

## Micro, Small, and Medium Enterprises (MSMEs) and Sustainable Fashion

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Fashion is a competitive and growing industry. Big brands have lowered production costs making clothing more affordable, and release up to 24 collections per year. Not only are people buying more clothes, but also, bought garments are being replaced at a faster pace.<sup>1</sup> This trend in fast fashion carries a hefty price tag on the environment. Up to 85% of clothing produced each year ends up in landfills.<sup>2</sup> Moreover, it is estimated that the fashion industry produces 10% of global carbon dioxide emissions annually and uses up to 1.5 trillion liters of water.<sup>3</sup> Also, new research shows that micro-plastics from clothing make its way out to seas and oceans.<sup>4</sup>

Thanks to digital media, information on the harmful effects of fast fashion is readily available worldwide, and consequently, a growing population of environmentally conscious shoppers are turning to sustainable fashion. Sustainable fashion is a movement that emphasizes quality over quantity, and promotes making conscious buying choices driven by information on how each piece

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<sup>1</sup> McFall-Johnsen, M. (2019). *The fashion industry emits more carbon than international flights and maritime shipping combined. Here are the biggest ways it impacts the planet.* Business Insider Nederland. <https://www.businessinsider.nl/fast-fashion-environmental-impact-pollution-emissions-waste-water-2019-10?international=true&r=US#while-people-bought-60-more-garments-in-2014-than-in-2000-they-only-kept-the-clothes-for-half-as-long-2>

<sup>2</sup> McFall-Johnsen, M. (2019). *The fashion industry emits more carbon than international flights and maritime shipping combined. Here are the biggest ways it impacts the planet.* Business Insider Nederland. <https://www.businessinsider.nl/fast-fashion-environmental-impact-pollution-emissions-waste-water-2019-10?international=true&r=US#while-people-bought-60-more-garments-in-2014-than-in-2000-they-only-kept-the-clothes-for-half-as-long-2>

<sup>3</sup> Davis, N. (2020, April 7). *Fast fashion speeding toward environmental disaster, report warns.* The Guardian. <https://www.theguardian.com/fashion/2020/apr/07/fast-fashion-speeding-toward-environmental-disaster-report-warns>

<sup>4</sup> Messinger, L. (2018). *How your clothes are poisoning our oceans and food supply.* The Guardian. <https://www.theguardian.com/environment/2016/jun/20/microfibers-plastic-pollution-oceans-patagonia-synthetic-clothes-microbeads>

of clothing is made. This movement gave rise to a number of MSMEs who cater to this fashion niche and promise to produce clothes that are made from sustainable materials and processes, and have a smaller carbon footprint.

MSME examples of sustainable fashion include Bug Clothing, a home business led by one woman in the UK that makes handmade clothing using deadstock fabric from big designer factories; Tsouls, a small business led by an American husband and wife that produces footwear made of cork; and Joseph & Alexander, a small UAE brand that produces swimwear from plastic sourced out of oceans. It is important to note that as MSMEs enter the sustainable fashion market, this creates the opportunity for complementary business to emerge, such as MESME vendors and suppliers. Interesting examples include Sourcing Playground, a B2B platform that connects brands to more sustainable manufacturers; and Queen of Raw, a platform for businesses to buy and sell deadstock fabric.

Another way startups are augmenting sustainability in fashion is through the development of dyes and fabric using biotechnology. Typically, dyes used in mass production are manufactured using harsh chemicals, release toxic byproducts, and consume a lot of water and energy. Tech startups have come to the rescue and are using synthetic biology to change the way dyes are produced. Two promising examples from Europe are Pilio bio and Colorfix. Pilio bio is located in Paris and manufactures pigments and dyes using enzymes, and Colorfix is based out of Norwich in the UK and uses microbes to dye textiles using minimal water and energy.

Tech MSMEs are also using biotechnology to produce fabric that is more sustainable. Growing plant-based textiles (such as cotton), requires land and consumes large quantities of water. Similarly, synthetic fibers derived from fossil fuels not only contribute to greenhouse gas emissions, but also leave microplastic residues in clothing. Two notable tech MSMEs working towards producing sustainable fabric are Spiber and Bolt Threads. Spiber is a Japanese startup that produces fabric using protein fibers. The company has created outdoor jackets made from microbe-

derived silk, and works toward lowering the cost of spider silk production to levels similar to that of synthetic fibers. Bolt Threads produces spider silk using yeast and is selling to big brands like Stella McCartney.

It is clear that MSMEs around the world are working towards making fashion sustainable with full force. Their approaches are innovative, and focus on building environmental awareness in communities. They are key agents of change, and can play an integral role in shifting the way societies consume and impact the environment. Around the world, governments have erected support programs for MSMEs to encourage this change.<sup>5</sup> Some programs provide funding to small businesses, while others aim at connecting artisans to large scale producers, latest technologies, and international markets. Moreover, central banks offer a variety of schemes that aim at providing MSMEs easy access to finance. Currently, ethical design is geographically concentrated in Australia, Scandinavia, and the United Kingdom. Broadly speaking, these regions have progressive governments who incentivize sustainable and ethical practices, as well as business environments that are increasingly environmentally conscious and competitive. In order to promote sustainable consumerism, it is essential that governments take an even more proactive effort towards supporting, rewarding, and promoting MSMEs that make mindful consumption possible.

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<sup>5</sup> European Commission. (2016). *Support for SMEs and entrepreneurs*. Internal Market, Industry, Entrepreneurship and SMEs - European Commission.  
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