

The Economic Impact of Fast Fashion

by

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Abstract

The Fast Fashion Industry is a global market that dictates an increase in consumers' buying behavior. The business model efficiently creates clothing cheaply and quickly to keep up with the latest fashion trends while fulfilling instant gratification to the audience during their shopping spree. This paper discusses social, economic, sustainability, and environmental factors of the Fast Fashion industry and its' potential impact on the economy, environment, and society. Also, I examine the relationship between the store's location of the three biggest fast-fashion companies in the U.S. (H&M, Forever 21, and Old Navy) and socioeconomic factors. The findings indicate that only population affects the location choice of all three companies. Finally, I offer potential solutions to create more awareness for the public and provide examples of how to decompose their clothing.

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1. Introduction

Fast Fashion is an international business strategy for trendy clothing produced at a low cost. Fashion reflects on the individual's sense of style, identity and a form of self-expression. The clothes people wear also reflect on the season, whether it's fall, spring, winter or summer. Fashion has been prominent since the 1800s, however the emergence of the Industrial Revolution by the 1960s and 1970s significantly rose due to new technologies like sewing machines and factories. This advancement was a positive outcome for the economy allowing for more jobs to be created and it became easier for consumers to buy the clothes they wanted.

High fashion and street clothing are phenomena people partake in, and by the 1990s and 2000s, low-cost fashion peaked (Rauturier, 2022). Shopping can be viewed as a hobby for consumers, allowing people to mimic the latest trends of their favorite celebrities or seen through everyday life and media. Big fast-fashion retailers today in 2022 have the advantage of producing even cheaper and quicker, especially with the efficiency of online shopping. The oldest pioneer in fast fashion is H&M originated in Sweden in 1947. This company is passionate about efficiency through the supply chain by responding quickly to trends and creating new garments (Rauturier, 2022). The demand for ready-made garments increased, and other popular brands could successfully create an economy for developing countries.

As fast fashion is constantly evolving, consumer behavior can be examined whether in-store retailers or online shopping. The business model is highly profitable in sales; a third of the sales occur in North America from the US 1 trillion dollars spent (Allwood et al., 2006). Hence, consumers are the leading players in this shopping game, there will always be new pieces available, and the buying behavior is easily detected. Although, the clothing manufacturing industry is yearning to have a more sustainable and ethical future as the years go on. The

overwhelming consumption from the public perpetuates an exodus of online orders and consumers driven to purchase excessive amounts of cheap clothing to fulfill trendy fashion and social norms. This paper illustrates the social responsibility for humans to acknowledge their consumption and buying behaviors and how it will have a long-lasting impact on the environment.

Fast fashion is a hugely profitable industry in fashion; however, it has detrimental effects on human existence and evokes sustainability issues. Kolowski et al. (2012) point out the underlying social impacts on workers' rights in developing nations, including long hours, low wages, and health concerns. It is essential to distinguish this phenomenon and its dangers to our planet; as consumers shop and buy new fashion pieces, the disposal increases. Clothing does not last forever; hence, pieces end up in landfills, creating massive textile waste.

The replication of high fashion demands and current trends drives the manufacturers to mass-produce at a low cost and risk unethical working conditions. Non-biodegradable clothing has a significant effect on the environment, and the release of carbon CO₂ emissions—Air and ocean pollution by the clothes ends up in landfills. The number of work people do in third world countries to create clothing is not recognized by the consumers. Factories are not ethically inclined to treat their workers correctly to meet the high demand of executing these clothing pieces, also called "sweatshop labor" (Kolowski et al. 2012). Even further, environmental issues such as waste, pollution, and CO₂ emissions must be considered ethical. This study explores the fast fashion industry's economic, environmental, and social costs.

In this paper, I explore the location choice of the three big fast-fashion retailers, H&M, Old Navy, and Forever 21. I aim to understand whether their location decisions depend on socio-economic factors such as area population, income, education, and Internet access. Using the state-level data

on the number of stores in the United States and demographic variables, I find that the population mainly drives that location choice and proximity to the consumers. Finally, I discuss the potential sustainability solutions for the fast fashion industry.

2. Literature Review

My research builds upon prior research investigating the social and environmental impact of the fast fashion industry. This paper will examine individuals' buying behavior while not thinking twice about where their clothes come from and who made them. Ultimately, consumers seek the best deal for their clothing at the cost of many unethical practices and sustainability issues.

2.1 Environmental impacts

There is a lack of social responsibility regarding the waste of clothes and its yearly sustainability. Clothes produced by fast fashion are in high demand as trends rapidly change. The manufacturing is fast-paced, and the orders are challenging to keep up in factories located in third-world countries. The United States notably manufactures its clothing in countries like China, where the costs of labor and materials are low, which allows them to react to even slight changes in fashion trends rapidly. The life cycle of clothing is crucial to the environment because the fabric is hard to decompose and evolves into solid waste. Textile wastes end up in landfills rather than being recycled or re-used (Kozlowski et al., 2012).

Kozlowski et al. (2012) analyze the life cycle of clothing in the fashion industry. The paper provides a framework of possible solutions for sustainable development and argues that the producer has a responsibility for their products in the marketplace and must address them using the framework. This conceptual framework describes solutions such as recycling clothing, selecting organic and recycled material, reducing chemical input and outputs, promoting

environmental worker rights, and implementing policies for supplies and factories. The handling of waste products is a liability for the life cycle of clothing.

2.2 Social impacts

Many individuals may feel disconnected from their clothing, including Americans because many trendy clothes nowadays are not "Made in the USA". Crew (2008) delves into the concept of the unequal geographies of fashion and how these practices and places are "scarcely imaginable".

The underpaid and overworked individuals are considered the victims of fast fashion. Her research evaluates sweatshop exploitation in the world's poorest countries and how the workers' livelihoods are diminished as they are fast-paced and pay low wages. Crew (2008) draws a parallel by using the metaphor "taken for granted" distinctions between production and consumption. Ethically, the reflection of where our clothes come from and who made these clothes is emphasized in this paper. The author suggests three possible solutions:

1. Recycle clothing and recreate new pieces with the fabric.
2. Use technology for advertising campaigns to promulgate knowledge on consumption.
3. As a global citizen, to know the economic and political significance.

2.3 Consumer Behavior

Quick response and high demand are the essentials of fast fashion. Trends occur so often that styles do not only change by season but also by week. New designs require new manufacturing and shipping to stores to switch up their inventory and facilitate a new collection. Clothing stores such as Zara, H&M, and Forever 21 are big retailers and online stores that allow consumers to purchase their clothing for low prices relative to the market.

Cachon and Swinney (2011) analyze the quick response system, which evaluates the design process for consumers' more inferior value products. Evidentially, consumers quickly respond to new trends, but trends come and go. They spend money quickly without thinking of the fading trends and do not value the quality of their clothing. The behavior of consumers when prices and sales occur is researched in this study. The propensity of consumers to anticipate future markdowns and intentionally delay purchasing until a sale occur (Cachon and Swinney 2011). Furthermore, this behavior is "strategic" for retailer margins and significantly increases profitability while diminishing old styles and pieces of clothing. The notion of quick response during markdowns reduces the amount of inventory, and new styles and trends influence consumers to pay the total price because of the proposed value. Cachon and Swinney (2011) implement the practice retailers use by having a sale section directly next to the new release section to sell as much inventory as possible. The findings conclude that the quick response system triggers consumers to spend more and buy more; their research underlines the complements and substitutes in this business practice.

3. Methodology

To analyze the location decision of Fast Fashion firms, I collected the location data for the three biggest stores that produce and sell fast fashion in the United States - H&M, Old Navy, and Forever 21 from their store locator website. The Socio-economic variables I collected the United States Census Bureau 2020 are Population, Density (Population per square mile), Female persons (Percent), Households with internet, Education (Bachelor's Degree or higher, percentage of persons 25 or higher), and Income (Per Capita Income in past 12 months) . The Data is collected from all 50 states of the United States. The aim is to collect this Data to see how it compares to social-economic characteristics such as the population, female percentage, per capita income,

education level, and age level group. These characteristics will determine who shops there the most and explain why these stores are popular.

To determine what social economics factors, affect the location decision of fast fashion industry, I estimate the following equation:

$$StoresN = \beta_0 + \beta_1 Pop + \beta_2 Density + \beta_3 Fem + \beta_4 Internet + \beta_5 Income + \varepsilon \quad (1)$$

Where the dependent variable *StoresN* is the number of stores in a state. The dependent variable *Pop* is the population in a state. I expect the coefficient β_1 to be positive because more population you have, the more people that will be shopping in stores. The variable *Density* represent the density of population in a state. I expect the variable β_2 to be positive. The variable *Female* represents the female population in a state, I expect β_3 to be positive. The variable *Internet* represents the households with internet, I expect β_4 to be negative. The variable *Income* represents the Income per capita in the last 12 months, I expect β_5 to be positive. The greater the density and the female population you have will account for the consumers in the area shopping from the big retailers. The higher the education, the more mindfulness consumers have before purchasing clothing that comes from fast fashion. The more households with internet, the more shopping people will do online or discover new trends from social media. There is also a substitution effect, instead of buying from stores in person, you can shop from them online. Income per capita might go both ways, higher the income can result in buying more clothes, or the lower the income it is most likely that people will shop at fast fashion distributor stores, because the clothes are very affordable.

4. Data

Table 1: Summary Statistics

	Count	Mean	Median	Max	Min	SD
Store Location Statistics						
H&M Stores	520	11	6	83	1	14
Old Navy	1088	43	16	120	1	23.5
Forever 21	411	9.6	6	69	1	12.4
Social Economic Characteristics						
Population	330,759,736	6,615,195	4,581,797	39,538,223	576,851	7,436,143
Female Population %		0.51	0.507	0.517	0.479	0.008
% of HHs with Tech		0.83	0.823	0.883	0.715	0.038
Income		33,295	31,995	44,496	24,369	4,752

Table 1 shows summary statistics for the company statistics and social and economic characteristics. The company statistics come from the store's websites. H&M, Old Navy, and Forever 21 each have their store locator website that lists all the stores and locations worldwide and in the United States. My data is for all the stores located in the United States; the count column states how many stores of a particular brand are located in the country. H&M and Old Navy have stores in every state; while Forever 21 only has stores in 43 states. The company statistics show that the fast fashion retail store with the most stores is 1088, Old Navy. The minimum number of stores is 1 in states like Mississippi, South Dakota, and Wyoming. This means that in second place is H&M, and then lastly Forever 21.

The total population in the US is 330 million, on average you have 6.6 million in each state, with a minimum of 576k in Wyoming and maximum 39 million in California. On average half of the population is female. The households with technology average is 83% of the population, with a Maximum of 88% in California and minimum of 71% in Mississippi. Per Capita income in the last

12 months averages at about \$33,295, with a maximum of \$44,496 in Connecticut and minimum of \$24,369 in Mississippi.

5. Results

I want to compare the number of stores and how they are associated with the social-economic characteristics. The variable Social Economic Characteristics shows Population, Female Population percentage, Percentage of households with Technology, and Income. After looking through the whole data, the most significant variable is the population. The most outstanding social-economic characteristic is the population; the population has the most to do with the proximity and the number of stores in each state. This affects the number of sales from fast fashion stores and fast fashion consumers. I estimate three separate regressions.

Table 2: Estimated Regression Coefficients for Forever 21

	(1)	(2)	(3)
Population	0.157***	0.156***	0.156***
	0.00	0.00	0.000
Density		0.270**	0.293
		0.153	0.254
Female			-78.81
			76.70
Internet			7.24
			20.34
Education			-5.14
			18.72
Income			1.01
			2.24
Observations	50	50	50
R-squared	0.94	0.95	0.95

The results of equation 1 estimation for Forever 21 are presented in table 2. The first column shows the effect of population – additional 100,000 people living in the state increase the number of

Forever 21 stores by 0.157. The coefficient is significant at the 1% level. The second column I add Density of the population to the explanatory variables. The coefficient on the population does not change. The coefficient on the density variable is positive and significant at 5% level. Additional 100 people per one square mile will increase the number of stores by 0.270. In column 3 I add the following explanatory variables (female, internet, education, and income). None of the estimated coefficients for these variables are significant, the coefficients on population and density do not change, but the coefficient for density becomes insignificant.

Table 3: Estimated Regression Coefficients for Old Navy

	(1)	(2)	(3)
Population	0.312***	0.308***	0.308***
	0.00	0.00	0.00
Density		0.652**	0.22***
		0.224	0.00
Female			19.44
			110.69
Internet			-26.15
			29.35
Education			32.77
			27.02
Income			1.73
			3.23
Observations	50	50	50
R-squared	0.97	0.97	0.98

The results of equation 1 estimation for Old Navy are presented in table 3. The first column shows the effect of population – additional 100,000 people living in the state increase the number of Old Navy stores by 0.312. The coefficient is significant at the 1% level. The second column I add Density of the population to the explanatory variables. The coefficient on the population does not change. The coefficient on the density variable is positive and significant at 5% level. Additional

100 people per one square mile will increase the number of stores by 0.652. In column 3 I add the following explanatory variables (female, internet, education, and income). None of the estimated coefficients for these variables are significant, the coefficients on population and density do not change, but the coefficient for density becomes insignificant.

Table 4: Estimated Regression Coefficients for H&M

	(1)	(2)	(3)
Population	0.098***	0.098***	0.097***
	0.00	0.00	0.00
Density		0.089	0.721
		0.675	1.149
Female			-166.23
			347.25
Internet			79.17
			92.07
Education			41.45
			84.75
Income			0.00
			0.00
Observations	50	50	50
R-squared	0.27	0.27	0.31

The results of equation 1 estimation for H&M are presented in table 4. The first column shows the effect of population – additional 100,000 people living in the state increase the number of H&M stores by 0.098. The coefficient is significant at the 1% level. The second column I add Density of the population to the explanatory variables. The coefficient on the population does not change. The coefficient on the density variable is positive but not significant. In column 3 I add the following explanatory variables (female, internet, education, and income). None of the estimated coefficients for these variables are significant, the coefficients on population and density do not

change, but the coefficient for density becomes insignificant. Across all of the chains only the population is significant, hence the companies only target the population.

6. Limitations

Some limitations that may have affected the data include only focusing on the United States. The Fast Fashion Industry is worldwide, and the clothing manufacturers come from overseas. It would have been interesting to see how other countries worldwide are affected by big chains such as Forever 21, H&M, and Old Navy. Unfortunately, the data is not available or well researched yet to make this broad comparison. In addition, a limitation may be that online shopping is not researched in this study; this study is mainly focused on in-store sales rather than online sales. However, both buying behaviors are very similar and intriguing.

7. Conclusion

From the data I collected, I estimated the economic impact of the fast fashion industry. The prior research investigating the fast fashion industry's social and environmental impact helped me understand the problems that revolve around this international business strategy. Fashion's significance in our everyday lives and ability to allow individuals to express themselves delves into a greater notion of the lifecycle of clothing. Sustainability, Ethics, and Human Responsibility to keep our planet safe are the main takeaways from this research. The issues in making the clothing rapidly and fast-paced to keep up with fashion trends provided insight into workers' rights in factories and their challenges in fulfilling tight deadlines every time trends change. Trends come and go; the cheaper the material, the more rapidly it is produced and easier

to dispose of. Having access to buy new clothing gives the consumer the option of getting rid of their clothes, whether it is in a sustainable manner such as donating, recycling, and reusing.

On the other hand, they may decide to dispose of it in the garbage, which creates issues of more landfills and burning more fossil fuels. In addition, the people making our clothes are exposed to harmful chemicals and breathe in toxins. Their work is underpaid, unfair wages, and rushed to fulfill a quota. Many labor laws exist nowadays, but many factories that violate them are not ethically correct.

There are potential solutions. More awareness has to be created for the population on the lifecycle of clothing. Preventing consumers from shopping in these stores is not the problem; it's how they can contribute to society by disposing of their clothing in a less harmful way. If the clothes are still wearable and in good condition, donating may be an option; someone else can wear them. Whether passing down the clothes to a family member or donating to a local bin, shelter, or thrift shop, recycling and reusing seems like the best option, sustainable and ethical. Another idea could be re-selling your clothing online; many of us have branded clothing or good quality clothing that we no longer need or want. Another idea is to encourage consumers to buy less and pick out better quality clothing.

Finally, the next step is supporting more sustainable brands and companies that use eco-friendly fabrics. The future of the fast fashion industry is leading to sustainability. However, we consumers have to take the following steps to look after our clothes and be cautious of where we buy them.

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