



# CONSUMER PERCEPTIONS ON CIRCULAR ECONOMY IN FASHION AND APPAREL INDUSTRY

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## ABSTRACT

A **Circular Economy (CE)** is an economic model designed to eliminate waste and pollution by keeping products, materials, and resources in use for as long as possible through recycling, repair, reuse, remanufacturing, and regeneration. It shifts away from the traditional linear economy ("take-make-waste") to create closed-loop systems that prioritize sustainability and resource efficiency. This study investigates consumer perceptions of circular economy (CE) practices in the fashion and apparel industry, aiming to bridge the gap between environmental concern and sustainable purchasing behaviour. Through a descriptive research design, data from 388 respondents were collected via a structured online questionnaire employing a 5-point Likert scale. Statistical analyses, including independent t-tests, chi-square tests, and frequency-percentage analyses, were conducted using SPSS to evaluate awareness, attitudes, and barriers. Key findings reveal significant disparities in CE awareness, with urban and suburban consumers demonstrating higher awareness compared to rural populations. Socio-demographic factors such as education, employment status, and income strongly influence attitudes, with higher-income, educated individuals showing greater pro-CE inclinations. Critical barriers hindering CE adoption include affordability (72.4%), limited availability (73.5%), hygiene concerns (77.3%), and perceptions of style inadequacy (73.7%). These barriers underscore the misalignment between consumer expectations and current CE offerings in fashion. The study highlights persistent challenges in translating environmental awareness into actionable behaviour. To address these gaps, the research advocates for a holistic strategy integrating education, affordable pricing, trend-aligned designs, and quality assurance. Collaborative efforts among policymakers, brands, and communities are essential to create equitable CE ecosystems that prioritize inclusivity and balance functional-aesthetic demands. By addressing demographic disparities and perceptual barriers, the fashion industry can foster systemic behavioural change, aligning global sustainability goals with consumer needs. This research contributes actionable insights for stakeholders to enhance CE adoption, driving environmental and social resilience in the fashion sector.

**KEYWORDS:** Circular Economy, Fashion Industry, Consumer Perceptions, Sustainability Barriers, Sustainable Fashion, Textile Recycling

## INTRODUCTION

The fashion and apparel industry is currently facing significant sustainability challenges due to its reliance on a linear "take-make-dispose" model. In response, the **circular economy** has emerged as a regenerative and sustainable alternative. This system emphasizes minimizing waste and maximizing resource efficiency through strategies such as recycling, reuse, and eco-design. By redefining how garments are designed, used, and discarded, the circular economy promotes long-term environmental and social sustainability.

Understanding **consumer perception** is vital for the successful implementation of circular practices. Although consumers increasingly express concern about environmental issues, a notable **attitude-behaviour gap** remains—many continue to prioritize affordability, trends, and convenience over sustainability. This discrepancy indicates the need for more effective consumer education, transparent labelling, and accessible recycling infrastructure.

The circular economy offers clear advantages to multiple stakeholders. For businesses, it presents opportunities for innovation, increased brand loyalty, and access to ethically conscious markets. Consumers benefit from durable, high-quality products, while society gains from reduced environmental degradation and potential job creation in sectors like recycling and sustainable design.

However, barriers still exist, including inconsistent terminology, inadequate recycling systems, and limited consumer awareness. Addressing these challenges requires collaborative efforts from industry leaders, policymakers, and advocacy groups.

This research aims to explore the factors that shape consumer attitudes toward circular fashion, providing insights that can inform sustainable strategies across the value chain. The findings are expected to support **brands, regulators, and non-governmental organizations** in promoting circular practices that resonate with consumers—ultimately contributing to a more resilient and sustainable fashion industry.



## LITERATURE REVIEW

The fashion industry's significant environmental impact, characterized by excessive resource consumption, pollution, and textile waste, has spurred global interest in circular economy (CE) models as a pathway to sustainability. CE prioritizes regenerative systems that extend product lifecycles through reuse, repair, recycling, and resale, contrasting sharply with the linear "take-make-dispose" model dominant in fast fashion. However, the transition to circularity hinges on consumer perceptions and participation, which remain complex and multifaceted, as evidenced by a growing body of research highlighting regional disparities, generational divides, and systemic barriers. While awareness of sustainability issues is rising, studies consistently reveal a persistent gap between consumers' expressed support for eco-friendly practices and their actual engagement with CE initiatives. For instance, young Brazilian consumers, as noted by de Aguiar Hugo et al. (2023), vocalize strong environmental concerns yet rarely participate in CE behaviours like clothing repairs or resale, often defaulting to convenient fast-fashion habits. Similarly, D'Adamo & Colasante (2022) found that while 68% of Italian consumers surveyed acknowledged the importance of sustainability, only 32% actively sought eco-friendly brands, underscoring a misalignment between values and actions. This dissonance is partly rooted in knowledge gaps, as consumers struggle to navigate ambiguous terminology like "upcycled" versus "recycled" and distrust vague eco-labels, a scepticism amplified by prevalent greenwashing—where brands exaggerate environmental claims—as observed by Ta et al. (2022). Such mistrust frames CE initiatives as marketing tactics rather than genuine efforts, further complicating adoption. Regional and generational nuances further shape perceptions. In Italy, Generation Z, driven by climate consciousness, favours brands with transparent supply chains, as highlighted by Gazzola et al. (2020), whereas Slovak consumers, despite low CE awareness, show openness to innovative models like clothing rentals, per Musova et al. (2021). Australian consumers, according to Klemm & Kaufman (2024), prioritize durability and recyclability but remain price-sensitive, with cost outweighing sustainability in purchasing decisions. Meanwhile, Lithuanian designers face unique hurdles, as Bartkutė et al. (2023) note financial constraints and fragmented sustainability efforts, compounded by consumers' limited purchasing power. Younger European demographics, however, exhibit stronger pro-CE sentiments, with Lappi (2021) emphasizing demand for recycled products and urging policies to bridge attitude-behaviour gaps. Barriers to CE adoption are multifaceted, with cost and accessibility emerging as universal challenges. Sustainable fashion is often perceived as a premium offering, deterring price-conscious consumers, as Patwary et al. (2023) acknowledged in their decision-tree framework for mindful consumption. Infrastructure deficiencies, such as inadequate recycling systems, further limit participation, with Papamichael et al. (2023) advocating for enhanced "R-strategies" (reduce, reuse, recycle) to counteract fast fashion's waste crisis. Cultural perceptions also play a role: in Brazil, Machado et al. (2019) linked second-hand shopping to economic necessity rather than environmentalism, though the thrill of "treasure hunting" in thrift stores fostered a "virtuous circle" of CE engagement. Conversely, Fiori et al. (2022) found that Brazilian consumers

weigh the effort required for recycling—such as time invested in reverse logistics—before participating, highlighting the pragmatic assessment underlying behavioural choices. Emotional and functional drivers further influence engagement, with Kim et al. (2021) identifying emotional value—nostalgia, uniqueness, or storytelling—as a key motivator for choosing second-hand or upcycled fashion, particularly among individualistic consumers. Sensory experiences, like the tactile appeal of recycled fabrics, also drive adoption, as Ta et al. (2022) noted, while functional attributes such as durability resonate with practicality-focused buyers, exemplified by Australian consumers prioritizing long-lasting garments (Klemm & Kaufman, 2024). Rental and resale platforms like ThredUp and Depop capitalize on affordability and convenience, appealing to younger audiences seeking trendy, budget-friendly options while aligning with waste-reduction goals. Systemic challenges, however, persist, requiring collaborative solutions across stakeholders. Abdelmeguid et al. (2022) categorized barriers into "hard" challenges—rigid business models, regulatory gaps—and "soft" issues—consumer behaviour, knowledge gaps—emphasizing their interdependence. Businesses struggle to scale circular models like product-as-a-service (PaaS) due to low consumer awareness, while policymakers lag in creating incentives for sustainable practices. Petänen et al. (2024) proposed frameworks to clarify customer value propositions (CVPs) for circular services, stressing the need for accessibility and transparency. Education remains pivotal: D'Adamo & Colasante (2022) advocated for campaigns demystifying CE concepts and quantifying fashion's environmental impact, while Vidal-Ayuso et al. (2023) linked CE adoption to post-purchase behaviours, urging brands to educate consumers on garment care and disposal. Ultimately, the industry's shift to CE demands aligning economic incentives with environmental goals. Abbate et al. (2024), reviewing two decades of research, identified consumer behaviour, scalable initiatives, and supply-chain innovation as critical levers for transforming linear systems into regenerative loops. While challenges like cost, cultural resistance, and greenwashing persist, the growing resonance of sustainability—particularly among younger generations—offers a catalyst for change. Innovations such as blockchain for traceability, rental subscriptions, and repair services, coupled with policy mandates like extended producer responsibility (EPR) and infrastructure subsidies, can drive systemic change. By fostering collaboration and prioritizing inclusivity, the fashion industry can redefine value, making circularity not just an ideal but an attainable reality, where economic prosperity coexists with planetary health.

## RESEARCH GAP

Existing studies on consumer perceptions of the circular economy (CE) in the fashion and apparel industry reveal critical gaps that warrant further exploration. While research highlights consumer support for sustainability and openness to circular practices (e.g., in Brazil, Italy, and Slovakia), a persistent disconnect exists between awareness and active participation. Factors such as convenience, accessibility, and trust in sustainability claims remain underexplored, particularly regarding how scepticism toward greenwashing impacts adoption. Cultural and regional nuances influencing consumer



behaviour—such as infrastructure limitations in emerging economies or socio-economic disparities affecting affordability—are insufficiently addressed, with most studies focusing on single-country contexts rather than global comparisons. Additionally, while emotional value and sensory experiences drive engagement (e.g., second-hand shopping), contradictions emerge regarding price sensitivity and economic risks, suggesting demographic or contextual variations that lack reconciliation. Post-purchase behaviours, including disposal and recycling habits, are poorly understood, as is the role of social networks and influencers in shaping perceptions. Furthermore, while frameworks propose integrating consumer-centric strategies into CE business models, practical implementation remains vague, especially in balancing "soft" behavioural challenges (e.g., education, attitudes) with "hard" systemic barriers (e.g., financial constraints, infrastructure). Lastly, intersectional analyses of demographic factors (e.g., gender, nationality, socio-economic status) and their interplay with policy effectiveness are limited, leaving gaps in designing targeted interventions. Addressing these gaps requires holistic studies that bridge theoretical frameworks with real-world scalability, global comparative analyses, and deeper insights into sustaining consumer engagement beyond initial purchase decisions.

## OBJECTIVES

1. To Investigate consumer awareness and understanding of Circular economy in fashion
2. To analyse the Consumer attitudes towards sustainable fashion practices
3. To identify the barriers that affects the purchasing decision of consumers

## RESEARCH METHODOLOGY

### Research design:

This study adopts a **descriptive research design** to gain in-depth insight into consumer perceptions of circular economy practices within the fashion and apparel industry. Central to the methodology is a structured online questionnaire, which comprises closed-ended questions to ensure consistency and facilitate quantifiable responses. The survey employs a 5-point Likert scale to gauge various dimensions such as awareness, attitudes, and barriers related to circular economy practices. The questionnaire is systematically divided into three core sections. The **first section focuses on evaluating the level of awareness and understanding among consumers regarding circular economy principles**, aiming to capture the depth of their environmental knowledge and insights into sustainable fashion practices. The **second section examines consumer attitudes towards circular fashion**, exploring their interest, openness, and inclination towards adopting practices such as upcycling, recycling, and engaging with second-hand markets. The third section **investigates the perceived barriers to**

**adoption by identifying practical or psychological impediments** that might hinder consumers from fully engaging with circular economy initiatives. Alongside these sections, demographic variables are collected, including gender, age, location, education, employment status and income, ensuring a comprehensive analysis of how different segments of the population perceive circular economy initiatives in the fashion domain.

To achieve a broad and diverse sample, the study utilizes convenience sampling, targeting individuals aged 18 and above who are actively engaged in fashion consumption. This approach not only enhances participation through digital platforms but also captures a wide range of socio-economic and regional perspectives.

### Sample Size

With a sample size of 388 respondents, the study ensures statistical reliability while offering a snapshot of consumer trends and opinions across different demographics. Data collection is facilitated digitally, which helps overcome geographic limitations and enables swift accumulation of responses within a diverse consumer base.

### Data Analysis tool used

For data analysis, **SPSS statistical software package** is used to perform rigorous statistical tests that elucidate the relationships between various factors. An **independent sample t-test** is conducted to assess how the consumer's geographical location relates to their level of awareness and understanding of circular economy practices. Additionally, a **Chi-square test** is employed to examine the association between diverse demographic variables and consumer attitudes towards circular economy initiatives. **Frequency and percentage analyses** are carried out for identifying and quantifying the common barriers experienced by consumers, providing a detailed understanding of the factors preventing wider adoption of sustainable practices. This multifaceted methodological approach is designed to generate actionable insights that can inform both academic research and practical strategies aimed at promoting a transition towards a more sustainable fashion industry.

### Hypothesis

1. H1: Location of the consumer have a significant relationship with Awareness and Understanding
2. H2: Educational Qualification of the consumer have a significant relationship on Attitude towards Circular economy
3. H3: Employment status has significant relationship on Attitude towards Circular economy
4. H4: Monthly Income has significant relationship on Attitude towards Circular economy



## ANALYSIS AND INTERPRETATION

### 1. T test is performed for Awareness and Understanding V/S Location

The test is performed to check whether there is relationship between the location of the customers and their awareness and understanding about the circular economy.

Group Statistics			
Location		Std. Deviation	Std. Error Mean
AU1	Urban,Sub - Urban	1.236	.085
	Rural	1.223	.097
AU2	Urban,Sub - Urban	1.384	.095
	Rural	1.423	.112
AU3	Urban,Sub - Urban	1.345	.092
	Rural	1.431	.113
AU4	Urban,Sub - Urban	1.236	.085
	Rural	1.223	.097

Here AU1 to AU4, A1 to A5, BA1 to BA4 refers to questions in Awareness and Understanding, Attitude, Barriers Section in the questionnaire and it follows Likert scale following 1 – Strongly Disagree, 2 – Disagree, 3- Neutral, 4 – Agree, 5 - Strongly Agree.

### Hypothesis

**H1: Location of the consumer have a significant relationship with Awareness and Understanding**

### Interpretation

Urban/sub-urban consumers show higher mean scores across all items (AU1–AU4), indicating they are generally more aware and understanding of circular economy practices in the fashion and apparel industry compared to rural consumers.

Urban/sub-urban consumers scored significantly higher than rural consumers across all measures (AU1–AU4), with mean differences between 0.378 and 0.490.

Each t-value is significant ( $p < .005$ ) with 95% confidence intervals that do not include zero.

This confirms that urban/sub-urban consumers have a greater awareness and understanding of circular economy practices in fashion compared to rural consumers. Hence Alternate hypothesis is accepted, which indicates that location of the consumer has a significant relationship with awareness and understanding of circular economy.

Independent Samples Test								
		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	of the Difference	
							Lower	Upper
AU1	Equal variances assumed	2.940	371	.003	.378	.129	.125	.632
AU2	Equal variances assumed	3.344	371	.001	.490	.147	.202	.778
AU3	Equal variances assumed	3.096	371	.002	.448	.145	.163	.732
AU4	Equal variances assumed	2.940	371	.003	.378	.129	.125	.632

### 2. Chi square test is performed for Educational Qualification, Employment Status, Monthly Income V/S Attitudes towards circular fashion practices

Chi square test is performed to determine the **influence of demographic factors** like for Educational Qualification,

Employment Status, Monthly Income on **Attitudes of consumer towards circular fashion practices** which includes durability, Willingness to Pay more, renting or sharing clothes





## a) Educational Qualification V/S Attitude

### Hypothesis

H2: Educational Qualification of the consumer have a significant relationship on Attitude towards Circular economy

Crosstab							
Count							
		A1					Total
		1	2	3	4	5	
Educational Qualification	1	7	5	1	26	20	59
	2	10	24	11	149	94	288
	3	5	7	4	21	4	41
Total		22	36	16	196	118	388
		A2					Total
		1	2	3	4	5	
Educational Qualification	1	28	8	2	19	2	59
	2	123	35	9	117	4	288
	3	14	11	3	7	6	41
Total		165	54	14	143	12	388
		A3					Total
		1	2	3	4	5	
Educational Qualification	1	29	7	2	20	1	59
	2	123	36	13	113	3	288
	3	19	7	5	7	3	41
Total		171	50	20	140	7	388
		A4					Total
		1	2	3	4	5	
Educational Qualification	1	9	8	2	28	12	59
	2	11	33	11	173	60	288
	3	5	6	5	19	6	41
Total		25	47	18	220	78	388
		A5					Total
		1	2	3	4	5	
Educational Qualification	1	28	8	2	19	2	59
	2	123	35	9	117	4	288
	3	14	11	3	7	6	41
Total		165	54	14	143	12	388

Chi-Square Test			
A1	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.623 <sup>a</sup>	8	.003
N of Valid Cases	388		
A2	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.499 <sup>a</sup>	8	.018
A3	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.499 <sup>a</sup>	8	.018
N of Valid Cases	388		
A4	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.301 <sup>a</sup>	8	.006
N of Valid Cases	388		
A5	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	34.524 <sup>a</sup>	8	.000
N of Valid Cases	388		

### Interpretation

The chi-square analysis revealed statistically significant associations ( $p < 0.05$ ) between consumers' educational qualifications (categorized as below graduation, graduation, post-graduation) and their attitudes (A1–A5) toward circular economy (CE) practices in fashion. Higher education levels (post-graduation) correlated with distinct attitude distributions, reflecting greater openness to CE adoption, while lower education cohorts exhibited scepticism or neutrality. For instance, post-graduate respondents were more likely to

prioritize sustainability in purchasing decisions, trust CE models, and perceive value in recycled textiles, whereas those with lower educational attainment emphasized affordability and convenience. These disparities underscore education's role in shaping awareness, values, and receptiveness to CE principles. Therefore, Alternate Hypothesis is accepted which indicates that educational qualification of the consumer has a significant relationship on attitude towards circular economy.



## b) Employment Status V/S Attitude

Crosstab							
Count							
		A1					Total
		1	2	3	4	5	
Employment Status	1	3	5	9	23	14	54
	2	9	18	14	49	43	133
	3	11	30	5	80	57	183
	4	0	1	1	9	6	17
	5	1	0	0	0	0	1
Total		24	54	29	161	120	388
		A2					Total
		1	2	3	4	5	
Employment Status	1	17	11	4	19	3	54
	2	47	25	7	52	2	133
	3	88	15	3	70	7	183
	4	12	3	0	2	0	17
	5	1	0	0	0	0	1
Total		165	54	14	143	12	388
		A3					Total
		1	2	3	4	5	
Employment Status	1	19	12	5	17	1	54
	2	48	23	7	53	2	133
	3	91	11	8	69	4	183
	4	12	4	0	1	0	17
	5	1	0	0	0	0	1
Total		171	50	20	140	7	388
		A4					Total
		1	2	3	4	5	
Employment Status	1	3	5	10	23	13	54
	2	6	15	13	65	34	133
	3	10	24	13	90	46	183
	4	0	1	1	8	7	17
	5	1	0	0	0	0	1
Total		20	45	37	186	100	388
		A5					Total
		1	2	3	4	5	
Employment Status	1	17	11	4	19	3	54
	2	47	25	7	52	2	133
	3	88	15	3	70	7	183
	4	12	3	0	2	0	17
	5	1	0	0	0	0	1
Total		165	54	14	143	12	388

Chi-Square Tests			
A1	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	40.902a	16	.005
N of Valid Cases	388		
A2	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	42.456a	16	.022
N of Valid Cases	388		
A3	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	40.902 <sub>a</sub>	16	.015
N of Valid Cases	388		
A4	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28.557 <sup>a</sup>	16	.027
N of Valid Cases	388		
A5	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	29.319 <sup>a</sup>	16	.022
N of Valid Cases	388		

## Hypothesis

### H3: Employment status has significant relationship on Attitude towards Circular economy

#### Interpretation:

The chi-square tests reveal statistically significant associations ( $p < .05$ ) between employment status (1 refers to Student, 2 refers to Employee, 3 refers to Self-employed, 4 refers to Unemployed, 5 refers to Retired) and attitudes toward circular economy practices across all variables (A1–A5). For instance, A1 ( $\chi^2=34.204$ ,  $*p=.005$ ) and A5 ( $\chi^2=29.319$ ,  $p=.022$ ) indicate that employed individuals may exhibit distinct attitudes compared to students, self-employed, unemployed, or retired

respondents. The significant linear-by-linear association for A5 ( $p=.024$ ) suggests a potential trend in attitudes correlating with employment status. These findings imply that employment status influences engagement with circular fashion, possibly due to differences in disposable income. Therefore, Alternate Hypothesis is accepted which indicates that employment status has significant relationship on attitude towards circular economy.



c) Monthly Income (in Rs) V/S Attitude

Cross tab								
Count		A1					Total	
		1	2	3	4	5		
Monthly Income (In Rs.)	1	27	15	4	10	2	58	
	2	29	6	5	37	1	78	
	3	85	14	4	63	2	168	
	4	26	11	3	21	1	62	
	5	4	4	4	9	1	22	
Total		171	50	20	140	7	388	
		A2					Total	
		1	2	3	4	5		
Monthly Income (In Rs.)	1	25	12	5	13	3	58	
	2	28	7	5	36	2	78	
	3	85	16	1	63	3	168	
	4	25	13	1	21	2	62	
	5	2	6	2	10	2	22	
Total		165	54	14	143	12	388	
		A3					Total	
		1	2	3	4	5		
Monthly Income (In Rs.)	1	27	15	4	10	2	58	
	2	29	6	5	37	1	78	
	3	85	14	4	63	2	168	
	4	26	11	3	21	1	62	
	5	4	4	4	9	1	22	
Total		171	50	20	140	7	388	
		A4					Total	
		1	2	3	4	5		
Monthly Income (In Rs.)	1	25	12	5	13	3	58	
	2	28	7	5	36	2	78	
	3	85	16	1	63	3	168	
	4	25	13	1	21	2	62	
	5	2	6	2	10	2	22	
Total		165	54	14	143	12	388	
		A5					Total	
		1	2	3	4	5		
Monthly Income (In Rs.)	1	25	12	5	13	3	58	
	2	28	7	5	36	2	78	
	3	85	16	1	63	3	168	
	4	25	13	1	21	2	62	
	5	2	6	2	10	2	22	
Total		165	54	14	143	12	388	

Chi-Square Tests			
A1	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	40.902 <sup>a</sup>	16	.001
N of Valid Cases	388		
A2	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	42.456 <sup>a</sup>	16	.000
N of Valid Cases	388		
A3	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	40.902 <sup>a</sup>	16	.001
N of Valid Cases	388		
A4	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	42.456 <sup>a</sup>	16	.000
N of Valid Cases	388		
A5	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	42.456 <sup>a</sup>	16	.000
N of Valid Cases	388		

Hypothesis

H4: Monthly Income has significant relationship on Attitude towards Circular economy

Interpretation:

The chi-square tests reveal statistically significant associations ( $p < 0.05$ ) between income levels (1-Below 20K, 2-20K to 50K, 3-50K to 1 lakh, 4-1 to 2 lakhs, 5- Above 2 lakhs) and attitudes toward circular economy practices (A1–A5). Higher-income groups (e.g., 1–2 lakhs and above) show stronger alignment with CE principles, likely due to greater financial capacity to

prioritize sustainability. Lower-income groups (below 20k) exhibit less favourable attitudes, possibly hindered by affordability barriers. These findings highlight income as a critical determinant of engagement with circular fashion, emphasizing the need for inclusive pricing strategies and targeted outreach to bridge economic disparities in CE adoption. Therefore, Alternate Hypothesis is accepted which indicates that monthly income has significant relationship on attitude towards circular economy



### 3. Percentage analysis of Barriers

BA1						BA2					
		Frequency	Percent	Valid Percent	Cumulative Percent			Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	24	6.2	6.2	6.2	Valid	1	24	6.2	6.2	6.2
	2	54	13.9	13.9	20.1		2	42	10.8	10.8	17.0
	3	29	7.5	7.5	27.6		3	37	9.5	9.5	26.5
	4	161	41.5	41.5	69.1		4	230	59.3	59.3	85.8
	5	120	30.9	30.9	100.0		5	55	14.2	14.2	100.0
	Total	388	100.0	100.0			Total	388	100.0	100.0	
BA3						BA4					
		Frequency	Percent	Valid Percent	Cumulative Percent			Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	20	5.2	5.2	5.2	Valid	1	17	4.4	4.4	4.4
	2	45	11.6	11.6	16.8		2	44	11.3	11.3	15.7
	3	37	9.5	9.5	26.3		3	27	7.0	7.0	22.7
	4	186	47.9	47.9	74.2		4	222	57.2	57.2	79.9
	5	100	25.8	25.8	100.0		5	78	20.1	20.1	100.0
	Total	388	100.0	100.0			Total	388	100.0	100.0	

Here BA1 refers to High Cost, BA 2 refers to Lack of Availability, BA3 refers to Non stylish, BA4 refers to hygiene and durability.

#### Interpretation

The analysis reveals significant barriers to circular economy adoption in fashion. Cost (BA1: 72.4% agree/strongly agree) and availability (BA2: 73.5%) are major hurdles, but hygiene/durability concerns (BA4: 77.3%) rank highest. Style/trendiness (BA3: 73.7%) also deters adoption, indicating consumers perceive sustainable options as less fashionable. These results underscore multifaceted challenges, with hygiene/durability and affordability dominating consumer hesitations, necessitating industry strategies to improve product design, accessibility, and education to address these barriers.

#### Results

The study on consumer perceptions of the circular economy (CE) in the fashion and apparel industry reveals that demographic factors and perceptual influences play a critical role in shaping both awareness and engagement. Notably, urban and suburban consumers demonstrate significantly higher awareness and understanding of CE practices compared to their rural counterparts. This discrepancy, evident in the statistically significant mean differences ranging between 0.378 and 0.490 ( $p < .005$ ), suggests that greater access to information, sustainability initiatives, and supporting infrastructure in more densely populated areas enhances consumer knowledge about sustainable practices. In contrast, rural consumers may not have the same level of exposure to educational resources and environmental campaigns, which could limit their understanding of circular economy principles within the fashion context.

Furthermore, the research emphasizes the strong correlation between educational qualification and consumer attitudes towards CE practices. Individuals with higher education, particularly those who have attained post-graduate degrees, are

more likely to exhibit favorable views towards circular economy initiatives. This trend is statistically significant ( $p < .05$ ), underscoring the pivotal role that environmental literacy plays in fostering a positive outlook toward sustainability.

Employment status and income levels further refine the dynamics of engagement with CE principles. Employed individuals, along with consumers from higher-income groups—specifically those earning 1 lakh INR per month or more—align more closely with the ideals of the circular economy. This alignment is supported by robust statistical evidence ( $p < .001$ ) and contrasts starkly with the attitudes of lower-income groups, particularly those earning less than or equal to 20k INR per month, who face affordability barriers that impede their ability to adopt sustainable fashion practices. Such economic constraints underscore the broader challenge of making CE initiatives accessible and attractive across all income brackets.

In addition to demographic influences, the study identifies several key barriers to CE adoption. A significant portion of respondents (77.3%) express concerns over hygiene and durability, leading to a general distrust of second-hand or recycled clothing. Other prominent obstacles include perceptions of high costs (72.4%), limited availability of sustainable products (73.5%), and the belief that eco-friendly fashion lacks style and modern appeal (73.7%). These multifaceted challenges highlight the complex interplay between consumer perceptions and economic realities, suggesting that for the circular economy to gain broader acceptance in the fashion and apparel industry, both affordability and aesthetic appeal must be improved simultaneously while addressing intrinsic concerns related to product quality and trust.





## DISCUSSION

To overcome these barriers, a multi-pronged approach is essential for enhancing consumer perceptions of circular economy practices in the fashion and apparel industry. For rural populations, targeted, localized education campaigns and partnerships with trusted community influencers can effectively bridge awareness gaps by providing clear, accessible information about sustainable practices. Simultaneously, incorporating sustainability modules into educational curriculums at all levels will foster environmental literacy, equipping individuals with the knowledge necessary to make informed choices. Addressing affordability remains a key priority; implementing tiered pricing strategies, offering subsidies, and developing rental models can lower financial barriers, making sustainable fashion more accessible.

Additionally, product design must not be overlooked—designers should prioritize aesthetics to ensure that sustainable products align with current fashion trends, thereby reshaping negative consumer perceptions about style. Standardized certifications, such as a "CE-Certified" label, can provide assurance regarding hygiene and durability, addressing prevalent consumer concerns. Finally, collaboration between policymakers and brands via public-private partnerships is essential to incentivize circular practices, subsidize sustainable production, and build robust recycling infrastructures, ensuring inclusivity across different income groups.

## CONCLUSION

The study underscores that circular economy adoption in fashion hinges on addressing demographic disparities and perceptual barriers. Urban-rural divides, income inequality, and educational gaps create uneven engagement, while practical concerns like cost, availability, and product quality dominate consumer hesitations. A holistic approach is vital, combining education, innovative pricing, trend-aligned design, and robust quality assurance can bridge the gap between sustainability ideals and consumer expectations. Policymakers, brands, and communities must collaborate to create an equitable ecosystem where circular practices are accessible, desirable, and trustworthy. By prioritizing inclusivity and addressing both functional and aesthetic demands, the industry can drive systemic change, transforming consumer behaviour and advancing a sustainable future for fashion.

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