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A Factor Analysis Approach to Determine Extrinsic Determinants Influencing Apparel Purchase: A Study based in a Metropolitan City in India

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Abstract

Understanding consumer purchase behaviour is vital in today's competitive retail environment, particularly in the fast-growing apparel sector of India. The current study investigates the impact of external factors on the buying behaviour within the organized sector of Kolkata, an eastern metropolis in India, utilising the Stimulus–Organism–Response (SOR) model. The study uses Exploratory and Confirmatory factor analyses to extract factors and validate them. Initially, 24 external attributes were identified from past literature, out of which 20 of them were confirmed through a pilot survey. The main survey collected 550 responses, out of which 362 responses were found to be complete and valid for the study. Exploratory factor analysis (EFA) was performed on 253 responses and Confirmatory factor analysis (CFA) on the remaining 109 responses. Seven factors namely, Product Positioning, Shop Locale, Merchandising, Fabric Quality, Aesthetics, Elegance and Durability were extracted and confirmed. Independent t-tests conducted to examine gender-based differences showed disparities across four factors while chi-square tests show multiple statistically significant associations among the factors. The results validate the relevance of the SOR framework in the emerging apparel market scenario of the metropolis, showing a distinct relationship between external triggers, internal assessments and consumer buying intentions. The research provides practical guidance for the apparel marketers, recommending strategic retail approaches. Limitations and future research avenues have been addressed, highlighting the need for multi-city studies and integration of internal factors also.

Keywords: *Consumer Behaviour, External Factors, Factor Analysis, SOR Framework, Strategic Retail Approaches.*

INTRODUCTION

The buying behaviour of consumers is a complex process by which individuals or an organization selects, procure, use or discard products, ideas or experiences to satisfy their needs and preferences. In the current scenario of market competition, understanding consumer demand is of pivotal importance. Previous researches indicate the complexity of consumer behaviour, often termed dubious posing a challenge even for the experts in the field (Solomon, 2012). However, even though unpredictable, consumer behaviour is the subject of scientific research, incorporating diverse intrinsic and extrinsic factors. Intrinsic factors include consumer inner motivations, while extrinsic factors are variables influenced by marketers (Jisana., 2014). Personal factors vary among consumers and buying behaviour is framed by personal decisions (Bagga, 2013). Consumer buying behaviour is influenced by key factors

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such as price, comfort, quality, style and availability (Stavkova, 2008).Marketing success hinges on leveraging product attributes that align with consumer preferences. In today's market scenario, marketers have to customize their approaches in alignment with customer preferences and aspirations.

Amongst product categories, clothing is significantly a necessity item and serves as a tool for self-expression and social communication. The clothing industry is one which has a high turnover volume across different consumer bases in India as well as abroad. According to experts, the country's domestic apparel market is now the second largest witnessing notable expansion over the past decade. Fast fashion brands are now gaining traction in India influencing Gen Z consumers whose purchasing decisions are shaped by Western lifestyles, clothing and social media trends (Islam, 2024). Moreover, factors like rising income, urbanization, modern shifting lifestyles and an increasing preference for branded items have further added to consumer aspiration (Jena & Paltasingh 2023). Buyers today can now access branded products at affordable prices while enjoying a wide selection of brands in the stores (Dheepalakshmi, 2024).However, in today's highly competitive marketplace, where numerous brands and retail outlets operate simultaneously, marketers must move beyond conventional selling approaches to effectively meet consumer expectations. Although extensive research has been conducted globally on consumer behaviour, in the Indian context most of it has focused on major metros like Delhi NCR, Ahmadabad and Bengaluru. Empirical studies focusing on eastern cities, particularly Kolkata remains limited except for some fragmented studies. The current study, which adopts an exploratory-confirmatory design, is an attempt to fill this lacuna. The exploratory phase covers context-specific factors influencing apparel purchase decisions while confirmatory analysis is used for validation of the factors. The dual phase design of the current study addresses the gaps and offers a validated model that can be generalized to similar retail markets across the country.

The current study is influenced by stimuli in the retail environment using the Stimulus–Organism–Response (SOR) framework. The framework originally proposed by Mehrabian and Russell (1974) states that external stimuli trigger cognitive states in individuals shaping their behavioural response. Mapping external attributes onto the SOR structure, the current research provides a systematic understanding of how external attributes influence apparel purchase decision in Kolkata's organized market. By identifying 24 external attributes from past literature and establishing that 20 significantly affect apparel purchase behaviour through a pilot survey, this study highlights its importance and aims to explore extrinsic factors influencing consumer preferences. The present research aims to: (1) determine the main extrinsic factors influencing clothing purchase decisions in Kolkata's organized retail sector; (2) use confirmatory factor analysis to validate the factor structure; and (3) investigate demographic differences focusing on gender. The current study aims to provide practical recommendations for the marketers to focus on product development and create more effective marketing strategies. It is anticipated that the results will support both practical retail strategy decision making and scholarly discussions on consumer behaviour.

LITERATURE REVIEW

Past research reveals that product attributes form the key drivers to purchase decision of consumers in the apparel industry. Price, among product attributes, has been found as one of the most influential determinants of consumer purchase. Etgar and Malhotra (1981) rate price as the most important aspect compared to comfort, style or colour. Jantan and Kamaruddin

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(1999) in their research established price as the most influencing factor. Subsequent studies by Moore and Goldsmith (2000) ranked price as the main influencer, the others being service quality, location of store and merchandise assortment. However, the relative weights of product attributes differ across demographic groups, as observed by North et al. (2003); their study revealed that in case of women price is more important than style. Tsiotsou (2006) established a relation between product quality, purchase intention and customer satisfaction. D'Souza et al. (2007) revealed the interrelationship between price and product quality on green purchasing behaviour. Studies by Mirabi et al. (2015) in Tehran stressed on product quality and brand advertisement as the main drivers, whereas the study by Cham et al. (2018) revealed that buying behaviour of Malaysian Gen-Y consumers had significant influence by brand image, perceived quality, word-of-mouth and price consciousness. In the Indian context, various researches have likewise given importance to price, quality and perception about the brand. While Rai (2013) and Kanthi (2013) pointed to the role of advertisements, design and price, Vashi (2020) mentioned the same factors for luxury apparel market in Ahmadabad. The study by Almira (2021) on a new fashion brand concluded that demographic and cultural variables moderate product attributes in apparel buying.

Consumer choices are also shaped by various store attributes such as its location, ambience and quality of service. The study on U.S. Hispanic consumers by Seock (2009) revealed that store ambience and customer service had more impact than convenience. Diallo et al. (2013) and Rishi (2011) stressed on the influence of store image, value consciousness, and cultural influence on buying behaviour; the former in French market and the later in Indian market. Again, in the Indian context, studies by Gurunathan and Krishnakumar (2013) on Tamil Nadu consumers revealed that store credibility and reference groups are the principal determinants of consumers' purchase decisions. Shafi and Madhavaiah (2014) placed store qualities and product attributes as primary drivers to consumer choices in Bangalore. In the Kolkata scenario, Basu et al. (2014) identified product assortment, location, service quality and customer interaction as important attributes. Guha (2014) studied price sensitivity among working women and revealed it was closely linked with store experiences. Research on Khadi fashion wear by Datta and Sarkar (2021) underlined the influence of store ambience on consumer attitudes. Research on promotional efforts, such as advertising, promotions and reward programs has revealed their impact on consumer behaviour. Ayanwale et al. (2005) investigated the impact of advertising on purchase intent. Study by Lowe (2010) in the UK concluded that discounts and promotions are the most favourite marketing strategies, while studies based on Pakistan by Shahzad (2020) indicated that discounts and coupons were more successful than "buy one, get one free" promotions. Zhang and Zheng (2019) developed consumer behaviour model to forecast the effect of promotion, price and quality strategies. In the Indian context, Pinto et al. (2021) and Malhotra (2020) identified store variables and promotional variables influencing impulse purchasing behaviour in Bengaluru while Almira (2021) revealed that promotional variables majorly influence consumer behaviour.

In spite of extensive global literature on factors influencing purchase decisions, research on extrinsic factors in the Indian context and especially eastern metropolis like Kolkata is not adequately represented. Past studies that have been conducted yield fragmented and one-dimensional outcomes for individual product segments. Empirical research on ascertaining broader determinants of apparel purchasing behaviour in the Kolkata scenario is limited. This gap highlights the need for context-specific investigations and thus paves the way for the current study. It aims to identify the most pertinent external attributes and empirically confirm

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their impact on consumer attitudes and behaviours. The findings are expected to contribute to both academic knowledge and practical marketing strategies.

CONCEPTUAL FRAMEWORK & RESEARCH OBJECTIVES

Going through past literature review, the current study conceptualizes external factors as independent variable that influences consumer behaviour, the dependent variable. Consistent with the Stimulus–Organism–Response (SOR) framework and informed by the Theory of Planned Behaviour (Ajzen, 1991), external stimuli in the retail environment act as triggers shaping consumer perceptions, attitudes, intentions and subsequent purchase decisions. The identified extrinsic factors are categorized into product, store and promotional attributes which interact with the consumer's decision-making processes affecting consumer attitudes and purchase behaviour. The conceptual framework integrates the SOR model with localized adaptations to account for a unique retail landscape of a metropolis, thereby providing both theoretical and practical relevance.

Based on this framework, the study addresses the following research questions:

RQ1: What are the predominant external factors that affect consumer purchasing behaviour in Kolkata's organized apparel market, as identified from existing literature?

RQ2: How do consumers in a metropolis perceive and prioritize these extrinsic factors when making apparel purchase decisions?

RQ3: What are the underlying latent dimensions of consumer decision-making in the apparel market, and can these dimensions be empirically validated?

RQ4: Is there gender-based differences in the perception of extrinsic purchase cues and what relationships exist among the identified retail attributes?

In alignment with the above research questions, the present study aims to pursue the following objectives:

1. To identify key extrinsic attributes influencing consumer behaviour toward readymade garments from past literature. This objective addresses RQ1 by synthesizing extant literature to identify the main external attributes that shape the apparel purchase decisions.
2. To assess the contextual relevance of these attributes in the apparel retail sector of a metropolis. Responding to RQ2, a pilot survey evaluates the significance and applicability of identified factors within the city's socio-economic environment.
3. To extract and categorize the underlying dimensions of consumer behaviour in the readymade garment market using Exploratory Factor Analysis (EFA). Corresponding to RQ3, exploratory factor analysis group related attributes into coherent factors that reflect dominant behavioural patterns among consumers.
4. To evaluate and confirm the factor structure through Confirmatory Factor Analysis (CFA). Also aligned with RQ3, CFA tests the statistical robustness and reliability of the derived structure, confirming key extrinsic determinants.
5. To examine gender differences in perceptions of extrinsic purchase drivers and explore interrelationships among the extracted factors using independent t-tests and chi-square analysis. This objective addresses RQ4, providing insights into demographic influences on consumer decision-making in the context of the apparel market of Kolkata.

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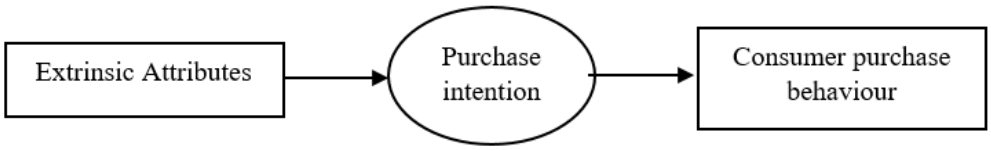

Fig 1: Proposed Conceptual Framework

Keeping in mind the research objectives, a detailed study on past literature revealed 24 different attributes that have a significant influence on the buying behaviour of consumers, which are listed (Table 1) based on their percentage of occurrence in past studies;

Table 1: Identified variables from past literature

Sl No.	Identified variable	Sl No.	Identified variable
1	Quality	13	Promotion
2	Brand	14	Durability
3	Price	15	Colour
4	Design	16	Latest trends
5	Fashion	17	Texture
6	Variety	18	Parking facilities
7	Style	19	Store location
8	Material	20	Store ambience
9	Display	21	Celebrity influence
10	Discounts	22	Payment options
11	Advertisements	23	Size availability
12	Comfort	24	Store lighting and music

Subsequently, a pilot study was first conducted with the above 24 attributes which were then refined to 20 attributes for collecting respondent data for the main study.

RESEARCH METHODOLOGY

For the current research, an exploratory research design was employed to study the extrinsic determinants of consumer purchase behaviour in the apparel market of Kolkata. Respondent data were gathered by non-probability convenience sampling from shopping malls which were chosen due to their consolidated and diverse clientele, spanning various socio-economic backgrounds. Malls serve as hubs for shopping, dining and entertainment, attracting a surge in foot traffic, especially among young adults on weekends and holidays. The concentration of customers from diverse backgrounds and multifaceted offerings make apparel retail outlets in shopping malls ideal venues for interviewing respondents.

Data collection occurred during the peak period of footfall, from August to October, coinciding with Indian festivals like Durga Puja and Diwali, a period characterized by heightened consumer activity. Respondents were approached in seven strategically selected shopping malls across various city locations and invited to participate voluntarily. Only those who had purchased apparel during their visit were included. Respondents were informed about the voluntary nature of participation, the confidentiality of responses and the intended use of data for research purposes.

For the pilot survey, the survey instrument, a questionnaire, was developed based on a comprehensive review of extant literature on consumer behaviour, with a focus on the extrinsic determinants of apparel purchase. An initial pool of 24 attributes, as given in Table 1, was refined through a pilot study involving 51 participants across ten retail outlets within a

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shopping mall. The pilot sample consisted primarily of young adults, reflecting the primary demographic of interest in the main study. The pilot questionnaire used a closed-ended structure and the respondents measured the relative importance of a number of external attributes using a five-point Likert scale running from 1 (Not Important) to 5 (Most Important). The mean score of the attributes as obtained from the pilot study are tabulated (Table 2);

Table 2: Identified variables from the pilot survey with their mean scores

Sl. No.	Variables	Tabulated mean score	Sl. No.	Variables	Tabulated mean score
1	Price of the product	4.29	13	Store Ambience	3.27
2	Brand of the product	4.17	14	Store Display	3.24
3	Comfort using the product	4.70	15	Store Variety	3.86
4	Colour of the product	3.58	16	Advertisement	3.70
5	Durability of the product	4.05	17	Discount	4.07
6	Quality of the product	4.39	18	Promotional Schemes	3.53
7	Fashion of the product	3.73	19	Latest Trends in Store	3.84
8	Design of the product	4.09	20	Car parking facilities	2.65
9	Style of the product	4.37	21	Payment options	1.94
10	Material of the product	4.25	22	Size availability	1.93
11	Texture of the product	3.90	23	Celebrity Influence	1.92
12	Store Location	3.24	24	Store lighting and music	1.08

Attributes having a mean score less than 2.0 were screened out. This refinement process produced a final questionnaire with demographic variables age, gender, level of education, income and 20 items relating to external characteristics that affect apparel buying behaviour.

For the main study, respondents indicated their choices on a five-point Likert scale where 1= Not at all important, 2= not important, 3= neutral, 4= important and 5= very important, for the 20 external attributes in the main study. This scaling technique enabled the researcher to quantify consumer opinion to statistical tests like factor analysis and hypothesis development. For the main study, data were collected from 550 respondents across 7 shopping malls in the city, out of which only 362 valid responses could be used for analysis, others discarded due to incomplete or improper filling up of the questionnaire. Using SPSS, version 25, Exploratory Factor Analysis (EFA) was carried out to identify the latent constructs underlying the observed variables, as it is perfectly suited for exploratory study to reduce a large set of interrelated variables into fewer, conceptually meaningful factors, subsequently revealing the principal determinants of consumer purchase behaviour (Hair et al., 2010). EFA is followed by Confirmatory Factor Analysis (CFA) to validate the factor structure and ensure the robustness of the derived model. Additional statistical procedures, including independent samples t-tests and chi-square tests, were applied to examine gender differences and interrelationships among the derived factors.

RESULTS & FINDINGS

Analysis was carried out with 362 valid responses, out of which 253 responses were used for EFA and 109 for CFA, considering70% of the valid responses for EFA. Although the value 109 for CFA is modest in size, nevertheless conducting CFA served as a validation step to assess the fit and stability of the derived factor structure. This approach is in alignment of previous studies by Yong and Pierce (2013), especially when re-collection of data is impractical. Out of the 253, there were 126 males (49.8%) and 127 females (50.2%) aged between 20 to 35 years. In behavioral sciences, latent variables (not directly measured) and

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manifest variables (measurable) characterize consumer purchase behavior. Exploratory factor analysis was used to reduce variables, clarify data and identify factors influencing apparel purchase intention among customers.

Reliability testing and validity considerations

From the primary research sample (N=362), internal scale consistency was evaluated with Cronbach's alpha (= 0.841), depicting strong reliability. This value exceeded the commonly applied threshold value of 0.70 (Nunnally & Bernstein, 1994). The item-total correlation analysis verified that all attributes contributed significantly to the total construct without any of them being eliminated. The validity of the questionnaire was maintained; the content validity was secured by rigorous literature review and expert judgment of the chosen variables.

Factor analysis

The factors were selected based on Kaiser-Meyer-Olkin (KMO) measures of sampling adequacy criteria and Bartlett's test of sphericity (Table 3). The overall measure of adequacy was determined to be 0.724, suggesting that the sample exhibited a good fit for the analysis (Hair et al., 1998). Bartlett's test of Sphericity indicated a statistically significant level of correlations among the variables allowing application of factor analysis.

Table 3: KMO and Bartlett's Test of Sphericity

Statistic		Values
Kaiser-Meyer-Olkin	Measure of Sampling Adequacy	0.724
Bartlett's Test of Sphericity	Approx. Chi-Square	1690.663
	Degrees of Freedom	190
	Significance	.000

Factor analysis revealed an initial solution comprising seven attributes with eigenvalues surpassing 1, collectively explaining around 68% of the observed variation in customer behavior patterns. An eigenvalue exceeding 1 signifies stronger predictive capability than individual variables. According to the Kaiser criterion, only these seven attributes were retained due to their eigenvalues surpassing 1, while others fell below this threshold. Varimax with Kaiser Normalization rotation method was used to interpret the data for the list of factors. The factors were labeled based on salient loadings. All loadings below 0.5 were not considered. The observed variations of different components with initial Eigen values and percentage of variance are presented in Table 4.

Table 4: Observed Variations in Consumer Buying Behaviour

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings	
	Total	% of Variance	Cumulative %	Total	% of Variance
1	3.872	19.362	19.362	3.872	19.362
2	2.456	12.280	31.642	2.456	12.28
3	2.159	10.796	42.438	2.159	10.796
4	1.541	7.703	50.141	1.541	7.703
5	1.291	6.456	56.596	1.291	6.456
6	1.211	6.055	62.651	1.211	6.055
7	1.052	5.260	67.911	1.052	5.26

The total variance of different components with extraction and rotation sums of squared loadings is depicted in Table 5.

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Table 5: Total Variance Explained (Rotated Components)

Component	Rotated Eigenvalue	% of Variance	Cumulative %
1	2.320	11.602	11.602
2	2.100	10.500	22.102
3	2.052	10.262	32.364
4	2.040	10.199	42.563
5	1.908	9.538	52.101
6	1.643	8.215	60.316
7	1.519	7.595	67.911

Table 6: Rotated component matrix obtained

Variables	Components						
	1	2	3	4	5	6	7
Price	0.520						
Brand	0.501						
Advertisements	0.626						
Discount	0.824						
Promotion	0.679						
Store Location		0.721					
Store Ambience		0.707					
Car parking facilities		0.705					
Store Display			0.588				
Variety			0.909				
Latest trends			0.615				
Quality				0.725			
Material				0.823			
Texture				0.625			
Design					0.771		
Style					0.745		
Comfort						0.537	
Color						0.732	
Fashion						0.745	
Durability							0.818

Exploratory Factor Analysis

EFA was performed with Principal Component Analysis (PCA) under Varimax rotation to increase interpretability. Based on Kaiser criterion (eigenvalues > 1.0), 7 factors were retained which collectively explained 68% of the variance in the dataset, which surpasses the accepted standard threshold. This implies that the extracted factors explain a considerable amount of variability in the dataset (Hair et al., 2019). Factor loadings less than 0.50 were suppressed to emphasize on the strongest relationships which allowed easier interpretation.

Table 7: Factors extracted from Exploratory Factor Analysis

Factor No.	Percentage of Variance	Cumulative Percentage	Factor Name	Variables	Loading
F1	19.362	19.362	Product Positioning	Price	.520
				Brand	.501
				Advertisements	.626
				Discounts	.824
				Promotion	.679
F2	12.28	31.642	Shop Locale	Shop location	.721
				Shop ambience	.707

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				Parking facilities	.705
F3	10.796	42.438	Merchandising	Store display	.588
				Store Variety	.909
				Store trends	.615
F4	7.703	50.131	Fabric Quality	Product Quality	.725
				Product Material	.823
				Product texture	.625
F5	6.455	56.596	Aesthetics	Product Design	.771
				Style of the product	.745
F6	6.055	62.651	Elegance	Comfort	.537
				Colour	.732
				Fashion	.648
F7	5.26	67.911	Durability	Durability of the Product	.818

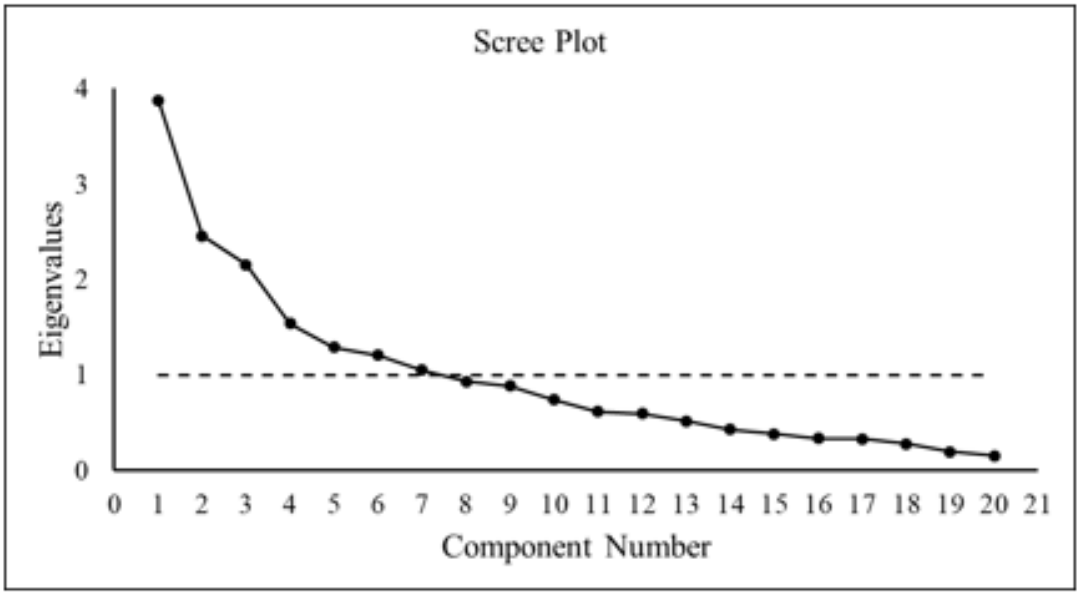

Figure 2: Scree-plot

All the 7 identified factors collectively account for approximately 68% of the total variance. All factors exhibit eigenvalues greater than 1, as demonstrated in the scree-plot (Figure 2). The identified factors are named as 'Product Positioning' (F1), 'Shop Locale' (F2), 'Merchandising' (F3), 'Fabric Quality' (F4), 'Aesthetics' (F5), 'Elegance' (F6), and 'Product Durability' (F7).

Confirmatory Factor Analysis

The seven-factor model of EFA was tested for structural validity and confirmed through CFA using AMOS 20.0. All standardized factor loadings were statistically significant ($p < .001$), confirming convergent validity. Average Variance Extracted (AVE) values were ≥0.50 and Composite Reliability (CR) values exceeded 0.70, indicating strong internal consistency.

Relationships between the factors from CFA analysis in SPSS AMOS is shown in Table 8. The notation used (↔ and →) typically indicates the type of relationship between the factors where '↔' represents a bidirectional relationship (covariance or correlation) between two factors and '→' represents a unidirectional relationship (regression path) from one factor to another. These relationships suggest how each factor is related to others in our model. For

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instance, F1 is related to F4, F5, and F6 bi-directionally, meaning they share covariance or correlation. F4, however, has a unidirectional relationship with F7, indicating that F4 influences F7.

Table 8: Relationship between different factors in CFA

Factor1	Relationship	Factor2
F1	↔	F4
F1	↔	F5
F1	↔	F6
F2	↔	F3
F3	↔	F4
F4	↔	F5
F4	→	F7
F5	↔	F6

[Source: CFA Path Diagram, AMOS]

The CFA path diagram is given in Figure 3.

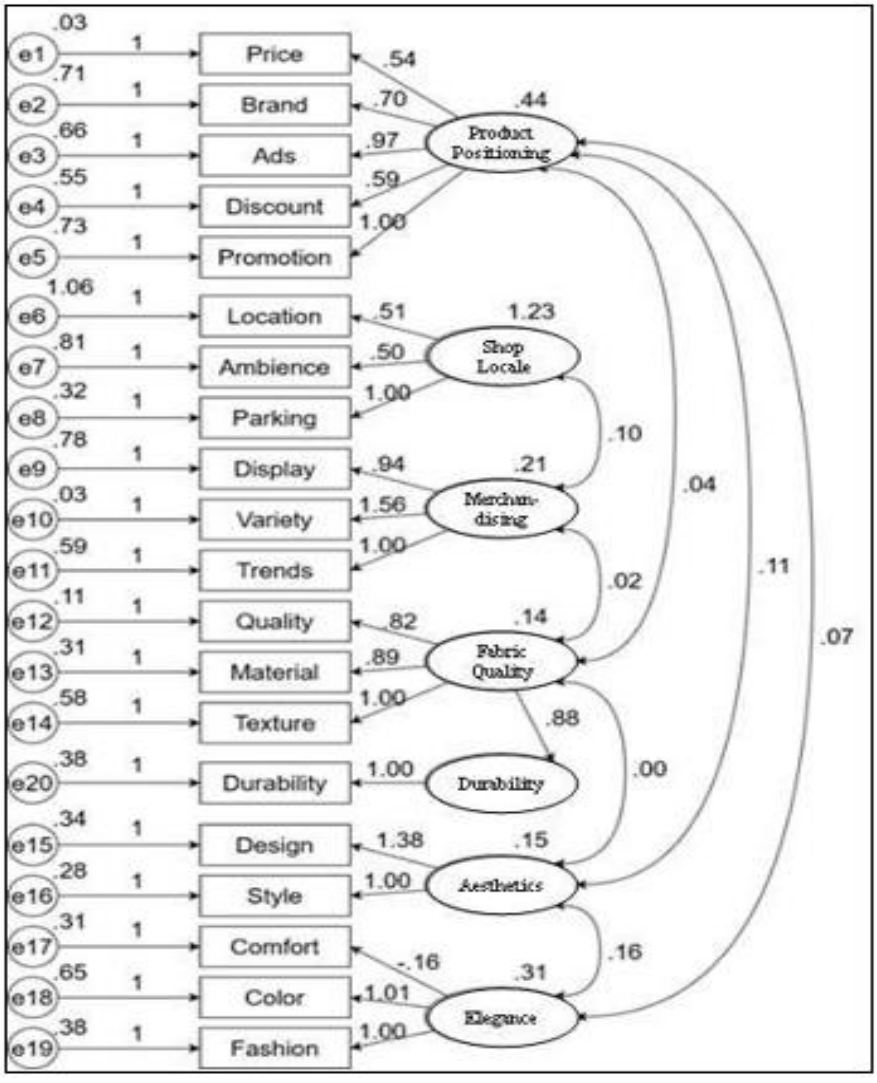

Fig 3: CFA Path Diagram

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Statistical assessment of model fit

The CFA model was tested to understand relationships among latent constructs based on observed variables 'covariance. The analysis yielded a chi-square value of 298.218 with 163 degrees of freedom (dF) (Table 9), resulting in a chi-square to degrees of freedom ratio (χ^2/dF) of 1.83, which indicates a reasonably good fit of the proposed model since values close to 1 suggest a strong representation of observed variables and their relationships. Importantly, the ratio being below the threshold of 5 supports the conclusion of adequate model fit, confirming the reliability of the specified relationships among the latent constructs.

Table 9: Statistical values as obtained from CFA

Statistic	Values
Chi-square Value	298.218
Degrees of Freedom	163

The result confirms the structural soundness and constructs validity of the model, reinforcing its conceptual relevance in capturing consumer behaviour dynamics in Kolkata's organized apparel sector.

Gender-Based Differences: t-Test

An independent samples t-test was conducted to examine gender-based differences in the influence of 7 apparel retail attributes, namely Product Positioning, Shop Locale, Merchandising, Fabric Quality, Aesthetics, Elegance and Durability on consumer purchase intention. The analysis showed that gender moderates the relative importance of specific retail attributes, although overall factor relevance remains consistent.

Table 10: Gender-Based Comparison of Factor Means Using Independent Samples t-Test

Factor	Male Mean	Female Mean	t-statistic	p-value	Interpretation
Product Positioning	2.88	3.64	-6.47	< 0.001	Significant difference: Females rated higher
Shop Locale	3.18	3.35	-1.87	0.063	No significant difference
Merchandising	3.98	3.79	2.92	0.004	Significant difference: Males rated higher
Fabric Quality	4.35	4.42	-1.54	0.125	No significant difference
Aesthetics	4.35	3.89	6.23	< 0.001	Significant difference: Males rated higher
Elegance	4.81	4.59	3.77	< 0.001	Significant difference: Males rated higher

Table 10 shows that female consumers rated product positioning higher than their male counterparts, highlighting greater sensitivity to price and promotion mix. In contrast, the male consumers gave higher weightage to merchandising, aesthetics and elegance, emphasizing the influence of product variety, latest trends as well as product design, comfort and style. There was no significant gender difference observed for shop locale and product material.

Chi-Square Analysis

The chi-square test of independence was applied to examine the relationship among the extracted factors from EFA and the tabulated summary is given below in Table 11.

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Table 11: Chi-square test results

Factor 1	Factor 2	Chi-Square (χ^2)	p-value	Interpretation
Product Position	Shop Locale	3.26	0.071	No significant relationship
Product Position	Merchandising	0.00	0.951	No significant relationship
Product Position	Aesthetics	6.56	0.010	Significant relationship
Product Position	Elegance	10.53	0.001	Significant relationship
Product Position	Durability	1.12	0.291	No relationship
Shop Locale	Merchandising	12.41	0.0004	Strong significant relationship
Shop Locale	Aesthetics	11.54	0.0007	Significant relationship
Shop Locale	Elegance	14.48	0.00014	Significant relationship
Shop Locale	Durability	11.46	0.00071	Significant relationship
Merchandising	Aesthetics	20.04	< 0.001	Very strong relationship
Merchandising	Elegance	19.09	< 0.001	Very strong relationship
Merchandising	Durability	15.37	< 0.001	Strong relationship
Aesthetics	Elegance	28.83	< 0.001	Extremely strong relationship
Aesthetics	Durability	16.28	< 0.001	Strong relationship
Elegance	Durability	17.90	< 0.001	Strong relationship

The results show multiple statistically significant associations which mean that these factors are interconnected and jointly influence consumer purchase decisions. Product positioning is associated with Aesthetics and Elegance. Similarly, Shop locales are associated with Merchandising and Durability while both Aesthetics and Elegance is correlated with Merchandising. The strongest relationship observed was between Aesthetics and Elegance. The analysis shows that several factors so extracted are closely related to each other. Significant associations among product positioning, shop locale, merchandising, aesthetics and elegance prove that consumers do not evaluate these separately; rather their perceptions of one factor tend to affect how they view others. The associative nature of relationships suggests that purchase decisions of consumers are a result of combined evaluation of product image, store environment and promotional drives.

Hypotheses formulation and testing

Based on literature survey and factors extracted from EFA, a set of hypotheses was formulated, which are proposed below,

H1: The proposed measurement model provides an acceptable fit to the data.

The current study used 362 valid respondent data and identified 20 different attributes subject to EFA that yielded 7 factors which were both reliable and valid. The CFA conducted to validate the extracted factors yielded a chi-square value of 298.218 with 163 degrees of freedom, and ratio (χ^2/dF) of 1.83, which is well below the accepted threshold value of 3. Given the obtained goodness-of-fit values, H1 is accepted, suggesting that the factors generated through EFA was statistically suitable for subsequent analysis.

H2a: There is a significant difference between male and female consumers in their perception of product positioning.

Independent samples t-test conducted to examine gender-based differences reveal the value of t = -6.47 and value of p<.001, thereby showing a significant difference. The calculated mean among females was 3.64 compared to males (=2.88), indicating that in this context, women are more responsive to external stimuli such as price, brand, discounts and promotions. Since the results show a significant difference, H2a is accepted.

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H2b: There is a significant difference between male and female consumers in their perception of merchandising.

The t-test results exhibit a higher mean evaluation of merchandising for males (=3.98) compared to females (=3.79) with value of t = 2.92, p=0.004, suggesting male sensitivity towards visual display, product variety and latest trends. As the results vary significantly, H2b is accepted.

H2c: There is a significant difference between male and female consumers in their perception of aesthetics.

The t-test results (t = 6.23, p<0.001) with ratings for males (=4.59) and females (=3.89) indicate that males rated aesthetic appeal significantly higher than females. This suggests that men placed more emphasis on product design and style. Since there is a significant difference, H2c is accepted.

H2d: There is a significant difference between male and female consumers in their perception of elegance.

In case of elegance, the results show the value of t = 3.77, p<0.001; male respondents reported higher rating (=4.81) than the female respondents (=4.59), indicating a pattern of male sensitivity to comfort, colour and design. Since the results for males and females vary, H2d is accepted.

H2e: There is a significant difference between male and female consumers in their perception of shop locale.

The t-test result yielded a value of t = -1.87, p =.063 was not significant at .05 level of significance. This implies that both male and female consumers share similar views regarding the store attributes. Since the results show no significant difference, H2e is rejected.

H2f: There is a significant difference between male and female consumers in their perception of fabric quality.

The t-test result yielded a value of t = -1.54, p =.125 was not significant at .05 level of significance. This implies that both genders attach similar importance to the quality of material used. Since the results are not significantly different, H2f is rejected.

H3a: There is a significant association between Aesthetics and Elegance.

Chi-square results (χ^2=28.83, p< 0.001) reveal a strong association between the two factors, Aesthetics and Elegance. Consumers rating garments as aesthetically appealing also perceived them to be elegant, indicating that these two factors reinforce each other. Therefore, H3a is accepted.

H3b: There is a significant association between Shop locale and Merchandising.

With a value (χ^2=12.41, p = 0.004) from Chi-square tests, it shows strong association between the two stated factors. This proves that shop location with its ambience and facilities is linked with effective merchandising. These factors jointly appeal to the consumer and hence H3b is accepted.

H3c: There is a significant association between Fabric quality and Aesthetics.

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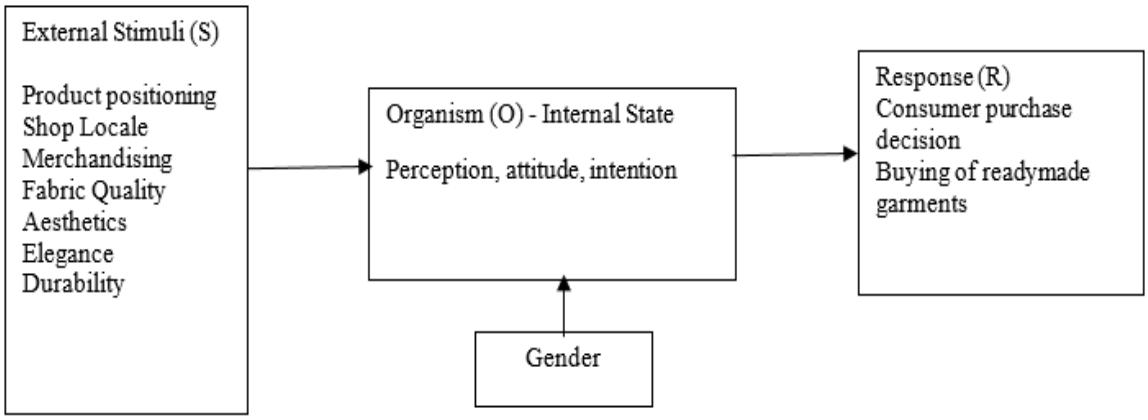
The results of Chi-square (χ^2=1.84, p = 0.175) clearly depict that the result is insignificant. Consumer perceptions on fabric quality do not necessarily influence aesthetic appeal and therefore H3d is rejected.

H3d: There is a significant association between Durability and Elegance

The value (χ^2=2.71, p = 0.103) indicate a non-significant result. The findings suggest that durability and elegance are evaluated separately in the minds of the consumer. Hence H3d is rejected.

Out of the total hypotheses stated and tested, the majority were statistically accepted while a few were rejected. The accepted hypotheses show that consumer purchase decisions are influenced by a group of interrelated external cues. Conversely, the rejected hypotheses prove that all the factors do not exert equal influences on consumer decision.

The results and findings are in strong alignment with Stimulus–Organism–Response (SOR) framework. The external retail environment acts as the stimulus (S) that shapes the internal psychological state of the consumer, which is the organism (O), which ultimately influences consumer response (R) in the form of purchase behaviour. The seven extracted factors represent the external cues that collectively stimulate consumer's attitude and perceptions towards purchase. Gender based variations and inter-factor associations further strengthen the fact that consumer responses arise from an integrated evaluation of product, store and promotional stimuli. Therefore, the SOR based model validates the theoretical pathway from external (environmental) stimuli to behavioural response. Practically this framework provides the apparel retailers with actionable insights for strategic retail decision making in Kolkata's organized apparel market.



[Fig 4: Conceptual Framework in alignment with SOR model]

DISCUSSION

Exploratory Factor Analysis (EFA) and its subsequent validation via Confirmatory Factor Analysis (CFA) provide a structured framework for understanding how external cues shape consumer decision-making, consistent with the Stimulus–Organism–Response (SOR) model, where external attributes are the stimulus influencing perception and attitude of consumers (organism) ultimately influencing purchase behaviour which is the response, Mehrabian& Russell (1974); Donovan & Rossiter (1982).

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Product positioning encompasses pricing, branding, discounts, advertisements and promotion, in SOR context, all these stimuli trigger internal cognitive process that produces a positive purchase response. Shop locale significantly impacts consumer preferences with convenient store location, environment and customer-friendly facilities cultivating loyalty and trust in customer's mind. Within the SOR framework, the retail environment operates as a stimulus influencing affective responses, which in turn facilitate approach behaviours. Merchandising involves product display, variety and latest trend influencing customer satisfaction and purchasing behavior positively. From the SOR perspective, merchandising functions as a stimulus that enhances emotional and cognitive responses, reinforcing positive purchase intentions. Fabric Quality emphasizes material composition and texture, crucial for meeting consumer standards.

This factor operates as a stimulus, eliciting evaluative responses in the organism stage of the SOR model. Aesthetics encompasses garment design and style, varying by individual preference and strongly influencing purchasing decisions. Study shows aesthetics as a strong influencer, particularly for male consumers. Elegance focuses on clothing comfort, colour choices and fashion selections that enhance presentation and confidence. It reinforces consumers' aspirational self-expression, translating external cues into internalized perceptions that shape purchase behaviour. Finally, Durability, closely linked to perceived quality, emphasizes product longevity and construction quality essential for apparel. This factor is closely linked to perceived quality and affects long-term value assessments. In the SOR model, these stimuli inform the organism's evaluative processes, strengthening the perceived benefits and reinforcing purchase decisions.

Theoretical & Practical Implications

The seven extracted factors in close alignment with the SOR framework guide the current research. The constructs reflect external cues operating as environmental stimuli (Stimulus). These attributes form the basis of internal evaluations and judgements (Organism) shaping an individual's attitudes towards purchase. The outcome of the process is the customer's purchase intention (Response). This mapping reinforces the theoretical relevance of the SOR model. Retailers should set the right price, build strong brands and implement targeted promotional campaigns for effective product positioning. They should respond to the observed gender-specific sensitivities, such as the higher price responsiveness among female consumers. A well-structured approach enhances brand loyalty, making products more appealing by ensuring they are perceived as fashionable, affordable and valuable in the eyes of the consumers. Investments in location selection, ambience, car parking facilities and spatial layout are crucial.

A thoughtfully designed store with comfortable interiors, proper lighting and a pleasant ambience enhances the shopping experience. Easy accessibility, attractive product displays and added conveniences like seating areas or fitting rooms make customers feel appreciated, increasing footfall and sales. Engaging product displays, an extensive range of styles, and the latest fashion trends contribute to an enjoyable shopping experience. Neatly arranged shelves, themed setups, and well-dressed mannequins guide shoppers towards new collections. A strategic approach to merchandising enhances purchase volume and fosters customer loyalty. Strategic alignment of product displays, assortments and fashion relevance can stimulate both impulse purchases and brand credibility. Shoppers prefer garments made from high-quality materials that provide comfort and a premium feel. When customers recognize the value of quality clothing, they are more inclined to purchase and recommend the brand. Focusing on aesthetics allows brands to cater to different fashion preferences. Offering a range of trendy

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and visually attractive options boosts customer confidence and encourages them to be associated with the brand. Well-fitted garments in sophisticated colors and fashionable designs enhance a person's confidence. A balance between modern trends and timeless styles enables consumers to find outfits suitable for various occasions. When clothing combines elegance with comfort, it attracts individuals who appreciate both style and ease. Shoppers seek clothing that maintains its shape, colour and usability over time. Using reinforced stitching, premium fabrics and expert craftsmanship contribute to product longevity. Marketing efforts should highlight durability by showcasing garments' resistance to daily wear and tear.

CONCLUSION

The current study examined the external factors influencing apparel purchase behaviour in Kolkata's organized retail market, focusing on how external retail cues shape consumer decision-making. Using EFA, seven external factors were identified, viz. Product Positioning, Shop Locale, Merchandising, Fabric Quality, Aesthetics, Elegance and Durability which were further validated by CFA. Gender based differences were observed in case of Product Positioning, Merchandising, Aesthetics and Elegance. Statistically significant associations have been found amongst some of the factors which indicated that purchase decisions of consumers are a result of combined evaluation of product, store and promotional drives. The study reinforces the Stimulus–Organism–Response (SOR) framework, showing that external retail stimuli (S) elicit internal cognitive and emotional evaluations (O), which subsequently guide behavioural intentions and purchase decisions (R). Theoretically, the application of the SOR model to the emerging apparel market provides an empirically grounded framework linking external cues with internal evaluation and behavioural outcomes. While the current study acknowledges the limitations of a marginal KMO value and a moderate sized CFA sample, nevertheless, its contributions to understanding consumer behaviour in the context of Kolkata market remains significant. By identifying and validating context-specific external factors influencing apparel purchase behaviour, it helps in the advancement of academic discourse on retail psychology.

The study also reveals that retailers operating in this market face the dual challenge of catering to an ever-evolving consumer base while simultaneously providing a superior shopping experience. These insights necessitate the adoption of consumer-centric strategies that align with the preferences and expectations of the Kolkata market. To thrive in this competitive landscape, retailers must integrate innovation, continuously adapt to emerging trends and ensure an optimal balance of quality, affordability and experiential shopping. By doing so, they can effectively cater to the diverse needs of Kolkata's apparel consumers while fostering long-term customer satisfaction and loyalty.

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