

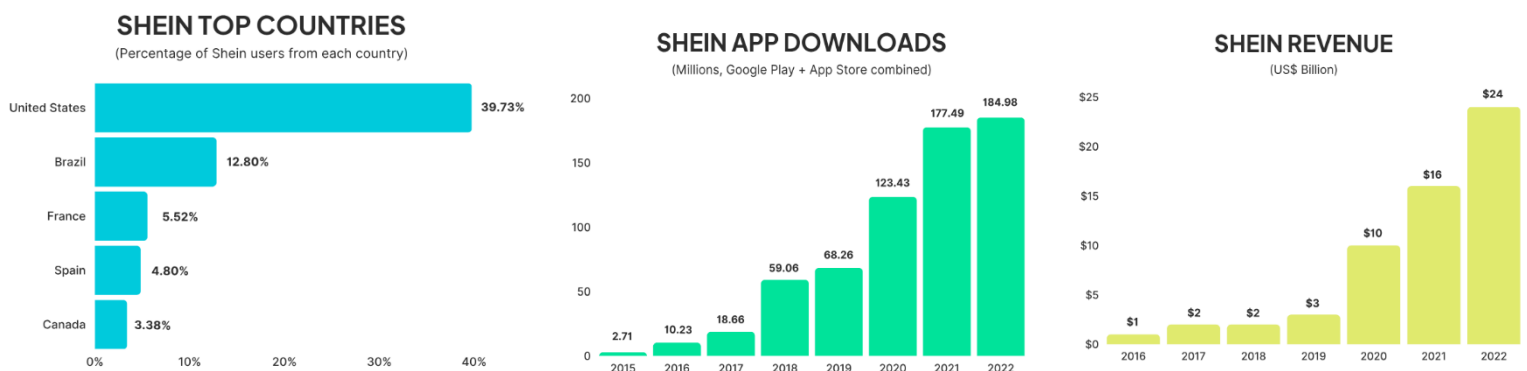
SHEIN: Cost of Unsustainability in budget-friendly Polyester Apparel

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About SHEIN

SHEIN, a Singapore-headquartered company started by **Founder & CEO Sky Xu** is famous for its fast-fashion apparel. It was started in the year **2008** and it focused on selling wedding dresses in China, under the name ‘Sheinside’. However, in the year 2015, Xu pivoted his focus to fast-fashion apparel when they rebranded to ‘Shein’ (She-In).

Shein is currently operating in **over 150 countries**, as per their website. Within which, the **USA** is the most prevalent market. An extraordinary hike of **6,725.83% in downloads** can be observed from 2015 to 2022. In 2022, Shein raised \$1 Billion in a funding round, leading to Shein’s valuation being more than H&M, and Zara combined, i.e., **\$100 Billion**. Shein generated **8x revenue** from 2019 to 2022, highlighting the growth that the organization witnessed after COVID-19. In the year 2022, Shein was recognized as the most downloaded app indicating how the application was liked by the consumers.



Source: MobiLoud Shein Statistics

Why is SHEIN bad for the environment?

Shein’s fiber portfolio comprises mainly Polyester, and Nylon materials which are synthetically produced. The chemicals used for the synthesis are Sodium Hydroxide and Carbon disulfide. Polyester is also derived from fossil fuels, and as a result, is polluting both air and water. With every wash, it releases microplastics. Once dumped into the landfills, the toxic chemicals seep into the land resulting in significant contamination. Furthermore, they have adverse effects due to the inability to recycle materials like Polyester.

On average, Shein produces 35,000 to 100,000 clothing products daily. Cumulatively, mass production releases 6.3 million tons of carbon dioxide annually into the atmosphere while the clothes are short-lived. Due to cheap rates, an average consumer spends \$300 on Shein in a year. Whereas, the clothing lasts on an average of 2 weeks of wear. This entire model is “take-make-dispose”, which revolves around the quick production of clothes, worn a few times, and then discarded.

While the global fashion industry is aiming for a net-zero emissions industry by 2050 as a part of the commitments made with the United Nations Alliance for Sustainable Fashion, SHEIN has been observed to be stalling efforts. In a recent declaration by the SHEIN Group, it was stated that in 2022, the production volume had increased by 57%, which resulted in a 52% increase in emissions. Even though they highlighted their efforts in mitigating the emissions and choosing the path of decarbonization programs, which were implemented in the fiscal year 2022. The success of the fast-fashion brand has certainly limited them while executing those actions.

Solutions to Resolve Sustainability Challenges

Shein’s Steps

Shein states that they have recently chosen to partner with a non-profit The OR Foundation which received \$15 million from Shein to deal with the humongous clothing waste problem at Kantamento Market in Accra. The grant can

be used based on \$5 million a year for three years. This is a part of Shein's extended responsibility fund to mitigate textile waste, which sums to a whopping \$50 million over five years. Many critics have put forth this stunt as 'greenwashing' to present to the larger audience as a step to take the edge off textile waste. As this would let Shein continue with its business as usual while paying a tip for showcasing an extra effort towards being 'environmentally supportive'.

Whinston, the global head of ESG at Shein propounds how necessary it is to educate consumers about keeping clothes for longer in circulation, giving them a longer life. He also added in an email that Shein's steps in making small batch production may result in less waste to begin with, which could yield an immediate drop in global production of 20% if adopted by the rest of the industry.

Suggestions

Investment in Sustainable Materials

Numerous sustainable clothing materials can be used as alternatives to the existing polyester. This can improve not only the apparel's quality but also mitigate its effect on the environment. This will further add to the appeal to its eco-conscious consumers. Investing in materials such as Organic Cotton, Recycled Polyester, and plant-based fibers can reduce the reliance on polyester.

Doing so has a lot of costs associated with it due to the increase in demand that would be observed if all the clothes were eventually designed using organic materials. Another major issue is also that these materials are not readily available at all times, and have regulatory compliance associated with them, making the need for a robust supply chain crucial. This may act as a boon for Shein as this would lead to more transparency in the eyes of the audience when they are already facing allegations of having a 'not-so-open' approach to hide their bad working environment. Shein can overcome the challenges of being slammed as an anti-environmental brand.

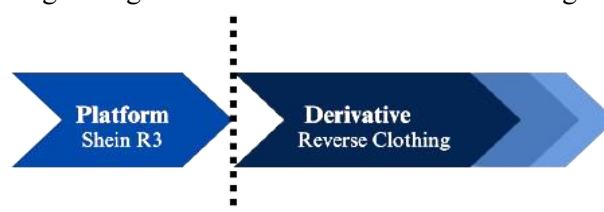
Circular Economy

Circular economy comprises a closed-loop fashion chain where consumers buy clothes from the brand, and instead of disposing: they either return to the brand or re-sell it. This is a fundamental way of opting for sustainability by increasing the shelf-life of the clothes. This approach gives space for more innovation and the introduction of newer ideas on the go. It enables the incorporation of organic materials while designing if necessary.

SHEIN can design a **Platform (Shein R3)** that would focus on 3 pillars of Sustainability: Reduce, Reuse, and Recycle. It can be used specifically to take back disposable clothes and refine them to sell them again. This will majorly cut down on the costs associated with sourcing materials, reducing the stock of textiles in inventory, and the cost of designing. They already have a huge base audience who follow social media influencers, which can be used to their power to encourage participation. This will create a "Network Effect" steering consumer behavior towards participating in this. They can incentivize consumers who proactively participate in this closed-loop fashion platform by offering regular credits and discounts. Furthermore, they can develop derivatives to this in the future.

By doing so, SHEIN can restructure and establish its entire brand identity around Sustainability. In future derivative advancements, they can introduce '**Reverse Clothing**' (*the ability to use the same clothes inwards and outwards*) and add innovative approaches as the fashion industry continues to make strides.

In a very far-fetched approach, SHEIN can also collaborate with other technologically advanced approaches to create a sustainable clothing line. For instance, they can partner with labs such as MIT which is already working towards 'Active Textile Tailoring'. The work demonstrates a new system of "smart" textiles where one piece of clothing can change its shape, style, and structure in response to moisture and heat. However, thorough finances would be hard to predict since it is a new technology and would take time to completely advance. Such a collaborative stance can produce more innovative ways of navigating through this issue of textile waste and bring Shein to the forefront of change in the fashion industry.



Financial Analysis *(Use of AI was made for this section)*

Scenario	Revenue (Bn)	Profit (Bn)	Change from Business as Usual	Per Unit Cost	Price per Unit
Business as Usual	10	1	-	\$1 (assumed)	\$10
Sustainable Materials (Organic Cotton, Recycled Polyester)	11	0.85	-0.15	\$1.10 (+10% increase)	\$11.00 (+10% increase)
Shein R3 (Circular Economy)	15	2.5	+1.5	\$1.30 (material cost + refurbishment)	\$7.50 (used clothes), \$10 (new clothes)

Scenario	Revenue Stream	Cost per Unit	Change from Business as Usual
Sustainable Materials	Selling New Clothes	\$1.10	+ \$0.10 (material cost increase)
			- \$0.05 (potential production cost decrease)
			+ \$1.00 (price increase to offset costs & capture sustainability premium)
Shein R3 (Circular Economy)	Reselling Used Clothes (20% of sales)	\$7.50 (collection, refurbishing)	+ \$1.50 (selling price - cost)
	Reduced Material Costs (10% for new clothes)		- \$1.00 (10%*\$1)
	Incentive Discount for Participation (-\$5 per new purchase on 20% of sales)		- \$1.00 (-\$5*20% of \$10)

Assumptions:

- SHEIN sells 1 billion units of clothing annually (revenue/price per unit).
- Sustainable materials increase material costs by 10% and potentially decrease production costs by 5% due to economies of scale.
- SHEIN can raise prices by 10% to offset the material cost increase and capture some consumer willingness to pay for sustainable clothing. Resold clothes are priced at a discount (\$15).
- Shein R3 can recapture and resell 20% of used clothes at an average price of \$15 per item. (This assumes a discount compared to new items)
- The cost of collecting, refurbishing, and reselling used clothes is \$7.50 per item (higher cost due to potential design changes for reusability).
- Consumers receive a \$5 discount on new purchases for participating in Shein R3 (incentivizes participation).
- SHEIN can reduce material costs by 10% due to less reliance on virgin materials for new clothes.
- There might be initial platform development costs of \$0.5 billion spread over 5 years (\$100 million annually).

Analysis:

- Sustainable materials might lead to a slight decrease in profit initially due to higher material costs. However, the potential for production cost reductions and capturing a sustainability premium through price increases can mitigate this impact.
- Shein R3 has the potential to significantly increase revenue and profit compared to both Business as Usual and using Sustainable Materials. Reselling used clothes creates a new revenue stream, partially offset by reduced

material costs and the participation incentive. The platform development costs are spread over several years, minimizing their impact on short-term profits.

These are still simplified scenarios, and actual figures can vary significantly. The long-term impact on production costs for sustainable materials is uncertain and might decrease as SHEIN scales up. Consumer response to price increases and the effectiveness of the circular economy program will significantly influence the financial outcome.

Recommendation

The analysis highlights the benefits of why **Circular Economy** would be the next best step for Shein as it is indicative of stepping up with the evolving needs. The financial analysis may be based on assumptions, but it serves as a way to comprehend the impact of implementing this.

While choosing to go with this poses multiple challenges related to consumer acceptance and market dynamics; investing in it indicates a progressive approach toward sustainability. It opens up opportunities for collaboration, growth, and innovation. Furthermore, they promote the reduction of waste, and resource consumption, and enhanced efficiency.

The con of implementing this majorly includes bringing a change in the behavior of consumers towards these necessities. Awareness of being 'environmental' in fashion is presumably still a desired attribute. Hopefully, over the years with the power of network effect, we will be able to overcome this.

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