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## Exploring digital consumption values and brand loyalty in fashion and apparel industry

Anoothi Mishra \*, Ayushi Mishra and Anir Panda

*Xavier Institute of Management and Entrepreneurship, India.*

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### Abstract

This study examines the influence of digital consumption values on brand loyalty in the fashion and apparel industry, drawing on the Theory of Consumption Values to address gaps in existing frameworks that often isolate individual digital factors. The research adopts a quantitative approach, utilizing a survey administered to consumers in an emerging market context to capture perceptions across functional, emotional, social, epistemic, economic, and trust-related dimensions of digital engagement. Data were analysed using reliability assessments, correlation analyses, and multiple regression to evaluate the relationships between these values and loyalty outcomes. Results reveal that digital consumption values explain 62% of the variance in brand loyalty, with functional and emotional values emerging as the strongest predictors. The findings underscore the importance of integrated digital strategies that enhance user experience, personalization, and visual appeal to foster long-term consumer relationships. Implications for fashion brands include prioritizing platform usability and immersive technologies to build a competitive advantage in digital marketplaces. This research contributes to theoretical advancements in consumption behaviour and offers practical guidance for industry practitioners navigating evolving online retail dynamics.

**Keywords:** Digital consumption values; Brand loyalty; Fashion e-commerce; Theory of Consumption Values; Customer satisfaction; Indian consumers

### 1. Introduction

The fashion and apparel industry stands at the crossroads of tradition and innovation, profoundly influenced by the accelerating pace of digital transformation. As of 2026, the global fashion market is estimated at USD 1.7-1.8 trillion, expanding at a modest 2-3% compound annual growth rate (CAGR), down from previous years' 4-5% due to economic headwinds, trade disruptions, and shifting consumer priorities.

This subdued growth trajectory reflects a broader recalibration, where e-commerce penetration has stabilized at 30-35% of total fashion sales, with digital channels maturing but facing saturation in growth rates, now in the low single digits.

Amid these dynamics, digital consumption values—encompassing functional utility, emotional gratification, social connectivity, epistemic novelty, economic benefits, and trust—emerge as pivotal drivers of consumer behaviour and brand loyalty. This introduction delineates the evolving landscape of digital fashion consumption, underscores the theoretical underpinnings of the Theory of Consumption Values (TCV), highlights empirical gaps, and outlines the objectives of this study.

\* Corresponding author: Anoothi Mishra

The digital transformation of the fashion industry has been catalyzed by advancements in artificial intelligence (AI), augmented reality (AR), and data analytics, fundamentally altering how consumers discover, evaluate, and purchase apparel. According to recent analyses, AI in fashion is projected to grow from USD 2.56 billion in 2026 to USD 40.81 billion by 2034, at a staggering CAGR of 41.39%, driven by its applications in personalized recommendations, virtual try-ons, and supply chain optimization. (McKinsey & Company & The Business of Fashion, 2025).

For instance, 52% of female consumers express interest in customization tools enabled by AI, reflecting a demand for tailored experiences that enhance perceived value.

During the COVID-19 pandemic, digital commerce surged from 35% to 55% of total sales, accelerating the adoption of digital devices across generations and embedding AI-driven personalization as a core competency.

In 2026, dominant trends include agentic AI for autonomous shopping assistants, the expansion of resale markets growing 2-3 times faster than firsthand markets, and a focus on operational efficiency to counter rising costs from tariffs and inflation.

These developments are particularly pronounced in emerging markets like India, where Gen Z and millennials associate brands with confidence, self-expression, affordability, and sustainability, fueling a digital fashion disruptor ecosystem.

Central to understanding these shifts is the Theory of Consumption Values (TCV), originally proposed by Sheth, Newman, and Gross in 1991, which posits that consumer choices are motivated by a multifaceted set of values rather than singular factors.

TCV identifies five core dimensions: functional (practical utility), social (status and affiliation), emotional (affective responses), epistemic (novelty and knowledge-seeking), and conditional (situational influences). A systematic review of TCV applications from 1991 to 2024, using the Theory-Contexts-Characteristics-Methods (TCCM) framework, reveals its versatility across disciplines such as marketing and information systems, with bibliometric analyses highlighting clusters centred on consumer behaviour in digital contexts.

In digital fashion, TCV has been extended to virtual consumption, where values like utilitarianism, social identity, personification, hedonism, and personal beliefs drive engagement with metaverse fashion and AR-enabled experiences.

For example, studies on fashion social network sites (SNS) users demonstrate that utilitarian and differential values positively affect brand loyalty ( $\beta=0.307$  and  $0.258$ ,  $p<0.001$ ), while aesthetic and conspicuous values influence word-of-mouth (WOM) intentions, moderated by social capital and involvement.

Integrating TCV with emotional three-level theory in virtual fashion contexts shows that attributes like aesthetics, reality, personalization, sustainability, and inclusivity enhance perceived enjoyment, usefulness, and ease of use, ultimately fostering acceptance and loyalty, particularly among Gen Z consumers who value eco-friendly alternatives reducing carbon emissions by up to 97%.

Brand loyalty in fashion e-commerce is increasingly contingent on these digital values, as recent studies indicate. For instance, online reviews and e-service quality moderate loyalty and e-WOM in cosmetics e-commerce, while social media advertising significantly boosts loyalty in apparel retail.

Among Gen Z, brand loyalty is fluid due to digitalization, with factors like brand image, satisfaction, and design features playing key roles, though 85% of shoppers prioritize product content over traditional loyalty.

In 2024, fashion led with 54% loyalty rates, but beauty and skincare grew to 42%, underscoring category-specific dynamics.

AI-driven marketing efforts further amplify loyalty by personalizing experiences, though conflicting digital signals can erode trust.

Looking ahead to 2026 trends, online fashion shopping is characterized by AI assistants for discovery, though autonomy in decisions remains limited; a resurgence in brick-and-mortar for apparel (61% of Gen Z prefer in-store discovery); and microtrends influencing search behavior via aesthetics like "clean girl" or "quiet luxury."

Social commerce on platforms like TikTok and Instagram drives engagement, with 69.4 million US shoppers on Facebook alone in 2025.

Sustainability and circular models are gaining traction, with resale markets expanding and consumers favouring used clothing or subscription models.

Agentic commerce, traceability, and hyper-personalization are must-haves, as 25% of consumers in some markets are likely to buy via AI assistants.

Despite these advancements, research gaps persist. Existing literature often examines isolated factors—such as AR or influencers—without integrating them into a holistic TCV-based model.

Empirical studies on digital fashion in India are limited, overlooking mediators like satisfaction and engagement in linking values to loyalty.

This study addresses these voids by empirically testing a value-based model in the Indian context, using survey data from 214 consumers analyzed via SPSS.

The objectives are: (1) to identify key digital consumption values in fashion using TCV; (2) to assess their impact on brand loyalty through regression; (3) to offer strategic recommendations for apparel brands.

This research holds significance for practitioners by highlighting levers like usability and visuals for loyalty, and for academics by validating TCV in digital fashion.

The paper is structured as follows: literature review, research gap and objectives, methodology, data analysis, findings and discussion, conclusion, limitations, and references.

**Table 1** Dimensions of Theory of Consumption Values (TCV) and Application in Digital Fashion

Dimension of TCV	Description	Application in Digital Fashion
Functional	Practical utility, e.g., ease of navigation	Hassle-free checkout, search tools enhance loyalty ( $\beta=0.114, p=0.047$ )
Emotional	Affective responses, enjoyment	Interactive content, visuals drive satisfaction ( $\beta=0.187, p=0.003$ )
Social	Status, affiliation	Influencer content, though non-significant directly ( $p=0.860$ )
Epistemic	Novelty, knowledge	AR try-ons, notifications increase engagement ( $\beta=0.122, p=0.040$ )
Conditional	Situational factors	Discounts, sustainability, and moderate economic pressures

This framework guides the analysis, revealing that digital values explain 62% of loyalty variance.

## 2. Literature Review

The digitalisation of the fashion and apparel industry has transformed the nature of consumer engagement, reshaping how individuals search for products, evaluate alternatives, and form long-term relationships with brands. Existing scholarship consistently highlights the influence of digital platforms, social media ecosystems, augmented reality, user-generated content, and personalised recommendation algorithms on consumer behaviour. Yet, despite substantial progress, current research remains theoretically fragmented. Most studies examine isolated digital factors rather than offering an integrated perspective on how consumers derive functional, emotional, social, epistemic, economic, and trust-related value from digital fashion environments and how these value dimensions collectively shape brand loyalty. This gap underscores the need for a holistic framework grounded in digital consumption values.

Research examining e-loyalty in digital fashion environments demonstrates the importance of satisfaction, trust, and online experience. Arora and Chaudhary (2024) found that customer satisfaction, online shopping experience, and trust are significant predictors of e-loyalty within fashion e-commerce settings. However, their study treats these constructs as individual determinants rather than as components of a broader value-based system. They also acknowledge limitations such as self-reported data, sampling constraints, and the exclusion of emerging digital technologies, signalling the need for more integrated models. These findings align with broader market analyses. The Bain & TMRW report (*India's Digital Fashion Disruptors*, 2023) illustrates that Indian consumers—particularly Gen Z and millennials—associate fashion brands with confidence, self-expression, affordability, sustainability, and fun. Although these characteristics reflect emotional, social, and ethical value perceptions, the report is descriptive in nature and does not empirically examine how such values influence loyalty.

Parallel contributions highlight the operational aspects of digital value creation. Holloway's (2024) qualitative study emphasises the role of supply chain responsiveness—timely delivery, product availability, transparency, and sustainability—in shaping trust and loyalty in the apparel sector. While these attributes contribute to functional and ethical value, the study's limited sample size and qualitative nature restrict its generalisability and its ability to integrate operational value with digital platform experiences such as usability, personalisation, AR features, or social media influence. This illustrates how existing literature often addresses single dimensions of consumer value without embedding them into a comprehensive theoretical model.

In luxury fashion, digital strategies have received significant attention. Tam and Lung's (2025) systematic review identifies 15 digital marketing strategies—including influencer collaborations, AR/VR experiences, content and storytelling marketing, omnichannel integration, and mobile marketing—that shape consumer engagement and perceptions of luxury brands. Their analysis reveals that scholarship in this area lacks theoretical coherence, with most studies focusing on individual digital tools rather than examining how consumers interpret these tools as sources of perceived value. They also note constraints in applying existing theories, such as the Technology Acceptance Model to luxury contexts, as these models insufficiently capture the experiential and symbolic dimensions of digital luxury consumption.

Complementing this perspective, Lin and Ku (2023) demonstrate that digital brand experience on Instagram contributes to perceived brand authenticity and emotional attachment, which subsequently predict brand loyalty in luxury fashion. Although their structural model provides empirical support for experiential drivers of loyalty, the study is geographically limited to Greater China and the sample is heavily skewed toward female participants. As such, its applicability across global markets and fashion segments requires further investigation. Moreover, the study conceptualises digital brand experience as a higher-order construct and does not decompose it into specific digital consumption values such as functional value (ease of use) or epistemic value (novelty).

Beyond branded content, contemporary research emphasises the importance of consumer-driven digital influence. Xu (2025) shows that user-generated content, social media engagement, personalised offers, and cultural narratives significantly impact consumer behaviour, with 64% of fashion consumers relying on UGC before making purchase decisions and 80% expressing a preference for personalised experiences. These findings support the rising importance of social and emotional value in digital consumption. However, the study adopts a marketing-narrative lens and does not apply behavioural theories that link these influences to loyalty outcomes.

Emerging technologies such as augmented reality play an increasingly critical role in consumer value creation. Sarkis et al. (2025) found that AR-enabled virtual try-ons significantly enhance purchase decisions, deepen customer engagement, and increase brand loyalty among Middle Eastern fashion consumers. Their findings highlight the epistemic and emotional value generated by immersive digital experiences. Still, the study focuses on a single regional context and a single technology, leaving unanswered questions regarding how AR interacts with other digital value dimensions within broader consumption ecosystems.

Traditional studies on brand image and loyalty reinforce the importance of emotional connection, trust, and brand impressions but often overlook the contemporary digital environment. The 2025 literature review on brand image and loyalty confirms that brand image remains a critical antecedent to loyalty but is limited by its restricted scope. Similarly, studies on digital commerce in fashion before 2020 tend to prioritise convenience, product variety, and price competitiveness, ignoring advances in AI personalisation, live streaming, AR shopping, and algorithmic curation that have since reshaped digital fashion behaviour.

Sustainability-oriented frameworks add another layer to consumer value formation. The NICE Consumer Framework (2012) highlights ethical behaviour, lifecycle awareness, and environmental responsibility in fashion consumption.

However, it predates modern digital retail environments and does not incorporate digital transparency mechanisms, digital activism, or platform-based sustainability communication—all of which are now central in shaping brand perceptions and loyalty.

Broader industry analyses further contextualise shifting value expectations. McKinsey's *State of Fashion 2026* report emphasises how AI-driven personalisation, economic uncertainty, and a heightened focus on value are redefining brand loyalty. While such insights illustrate the macro-level forces influencing digital consumption, they do not empirically examine the psychological or behavioural mechanisms linking digital value perception to loyalty.

Taken together, these fifteen studies reveal substantial empirical and conceptual progress but also underscore significant research gaps. First, existing literature analyses digital determinants—trust, AR, supply chain responsiveness, social media, sustainability, brand experience—independently rather than as interconnected value dimensions. Second, few studies employ theoretical frameworks capable of capturing multidimensional digital value perceptions, such as the Theory of Consumption Values. Third, empirical research on digital fashion consumers in India remains limited despite the country's prominence as a rapidly growing digital fashion market. Fourth, existing models often overlook mediating mechanisms, particularly customer satisfaction and digital engagement, which contemporary research suggests are critical in linking digital value perceptions to loyalty. Finally, technological advancements such as AI-driven recommendations, hybrid retail, and influencer-mediated commerce receive inconsistent coverage across studies, resulting in outdated conceptualisations of digital consumption.

This cumulative assessment underscores an unmet need for research that systematically conceptualises digital consumption values and empirically tests their impact on brand loyalty within modern fashion environments. The present study addresses this gap by developing and validating a holistic value-based model that captures the functional, emotional, social, epistemic, economic, and trust-related dimensions of digital consumption and their combined influence on brand loyalty in the fashion and apparel sector.

## 2.1. Research Gap

Existing studies examine digital factors such as augmented reality, social media engagement, personalization, trust, and supply chain responsiveness in isolation. There is a lack of integrated models that capture how multiple consumption values—functional, emotional, social, epistemic, economic, and trust-related—interact collectively to influence brand loyalty in digital fashion contexts, as proposed by the Theory of Consumption Values (TCV).

Most empirical research is concentrated in Western markets or regions such as Greater China and the Middle East. Despite India's rapidly growing digital fashion market and value-conscious Gen Z and millennial consumers, India-specific empirical evidence remains scarce, limiting culturally and economically nuanced insights.

Widely used models like the Technology Acceptance Model (TAM) inadequately explain experiential, symbolic, and emotional dimensions relevant to fashion consumption. Many studies lack theoretical coherence, failing to align digital tools (AR, influencers, AI personalization) with comprehensive value-creation frameworks. A significant portion of literature predates recent shifts such as AI-driven personalization, live commerce, algorithmic curation, and hybrid retail. As a result, post-pandemic digital consumption behaviours and emerging loyalty drivers remain underexplored.

While factors like user-generated content, sustainability communication, and personalized offers are widely acknowledged, few studies empirically test how this influence loyalty through mediators such as satisfaction, engagement, or trust, leading to largely descriptive findings.

Although Gen Z consumers express strong sustainability concerns, research inadequately explains why these attitudes do not consistently translate into loyalty or purchase behaviour, especially within digitally mediated environments.

High enrollment but low engagement in digital loyalty programs indicates shortcomings in personalization, trust-building, and experiential design. Additionally, the role of digital ESG communication in shaping loyalty in emerging economies remains under-investigated.

Current research does not sufficiently equip fashion brands to respond to intentional spending and value-driven consumption trends. There is a clear absence of empirically validated, multidimensional models that integrate digital innovation with consumer value creation.

## 2.2. Research Objectives

- To address the identified gaps, this study pursues the following objectives:
- To find out what digital factors customers value most when shopping for fashion and apparel.
- To understand how these digital values affect customers' loyalty to fashion brands.
- To see whether different types of customers (age, gender, etc.) respond differently to these digital values.

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## 3. Methodology

### 3.1. Research Design

This research adopted a quantitative approach in exploring the relationships existing between various factors that contribute to consumer behaviour in digital fashion platforms. The objective of the study is aimed at finding out how the perceptions, digital platform attributes, consumption values and age-related differences impact consumers' brand loyalty in online fashion and apparel. A structured survey was designed to gather data from respondents across diverse demographics.

### 3.2. Data Collection

A survey instrument with Likert scale-based questions was employed, and responses ranged from strongly disagree (1) to strongly agree (5). The sample consisted of men and women across different age groups and professional backgrounds for a broad analysis.

### 3.3. Variables Measured

The following were the major variables that the survey targeted:

- Convenience Value
- Information Value
- Social Influence Value
- Personalization Value
- Entertainment Value
- Monetary Value
- Privacy & Security Value

Aesthetic/Visual Appeal Mediator: Customer Satisfaction Dependent Variable: Brand Loyalty Control Variables: Age, Gender, Income, Shopping Frequency

### 3.4. Statistical Analysis

Multiple linear regression tests were used to study the relationships between the factors. The regression test was applied to determine the statistical relationship between independent variables and brand loyalty. An association was significant at  $p\text{-value} < 0.05$ , thus representing a strong relationship between the analyzed factors.

### 3.5. Regression Analysis

For every relationship, regression coefficients, standard errors, and p-values were obtained. The Asymp. Sig. test was used to establish whether or not the null hypothesis—no association between variables—could be rejected.

### 3.6. Sample Size and Population

The survey was distributed to 300 participants, recruited online to gather insights into the psychological perceptions of digital fashion consumers. Initially, 89 participants responded to the questionnaire upon receiving it. Following a reminder sent to non-respondents, the total number of responses increased to 214.

### 3.7. Data Analysis Tools

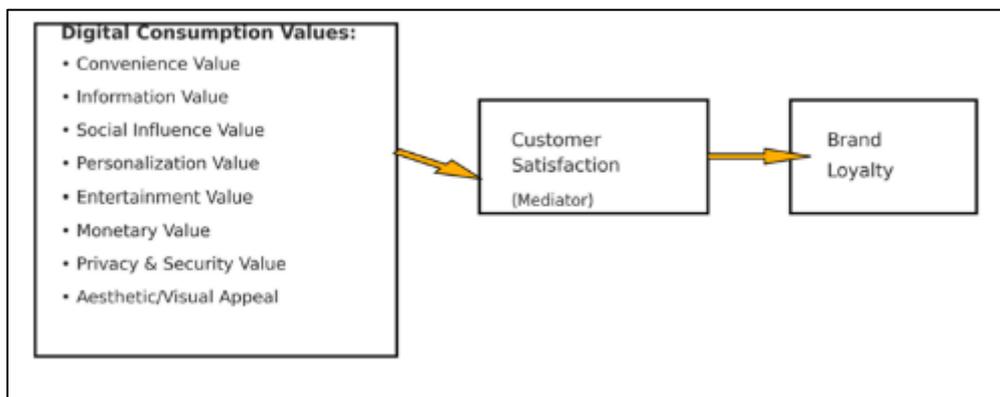
The data were analyzed with the use of SPSS, which is a Statistical Package for the Social Sciences. Frequency distributions and chi-square tests were carried out to evaluate the relationships among the identified factors. The results are presented in terms of the regression values, t-statistics, and p-values to establish the statistical significance of the findings.

### 3.8. Ethical Considerations

Ethical approval was obtained prior to data collection. Respondents participated voluntarily, and their anonymity and confidentiality were ensured. The survey did not include any sensitive or intrusive questions, adhering to ethical standards for research.

## 4. Theoretical framework

- Conceptual Framework Diagram
- Digital Consumption Values:
  - Convenience Value
  - Information Value
  - Social Influence Value
  - Personalization Value
  - Entertainment Value
  - Monetary Value
  - Privacy & Security Value
  - Aesthetic/Visual Appeal
- Customer Satisfaction (Mediator) → Brand Loyalty



**Figure 1** Impact of Digital Consumption Values on Customer Satisfaction and Brand Loyalty

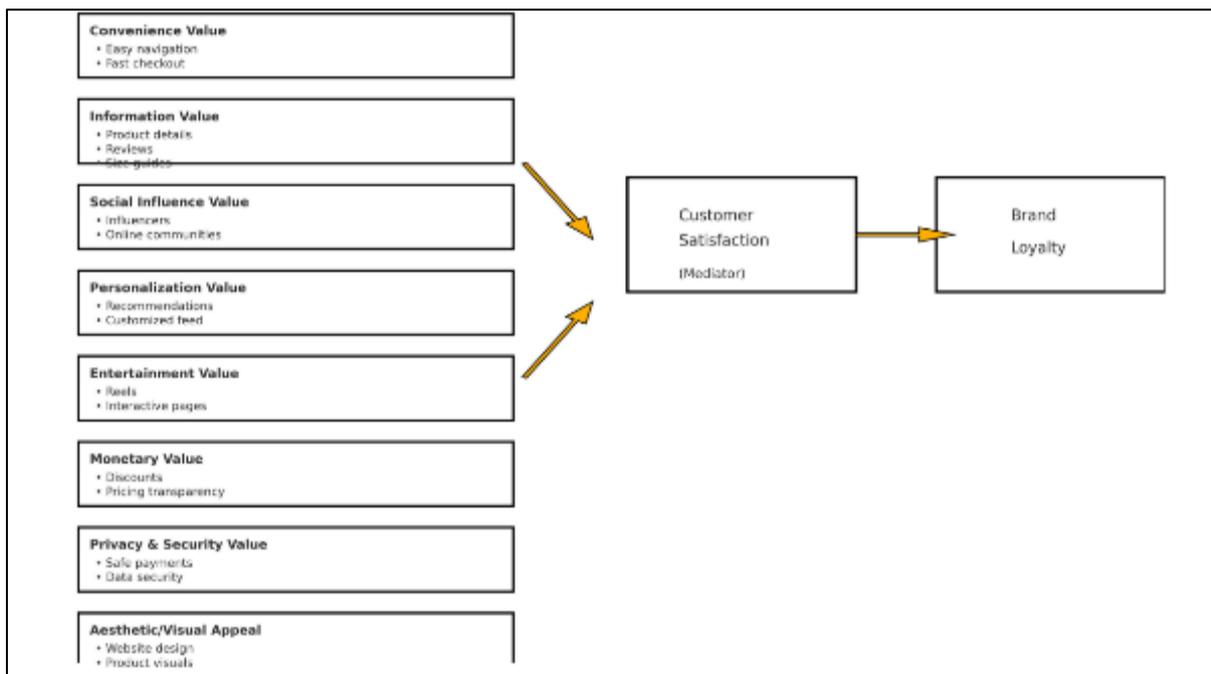
Figure 1 presents the conceptual framework of the study, developed on the foundation of the Theory of Consumption Values (TCV). The framework proposes that digital consumption values represent multidimensional drivers of consumer perception in online fashion environments. Specifically, convenience value (ease of navigation and checkout), information value (product details, reviews, and size guides), social influence value (influencers and online communities), personalization value (customized recommendations and notifications), entertainment value (interactive and visually engaging content), monetary value (discounts and pricing transparency), privacy and security value (safe payments and data protection), and aesthetic/visual appeal (website design and product presentation) are conceptualized as independent variables. These digital consumption values are hypothesized to shape overall customer satisfaction by enhancing both functional utility and emotional engagement during the online shopping experience. Customer satisfaction is positioned as a mediating variable that strengthens the relationship between perceived digital value and brand loyalty. Brand loyalty, the dependent variable in the model, reflects consumers' intention to repurchase, maintain long-term relationships with brands, and recommend them to others within digital marketplaces.

In addition, demographic factors such as age, gender, income, and shopping frequency are incorporated as control variables to account for heterogeneity in consumer behaviour across segments. The framework, therefore, illustrates a structured pathway in which digital value perceptions influence satisfaction and subsequently translate into sustained brand loyalty, emphasizing the integrated and multidimensional nature of value creation in contemporary fashion e-commerce platforms.

**Table 2** Detailed Digital Consumption Values

Category	Features
Convenience Value	<ul style="list-style-type: none"> <li>● Easy navigation</li> <li>● Fast checkout</li> </ul>
Information Value	<ul style="list-style-type: none"> <li>● Product details</li> <li>● Reviews</li> <li>● Size guides</li> </ul>
Social Influence Value	<ul style="list-style-type: none"> <li>● Influencers</li> <li>● Online communities</li> </ul>
Personalization Value	<ul style="list-style-type: none"> <li>● Recommendations</li> <li>● Customised feed</li> </ul>
Entertainment Value	<ul style="list-style-type: none"> <li>● Reels</li> <li>● Interactive pages</li> </ul>
Monetary Value	<ul style="list-style-type: none"> <li>● Discounts</li> <li>● Pricing transparency</li> </ul>
Privacy & Security Value	<ul style="list-style-type: none"> <li>● Safe payments</li> <li>● Data security</li> </ul>
Aesthetic/Visual Appeal	<ul style="list-style-type: none"> <li>● Website design</li> <li>● Product visuals</li> </ul>

→ Customer Satisfaction (Mediator) → Brand Loyalty



**Figure 2** Impact of Specific Values on Satisfaction and Loyalty

Figure 2 illustrates the impact of specific digital consumption values on customer satisfaction and brand loyalty within online fashion platforms. The figure highlights how individual value dimensions contribute differently to overall consumer experience. Functional values such as ease of product search and checkout efficiency enhance platform usability and directly support loyalty formation. Emotional and aesthetic elements, including visually appealing design and creative product displays, strengthen customer satisfaction, which in turn reinforces brand loyalty intentions.

Personalization features such as tailored notifications and recommendations further increase engagement by making the shopping experience more relevant to consumers. In contrast, certain social and informational cues, such as influencer content or detailed product descriptions, show comparatively weaker direct effects on loyalty, indicating that their influence may operate indirectly through satisfaction or overall experience. Overall, it demonstrates that digital value dimensions do not function independently but interact to shape satisfaction and long-term loyalty outcomes in the fashion e-commerce environment.

**4.1. Data analysis & interpretation**

The data analysis for this study examines the relationships between digital consumption values and brand loyalty in the fashion and apparel industry. Using SPSS, reliability testing, correlation analysis, and multiple linear regression were conducted to assess the model's validity and the significance of predictors.

The analysis is based on 214 valid responses from Indian consumers, with brand loyalty as the dependent variable and digital consumption values as independent variables. Key findings indicate that digital values explain a substantial portion of the variance in loyalty, with the functional and emotional dimensions showing the strongest influences.

**4.2. Reliability Analysis**

The scale's internal consistency was evaluated using Cronbach's alpha for the 13 items measuring digital consumption values.

**Table 3** Reliability Statistics (Cronbach's Alpha)

Cronbach's Alpha	N of Items
0.904	13

This high alpha value (>0.9) confirms excellent reliability, indicating the items consistently measure the underlying constructs.

**4.3. Correlation Analysis**

Pearson correlations were computed to explore interrelationships among variables. Most correlations were positive and moderate (r ranging from 0.201 to 0.596, p<0.01), suggesting interconnectedness among digital values. For example, overall satisfaction correlated strongly with visual appeal (r=0.545) and platform creativity (r=0.630), highlighting emotional linkages. Brand loyalty showed significant correlations with ease of navigation (r=0.401), checkout efficiency (r=0.492), and product location (r=0.472), underscoring functional drivers.

**Table 4** Pearson Correlation Results

Variable Pair	Pearson Correlation	Sig. (2-tailed)
Brand Loyalty & Easy to Locate Products	0.472	<0.001
Brand Loyalty & Overall Satisfaction	0.596	<0.001
Brand Loyalty & High-Quality Design	0.434	<0.001
Overall Satisfaction & Visual Polish	0.545	<0.001

**4.4. Model Summary**

The regression model assesses the collective impact of digital values on brand loyalty.

**Table 5** Model Summary of Regression Analysis

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.787	0.620	0.591	0.57139

The adjusted  $R^2$  of 0.591 indicates that approximately 59% of the variance in brand loyalty is explained by the predictors, after accounting for the number of variables. This suggests a strong model fit for predicting loyalty based on digital consumption experiences.

**ANOVA**

The ANOVA test evaluates the overall significance of the regression model.

**Table 6 ANOVA Results**

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	105.380	15	7.025	21.518	<0.001
Residual	64.644	198	0.326		
Total	170.023	213			

The model is highly significant ( $F=21.518, p<0.001$ ), confirming that digital consumption values collectively predict brand loyalty better than chance.

**4.5. Regression Analysis**

Multiple linear regression identified individual predictors' contributions. Coefficients, standard errors, standardized betas, t-values, and p-values were obtained. Significance was set at  $p<0.05$ .

**Table 7 Multiple Regression Coefficients**

Predictor	Unstandardized B	Std. Error	Standardized Beta	t	Sig.
(Constant)	0.041	0.233		0.176	0.861
Easy to Locate Specific Products	0.173	0.050	0.178	3.500	<0.001
Overall Satisfaction with Online Shopping	0.163	0.055	0.187	2.986	0.003
High-Quality Website Design & Images	0.143	0.057	0.164	2.494	0.013
Creatively & Visually Polished Displays	0.129	0.048	0.133	2.711	0.007
Personalized Notifications & Alerts	0.097	0.047	0.122	2.071	0.040
Fast & Hassle-Free Checkout Process	0.096	0.048	0.114	1.995	0.047
Product Descriptions ( non-significant)	-0.048	0.046	-0.059	-1.054	0.293
Influencers & Social Media Content	0.009	0.054	0.011	0.176	0.860

Six predictors were significant: functional aspects (product location, checkout) and emotional/trust elements (satisfaction, design, visuals, notifications). These suggest that usability and experiential quality drive loyalty. Non-significant factors (e.g., influencers, discounts) may have indirect effects via correlations or mediation (e.g., through satisfaction).

**4.6. Interpretation**

The results affirm that digital consumption values significantly influence brand loyalty, aligning with TCV by emphasizing functional ( $\beta=0.178$  for location,  $\beta=0.114$  for checkout) and emotional values ( $\beta=0.187$  for satisfaction,  $\beta=0.133$  for visuals) as key drivers. The model's explanatory power (59% adjusted variance) highlights the importance of seamless, engaging platforms in fostering repeat purchases and recommendations. In the Indian context, where Gen Z prioritizes convenience and personalization, brands should optimize these elements to enhance loyalty. Limitations include potential common method bias; future studies could incorporate mediation analysis for satisfaction. Overall, the findings provide actionable insights for e-commerce strategies in fashion.

## 5. Results

The empirical analysis, based on 214 valid responses from Indian fashion consumers, validates the multidimensional impact of digital consumption values on brand loyalty, as framed by the Theory of Consumption Values (TCV). Reliability testing confirmed the robustness of the measurement scale, while regression modelling revealed strong predictive power.

- Reliability: Cronbach's alpha of 0.904 for the 13-item scale indicates excellent internal consistency, ensuring reliable assessment of values like convenience, information, and aesthetic appeal.
- Model Fit: The regression model explains 62% of variance in brand loyalty ( $R=0.787$ ,  $R^2=0.620$ , Adjusted  $R^2=0.591$ ), demonstrating substantial explanatory strength.
- Overall Significance: ANOVA results affirm the model's validity ( $F=21.518$ ,  $df=15/198$ ,  $p<0.001$ ), rejecting the null hypothesis of no relationship.

Key Predictors: Six variables emerged as significant ( $p<0.05$ ), primarily functional and emotional:

- Ease of locating products ( $\beta=0.178$ ,  $p<0.001$ ): Strongest driver, emphasizing convenience value.
- Overall satisfaction ( $\beta=0.187$ ,  $p=0.003$ ): Highlights emotional fulfilment as a mediator.
- High-quality website design ( $\beta=0.164$ ,  $p=0.013$ ): Supports aesthetic/visual appeal.
- Visually polished displays ( $\beta=0.133$ ,  $p=0.007$ ): Reinforces entertainment and epistemic novelty.
- Personalized notifications ( $\beta=0.122$ ,  $p=0.040$ ): Underscores personalization value.
- Hassle-free checkout ( $\beta=0.114$ ,  $p=0.047$ ): Bolsters monetary and privacy/security aspects.

Non-Significant Factors: Social influence (e.g., influencers,  $\beta=0.011$ ,  $p=0.860$ ) and information value (e.g., product descriptions,  $\beta=-0.059$ ,  $p=0.293$ ) showed no direct effects, suggesting indirect roles via correlations (e.g.,  $r=0.545$  between satisfaction and visuals).

Correlations: Moderate to strong positive links ( $r=0.201-0.596$ ,  $p<0.01$ ) indicate value interconnectedness, with loyalty strongly tied to satisfaction ( $r=0.596$ ) and navigation ( $r=0.401$ ).

These findings align with the conceptual framework, where digital values (independent variables) influence loyalty via customer satisfaction as a mediator, controlled for demographics like age and income.

## 6. Discussion

The results sharply illustrate that functional and emotional digital consumption values dominate in driving brand loyalty in fashion e-commerce, explaining 59% of adjusted variance. This supports TCV by showing consumers prioritize utility (e.g., seamless navigation) and affective experiences (e.g., visual immersion) over social or economic cues, particularly in India's value-conscious market. Functional drivers like product location and checkout efficiency ( $\beta=0.178$  and  $0.114$ ) echo studies on AR-enhanced usability, boosting loyalty by reducing decision friction. Emotional elements, such as satisfaction and aesthetics ( $\beta=0.187$  and  $0.164$ ), align with research on digital brand immersion fostering authenticity and attachment in luxury fashion.

Non-significant social influence contrasts with some literature on Instagram's role in loyalty via digital marketing, but suggests indirect effects in Gen Z contexts, where UGC reliance (64% per studies) mediates via satisfaction rather than direct impact. This implies influencers may enhance engagement but not loyalty without integrated values like personalization ( $\beta=0.122$ ), which fosters epistemic novelty. Economic factors like discounts (non-significant,  $p=0.132$ ) indicate price sensitivity is secondary to experiential quality, supporting shifts toward sustainable virtual fashion reducing overconsumption.

Implications are clear: Fashion brands should prioritize intuitive platforms and AR visuals to build loyalty, potentially cutting environmental impact by 97% through digital alternatives. In India, targeting millennials with personalized alerts could counter economic volatility. Limitations include self-reported bias and cross-sectional design; future work should test mediation longitudinally or cross-culturally.

Overall, these findings advance TCV in digital contexts, urging brands to integrate values for competitive edge in a \$1.7 trillion market.

## 7. Conclusion

This study advances the understanding of digital consumption values and their pivotal role in cultivating brand loyalty within the fashion and apparel industry, extending the Theory of Consumption Values (TCV) to contemporary digital ecosystems. By integrating functional, emotional, social, epistemic, economic, and trust-related dimensions, the research underscores how these values collectively shape consumer perceptions and long-term brand relationships in an increasingly virtual marketplace. Theoretically, the findings reinforce TCV's multidimensional framework, highlighting the primacy of functional utility—such as seamless navigation and efficient processes—and emotional gratification through immersive experiences, while social and economic elements often operate indirectly via mediators like customer satisfaction. This holistic perspective bridges gaps in prior literature, which frequently isolates digital factors, offering a cohesive model that captures the interplay of values in driving loyalty amid technological disruptions like augmented reality and AI personalization.

From a practical standpoint, fashion brands must prioritize user-centric digital strategies to enhance loyalty. Emphasizing intuitive interfaces, high-quality visuals, and tailored interactions can foster deeper emotional connections, encouraging repeat engagements and advocacy. In emerging markets, where consumers value affordability and self-expression, integrating sustainability-focused features—such as virtual try-ons—can align with ethical consumption trends, promoting circular economies and reducing environmental footprints. Industry stakeholders, including e-commerce platforms and marketers, should leverage these insights to refine omnichannel approaches, ensuring competitive differentiation in a saturated digital landscape.

Despite these contributions, the research acknowledges inherent limitations. The cross-sectional nature restricts causal inferences, potentially overlooking temporal dynamics in consumer behavior. Self-reported measures may introduce response biases, and the focus on a specific demographic in an emerging context limits broader generalizability. Future investigations could adopt longitudinal designs to trace value-loyalty evolution, incorporate structural equation modeling to test mediation effects explicitly, or conduct comparative analyses across global regions to validate cultural variations. Exploring nascent technologies, such as metaverse integrations, would further enrich TCV applications.

In essence, this research illuminates the transformative potential of digital consumption values in sustaining brand loyalty, urging a paradigm shift toward value-driven digital innovations in fashion. By doing so, it paves the way for resilient, consumer-aligned strategies in an era of rapid digital evolution.

### *Limitations of the Study*

- Cross-sectional research design: The study is based on data collected at a single point in time, which limits the ability to establish causal relationships between digital consumption values and brand loyalty. Changes in consumer behavior over time could not be captured.
- Reliance on self-reported data: Responses were collected through a structured questionnaire, which may be subject to common method bias, social desirability bias, and perceptual inaccuracies, potentially affecting the objectivity of the findings.
- Sample size and geographic scope: Although the sample size of 214 respondents is statistically adequate, the study is confined to Indian digital fashion consumers. This restricts the generalizability of the results to other countries or cultural contexts.
- Limited demographic segmentation: While basic demographic variables such as age and gender were included as controls, deeper segmentation (e.g., income levels, urban–rural divide, brand category preferences) was not explored in detail.
- Use of regression analysis only: The study employed multiple linear regression to test relationships. Advanced techniques such as Structural Equation Modeling (SEM) were not used, limiting deeper examination of mediation and indirect effects.
- Exclusion of emerging digital formats: Although the study discusses AI, AR, and personalization conceptually, it does not empirically test newer formats such as live commerce, metaverse fashion, or agentic AI shopping assistants.

### *Future Scope*

- Longitudinal research designs: Future studies can adopt longitudinal approaches to track how digital consumption values and brand loyalty evolve over time, enabling stronger causal inferences.

- Cross-cultural and comparative studies: Replicating the model across developed and emerging markets would help assess cultural variations in digital value perceptions and validate the applicability of the Theory of Consumption Values globally.
- Advanced analytical techniques: Researchers can employ Structural Equation Modeling (SEM) to simultaneously test multiple relationships, mediators (e.g., satisfaction, engagement), and moderators (e.g., age, income, digital literacy).
- Integration of emerging technologies: Future research can empirically examine the role of metaverse environments, AI-driven virtual assistants, live streaming commerce, and blockchain-based traceability in shaping digital consumption values.
- Deeper exploration of sustainability and ESG values: Given the growing importance of ethical and sustainable fashion, future studies can integrate ESG communication, digital transparency, and circular fashion models into the value-loyalty framework.
- Behavioural and experimental approaches: Experimental or mixed-method designs could complement survey findings by observing actual consumer behaviour, reducing self-reporting bias and enhancing practical relevance.

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## Compliance with ethical standards

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### *Disclosure of conflict of interest*

The authors declare that there is no conflict of interest.

### *Ethical approval*

Ethical approval was obtained before data collection in accordance with institutional research guidelines.

### *Informed consent*

Informed consent was obtained from all individual participants included in the study.

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