxic wastewaters from textiles factories are dumped directly into the rivers [and] wastewater contains toxic substances such as lead, mercury, and arsenic” (Charpail, 2017). These toxic substances are harmful to both aquatic life and the health of people who survive off the riverbanks. Not only that, but the fast fashion industry uses 1.5 trillion liters of water every year. Furthermore, much of the clothing made by fast fashion uses synthetic fibers such as polyester or nylon, which are biodegradable and can take up to 200 years to decompose. Moreover, the fast fashion industry “accounts for 10% of global carbon emissions and it generates a lot of greenhouse gases due to the energy used during its production, manufacturing, and transportation of the billions of garments purchased each year” (Charpail, 2017).

Not only is the fast fashion supply chain detrimental to the environment, but there are also inhumane working conditions. Fast fashion companies exploit their workers to work long hours with little to sometimes no pay. Most of fast fashion clothing are produced in China, Bangladesh, or India, in which the minimum wage is “between half to a fifth of the living wage” (Charpail, 2017) and these brands are “paying their employees 5 times less than what a person actually needs to live” (Charpail, 2017). In addition, “Garment workers are often forced to work 14 to 16 hours a day, 7 days a week, or 96 hours per week” (Charpail, 2017) and “basic wages are so low that they cannot refuse overtime - aside from the fact that many would be fired if they refused to work overtime. In some cases, overtime is not even paid at all” (Charpail, 2017). The fast fashion companies also have unacceptable working health and safety conditions. In 2013, was the collapse of the Rana Plaza which happened in Dhaka, Bangladesh in which “1134 garment workers lost their life due to the collapse of a textile factory” (Charpail, 2017). Continually, “employees usually work with no ventilation, breathing in toxic substances, inhaling fiber dust or blasted sand in unsafe buildings. Accidents, fires, injuries, and disease are very frequent occurrences on textile production sites” (Charpail, 2017) and “when [employees] fail to meet their (unreachable) daily target, they are insulted, denied breaks, or not allowed to drink water” (Charpail, 2017). Continually, child labor is very common in the fast fashion industry. An example is in South India where “120,000 girls work under the Sumangali scheme, a practice which involves sending young girls from poor families to work in a textile factory for three or five years in exchange for a basic wage and a lump sum payment at the end to pay for their dowry” (Charpail, 2017). All in all, the fast fashion supply chain can be classified as one of the worst industries which is extremely harmful to the environment and takes advantage of innocent people in order to make great profits from their fast, cheap clothing.

Summary of the Assessment including Analysis and Support

As consumer trends swing toward demanding low prices and fast response times, the apparel industry has shifted dramatically over the years. The newest phase of the apparel supply chain life cycle has given birth to what is known today as fast fashion. Companies therefore are shortening the length of the fashion cycle and integrating sustainable innovation into the manufacturing process and product designs. The companies that are well known in this industry are Zara, H&M, Forever 21, Fashion Nova etc. Now these fashion businesses have a formidable supply chain system integrated that helps them become efficient and sustainable to become successful. With the goal to take their products from a trend to an online purchase with deliverable garments at lightning-fast pace. First in fashion design, companies use computerized computer-aided design/computer-aided manufacturing (CAD/CAM) tools so new trend designs can be consolidated and compared by using computers. In addition, enhanced communication using electronic data interchange (EDI) is used to establish quick and efficient communication between parties so designs can be exchanged and raise discussion in a timely manner. Then these companies focus on smart forecasting to predict garments, shapes, and colors that consumers will eventually purchase. By using technology analysis and market research, it helps businesses make data driven decisions to produce products and integrate them successfully to the public and fulfill demands. Once the sample making process has started and costings have been figured out, to mass-produce similar runway and trend they need a selection process on what type of materials will be needed. Businesses that are in fast fashion tend to use cheaper fabrics and labor. These cheap fabrics are made from non-renewable fossil fuels that

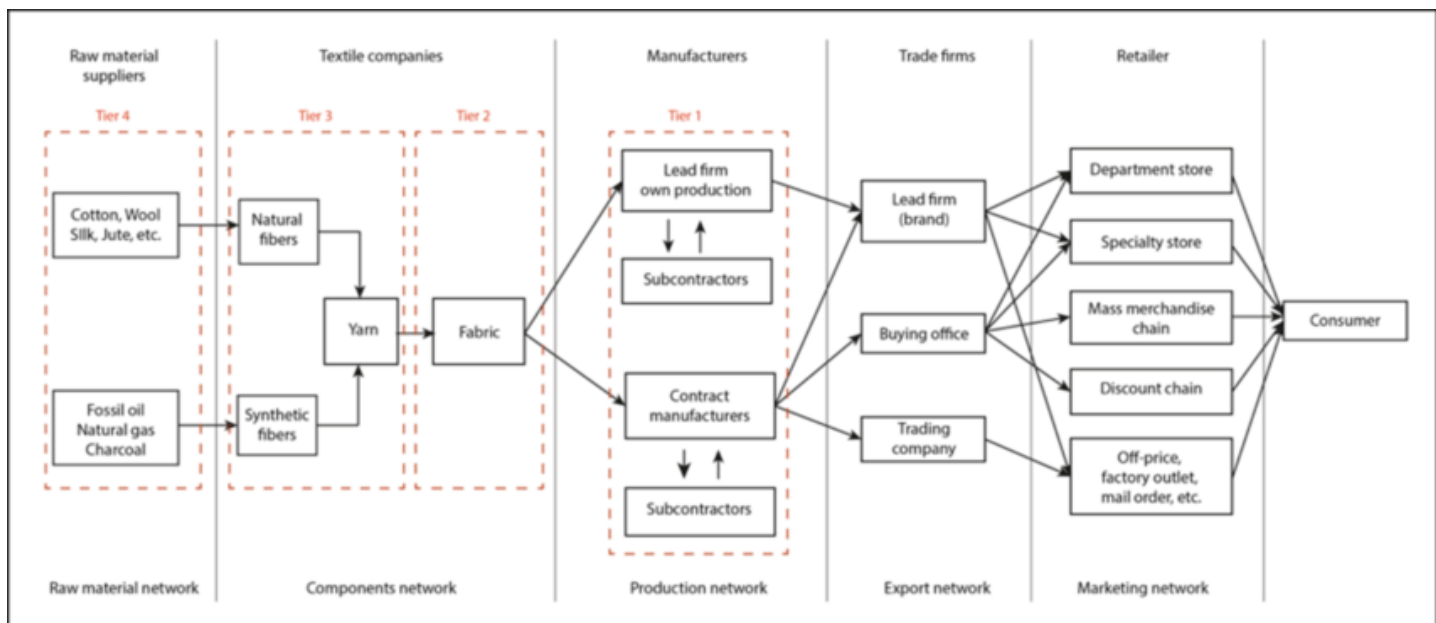
are called petrochemical textiles. The end result is selecting fabrics like polyester, rayon, spandex, polyurethane, nylon etc.



In addition, when it comes down to manufacturing and choosing the right partner. Companies over the years focus on a deep criteria of sustainability conditions, by showing data and information about supplier rating systems, selection and management. For instance, the table I have shown down below is the sustainability considerations in fast fashion retailers: suppliers' selection and management. They each have different criteria they look for but keep the same four categories the same. Such as supplier categorization and ratings, management, best practices and different forms of stakeholder engagement.

Supplier Categorization and Rating						Supplier Selection and Management	Best Practices	Forms of Stakeholder Engagement
Retailer A Five categories. Strategic suppliers (A+B) are responsible for 93% of total production in 2014 and 96% in 2018	2014	2015	2016	2017	2018	Compliance to Code of Conduct for Manufacturers and Suppliers, initial assessment and others over time through audits	Audit teams to verify compliance to Code of Conduct; classroom training for suppliers; management systems for the supply chain traceability; Implementation of the Strategic Plan for Stable and Sustainable Supply Chain 2014-2018 Workers at the centre Programmes Work In Supplier Clusters.	Global Framework Agreement with IndustriALL Global Union and alliances with the International Labour Organization (ILO), the UN Global Compact and Better Than Cash Alliance. Participation in ACT (Action, Collaboration, Transformation), the Ethical Trading Initiative and the Bangladesh Accord
	A	42%	42%	38%	36%			
	B	43%	46%	51%	53%			
	C	8%	7%	5%	5%			
	CAP	3%	2%	3%	4%			
Retailer B Four categories. Strategic suppliers (platinum+gold) responsible of 60% of total production in 2014 and 2018	2014	2015	2016	2017	2018	Compliance to Code of Conduct, initial assessment and others over time through audits, Individual meetings, 130 sustainability experts.	Full Audit Programme (FAP), Index Code of Conduct (ICoC), anonymous supplier surveys, close relations and constant dialogue with business partners, monitoring, assessment, training, reporting.	Several Partnerships with (among others): Better Cotton Initiative (BCI), Sustainable Apparel Coalition (SAC), Fair Labor Association (FLA), Fair Wage Network (FWN), Better Work, International Labour Organisation (ILO), UNI Global Union, WWF, Ethical Trading Initiative (ETI), Fair wage network (FWN).
	Platinum	-	-	-	1.28%			
	Gold	-	-	-	16.27%			
	Silver	-	-	-	52.26%			
	Other	-	-	-	30.19%			
Retailer C Three categories. Strategic suppliers (green + yellow) represent 84% of suppliers in 2014 and 98% in 2018	2014	2015	2016	2017	2018	Compliance to Code of Vendor Conduct (COVC). Assessments and development of a country-specific approach to assessing risk and improving work in factories	Sourcing teams & sustainability teams; assessing & approving factories; training; compliance with Code of Vendor Conduct; Better Program for monitoring factories; visits; interviews; factory rating.	Partnerships with: Verité, Alliance for Bangladesh Worker Safety, Better Work's Workplace Cooperation Program, Project on Sustainable Labor Practices in Global Supply Chains, International Labor Organization (ILO) Cornell Project on Sustainable Labor Practices, Life and Building Safety Initiative (LABS).
	Green	12.2%	42.3%	35%	36.9%			
	Yellow	36.2%	39.2%	48.9%	58.1%			
	Red	18.7%	18.5%	16%	5%			

As clothes are manufactured, they need to then be transported globally to retailers and consumers. The widespread transportation of textiles and clothes leads to increased pollution. Since fast fashion works at a breakneck speed. They focus on fulfillment channels that work for both physical and online retailers. In this case, these centers need to be flexible and accommodate locations. What I mean by accommodate is to evenly distribute the clothes to warehouses and shops so it can then be distributed quickly to their nearby consumers in specific cities. Which then completes the process of mass producing products and reaching their consumers.



Implications and Lessons Learned

In order to further describe the negative implications of the fast fashion supply chain we will go into detail about its horrid implications on the environment and economy. For example: water pollution is an alarming factor and the poor practices within the manufacturing of fast fashion. and contribute drastically. Textiles are also coloured with toxic dyes and the dye coloured waters are then washed into waterways. As a result, these coloured wastewater make their way into fresh waters and oceans causing irreversible water pollution. The production of textiles requires the use of deadly chemicals. For example, highly fluorinated compounds are used to make waterproof jackets. These chemicals can harm the people who become exposed to them including the workers and the consumer as it can be absorbed from the product into your skin and get flushed into the fresh and ocean water. Another example is cotton which is the most used raw material in the fast fashion industry. Cotton is produced using excessive waste water.

Another one of the biggest environmental risks that the fast fashion industry poses is textile landfill waste. The majority of textiles are not disposed of in an eco-friendly way at the end of their life stage which causes landfill waste to rise. There is heavy speculation that landfill waste produced in developing countries is astronomically higher than that of developed countries due to the absence of adequate infrastructures for recycling.

These infrastructures in fast fashion are built off of tremendously horrible working conditions in these textile factories. Most of the labour used in the production of fashion products is based in countries within the developing world where work regulations and minimum wage are virtually non-existent. What's worse is the poor working conditions for the Women and young children who also make up a significant portion of the workforce. There is also no furunity leave for these women so they are forced to birth their child on the job and continue working immediately after. There are also the challenges of the criminally abuse of child labour within this workforce. In developing countries like Bangladesh, there are cases of forced labour on the citizens there. They

often force the workers to work for no money at all. This insidious and criminal work conditions that are used by these big americans fashion brand are borderline close to modern day slavery.

Conclusion

In conclusion, we hope that this synopsis does a great job explaining why fast fashion is one of the world's most destructive and detrimental sectors within the clothing industry. Not only is the fast fashion supply chain detrimental to the environment, the inhumane working conditions have also proven to be deadly. The fast fashion supply chain is one of the worst sustainable supply chains today. In this presentation we explained why the fast fashion industry is the second largest polluter in the world with environmental damage only increasing as the industry grows.

This is largely due to their strategy of dropping the price of clothing over the past twenty years, which caused consumers to now have five times more clothing compared to twenty years ago. Because of this Companies therefore are shortening the length of the fashion cycle and integrating sustainable innovation into the manufacturing process and product designs. As fast fashion clothes are manufactured, they need to then be transported globally to retailers and consumers with this transportation of textiles and clothes leading to increased pollution. These examples explain why fast fashion is one of the world's most destructive and detrimental sectors within the clothing industry.

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