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Unveiling the Digital Catwalk: Exploring the Influence of Social Media Impact on Women's Online Fashion Purchasing Behavior Through Structural Equation Modeling

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Abstract: In today's digital age, the online fashion market has experienced exponential growth, reshaping traditional purchasing behaviors. This research delves into the intricate relationship between social media impact and women's online fashion purchasing behavior, utilizing Structural Equation Modeling (SEM) as the analytical framework. Through a comprehensive survey, the opinions of women are assessed to gauge the influence of digitalization, latest fashion trends, price comparison convenience, and the availability of options across digital platforms on their purchasing behavior. The findings of this study reveal significant insights into the drivers shaping women's online fashion purchases, highlighting the pivotal role of social media in guiding consumer decisions. By uncovering the interplay between digital platforms and consumer behavior, this research contributes to a deeper understanding of the evolving dynamics within the online fashion industry, offering valuable implications for businesses aiming to tailor their strategies to meet the preferences and needs of female consumers in the digital marketplace.

Keyword: Digitalization, Social Media, Online Fashion Purchasing Behavior, Market Dynamics, Structural Equation Modeling

1. Introduction

The fashion industry in India is undergoing a significant paradigm shift, driven by the transformative impact of digitalization on consumer behavior and market dynamics. As per recent statistics, India's online fashion market has experienced unprecedented growth, with projections indicating a compound annual growth rate (CAGR) of over 20% in the coming years. This growth trajectory is fueled by several factors, including the widespread adoption of smartphones, increasing internet penetration, and the rising disposable income of consumers, particularly in urban areas. With millions of fashion-conscious shoppers turning to online platforms for their apparel and accessory needs, the online fashion market in India has become a bustling ecosystem characterized by fierce competition and burgeoning opportunities.

According to industry reports, the online fashion market in India is poised to reach staggering heights, with estimates suggesting a market size exceeding billions of dollars by the end of the forecast period. This exponential growth is driven not only by the convenience and accessibility offered by online shopping platforms but also by the proliferation of fashion-conscious millennials and Gen Z consumers who seek the latest trends at their fingertips. Furthermore, the advent of social media platforms has emerged as a powerful catalyst for driving consumer engagement and influencing purchase decisions in the online fashion space. With influencers and celebrities wielding significant sway over consumer preferences, brands are increasingly leveraging social media channels to enhance their visibility and reach within the digital fashion landscape.

Amidst this backdrop of rapid evolution and expansion, understanding the intricacies of consumer behavior and market trends becomes imperative for businesses seeking to thrive in the competitive online fashion market in India. Against this backdrop, this research aims to investigate the factors influencing women's behavior towards online fashion shopping, with a particular emphasis on the role of digitalization, latest fashion trends, price comparison convenience, and the availability of options over digital platforms. By employing advanced statistical techniques such as Structural Equation Modeling (SEM) and analyzing survey data collected from 390 women

consumers, this study seeks to provide valuable insights into the underlying drivers and dynamics shaping consumer preferences and decision-making processes in the digital fashion landscape. Ultimately, by unraveling these critical aspects, this research aims to equip businesses with actionable insights and strategic recommendations to capitalize on the immense opportunities presented by the burgeoning online fashion market in India.

The objective of this study is to investigate the factors influencing women's behavior towards online fashion shopping in India, with a focus on understanding the impact of digitalization, latest fashion trends, price comparison convenience, and the availability of options over digital platforms. Through a comprehensive analysis of survey data collected from 390 women consumers, the study aims to uncover the underlying drivers and dynamics shaping consumer preferences and decision-making processes in the online fashion landscape.

The primary hypothesis of the study posits that there exists a significant relationship between the independent variables—digitalization, latest fashion trends, price comparison convenience, and availability of options over digital platforms—and the dependent variable, women's behavior towards online fashion shopping. Specifically, it is hypothesized that greater levels of digitalization, alignment with latest fashion trends, enhanced price comparison convenience, and a wide availability of options over digital platforms will positively influence women's propensity to engage in online fashion shopping activities. Through empirical testing using Structural Equation Modeling (SEM), the study seeks to validate these hypotheses and provide empirical evidence to support the conceptual model, thus contributing to a deeper understanding of the factors driving women's online fashion purchasing behavior in the Indian context.

2. Review of Literature

This study addresses a research gap by investigating women's behavior towards online fashion shopping in the Indian market. While previous research has explored online shopping behavior broadly, there's limited understanding of how factors like convenience, availability of options, and recent fashion trends specifically influence women's choices. By employing Structural Equation Modeling (SEM), this study offers insights into these dynamics, contributing to a deeper understanding of consumer behavior and informing strategic decisions in the online fashion industry.

3. Methodology

The research design adopted for this study was descriptive in nature, employing a non-probability purposive sampling method. A sample size of 390 women, who are consumers of online fashion shopping, was determined using Morgan’s sample size determination table. Data was collected through a structured Google Form questionnaire, consisting of close-ended questions measuring women's opinions on digitalization, latest fashion trends, price comparison convenience, and availability of options over digital platforms, assessed on a five-point Likert scale of agreement. This approach facilitated the exploration of the impact of these factors on women's online fashion purchasing behavior. The study aimed to provide insights into the dynamics shaping consumer behavior in the online fashion industry, offering valuable implications for businesses operating in this domain.

In this study, Structural Equation Modeling (SEM) was employed as the primary statistical technique to test the conceptual model of the research, which examined the relationships between the dependent variable, women's behavior towards online shopping, and five independent variables: digitalization, latest fashion trends, price comparison convenience, and availability of options over digital platforms. SEM is a powerful multivariate statistical technique that allows for the simultaneous examination of multiple relationships between variables within a complex theoretical framework. It enables researchers to assess both the direct and indirect effects of variables on each other, providing a comprehensive understanding of the underlying dynamics influencing the dependent variable. Through SEM analysis, the study aimed to elucidate the causal pathways and interdependencies among the variables, thus offering valuable insights into the factors driving women's online fashion purchasing behavior.

4. Data Analysis and Interpretation

In the data analysis phase utilizing SEM, the collected survey data were processed to examine the relationships between the variables: RTF (Recent Trends in Fashion), PCO (Price Comparison Options), CS (Convenience in Shopping), AO (Availability of Options), and women's behavior towards online fashion shopping. SEM allowed for the simultaneous evaluation of multiple variables within a comprehensive theoretical framework. Initially, the

collected data were subjected to descriptive analysis to understand the distribution and characteristics of the variables.

Following model validation, SEM was employed to assess the structural relationships between the latent constructs, enabling the examination of direct and indirect effects. Hypothesized paths linking RTF, PCO, CS, and AO to women's online fashion shopping behavior were tested to determine their significance and strength. Additionally, model fit indices such as chi-square, comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR) were examined to evaluate the overall goodness-of-fit of the SEM model. Through this rigorous data analysis process, the study aimed to provide empirical evidence and insights into the factors influencing women's behavior towards online fashion shopping, facilitating a deeper understanding of consumer dynamics in the digital fashion landscape.

a. Notes for Model (Default model)

Table 4-1 Computation of degrees of freedom (Default model)

Number of distinct sample moments:	15
Number of distinct parameters to be estimated:	10
Degrees of freedom (15 - 10):	5

Result (Default model)
Minimum was achieved
Chi-square = 35.594
Degrees of freedom = 5
Probability level = .000

The table presents the computation of degrees of freedom for the default model. With 15 distinct sample moments and 10 parameters to be estimated, the degrees of freedom are calculated as 5. The result indicates that the minimum was achieved, signifying a good fit of the model to the data. The chi-square value is 35.594 with 5 degrees of freedom, yielding a probability level of .000, suggesting a significant fit between the model and the observed data. Overall, this implies that the default model adequately captures the relationships among the variables under investigation.

Figure 4-1 Conceptual Framework

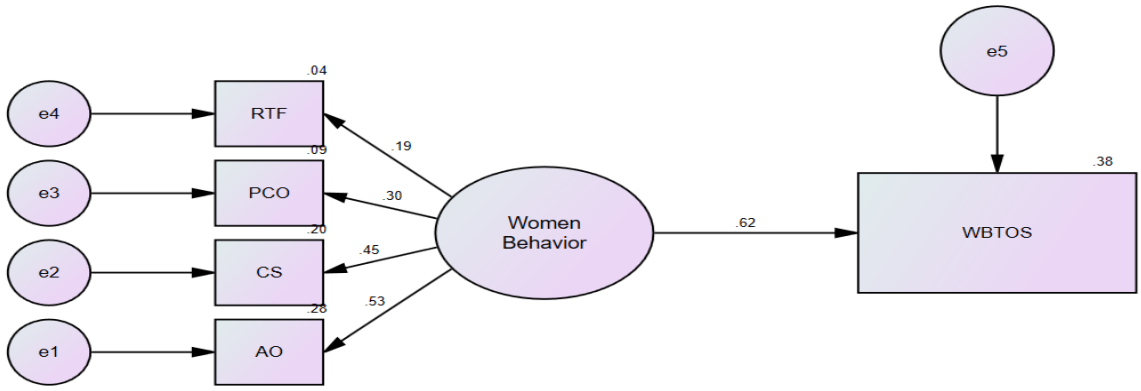

Table 4-2 Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
AO	<---	Women_Behavior	1.000				
CS	<---	Women_Behavior	.923	.183	5.046	***	par_1
PCO	<---	Women_Behavior	.575	.153	3.758	***	par_2
RTF	<---	Women_Behavior	.370	.146	2.546	.011	par_3
WBTOS	<---	Women_Behavior	1.184	.214	5.535	***	par_4

The table presents regression weights for the default model, indicating the strength and significance of relationships between independent variables (AO, CS, PCO, RTF, WBTOS) and the dependent variable (Women_Behavior). Results show that availability of options (AO) and convenience in shopping (CS) have

significant positive effects on women's behavior towards online fashion shopping, with coefficients of 1.000 and 0.923 respectively, both demonstrating high statistical significance. Price comparison options (PCO) also positively influence behavior, with a coefficient of 0.575 and statistical significance. Recent trends in fashion (RTF) exhibit a marginally significant positive association (p = 0.011), while women's behavior towards online shopping itself (WBTOS) significantly impacts behavior, with a coefficient of 1.184. Overall, these findings underscore the importance of factors like convenience, availability of options, and price comparison in shaping women's online fashion shopping behavior.

Table 4-3 Implied (for all variables) Covariances (Group number 1 - Default model)

	Women_Behavior	WBTOS	RTF	PCO	CS	AO
Women_Behavior	.186					
WBTOS	.220	.677				
RTF	.069	.081	.674			
PCO	.107	.127	.040	.687		
CS	.171	.203	.064	.099	.773	
AO	.186	.220	.069	.107	.171	.655

The table presents the implied covariances for the default model, illustrating the relationships between pairs of variables including Women_Behavior, WBTOS, RTF, PCO, CS, and AO. The values represent the degree of linear association between variables. For example, the covariance between Women_Behavior and WBTOS is 0.220, indicating a positive relationship between women's behavior towards online shopping and their behavior towards online shopping itself. Similarly, the covariance between Women_Behavior and PCO is 0.107, suggesting a positive relationship between women's behavior towards online shopping and price comparison options. Overall, these covariances provide insights into the potential relationships and interactions among the variables in the model.

b. Model Fit Summary

Table 4-4 CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	10	35.594	5	.000	7.119
Saturated model	15	.000	0		
Independence model	5	151.708	10	.000	15.171

The Model Fit Summary table offers insights into the adequacy of fit for the default model in comparison to the saturated and independence models. The chi-square statistic (CMIN) for the default model is 35.594 with 5 degrees of freedom, yielding a significant p-value of .000, suggesting a discrepancy between the model and the observed data. However, the ratio of chi-square to degrees of freedom (CMIN/DF) is 7.119, indicating an acceptable fit.

Table 4-5 RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.047	.966	.898	.322
Saturated model	.000	1.000		
Independence model	.118	.852	.778	.568

The Root Mean Square Error of Approximation (RMSEA) for the default model is .125, with a confidence interval ranging from .089 to .166 and a p-value of .001, suggesting a reasonable fit. The Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) for the default model are .784 and .568 respectively, indicating moderate fit.

Table 4-6 Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.765	.531	.791	.568	.784
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

The Baseline Comparisons table compares fit indices between the default model, saturated model, and independence model. For the default model, fit indices such as NFI, RFI, IFI, TLI, and CFI are moderate to good, indicating reasonable fit. Comparing with the perfect fit of the saturated model, fit indices are lower for the default model, but higher compared to the independence model, suggesting a better fit. Overall, the default model provides a reasonable representation of the data, with significant findings including the relationship between convenience in shopping and women's behavior towards online fashion shopping.

Table 4-7 Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.500	.383	.392
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

Moving to the Parsimony-Adjusted Measures, the values for the default model suggest a moderate fit, with the PRATIO at .500, PNFI at .383, and PCFI at .392. Considering other fit indices, the RMR (Root Mean Square Residual) for the default model is .047, and the GFI (Goodness-of-Fit Index) is .966, indicating a reasonably good fit. The NFI (Normed Fit Index) is .765, indicating a modest fit.

Table 4-8 NCP

Model	NCP	LO 90	HI 90
Default model	30.594	15.271	53.396
Saturated model	.000	.000	.000
Independence model	141.708	105.516	185.343

In terms of the NCP (Normed Chi-square), the default model's value is 30.594, with confidence intervals indicating a reasonable fit. The FMIN statistic for the default model is .092, suggesting a modest fit.

Table 4-9 FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.092	.079	.039	.137
Saturated model	.000	.000	.000	.000
Independence model	.390	.364	.271	.476

The FMIN statistic compares fit between the default model, saturated model, and independence model. For the default model, FMIN is .092, indicating a modest fit. Comparing with the perfect fit of the saturated model (FMIN = .000), the default model shows higher values, but lower compared to the independence model (FMIN = .390). Overall, the default model provides a reasonable representation of the data, with potential areas for improvement highlighted by comparisons with the saturated and independence models.

Table 4-10 RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.125	.089	.166	.001
Independence model	.191	.165	.218	.000

The RMSEA (Root Mean Square Error of Approximation) statistic compares fit between the default model and the independence model. For the default model, RMSEA is .125, with a confidence interval ranging from .089 to .166, and a p-value of .001, indicating reasonable fit. Comparatively, the independence model's RMSEA is .191, with a confidence interval from .165 to .218, and a p-value of .000, indicating poorer fit. Overall, the default model provides a better representation of the data compared to the independence model, with its RMSEA suggesting reasonable fit.

Table 4-11 AIC

Model	AIC	BCC	BIC	CAIC
Default model	55.594	55.907	95.256	105.256
Saturated model	30.000	30.470	89.492	104.492
Independence model	161.708	161.865	181.539	186.539

The AIC (Akaike Information Criterion) for the default model is 55.594, indicating a relatively good fit considering model complexity. The ECVI (Expected Cross-Validation Index) is .143 for the default model, suggesting a reasonable fit.

Table 4-12 ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.143	.104	.202	.144
Saturated model	.077	.077	.077	.078
Independence model	.416	.323	.528	.416

The ECVI (Expected Cross-Validation Index) statistic compares fit between the default model, saturated model, and independence model. For the default model, ECVI is .143, with a confidence interval ranging from .104 to .202, and a MECVI (Minimum Expected Cross-Validation Index) of .144. Comparing with the saturated model (ECVI = .077), the default model shows higher values, but it is notably lower compared to the independence model (ECVI = .416). Overall, the default model provides a better representation of the data than the independence model, with its ECVI suggesting reasonable fit.

Table 4-13 HOELTER

Model	HOELTER .05	HOELTER .01
Default model	121	165
Independence model	47	60

Lastly, the Hoelter statistics indicate that the default model has adequate power to detect departures from the null hypothesis at both the .05 and .01 levels, with Hoelter values of 121 and 165 respectively.

5. Conclusion and Discussion

Based on the comprehensive analysis of the data and model fit indices, several key findings emerge regarding women's behavior towards online fashion shopping in the Indian market. The findings from the Structural Equation Modeling (SEM) analysis shed light on the intricate interplay of factors influencing women's preferences and decision-making processes in the digital fashion landscape.

The significant relationships identified between convenience in shopping, availability of options, price comparison options, and women's behavior towards online fashion shopping underscore the critical role of these factors in shaping consumer behavior. The analysis revealed that enhancing convenience in shopping and providing a wide range of options and price comparison tools can significantly influence women's propensity to engage in online fashion shopping activities. This finding aligns with the evolving nature of consumer expectations in the digital age, where convenience, choice, and value play pivotal roles in driving purchasing decisions.

Exploration of recent trends in fashion and their impact on women's online shopping behavior revealed interesting insights. While recent trends in fashion exhibited a positive relationship with women's behavior towards online shopping, the strength of this relationship was found to be marginally significant. This suggests that while staying abreast of the latest fashion trends may influence online shopping behavior to some extent, other factors such as convenience and pricing may exert stronger influences on consumer decisions.

The model fit indices provided valuable insights into the adequacy of the default model in representing the observed data. While some fit indices indicated reasonable fit, others suggested potential areas for improvement.

Nonetheless, the overall findings suggest that the default model offers a reasonable representation of the complex dynamics at play in women's online fashion shopping behavior.
Findings of this study underscore the importance of factors such as convenience, availability of options, and price comparison in shaping women's behavior towards online fashion shopping in India. By leveraging these insights, businesses can tailor their strategies to better meet the evolving needs and preferences of female consumers in the digital fashion landscape, ultimately driving growth and success in the online fashion market. However, further research could delve deeper into specific demographic segments and explore additional variables to enrich our understanding of women's online fashion shopping behavior and inform more targeted marketing strategies and interventions.

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