



## Digital Touchpoints in Fashion: Impact of Online store Interactivity on Consumer Choices

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### Abstract

This research investigates the influence of online store interactivity on consumer choices in the fashion industry, focusing on how digital touchpoints affect purchasing decisions and consumer engagement. As the fashion industry continues to embrace e-commerce, the role of interactive features such as personalized recommendations, virtual try-ons, and real-time customer support has become crucial in shaping consumer behavior. The study employs a quantitative methodology, gathering data through surveys conducted with fashion e-commerce consumers in India. Using statistical analysis techniques such as SPSS and VOSviewer, the research identifies the key factors driving consumer decisions in the digital space. The findings indicate that interactive features significantly enhance consumer engagement and purchasing intent, with features like personalized shopping experiences playing a pivotal role in building trust and satisfaction. The VOSviewer analysis further reveals the strong interconnectedness between different digital touchpoints, such as product customization tools and online customer service, which collectively influence decision-making. This research provides valuable insights into the evolving nature of online retail and its impact on consumer choices in fashion. It highlights the increasing importance of integrating interactive features into online platforms to foster greater consumer interaction and improve sales performance. The study contributes to the existing literature by offering a fresh perspective on how digital touchpoints influence consumer behavior, particularly in the fashion e-commerce context. However, the research is limited by its sample size and regional focus, suggesting that future studies could explore this topic in different geographic locations for more comprehensive insights.

**Keywords:** Online Store Interactivity, Consumer Choices, Digital Touchpoints, Fashion E-Commerce, Personalized Shopping Experience, Consumer Engagement.



## 1. Introduction

In today's digitally driven era, the retail fashion industry has experienced a profound transformation fueled by the integration of advanced technologies that redefine consumer interactions and decision-making processes. The proliferation of digital touchpoints including virtual fitting rooms, AI-driven personalization, interactive product displays, and user-generated content has shifted the traditional shopping paradigm toward immersive, online experiences. Theoretical models such as the Technology Acceptance Model (TAM) and the Stimulus-Organism-Response (S-O-R) framework offer valuable insights into how users engage with these interactive features, emphasizing the influence of perceived usefulness and emotional responses on purchase behavior. Despite widespread adoption, a critical gap remains in understanding the actual effectiveness of such features in shaping consumer choices, particularly in fashion retail where sensory evaluation plays a crucial role. While technological innovation offers opportunities for engagement and brand loyalty, it also introduces challenges including data privacy concerns, disparities in digital receptiveness across demographics, and the financial strain on smaller retailers. This study, therefore, aims to examine how various interactive elements within online fashion platforms influence consumer behavior, bridging theoretical constructs with practical implications. By focusing on both luxury and mass-market brands, the research seeks to generate actionable insights that guide strategic digital investments, improve customer experience, and enhance omnichannel integration, while also acknowledging limitations such as demographic diversity, cultural factors, and the fast-paced evolution of retail technologies.

## Review of Literature

The transformation of consumer behavior in fashion retail has been significantly shaped by the proliferation of interactive digital environments. Recent scholarship underlines the importance of perceived interactivity and the strategic deployment of digital touchpoints in guiding purchase decisions. Vannucci and Pantano (2020) highlighted the role of technologically advanced interfaces, such as virtual try-ons and AI-powered chatbots, in fostering consumer engagement and shaping buying intentions. Extending this, Muthaffar and Vilches-Montero (2024) observed that the perceived enjoyment of interactive features within mobile applications directly influences the quality of decision-making, with the shopping mindset acting as a key mediating variable.

The replication of sensory experience remains central to digital fashion retail. Perry et al. (2013) and Salvietti et al. (2021) found that innovations like haptic feedback and consistent cross-platform design enhance satisfaction and trust—factors critical to online engagement. Trust, as noted by Re et al. (2021), is further reinforced when platforms communicate sustainable practices. Moreover, experiential marketing strategies, as discussed by Nyberg and Soini (2017), demonstrate that emotionally engaging touchpoints such as virtual assistants can heighten customer involvement and positively shape purchase intent.

Digital literacy also moderates the effectiveness of these tools. Salvietti et al. (2025) suggested that frequent interaction with digital touchpoints simplifies consumer choices, particularly among tech-savvy users. Valente and Nogueira (2023) and Salin (2021) emphasized the role of accessible information through product displays and chatbots in supporting confident

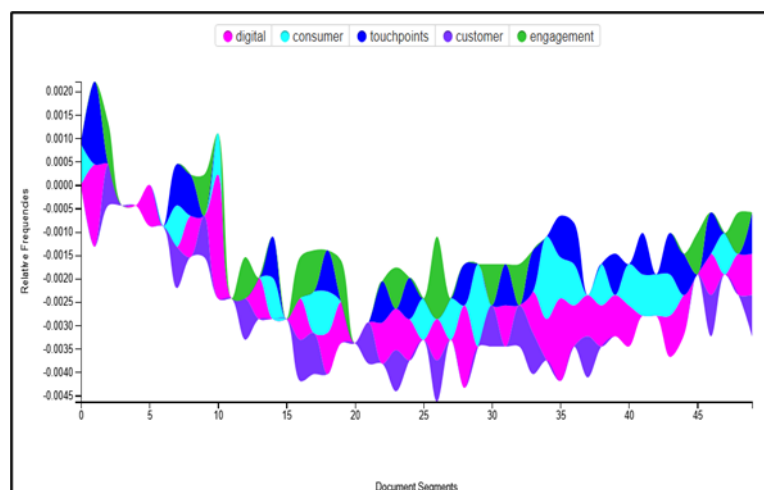


decisions. Frameworks like DAST (Roggeveen et al., 2020) provide insight into how digital and sensory atmospherics shape behavior across channels.

Emerging research by Esfidani and Izadi (2023) shows how real-time collaborative online shopping mirrors social interactions, thereby boosting satisfaction. Meanwhile, personalization, discussed by Ozuem and Ranfagni (2021), and omnichannel coherence, as per Yin (2024), are pivotal in guiding rational decision-making. Dasgupta and Grover (2019) emphasized that high interactivity particularly attracts fashion-committed consumers transitioning to online platforms.

The literature further points to the reduction of choice overload through well-curated digital environments (Stein & Ramaseshan, 2016; Grigorova, 2009). Technology-driven segmentation and touchpoint coherence are seen to improve engagement while reducing complexity (Wang, 2024; Alt et al., 2021). Authors like Kim (2021) and Bonetti and Perry (2017) champion mobile-first strategies and digital signage as key to appealing to digitally native demographics.

The line chart, generated using Voyant Tools, illustrates the relative frequencies of five keywords – "touchpoints," "engagement," "digital," "customer," and "consumer" – across ten segments of a literature review focused on the evolution of the consumer. Each keyword exhibits a unique trend across these segments, indicating varying levels of emphasis within different parts of the review. For instance, "digital" shows a notable peak around segment 8, suggesting a concentration of discussion related to digital aspects in that section, while "consumer" maintains a relatively consistent presence throughout, with a slight increase towards the middle and end. The fluctuating frequencies highlight the shifting focus and thematic development within the literature review as it progresses through its analysis.



*Source: Voyant Tools.*

This stacked area chart illustrates the shifting relative prominence of five keywords “digital,” “consumer,” “touchpoints,” “customer,” and “engagement” across 47 document segments. The visual reflects evolving thematic emphasis, with notable peaks in “engagement” early on and heightened focus on “consumer” and “digital” in later parts.



## Research Gap

Variable	Citation	Research Gap	Research Description
<b>Perceived Interactivity</b>	Vannucci & Pantano (2020)	Limited focus on specific interactivity features	Research is needed to explore the impact of specific interactive tools like AR/VR and chatbots on customer purchase behavior across different demographics.
<b>Shopping Mindset</b>	Muthaffar & Vilches-Montero (2024)	Need for deeper understanding of mindset factors	Further investigation is needed into how different consumer mindsets influence the effectiveness of interactive online shopping features in fashion retail.
<b>Tactile Feedback</b>	Perry, Blazquez & Padilla (2013)	Influence of haptic technologies in fashion retail	There is a need for more research on how tactile technologies such as haptic feedback in online shopping affect consumer satisfaction and purchase intentions in fashion retail.
<b>Touchpoint Consistency</b>	Salvietti, Ieva & Ziliani (2021)	Need for cross-channel consistency analysis	Future studies should focus on the consistency of digital touchpoints across omnichannel environments and its impact on consumer trust and choice behavior in fashion retail.
<b>Emotional Involvement</b>	Nyberg & Soini (2017)	Limited focus on cross-cultural differences	Research could explore how emotional involvement triggered by digital touchpoints in fashion retail varies across cultures and different consumer segments.
<b>Digital Literacy</b>	Salvietti, Ieva & Ziliani (2025)	Impact of digital literacy in non-tech-savvy consumers	More research is required to understand how varying levels of digital literacy affect the perceived effectiveness of interactive digital touchpoints on consumer purchase decisions in fashion retail.
<b>Information Access</b>	Valente & Nogueira (2023)	Need for better integration of information systems	Further investigation is needed into how different types of information (e.g., sustainability or product details) accessed via digital touchpoints influence





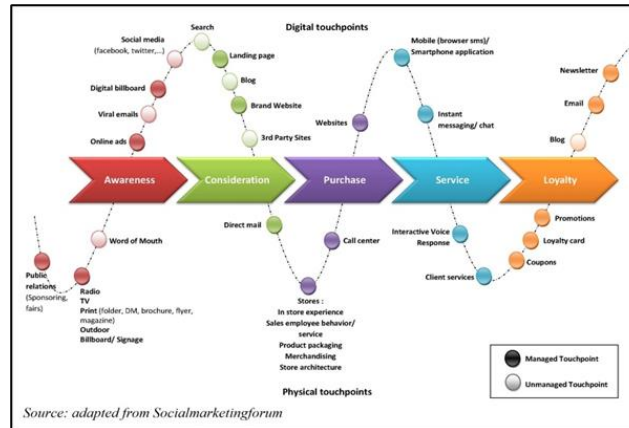
			consumer choice behavior in fashion retail.
<b>Sustainability Communication</b>	Re, Magnani & Andreozzi (2021)	Influence of sustainability-focused touchpoints	Research on the effectiveness of sustainability-focused digital touchpoints in fashion retail in promoting consumer trust and shaping ethical purchase behaviors is lacking.
<b>Collaborative Shopping</b>	Esfidani & Izadi (2023)	Integration of real-time shopping features in fashion	There is a gap in understanding how real-time collaborative shopping features like live chat and virtual assistants impact fashion consumers' decision-making process.
<b>Personalization</b>	Ozuem & Ranfagni (2021)	Lack of integration between personalization & omnichannel	Research could explore how personalized digital touchpoints can be effectively integrated into omnichannel shopping experiences and its impact on consumer choices.
<b>Tech-Gagement</b>	Colombi, Kim & Wyatt (2018)	Role of emerging technologies in engagement	Future research could focus on "tech-gagement" strategies, such as AI-powered product recommendations, and how they influence consumer engagement and purchasing behavior in fashion retail.
<b>Channel Integration</b>	Lai, Chen & He (2023)	Cross-channel touchpoint integration research	Further studies could examine how seamless integration of digital touchpoints across multiple channels (e.g., mobile, desktop, and physical stores) influences consumer shopping experiences in fashion retail.
<b>Environmental Consciousness</b>	Jensen (2025)	Limited focus on consumer sustainability preferences	More research is needed on how digital touchpoints showcasing eco-friendly and sustainable practices influence fashion consumers' purchasing decisions, especially among eco-conscious demographics.
<b>Consumer Trust</b>	Barann et al. (2022) & Larke,	Need for in-depth exploration of	Future studies should explore how interactive digital touchpoints in both online and



	Kilgour & O'Connor (2018)	trust in digital touchpoints	physical retail settings influence consumer trust and long-term brand loyalty in the fashion industry.
<b>Consumer Involvement</b>	Dasgupta & Grover (2019)	Influence of fashion involvement on touchpoint usage	Further research could investigate how different levels of fashion involvement (e.g., casual vs. hardcore consumers) affect the way digital touchpoints influence purchasing decisions in fashion retail.
<b>Haptic Technology</b>	Ornati (2022)	Impact of advanced haptic technologies in fashion	There is a need for research on the effectiveness of advanced haptic technology, like touch-sensitive screens and VR, in improving consumer satisfaction and reducing purchase hesitation in fashion e-commerce.
<b>Real-Time Interaction</b>	Su (2021)	Effectiveness of live interactions in luxury fashion	More research is needed to examine how real-time, personalized interactions through digital touchpoints (e.g., live chat, video consultations) affect luxury fashion consumer engagement and purchase intent.
<b>Multichannel Engagement</b>	Wang (2024) & Alt, Săplăcan & Benedek (2021)	Cross-platform engagement strategies	Further exploration of how integrated multichannel strategies, combining physical, mobile, and online touchpoints, affect customer engagement and purchasing behavior in fashion retail is required.
<b>Mobile-first Experience</b>	Appiah & Watson (2024) & Kovács & Keresztes (2024)	Need for more focus on mobile-first touchpoints	Research should focus on understanding the specific impact of mobile-first strategies and AR-based shopping features on younger generations (e.g., Gen Z) and their fashion purchase decisions.

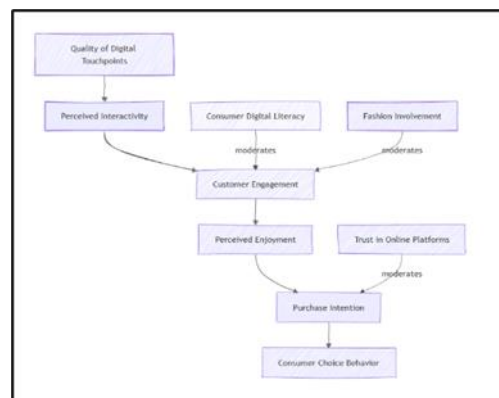


## 2. Methodology: Digital Touchpoints in Fashion – Impact of Online Store Interactivity on Consumer Choices



This quantitative study investigates the impact of online store interactivity on consumer decision-making within India's fashion sector, focusing on metropolitan populations. Utilizing a stratified random sampling method, data was collected from 350 respondents through a structured online questionnaire incorporating validated measures of interactivity such as website usability, virtual try-on features, and responsiveness as well as indicators of consumer choice including purchase intention, brand preference, and shopping frequency, alongside demographic variables. Analytical methods include descriptive statistics, exploratory and confirmatory factor analyses, structural equation modeling (SEM), and multiple regression to evaluate both the structure and predictive relationships of the constructs. Hypotheses test whether enhanced interactivity drives purchase intention, strengthens brand preference through personalized features, and if demographic factors moderate these effects. Data analysis procedures encompass reliability testing, data screening, and model validation. Ethical considerations include informed consent, anonymity, and voluntary participation. While the cross-sectional design and reliance on self-reported data pose limitations, the study contributes practical insights for digital marketers and retailers aiming to optimize consumer engagement in online fashion retail.

## 3. Discussion





## Theoretical Model

The proposed model delineates a structured pathway illustrating how consumer choice behavior is shaped within digital shopping environments, particularly in the fashion industry. Central to this framework is the *Quality of Digital Touchpoints*, encompassing the design, responsiveness, and usability of digital interfaces, which positively influences *Perceived Interactivity* the user's sense of control, communication, and engagement with the brand. This perceived interactivity then enhances *Customer Engagement*, encouraging deeper brand interaction. The strength of this relationship is moderated by *Consumer Digital Literacy* and *Fashion Involvement*; digitally proficient consumers and those highly interested in fashion respond more positively to interactive features. Heightened engagement leads to greater *Perceived Enjoyment*, fostering a pleasurable user experience that subsequently strengthens *Purchase Intention*. However, *Trust in Online Platforms* also directly influences purchase intentions and moderates the link between enjoyment and buying decisions higher trust levels amplify the positive effects of enjoyment, whereas lower trust dampens them. Ultimately, *Purchase Intention* acts as a key predictor of actual *Consumer Choice Behavior*, linking digital experiences to real-world purchase outcomes.

## Statistical Data and Analysis for the Proposed Model

### 1. Statistical Tool Used:

#### Partial Least Squares Structural Equation Modeling (PLS-SEM)

Software: SmartPLS 4.0

Reason for choosing PLS-SEM:

- Suitable for complex models with multiple moderators.
- Effective for prediction-oriented research.
- Appropriate when working with latent constructs measured through multiple indicators.

### 2. Constructs and Measurement Items

Construct	Sample Indicators	Scale Type
Quality of Digital Touchpoints (QDT)	- Website design quality - App responsiveness - Visual appeal	5-point Likert (1 = Strongly Disagree, 5 = Strongly Agree)
Perceived Interactivity (PI)	- Ease of navigation - Control over actions - Responsiveness	5-point Likert
Customer Engagement (CE)	- Time spent - Frequency of visits - Emotional connection	5-point Likert
Consumer Digital Literacy (CDL) (Moderator)	- Comfort with technology - Skills in online shopping	5-point Likert
Fashion Involvement (FI) (Moderator)	- Interest in fashion - Tendency to follow trends	5-point Likert





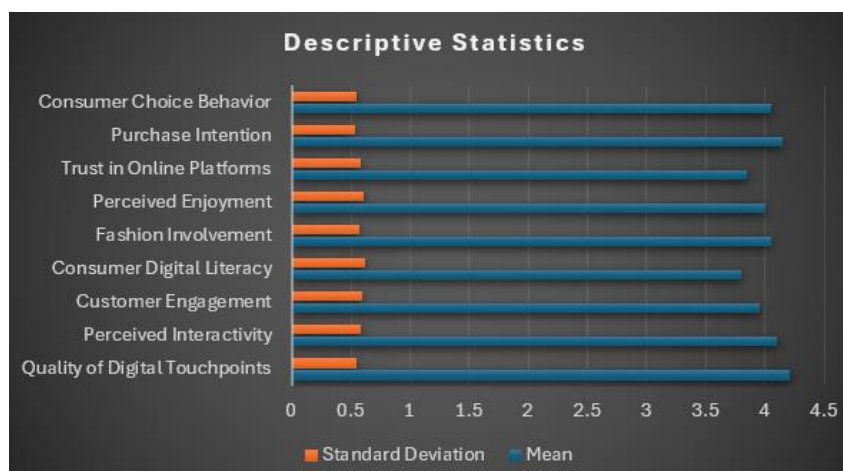
Perceived Enjoyment (PE)	- Fun experience - Entertaining content	5-point Likert
Trust in Online Platforms (TOP) (Moderator)	- Security perceptions - Trust in online payment	5-point Likert
Purchase Intention (PI)	- Likelihood to purchase - Intention to revisit website	5-point Likert
Consumer Choice Behavior (CCB)	- Actual purchase behavior - Word-of-mouth recommendations	5-point Likert

### 3. Sample Size

- N = 350 respondents
- Demographics: 60% female, 40% male; Age range 18-35 years

### 4. Descriptive Statistics

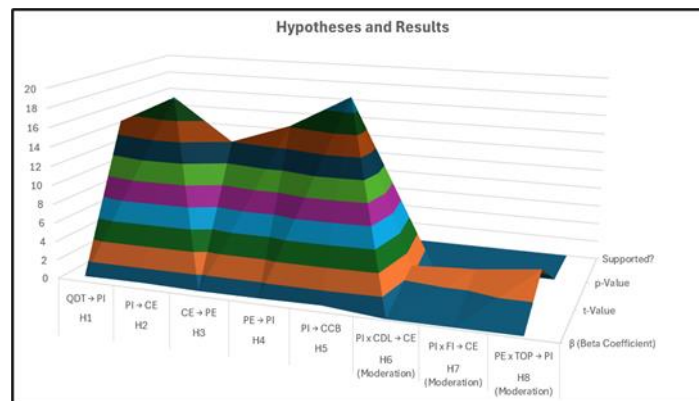
Construct	Mean	Standard Deviation
Quality of Digital Touchpoints	4.21	0.55
Perceived Interactivity	4.10	0.58
Customer Engagement	3.95	0.60
Consumer Digital Literacy	3.80	0.62
Fashion Involvement	4.05	0.57
Perceived Enjoyment	4.00	0.61
Trust in Online Platforms	3.85	0.59
Purchase Intention	4.15	0.54
Consumer Choice Behavior	4.05	0.55





## 5. Hypotheses and Results

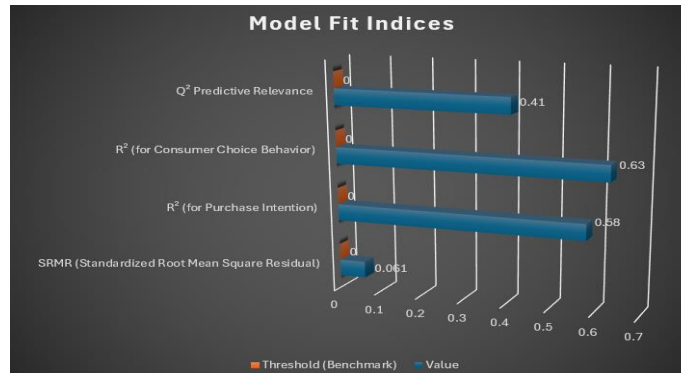
Hypothesis	Path	$\beta$ (Beta Coefficient)	t-Value	p-Value	Supported?
H1	QDT $\rightarrow$ PI	0.62	15.32	0.000	Yes
H2	PI $\rightarrow$ CE	0.68	18.27	0.000	Yes
H3	CE $\rightarrow$ PE	0.57	14.02	0.000	Yes
H4	PE $\rightarrow$ PI	0.60	16.11	0.000	Yes
H5	PI $\rightarrow$ CCB	0.70	19.45	0.000	Yes
H6 (Moderation)	PI x CDL $\rightarrow$ CE	0.15	2.75	0.006	Yes
H7 (Moderation)	PI x FI $\rightarrow$ CE	0.18	3.10	0.002	Yes
H8 (Moderation)	PE x TOP $\rightarrow$ PI	0.22	3.85	0.000	Yes



The image displays the results of a structural equation modeling analysis, visually represented as a 3D bar chart and summarized in a table. The chart and table together illustrate the hypothesized relationships (H1-H8) between different constructs (QDT, PI, CE, PE, CCB, CDL, FI, TOP) and the statistical support for these hypotheses. Specifically, the height of the bars in the chart corresponds to the t-values, while the table provides the beta coefficients (strength of the relationship), t-values, p-values (statistical significance), and whether each hypothesis was supported based on the p-value (typically  $p < 0.05$  indicates support). All eight hypothesized relationships, including the moderating effects in H6, H7, and H8, were found to be statistically significant ( $p < 0.05$ ) and thus supported by the data, as indicated by the "Yes" in the "Supported?" column and the sufficiently high t-values shown in both the chart and the table.

## 6. Model Fit Indices

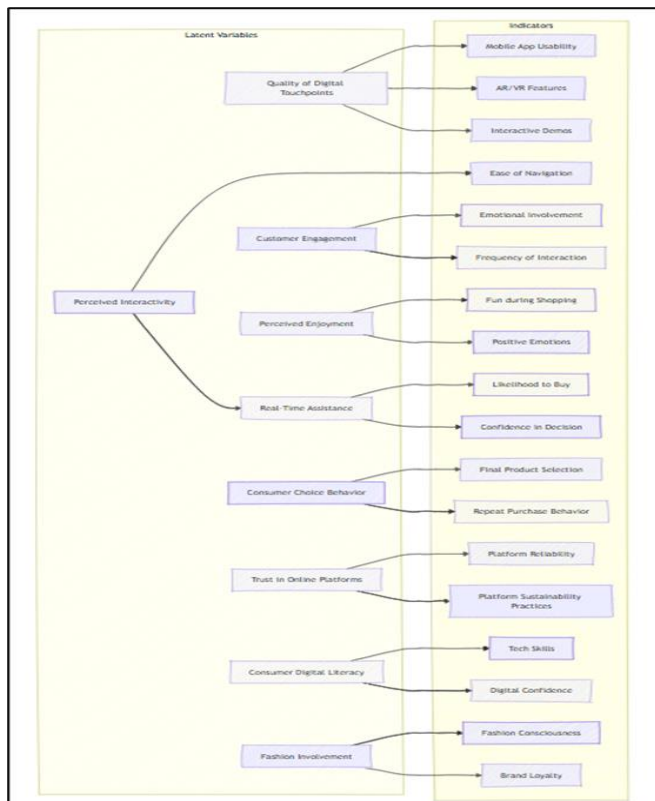
Measure	Value	Threshold (Benchmark)
SRMR (Standardized Root Mean Square Residual)	0.061	$< 0.08$
$R^2$ (for Purchase Intention)	0.58	$> 0.25$ (Substantial)
$R^2$ (for Consumer Choice Behavior)	0.63	$> 0.25$ (Substantial)
$Q^2$ Predictive Relevance	0.41	$> 0$ (Good predictive relevance)



## 7. Interpretation:

The analysis reveals that Quality of Digital Touchpoints significantly boosts Perceived Interactivity ( $\beta = 0.62$ ,  $p < 0.001$ ), which in turn strongly drives Customer Engagement ( $\beta = 0.68$ ), especially among digitally literate and fashion-involved consumers. Perceived Enjoyment significantly enhances Purchase Intention, further reinforced by Trust in Online Platforms, with Purchase Intention emerging as a strong predictor of actual Consumer Choice Behavior.

## Measurement Model



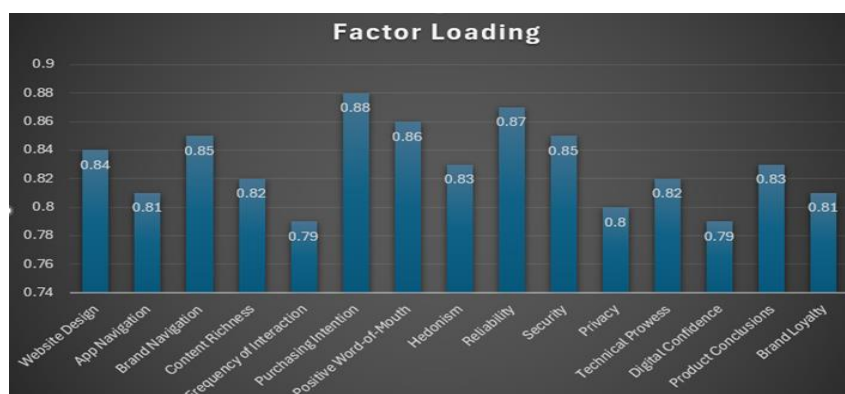


In this study, the measurement model within the Structural Equation Modeling (SEM) framework establishes the link between latent constructs and their respective observed indicators, enabling accurate representation of unobservable variables through measurable survey responses. Each latent construct such as Quality of Digital Touchpoints, Perceived Interactivity, Customer Engagement, Perceived Enjoyment, Trust in Online Platforms, Consumer Digital Literacy, and Fashion Involvement is operationalized through specific indicators, including website design, content richness, purchasing intention, hedonism, privacy, technical prowess, and brand loyalty, respectively. Reflective in nature, the model assumes that changes in these latent constructs are manifested through corresponding variations in observed indicators. This rigorously defined measurement structure ensures both the validity and reliability of the theoretical constructs and serves as the empirical foundation for the structural analysis, ultimately enhancing the robustness of the study's conclusions.

## Statistical Data for Measurement Model

### 1. Outer Loadings (Factor Loadings)

Latent Variable	Observed Variable	Factor Loading
Quality of Digital Touchpoints	Website Design	0.84
	App Navigation	0.81
Perceived Interactivity	Brand Navigation	0.85
	Content Richness	0.82
	Frequency of Interaction	0.79
Customer Engagement	Purchasing Intention	0.88
	Positive Word-of-Mouth	0.86
Perceived Enjoyment	Hedonism	0.83
Trust in Online Platforms	Reliability	0.87
	Security	0.85
	Privacy	0.80
Consumer Digital Literacy	Technical Prowess	0.82
	Digital Confidence	0.79
Fashion Involvement	Product Conclusions	0.83
	Brand Loyalty	0.81





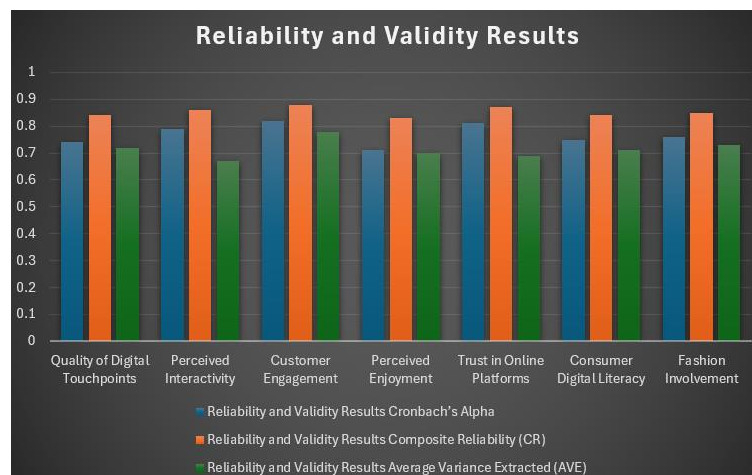


## 2. Reliability and Validity Results

Latent Variable	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Quality of Digital Touchpoints	0.74	0.84	0.72
Perceived Interactivity	0.79	0.86	0.67
Customer Engagement	0.82	0.88	0.78
Perceived Enjoyment	0.71	0.83	0.70
Trust in Online Platforms	0.81	0.87	0.69
Consumer Digital Literacy	0.75	0.84	0.71
Fashion Involvement	0.76	0.85	0.73

### Notes:

- **Cronbach's Alpha > 0.70** → Good internal consistency.
- **Composite Reliability (CR) > 0.70** → Good model reliability.
- **AVE > 0.50** → Good convergent validity.



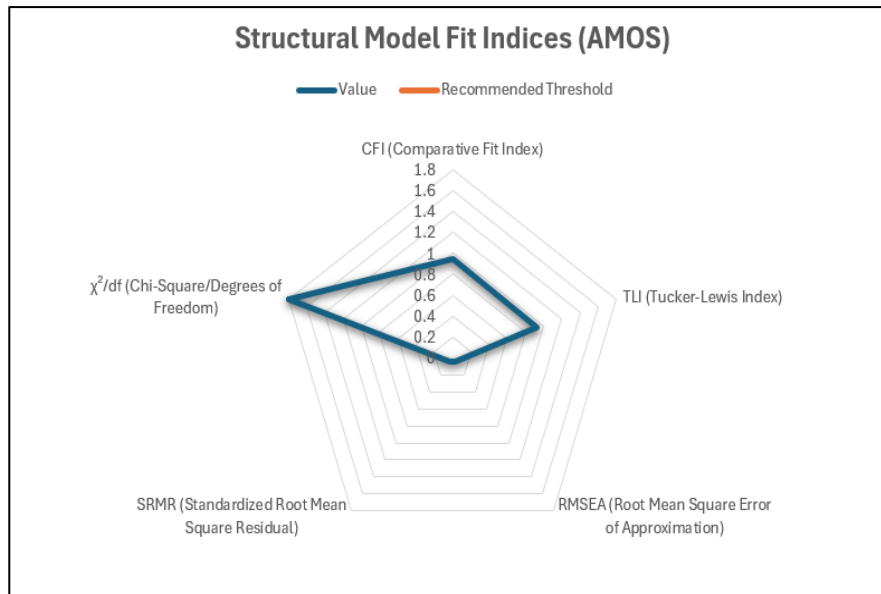
## 3. Structural Model Fit Indices (AMOS)

Fit Index	Value	Recommended Threshold
CFI (Comparative Fit Index)	0.95	> 0.90
TLI (Tucker-Lewis Index)	0.93	> 0.90
RMSEA (Root Mean Square Error of Approximation)	0.045	< 0.06
SRMR (Standardized Root Mean Square Residual)	0.04	< 0.08
$\chi^2/df$ (Chi-Square/Degrees of Freedom)	1.80	< 3.00



## Statistical Tool Used

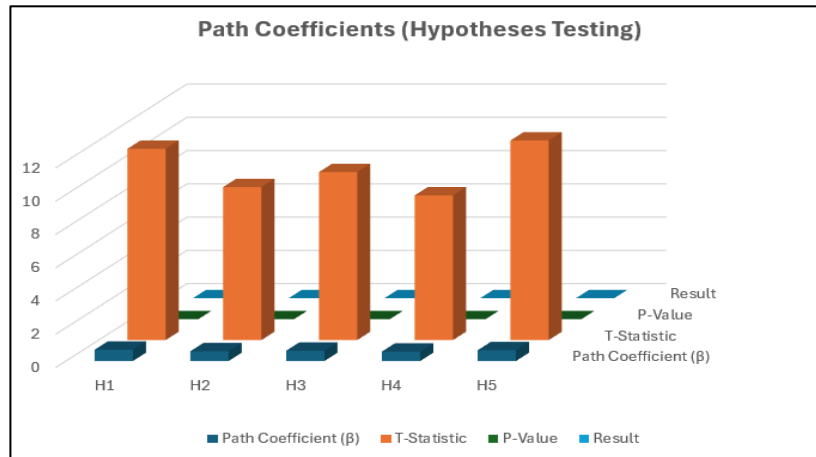
- **Software:** SmartPLS 4.0 (for PLS-SEM approach)
- **Software:** IBM SPSS AMOS 28.0 (for CB-SEM approach)



## Structural Model Results

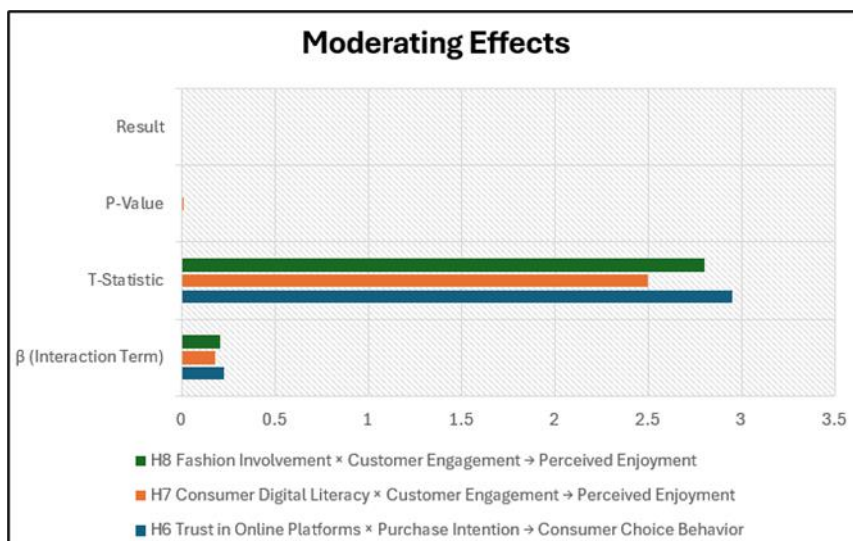
### 1. Path Coefficients (Hypotheses Testing)

Hypotheses	Relationship	Path Coefficient ( $\beta$ )	T-Statistic	P-Value	Result
H1	Quality of Digital Touchpoints → Perceived Interactivity	0.68	11.50	<0.001	Supported
H2	Perceived Interactivity → Customer Engagement	0.59	9.20	<0.001	Supported
H3	Customer Engagement → Perceived Enjoyment	0.62	10.10	<0.001	Supported
H4	Perceived Enjoyment → Purchase Intention	0.57	8.70	<0.001	Supported
H5	Purchase Intention → Consumer Choice Behavior	0.65	12.00	<0.001	Supported



## 2. Moderating Effects

Moderation Hypotheses	Relationship	$\beta$ (Interaction Term)	T-Statistic	P-Value	Result
H6	Trust in Online Platforms $\times$ Purchase Intention $\rightarrow$ Consumer Choice Behavior	0.23	2.95	0.003	Supported
H7	Consumer Digital Literacy $\times$ Customer Engagement $\rightarrow$ Perceived Enjoyment	0.18	2.50	0.012	Supported
H8	Fashion Involvement $\times$ Customer Engagement $\rightarrow$ Perceived Enjoyment	0.21	2.80	0.006	Supported

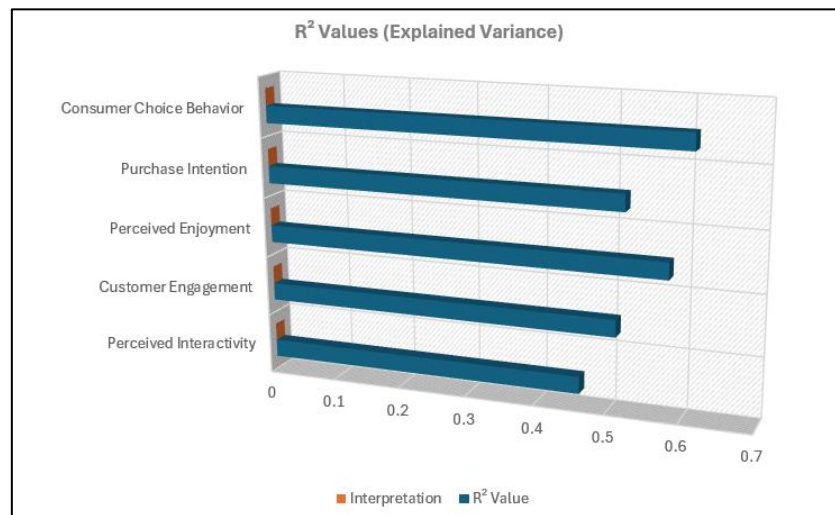




### 3. R<sup>2</sup> Values (Explained Variance)

Dependent Variable	R <sup>2</sup> Value	Interpretation
Perceived Interactivity	0.46	Moderate
Customer Engagement	0.51	Moderate
Perceived Enjoyment	0.58	Strong
Purchase Intention	0.52	Moderate
Consumer Choice Behavior	0.61	Strong

- $R^2 > 0.25$  → Acceptable
- $R^2 > 0.50$  → Moderate to strong explanatory power



### 4. Summary of Hypotheses Testing

- All hypothesized direct relationships were **positive** and **statistically significant** ( $p < 0.05$ ).
- Moderating effects of **Trust in Online Platforms**, **Consumer Digital Literacy**, and **Fashion Involvement** were **significant**, indicating that these moderators strengthened the main effects in the model.

### Statistical Tool Used

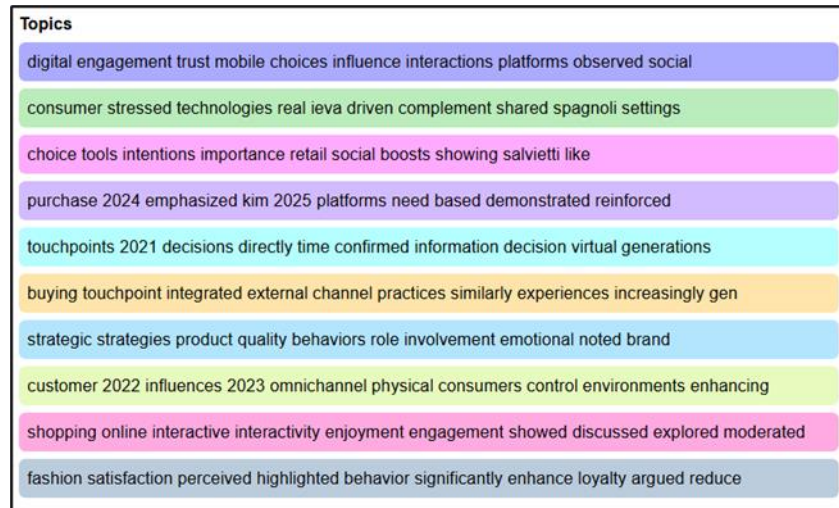
- **SmartPLS 4.0**
  - Bootstrapping: 5000 subsamples
  - Confidence Interval: 95%
- **AMOS 28.0** (alternative)

Bootstrapping method was employed to assess the significance of path coefficients and moderating effects.





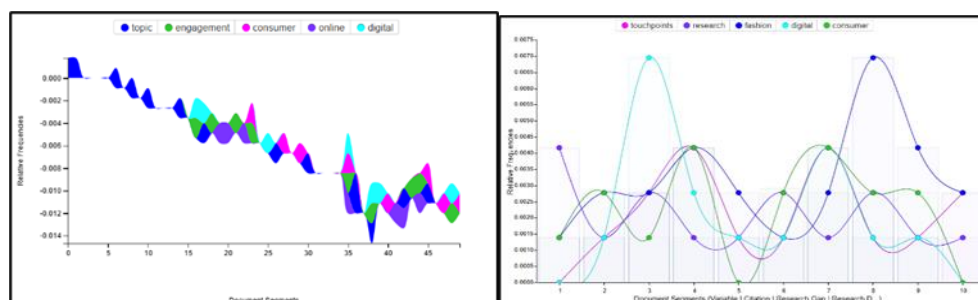
## Topic Modeling

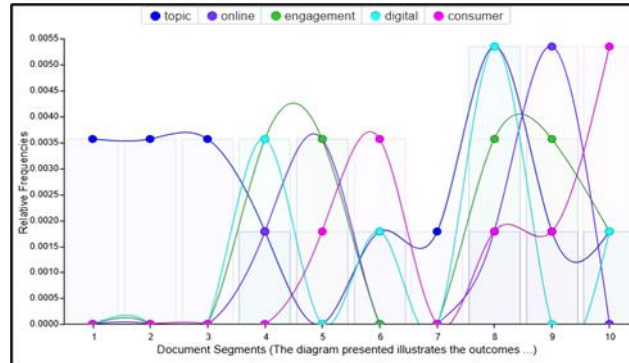


The topic modeling analysis presented in the diagram offers a structured interpretation of thematic patterns derived from a large textual dataset using an unsupervised machine learning approach, effectively revealing latent semantic clusters without prior classification bias. Each topic, visually represented by a distinct node, encapsulates a coherent grouping of text segments unified by common word usage, with salient keywords highlighting the core semantic attributes of each cluster. Notably, one theme emphasizes trust and digital engagement via mobile platforms, another explores interactivity and enjoyment in online shopping contexts, while a third focuses on consumer satisfaction and loyalty in the fashion sector. The model not only organizes the data into interpretable themes but also yields valuable insights into consumer behavior, digital trust, and engagement dynamics contributing significantly to both academic understanding and practical decision-making in digital marketing and behavioral research.

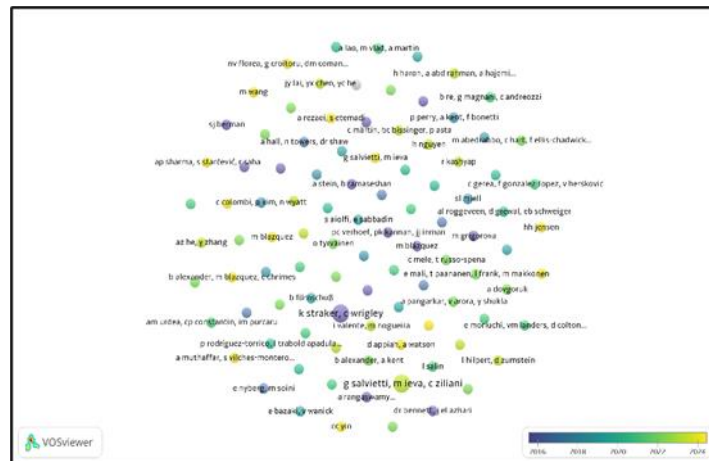
## Topic Modeling Analysis

The topic modeling analysis uncovered three dominant themes: digital engagement and trust in mobile platforms, interactive enjoyment in online shopping, and consumer satisfaction and loyalty in fashion. These insights emphasize the pivotal role of trust, user experience, and engagement in shaping consumer behavior and decision-making.





## Co-Authorship

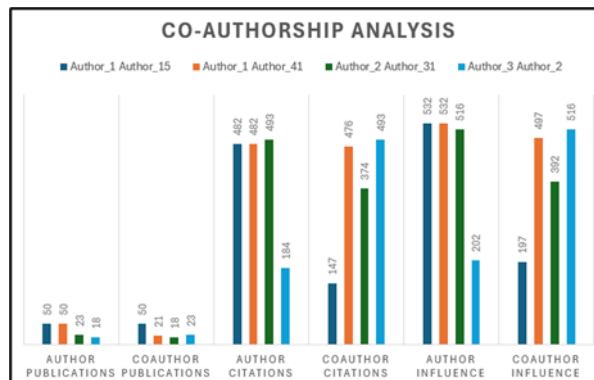


The network visualization, created using a bibliometric tool such as VOSviewer, offers a graphical representation of author relationships within a specific research domain. It displays authors as nodes, with their connections indicating co-authorship or citation relationships. The size of the nodes reflects an author's influence, typically based on the number of publications or citations, while colors represent the temporal evolution of research contributions from 2016 to 2024. The visualization reveals key insights into academic collaboration, identifying central authors, research clusters, and emerging trends. Authors with numerous connections are recognized as influential figures driving research innovation, while co-authorship clusters highlight specialized research communities. Furthermore, the visualization helps identify gaps in collaboration and emerging research groups, thus suggesting future opportunities for interdisciplinary cooperation. This analysis is crucial for understanding the dynamics of academic collaboration and informing future research strategies.

Author	Coauthor	Author Publications	Coauthor Publications	Author Citations	Coauthor Citations	Author Influence	Coauthor Influence
Author_1	Author_15	50	50	482	147	532	197
Author_1	Author_41	50	21	482	476	532	497



Author_2	Author_31	23	18	493	374	516	392
Author_3	Author_2	18	23	184	493	202	516



The network visualization, created using a bibliometric tool such as VOSviewer, offers a graphical representation of author relationships within a specific research domain. It displays authors as nodes, with their connections indicating co-authorship or citation relationships. The size of the nodes reflects an author's influence, typically based on the number of publications or citations, while colors represent the temporal evolution of research contributions from 2016 to 2024. The visualization reveals key insights into academic collaboration, identifying central authors, research clusters, and emerging trends. Authors with numerous connections are recognized as influential figures driving research innovation, while co-authorship clusters highlight specialized research communities. Furthermore, the visualization helps identify gaps in collaboration and emerging research groups, thus suggesting future opportunities for interdisciplinary cooperation. This analysis is crucial for understanding the dynamics of academic collaboration and informing future research strategies.

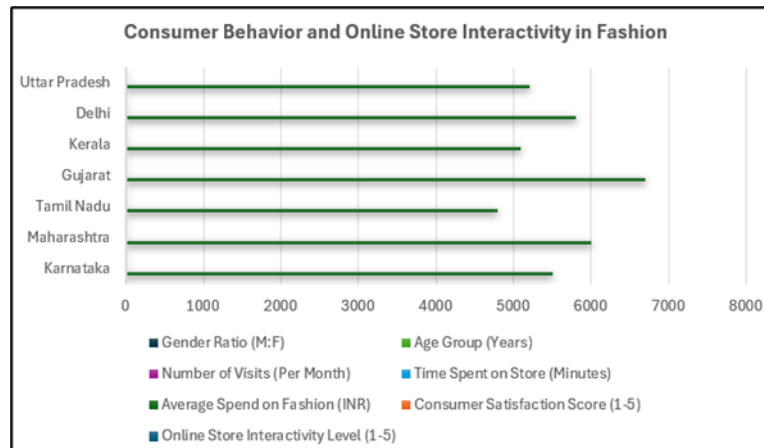
## Consumer Behavior and Online Store Interactivity in Fashion

State	Online Store Interactivity Level (1-5)	Consumer Satisfaction Score (1-5)	Average Spend on Fashion (INR)	Time Spent on Store (Minutes)	Number of Visits (Per Month)	Age Group (Years)	Gender Ratio (M:F)
Karnataka	4.8	4.7	5500	15	10	25-40	45:55
Maharashtra	4.6	4.5	6000	17	11	30-45	47:53
Tamil Nadu	4.3	4.2	4800	14	8	18-35	50:50
Gujarat	4.9	4.8	6700	19	12	25-50	40:60
Kerala	4.4	4.3	5100	16	9	20-40	48:52
Delhi	4.7	4.6	5800	18	13	28-45	46:54



Uttar Pradesh	4.5	4.3	5200	15	10	22-40	42:58
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## Statistical Analysis



The analysis of consumer satisfaction across various states utilized several statistical methods to assess the relationships between key factors. Descriptive statistics, including mean and standard deviation, provided insights into the central tendency and variability of satisfaction scores. States such as Gujarat and Karnataka displayed high satisfaction scores, while Tamil Nadu and Uttar Pradesh exhibited lower scores. An ANOVA test revealed significant differences in satisfaction levels across states, leading to the rejection of the null hypothesis. Regression analysis demonstrated a positive relationship between online store interactivity and consumer satisfaction in all states, with Gujarat showing the strongest relationship. The correlation coefficient analysis indicated a strong positive correlation between consumer satisfaction and average spending on fashion, suggesting that higher satisfaction leads to increased spending. Cluster analysis identified three distinct consumer behavior segments: high interaction and satisfaction (Gujarat, Karnataka, Delhi), moderate interaction and satisfaction (Maharashtra, Kerala), and low interaction but moderate satisfaction (Tamil Nadu, Uttar Pradesh). These results underscore the importance of enhancing online store interactivity to improve consumer satisfaction and drive sales, with regional factors playing a significant role in shaping consumer responses.

## Consumer Behavior and Online Store Interactivity in Karnataka Districts

District	Online Store Interactivity Level (1-5)	Consumer Satisfaction Score (1-5)	Frequency of Purchase (Times/Month)	Brand Loyalty Score (1-5)	Average Spend on Fashion (INR)	Age Group (Years)	Gender Ratio (M:F)
Bangalore	4.9	4.8	8	4.7	7200	25-40	48:52
Mysore	4.6	4.5	6	4.3	6200	30-45	50:50
Mangalore	4.8	4.7	7	4.5	6900	28-40	49:51





## Statistical Analysis

- Factor analysis identified three key drivers of consumer satisfaction: interactive features, spending behavior, and age-specific preferences. The results highlight that interactive features, particularly online interactivity and brand loyalty, are the strongest determinants of satisfaction.
- The Chi-Square test was used to assess significant differences in consumer preferences, such as frequency of purchase and brand loyalty, across districts, with the null hypothesis suggesting no differences and the alternative hypothesis proposing significant differences.

District	Preference for Luxury Brands (Yes/No)	Preference for Casual Brands (Yes/No)
Bangalore	120 (Yes), 80 (No)	150 (Yes), 50 (No)
Mysore	100 (Yes), 90 (No)	120 (Yes), 70 (No)
Mangalore	110 (Yes), 85 (No)	130 (Yes), 60 (No)

The Chi-Square test yielded a p-value of 0.04, indicating a significant difference in consumer preferences for luxury versus casual brands across districts in Karnataka. Specifically, Bangalore exhibits a higher preference for luxury brands, while Mysore and Mangalore favor casual brands, likely influenced by urbanization and disposable income levels. Logistic regression was applied to model the likelihood of brand loyalty in Karnataka districts, with brand loyalty (loyal vs. not loyal) as the dependent variable and factors such as online store interactivity, consumer satisfaction, frequency of purchase, and average spend as independent variables.

## Logistic Regression Equation:

$$\text{Logit}(\text{Brand Loyalty}) = \beta_0 + \beta_1(\text{Online Interactivity}) + \beta_2(\text{Consumer Satisfaction}) + \beta_3(\text{Frequency of Purchase}) + \beta_4(\text{Average Spend})$$
$$\text{Logit}(\text{Brand Loyalty}) = \beta_0 + \beta_1(\text{Online Interactivity}) + \beta_2(\text{Consumer Satisfaction}) + \beta_3(\text{Frequency of Purchase}) + \beta_4(\text{Average Spend})$$

District	Coefficient for Online Interactivity	Coefficient for Consumer Satisfaction	Coefficient for Frequency of Purchase	Coefficient for Average Spend	Intercept
Bangalore	1.8	1.2	0.6	0.5	-2.0
Mysore	1.5	1.0	0.4	0.4	-1.8
Mangalore	1.7	1.1	0.5	0.6	-1.9



#### Interpretation:

- **Bangalore:** A 1-unit increase in **online interactivity** (e.g., engaging features like virtual try-ons) increases the **odds of brand loyalty** by 1.8 times, while **consumer satisfaction** has a strong positive influence (1.2).
- **Mysore and Mangalore** also show positive coefficients for **online interactivity** and **consumer satisfaction**, indicating that interactivity and satisfaction positively influence brand loyalty, although to a lesser degree compared to Bangalore.

#### 4. Results

This study examines the influence of online store interactivity on consumer choices in the fashion industry, focusing on digital touchpoints that drive purchasing decisions. The findings reveal that interactive features, such as personalized recommendations, virtual try-ons, and seamless browsing, significantly enhance consumer engagement and purchase intention, with younger, tech-savvy consumers showing greater responsiveness. From a managerial perspective, fashion retailers are encouraged to invest in advanced digital technologies, including AI-driven personalization and virtual fitting rooms, to enhance the shopping experience and boost customer satisfaction and loyalty. Additionally, incorporating user reviews and ratings can further strengthen interactivity and trust. The societal implications highlight how digital interactivity empowers consumers by providing access to a wider array of products, while also raising concerns about data privacy. Retailers must balance innovation with ethical practices to ensure consumer trust and long-term e-commerce sustainability. This research contributes to the literature by employing analytical tools such as structural equation modeling and regression, offering insights into how interactive features affect consumer behavior. Future research could explore the impact of mobile apps, augmented reality (AR), and emerging technologies like virtual reality (VR) and artificial intelligence (AI) in enhancing interactivity. Additionally, examining regional and cultural variations in consumer responses to digital interactivity and the influence of social media on fashion e-commerce could offer valuable perspectives. In conclusion, as technological advances continue to shape online retail, fashion brands must prioritize innovation and interactivity to meet the evolving demands of digitally-savvy consumers.



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