

# AN OVERVIEW OF SUSTAINABLE CLOTHING CONSUMPTION PRACTICES

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*Abstract : Clothing is one purview that satisfies both functional and symbolic needs of the consumers. Presently sustainability of fashion and clothing items in the worldwide is the major considerable issue. The much talked concern is for the favour of fashion's sustainability around the world. For effective utilization of apparels, theoretical and practical level of understanding related to fashion behaviour of consumers should be enhanced because fashion clothing has important economic and social significance in societies. Fashion for the morality or ethical issues is one of the key concepts for the humanity and sustainability point of view. For the protection of the environment, sustainability of the fashion is the ultimate need in the present fastest growing world. These days, fashion is considered the key issue for the ecological aspect with ethical concern.*

**Index Terms – Sustainable, Clothing, Practices**

## I. INTRODUCTION:

Apparel is one of the basic necessities of human civilization along with food, water and shelter. One can have various apparels for various occasions. Fashion has touched every sphere of modern consumers from all over the globe. Fashion can be defined as a statement of a place, a class, a time, a religion, a culture, and even a nation. It is also a conventional form of expression defines a person. Industry manufactures casual wear to fashion wear. The Apparel Industry mirrors people's lifestyles and depicts their social and economic status (Bhanot, 2013). Fashion leaves a terrible environmental footprint along its entire supply chain. In 2010, the global apparel industry produced more than 150 billion garments, enough to provide more than twenty new articles of clothing to every person on the planet. At that scale, it is not surprising that the market for textiles is critical to the world economy. This balance of production directly establishes the scale of the industry's ecological impact. Fast fashion is having short product life cycles which leads new styles at frequent intervals which results in explosion in consumption. Although, much work still needs to be done to fully typify the magnitude of the problem, and there is a great range in terms of practices, including firms that are quite responsible. Global apparel markets in the recent past have shown a paradigm shift, moving towards increased product differentiation, and catering to a varied, responsive, and serious customer base. Retailers have thus gravitated toward demographic shifts, societal influences, economic impact, and green concerns.

As per one estimate the textiles and apparel market had revenues in excess of \$1.8 trillion dollars in 2010 (AM Mindpower 2010). Within this market, one of the best-documented sectors is apparel production. These statistics tell the global nature of the textiles trade and, in particular, the uneven supply of production and consumption across the planet. More than two-thirds of revenue for apparel manufacturers derives from export trade. Unsurprisingly, this means that garment manufacturing is geographically removed from major garment markets. More than 60% of production is carried out in East Asia, while about 60% of consumption occurs in the EU, the US, and Japan (with China rapidly becoming a large consumer as well), (Gugnami and Mishra 2012).

The Apparel and Textile industry is India's second largest industry after the IT Industry. In present situation irrespective of the class, Indian consumers are adopting fashionable items quickly and suitably with the rise in competition.

## Recent trends in Indian Apparel Market:

- 1) Continued rise of 'organised retail': Large, branded retail outlets where merchandises are systematically shelved and displayed will speed the change of consumer buying pattern. Today, organized retail accounts for less than 20% of all Indian apparel market the rest takes place in small, pop n mom store. But over the last ten years there has been a rapid acceleration of new shopping malls and hypermarkets across major cities of India.
- 2) Sustainable and eco-friendly manufacturing:

Apparel industry is turning greener these days with sustainable trends sprouting into a major influence on the industry. The apparel manufacturing sector is going under pressure to reduce the environmental impact of cultivating, processing, dyeing, bleaching, and fabric manufacturing, thus pushing retailers towards a sustainable approach. Also retailers are expected to eliminate existing labour inequalities and exploitation, and have a fashion-forward approach towards the manufacturing process. Fibres from wood pulp, bamboo etc. will tend to gain higher importance.

- 3) Increased inclination towards smart garments:

Growing use across various industrial verticals such as sports and fitness, healthcare, military and defense is motivating the smart clothing market globally. The increasing demand for monitoring body activities through sensors is expected to flow the demand for smart clothing market over the forecast timespan. Growing responsiveness among individuals regarding fitness is providing on dynamism to the industry growth. In addition, the inclination of athletes towards the use of these products to inhibit injuries and improve their performance is impacting on the business. Moreover, incorporation of newly developed and advanced fibers such as nano-fibers and hybrid materials is expected to drive the growth of smart clothing market (Gautom, 2019).

## 4) Changing demographics and lifestyles:

Changes in Indian demographics indicate that in the coming decades India will be a home to a large youth population. About 29% of Indian lives in cities and towns, among the least urbanization ratio of any country in the world. However that has been shifting fast in the forthcoming 20 years, anticipated number of Indians living in cities will grow by grow by 300 million, where they will adopt new styles and fashions to cope with new lifestyles and social statute . A major percentage of these new city residents will be gen next consumers, and making first-time selection for whole section of apparel items including denims, shirts, and shoes.

## 5) Brand awareness:

Brand awareness and realization about the self-have gained importance among buyers. The brand awareness has turned into an important variable that impact customer's perceptions of a brand. Brands have become increasingly important components of all the culture and the economy. With increasing globalization and international trade, a number of international brands are entering into India which is one of the fastest growing and highly competitive markets in the world as consumers are highly getting aware about the brands.

Growing consciousness about the self and the role of brands in enhancing the consumer's image are being recognized in developing countries. In India, liberalization has not only brought western brands amongst the Indian consumers, but has also introduced more of a western wear and lifestyle. The Indian consumer is associating western brands with status symbol, better quality of life and boost of self-image (Kumar et al., 2009)

## 6) E-commerce and online retailing

Innovation is Internet technology facilitates apparel retailers to sell online in a better manner. There are a wide variety of online stores available in India providing E-commerce and E-retailing support. Jabong.com, myantra.com, zovi.com, zara.com fashionindia.com, utsavfashion.in, marksandspencerindia.com are some of renowned online fashion retailers in India.

## 7) Influence of various media:

Promotion plays a major role for the retailers to sustain in the highly competitive scenario. Apparel retailers have adapted various strategies to promote their brands. Now many retailers utilizing social networking media for brand promotion, to maintain relationship with the customers by handling customer service inquiries and maintaining public relations. Apparel retailers have also gone for Web presence with a blog or website, with a great number of them selling their items online as well as in a physical store.

**Price segmentation of apparel market:**

Consumers are becoming more conscious, more demanding and more impulsive now a days whose apparel preferences are constantly being democratized. The apparel preferences which were a result of inherited customs and lifestyles have pivoted to modernity, aspirations and trendiness. Contemporary Indian consumers are more conscious about the present synchronicity of occasion and dressing, more demanding in fashion versus price balance and more unpredictable as they see apparel as a form of self-expression. This shift is due to the changing demographic and psychographic profile of the Indian consumers (Naqvi, 2018).

Price segmentation of the apparel market can be done as follows:

- Super premium
- Premium
- Medium
- Economy
- Low Price

**Clothing consumption stages:**

Clothing consumption greatly influence the state of the environment as all the clothing consumption phases creates different environmental concerns namely-

- Production stage
- Purchase
- Acquisition
- Use and maintenance
- Disposal

**Production stage:**

Various production stages of clothing and textiles consumes large amount of water and pollutes it as well. The fabric preparation process of desizing, scouring, and bleaching consumes a large amount of water throughout, and nearly all textiles dyeing application. The clothing industry is thus highly energy consuming but low in using energy efficiency, with most energy in clothing production consumed during weaving, spinning, and chemical processing. During 2008, for example, textile and clothing production used 1074 billion kWh of electricity (or 132 million tons of coal). Naturally, the environmental concerns arising from the production phase are highly interconnected with those from the purchase phase.

**Purchase phase:**

Consumers decide when and how many new clothing items they need and purchase accordingly. Hence, the purchase phase is critically important to clothing's environmental impact through its strong interaction with the other life cycle phases. Studies revealed that over recent decades, this volume has been rising, with private consumption of clothing and shoes in Sweden increasing by 53% from 1999 to 2009, including an average purchase of nine t-shirts per year. In America, as of 2013, the average consumer purchased 64 clothing items per year with an associated expenditure of \$907, approximately \$14.17 per item. However, most consumers still do not link their clothing consumption patterns with environmental degradation. According to the findings of Joergens (2006), there is a little evidence that ethical concerns have an effect on consumer's purchase intention. The majority of the consumers seem more concerned on fashion needs than ethical issues, although there seems to be awareness on the topic.

Indian consumers of 20–40 years were tested and the result of the study pointed out that attitude is positively related to purchase intention and green consumption values have a positive relationship with purchase intention for organic clothing and attitudes. Social influence does not impact purchase intention and attitude towards organic clothing (Varshneya et al., 2018).

#### **Acquisition:**

Another important aspect is clothing acquisition, alternative forms of which have deliberately become more popular (particularly in urban areas) in the form of clothing libraries, swap markets, fashion rentals, and second-hand stores. Although these alternative business models may signify a more environmentally friendly approach to clothing acquisition, their ability to lower clothing's environmental impact may be highly dependent on the consumer's transportation mode to and from the store.

That is, if using alternative models involves improved consumer transportation, the environmental benefits are expected to evaporate.

#### **Use and Maintenance:**

Clothing is expensive to maintain both from a monetary and green perspective; especially as most maintenance practices are strongly influenced by social norms of high level hygiene and cleanliness. Adherence to these social norms, however, often involves an environmental burden of energy, water, and detergent use. Studies revealed that Europeans, for example, wash their clothes at an average temperature of 45.8°C, a practice whose environmental impact is dependent on geographic and demographic context, including precise energy source. When the energy source is renewable, wash temperature has a lower environmental impact, but when the energy comes from fossil fuels, considerably the impact rises. In addition to the associated environmental impact, how often clothing is washed may also have implications for product life because laundering pays to wear and tear.

Among young Swedish consumers, for example, the average number of wearing before washing is two to three times for t-shirts, shirts, and tops but four or more times for trousers and skirts. Although 38% of these young consumers use eco-labelled detergents, reflecting the increasing replacement of harmful chemicals with bio-based, degradable ingredients, consumers typically experience difficulties fully understanding dosing instructions, which may lead to overuse.

The environmental burden increases if laundering includes tumble drying, which consumes 3–4 times more energy than washing at 40°C but is used after around 20% of washing cycles. Admittedly, such statistics should be interpreted with caution because dryer ownership varies greatly from 16% of all households in Poland to 83.4% in the U.S. Nevertheless, lowering washing temperatures and eliminating tumble drying and ironing would reduce a clothing product's energy consumption by 50% (Gwozdz et al., 2017).

#### **Disposal:**

In the developed countries, the excessive consumption of clothing items creates an overflow of discarded clothing, a throw-away culture that is particularly evident in developed countries. In 2014, the U.S. generated 16 million tons of textile and clothing waste, 64.5% of which was sent to landfills with only 16.2% recycled as reported by U.S. Environmental Protection Agency (EPA). Every year in the U.K. approximately 30% of the owned clothes (3,50,000 tons) being sent to landfills of worth £140 million. Clothing disposal takes many forms like discarding, reselling, reutilizing, donating to charity, and using unwanted clothes as rags, the European Commission's 2008 Waste Framework Directive provides clear guidance on the most environmentally significant methods like using fewer materials and keeping products longer, reusing, recycling etc. The utmost effective methods are recovery and binning (land filling), increasing clothing durability, charity donation etc.

Studies also revealed that consumers discard their clothing by passing it on to family members, donating it to charity, or using it as rags, reusing, recycling, or otherwise down-cycling. This widespread disposal carries a heavy ecological burden especially given that the synthetic materials widely used in fast fashion do not decompose, while clothes made from natural fibers such as wool, although decomposable, produce the highly potent greenhouse gas, methane.

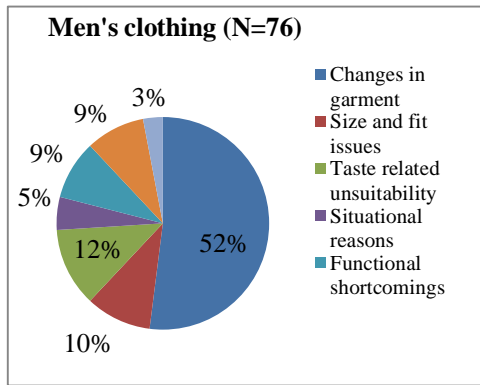
#### **Main reasons for clothing disposal:**

Research on product disposal practices in general differentiates between absolute and relative obsolescence (Cooper, 2004). Absolute obsolescence means that the product has failed and is no longer usable. Relative obsolescence applies to products that are still functional, but discarded for some other reasons. Main reasons for clothing disposal are as follows:

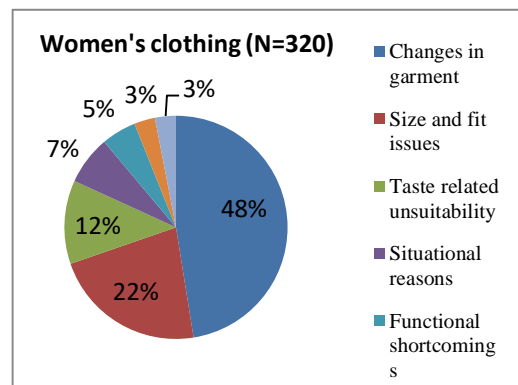
- Changes in the garment
- Size and fit issues
- Taste related unsuitability
- Situational reasons and storage
- Functional shortcomings
- Fashion or style changes.

Laitala et al., (2015) reported that the most common disposal reason was that the user had grown out of the garment (18%) which was followed by holes and tears (13%), and having similar or better garments (6%). Then, dislike of design or shape (4%), stains (4%) and worn out look (3%).

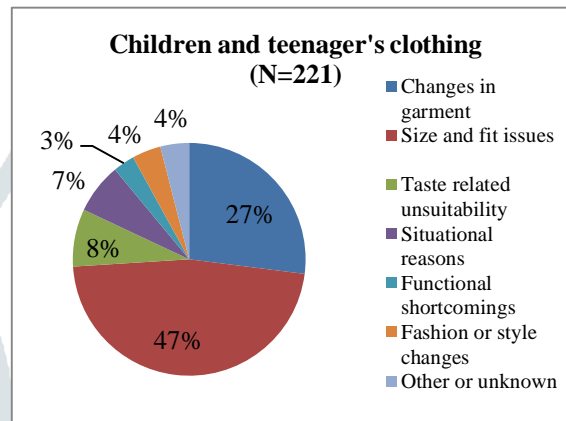
## Men's clothing disposal reasons



## Women's clothing disposal reasons



## Children and teenager's clothing disposal reasons

**Four essential design aspects emerge for expanding clothing lifespans:**

- The first two are associated to product design,
- The third to service design and
- The fourth to systems design

- 1) The choice of material and seams that promote durability. Examination of used clothing showed areas that need special attention. Even the potential for reuse could often be improved through increased quality of clothing.
- 2) The design of clothing which is crucial for the use satisfaction including the fit to the body, versatility of use and appearance.
- 3) Services such as altering the fit, mending, styling, stain decorations, body scanning, as well as education in sewing and altering.
- 4) Design of communication systems between the users and the clothing designers and producers, including labelling of size, fit, social and environmental aspects, durability and feedback from users.

For reducing the environmental impact of clothing consumption, design and implementation will be required for all consumption phases of different consumer groups which will better encapsulate consumer heterogeneity by identifying various clothing consumption patterns (Gwozdz et al., 2017). Also Niinimäki and Hassi (2011) present design strategies that can be used in promoting sustainable consumption of apparel include-

- a) Increasing product durability through higher quality.
- b) Informing the consumers about the expected lifetime.
- c) Using emotional attachment to increase product satisfaction, customization, as well as co-creation.

**Conclusion:**

The textile and clothing industry is currently one of the largest global industries. It causes increasing negative environmental impacts during material cultivation, manufacturing processes, any logistic phases and during use and disposal stages. In textile and clothing production, manufacturing cycles are speeding up, and hence manufacturing and consumption volumes are ever-increasing, while simultaneously the life span of products are shortening. Clothing consumption's high environmental impact raises concerns at each phase of a clothing item's life cycle, the severity of which is determined largely by which and how many clothing items consumers purchase and how often, as well as the frequency of item use and the nature of their maintenance and disposal. The explosion of consumption in the Western world adds to the environmental load of industrial processes and increases waste streams. Indian apparel market also had shown a steady and continuous growth during the past years. Current consumption patterns are strongly connected to contemporary industrial manufacturing systems, economic systems and the underlying values supporting them. However sustainable development requires a clear change in consumption patterns. Accordingly, it is exceedingly important to investigate how sustainable design can encourage sustainable consumption. An assessment of the definite environmental impact of several consumer segments could upkeep the development of effective behavioral interventions boosting truly ecologically friendly clothing consumption.

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