

“A STUDY ON CIRCULAR ECONOMY IN CLOTHING: A PATHWAY TO SUSTAINABLE FASHION AND SOCIAL IMPACT ON H&M’S RECYCLE PROGRAM”

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ABSTRACT

The circular economy (CE) is an economic model that prioritizes sustainability by keeping resources in use for as long as possible through recycling, reusing, and regenerating materials. Unlike the traditional linear economy, which follows a "take, make, dispose" approach, CE aims to create a closed-loop system that minimizes waste and reduces the need for new raw materials. The fashion industry, a major contributor to environmental pollution and waste, has increasingly adopted CE principles to address issues like excessive textile waste and high carbon emissions. Fast fashion, with its rapid production cycles, exacerbates these challenges by encouraging disposable consumption patterns. Companies like H&M have launched initiatives such as the H&M Conscious recycling program to promote sustainability by collecting and repurposing old garments. While these efforts align with the United Nations' Sustainable Development Goals (SDGs), particularly SDG 12 on responsible consumption and production, challenges remain in scaling up recycling processes and ensuring long-term impact. This research evaluates H&M's recycling program, its effectiveness in advancing the circular economy, and its broader environmental and social implications for the fashion industry.

Keywords: Circular Economy (CE), Sustainability, Fast Fashion, Recycling, Waste Reduction, H&M Conscious Initiative, Sustainable Development Goals.

INTRODUCTION

The circular economy (CE) has emerged as a sustainable alternative to the traditional linear economic model, which follows a “take, make, dispose” approach. By prioritizing resource efficiency, waste reduction, and product longevity through recycling and regeneration, CE seeks to create a closed-loop system that minimizes environmental impact. One of the industries where CE is gaining significant traction is fashion, which is known for its high levels of pollution, excessive resource consumption, and textile waste. The rise of fast fashion has exacerbated these environmental challenges, making sustainability a critical issue in the industry. To address this, several fashion brands, including H&M, have introduced initiatives aimed at promoting circularity, such as garment recycling programs. This paper explores the role of the circular economy in the fashion industry, with a particular focus on H&M’s sustainability efforts, assessing their effectiveness in reducing waste and aligning with global environmental goals.

OBJECTIVES

1. To understand consumer awareness and assess of circular economy in clothing and its role in promoting sustainable fashion
2. To identify consumer preference and barriers to recycling in fashion
3. To explore the role of fashion brands in promoting circular economy
4. To identify social impact of circular economy initiatives in clothing on consumer lifestyle, choice and environmental consciousness
5. To offer suggestions related to problems to be focused on circular fashion

RESEARCH METHODOLOGY

This study employs a quantitative research approach using primary data collected from respondents in Coimbatore City to analyze public perception and consumer participation in H&M’s recycling program. A structured questionnaire was used to gather data from a diverse group of consumers, focusing on their awareness, attitudes, and engagement with circular fashion practices. The collected data was analyzed using percentage analysis to interpret consumer trends and preferences, while the Chi-square test was applied to determine the relationship between demographic factors and sustainable fashion choices. This methodological approach ensures a comprehensive evaluation of the effectiveness of circular economy initiatives in the fashion industry, particularly in the context of Coimbatore.

REVIEW OF LITERATURE

Zaidi, A. A., & Chandra, R. (2024), "The challenges to circular economy in the Indian apparel industry: a qualitative study" This study identifies barriers to implementing circular economy principles in India's apparel retail sector. It highlights challenges such as regulatory issues, strategic limitations, and supply chain management hurdles, suggesting strategies like top management support and employee training to overcome these obstacles.

Das, S. (2025), "Circular economy: A sustainable model for waste reduction and wealth creation in the textile supply chain." This study explores the transition from a linear to a circular economy in the textile industry, emphasizing waste reduction and economic benefits. It highlights the environmental concerns associated with fast fashion and suggests recycling and repurposing as effective strategies for sustainability.

OVERVIEW OF THE STUDY

- Historical Evolution of Clothing Recycling – From pre-industrial reuse and repair practices to the rise of fast fashion and textile waste in the 20th century.
- Emergence of Sustainable Fashion – 1990s and 2000s saw early recycling initiatives by brands like Patagonia, H&M, and Nike.
- Growth of Circular Fashion Models – The 2010s introduced large-scale circular economy concepts, including H&M's Garment Collecting Program.
- Global Sustainability Efforts – Countries like Sweden, the Netherlands, and Japan lead in circular fashion policies and innovations.
- Focus of the Study – Evaluating H&M's recycling program's impact on textile waste reduction, consumer perception, and market influence in Coimbatore, India.

ANALYSIS AND INTERPRETATION

H&M GARMENT COLLECTION BIN FOR RECYCLING CLOTHS

S.NO	ACCEPTANCE LEVEL	NO OF RESPONDENT'S	PERCENTAGE
1	YES	49	46.66
2	NO	56	53.33
		105	100

INTERPRETATION

The above table states out of 105 respondents', 49 of the respondents are used H&M's garment collection bin for recycling cloths, while 56 of the respondents are not used H&M's garment collection bin for recycling cloths.

The majority of the respondents are not used H&M's garment collection bin for recycling cloths.

INTERESTED TO BUY RENTAL CLOTHING

S.NO	ACCEPTANCE LEVEL	NO OF RESPONDENT'S	PERCENTAGE
1	YES	67	63.80
2	NO	38	36.19
		105	100

INTERPRETATION

The above table states out of 105 respondents', 67 of the respondents are interested to buy rental clothes, while 38 of the respondents are not interested to buy rental clothes.

The majority of the respondents are interested to buy rental clothes for any occasional wear to reduce waste

CHI – SQAURE TEST

The chi – square test has been calculated based on the perception level of the respondent’s awareness about circular economy in clothing

AWARENESS OF THE CIRCULAR ECONOMY IN FASHION INFLUENCES WILLINGNESS TO BUY SUSTAINABLE CLOTHING

To find the awareness of the circular economy in fashion influence willingness to buy sustainable clothing of the respondent’s chi-square test is used and the result is given below

The awareness of the circular economy in fashion influence willingness to buy sustainable clothing, of the respondent’s was tested with the help of following hypothesis

- H₀ – Awareness of the circular economy and preference for sustainable fashion are independent.
- H₁ – Awareness of the circular economy and preference for sustainable fashion are dependent.

CHI – SQUARE TEST

FACTORS	CALCULATED VALUE	TABLE VALUE	DEGREE OF FREEDOM	SIGNIFICANTS
INCOME LEVEL WITH BUYING NEW CLOTHES	23.618	5.99	2	5%

Since the calculated Chi-Square value (23.62) is greater than the table value (5.99) and p-value (< 0.05), we reject H₀. This confirms that awareness of the circular economy and preference for sustainable fashion are dependent (related).

INCOME LEVEL INFLUENCE THE BUYING BEHAVIOR OF NEW CLOTHES

To find the income level with buying new clothes of the respondent's chi-square test is used and the result is given below

Income level with buying new clothes of the respondents was tested with the help of following hypothesis

- H_0 - Income level with buying new clothes of the respondents is independent
- H_1 - Income level with buying new clothes of the respondents is dependent

CHI – SQUARE TEST

FACTORS	CALCULATED VALUE	TABLE VALUE	DEGREE OF FREEDOM	SIGNIFICANTS
INCOME LEVEL WITH BUYING NEW CLOTHES	7.48	12.59	6	5%

Since the calculated Chi-Square value (7.49) is less than the table value (12.592) and p-value (0.278) > 0.05, we fail to reject H_0 . This confirms that income level and shopping frequency are independent (not related).

FINDINGS OF THE STUDY

- Majority of the respondents are aware about the fast fashion brand
- Majority of the respondents are aware about the fast fashion brand
- Majority of the respondents are buying new clothes once in three months
- Majority of the respondents are preferred to buy clothes from the brands that promotes sustainability

SUGGESTION

- Improve transparency by disclosing the full recycling process and the fate of collected garments.
- Invest in textile-to-textile recycling technologies to reduce reliance on downcycling and waste disposal.

- Expand consumer awareness campaigns to promote sustainable purchasing habits rather than only recycling.
- Strengthen collaborations with policymakers and industry stakeholders to create standardized circular fashion practices.

CONCLUSION

In conclusion, the transition to a circular economy in the fashion industry is essential for sustainability, and H&M's Recycle Bin Program represents a step in the right direction. While the initiative encourages consumers to recycle their old garments, its overall effectiveness is limited by challenges such as transparency, consumer awareness, and the efficiency of the recycling process. To achieve a truly circular fashion model, brands must go beyond garment collection and focus on sustainable production, advanced recycling technologies, and designs that promote durability and reusability. Additionally, the social impact of such programs must be carefully managed to prevent unintended consequences, such as harming local textile industries. Moving forward, a more comprehensive and transparent approach is needed to ensure meaningful environmental and social benefits, making circular fashion a viable and impactful solution for the industry.

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