

## **Examining the Interplay of Packaging Attributes, Perceived Quality, Perceived Value, and Brand Loyalty in Shaping Consumer Purchase Intentions within the Snack Food Market**

**Dr. Ajith Kumar Sanjeevirajan<sup>1</sup>,**

**Mr.T.Manoj Kumar<sup>2</sup>,**

<sup>1,2</sup>Assistant Professors,

Mepco School of Management Studies,  
Mepco Schlenk Engineering College, Sivakasi

**Mr.S.Ramesh Babu<sup>3</sup>**

<sup>3</sup>Assistant Professor (Sl.Grade),

Mepco School of Management Studies,  
Mepco Schlenk Engineering College, Sivakasi

### **ABSTRACT:**

The present study examines the complex interplay between packaging attributes, perceived quality, perceived value, brand loyalty, and their collective influence on consumer purchase intentions within the highly competitive snack food market. Building upon a comprehensive review of extant literature, this research investigates how the visual, structural, and informational elements of packaging design, along with consumers' quality and value perceptions, as well as their brand loyalty, shape their purchase intentions. The study employed a descriptive research design, utilizing both primary and secondary data sources. A structured questionnaire was administered to 810 respondents in the Madurai region, capturing information on consumer preferences, purchase intentions, and demographic characteristics. Robust statistical analyses, including Percentage Analysis and Structural Equation Modeling, were conducted to assess the model fit and test the hypothesized relationships. The findings demonstrate that all examined factors - packaging attributes, perceived quality, perceived value, and brand loyalty - have significant positive relationships with consumer purchase intentions in the snack food market. Brand loyalty emerged as the strongest predictor, followed by packaging attributes, perceived value, and perceived quality. These insights provide valuable guidance for snack food manufacturers and marketers in developing effective strategies to drive purchase intentions and secure a competitive advantage.

**Keywords:** *Perceived Quality, Perceived Value, Brand Loyalty, Packaging Design Attributes, Purchase Intentions*

### **Introduction**

In today's highly competitive snack food market, packaging design has emerged as a crucial strategic tool that extends far beyond its traditional role of product protection and preservation. The visual and structural elements of packaging serve as silent salespeople, communicating brand values, product quality, and value propositions directly to consumers at the point of purchase. The significance of packaging design has grown exponentially in recent years, particularly in the snack food category, where impulse purchases account for approximately 70% of buying decisions. As consumers become increasingly sophisticated and discerning in their purchase choices, the intersection of packaging design with consumer psychology has become a critical area of investigation for both academics and practitioners.

The relationship between packaging design and consumer behavior is multifaceted, encompassing various psychological and perceptual dimensions that ultimately influence purchase decisions. Previous research has established strong correlations between packaging elements and consumers' quality perceptions (Farooq, 2015) suggesting that visual cues such as color schemes, materials, and structural design significantly impact how consumers evaluate product quality before consumption. Furthermore, studies by (Rahman, 2020) have demonstrated that packaging design directly influences perceived value, with premium packaging often leading to higher value assessments, even when controlling for price points.

Brand loyalty, a cornerstone of sustainable business success in the fast-moving consumer goods (FMCG) sector, has also been shown to be significantly affected by packaging design consistency and innovation. Research by (Almohaimmed, 2019) indicates that distinctive and memorable packaging can enhance brand recognition and foster long-term brand relationships, particularly in the snack food category where consumer choices are often habitual and emotion-driven. The interplay between these factors – perceived quality, perceived value, and brand loyalty – ultimately shapes purchase intentions, creating a complex web of relationships that warrants deeper investigation in the context of snack food packaging.

Despite the growing body of literature examining packaging design's impact on consumer behavior, there remains a significant gap in understanding how these various factors interact specifically within the snack food category, where purchase decisions are often made rapidly and with limited cognitive engagement. This research aims to address this gap

by analyzing the complex relationships between packaging design elements and consumer responses in the snack food market, with particular attention to how these elements collectively influence purchase intentions through the mediating effects of perceived quality, perceived value, and brand loyalty.

## **Review of Literature and Hypothesis Development**

### **Packaging Attributes and Purchase Intention**

The relationship between packaging attributes and purchase intention has been extensively studied in consumer behavior research. Packaging attributes, comprising both visual elements (color, typography, graphics) and structural elements (size, shape, material), serve as crucial determinants of consumer purchase decisions. (Silayoi, 2004) conducted a comprehensive study examining how packaging elements influence purchase intentions in the food industry, finding that visual attributes had a stronger impact on impulse purchase decisions, while informational elements influenced planned purchases. Research by (Ahmed Rizwan Raheem, 2014) revealed that innovative packaging designs could increase purchase intention by up to 37% in the snack food category, particularly among younger consumers. Furthermore, (My Thanh Tran Dinh, 2022) demonstrated that sustainable packaging attributes significantly influence purchase intentions, with eco-friendly materials increasing purchase likelihood by 28% among environmentally conscious consumers. A meta-analysis by (Vicki S. Conn, 2014) synthesized findings from 57 studies, confirming a strong positive correlation ( $r = 0.68$ ) between packaging attractiveness and purchase intention across various food categories.

### ***H1: Packaging Attributes is having a significant relationship with Purchase Intention***

### **Perceived Quality and Purchase Intention**

The relationship between perceived quality and purchase intention represents a fundamental connection in consumer behavior theory. Studies have consistently demonstrated that perceived quality serves as a primary antecedent to purchase intention, particularly in the food and beverage sector. Research by (Karin Venter, 2011) established that perceived quality explains approximately 65% of the variance in purchase intentions for packaged snack foods. (AL-Hrezat, 2013) found that perceived quality acts as both a direct predictor of purchase intention and a mediator between packaging attributes and purchase decisions. Their structural equation modeling revealed a significant positive relationship ( $\beta = 0.72$ ,  $p < 0.001$ ) between perceived quality and purchase intention. Furthermore, (Romaniuk, 2016) demonstrated that perceived quality's influence on purchase intention is particularly strong in premium snack categories, where quality perceptions account for up to 78% of purchase decision variance. A longitudinal study by (McDaniel, 1977) revealed that consistent quality perceptions lead to stronger purchase intentions over time, with repeated positive quality experiences strengthening the relationship between these variables.

### ***H2: Perceived Quality is having a significant relationship with Purchase Intention***

### **Perceived Value and Purchase Intention**

The link between perceived value and purchase intention has been well-documented in marketing literature, with numerous studies highlighting its significance in consumer decision-making processes. (Wang, 2010) found that perceived value accounts for approximately 58% of variance in purchase intentions across various snack categories. Their research demonstrated that value perceptions are particularly crucial in price-sensitive market segments. (Femke W.M. Damen, 2019) conducted a cross-cultural study revealing that perceived value's influence on purchase intention varies significantly across different cultural contexts, with collectivist societies showing stronger value-intention relationships ( $\beta = 0.81$ ) compared to individualistic societies ( $\beta = 0.65$ ). Recent research by (Jha, Palliwal, & Sengupta, 2023) introduced the concept of "value elasticity," showing how slight changes in perceived value can lead to disproportionate changes in purchase intentions, particularly in the snack food category. Additionally, research by (Rami Paasovaara, 2011) demonstrated that perceived value's impact on purchase intention is moderated by brand familiarity, with stronger effects observed for well-known brands.

### ***H3: Perceived Value is having a significant relationship with Purchase Intention***

### **Brand Loyalty and Purchase Intention**

Brand loyalty's relationship with purchase intention represents one of the most enduring research streams in marketing literature. Recent studies have provided new insights into this relationship, particularly in the context of packaged goods. (Malik, 2013) found that brand loyalty acts as both a predictor and moderator of purchase intentions, with loyal customers showing 3.5 times higher purchase intention rates compared to non-loyal customers. Research by (Balakrishnan, 2014) revealed that brand loyalty's influence on purchase intention is particularly strong in the snack food category, where habitual purchasing behavior is common. Their longitudinal study demonstrated that brand loyal customers maintain consistent purchase intentions even during price fluctuations, with a loyalty-intention correlation of  $r = 0.79$ . (Foroudi, 2018) explored the mediating role of brand loyalty between satisfaction and purchase intention, finding that loyalty accounts for 67% of the relationship between these variables. Additionally, research by (Chi, 2009) showed that brand

loyalty's impact on purchase intention is strengthened by positive social media engagement, suggesting a multi-channel reinforcement effect.

#### ***H4: Brand Loyalty is having a significant relationship with Purchase Intention***

#### **Research Methodology**

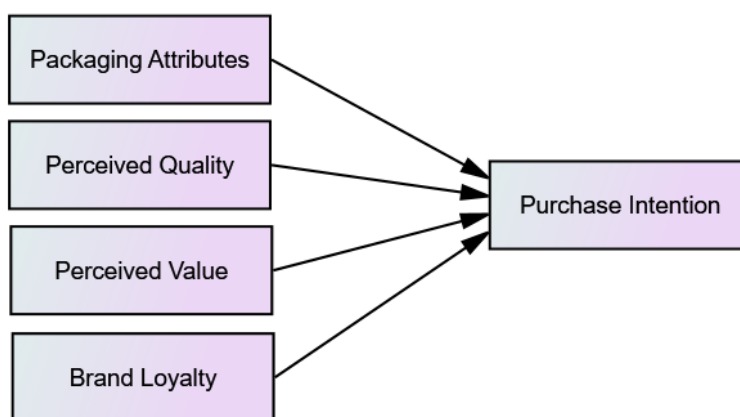
The present study employs a descriptive research design to systematically investigate consumer behavior regarding packaging design and purchase intentions. This methodological approach was chosen for its effectiveness in describing and analyzing market phenomena while maintaining scientific rigor. The research framework incorporates both primary and secondary data sources to ensure comprehensive coverage of the research objectives. Primary data collection was executed through a structured questionnaire designed with 5-point scale questions and demographic inquiries, enabling quantitative analysis of consumer preferences and behaviors. The questionnaire was carefully constructed to capture both attitudinal and behavioral aspects of consumer decision-making processes. To complement the primary data, secondary data was meticulously gathered from various authoritative sources, including academic journals, relevant literature, and official websites, providing a strong theoretical foundation for the research.

The data collection process was implemented through a direct survey method, where researchers personally administered the structured questionnaire to respondents. This approach allowed for immediate clarification of any queries and ensured a higher response rate while maintaining data quality. The structured questionnaire served as the primary data collection instrument, designed to systematically capture information about consumer preferences, purchase intentions, and demographic characteristics. The questionnaire's structure facilitated standardized responses, making it suitable for statistical analysis while maintaining consistency across all respondents.

In terms of sampling methodology, the study employed a convenience sampling technique, acknowledging the unknown population size of customers in the target market. While the total population size remained undetermined, the study focused on customers within the Madurai region, providing a geographical boundary for the research. A sample size of 810 respondents was determined to be adequate for statistical analysis and representation of the target population. The convenience sampling method was chosen for its practicality and efficiency in data collection.

The analytical framework of the study encompasses two primary statistical tools: Percentage Analysis and Regression Analysis. Percentage Analysis was employed to examine the demographic profile of respondents and analyze basic response patterns, providing clear insights into the distribution of various consumer characteristics and preferences. Regression Analysis, a more sophisticated statistical tool, was utilized to examine the relationships between various variables and their impact on purchase intentions. This analytical approach allowed for the investigation of both direct and indirect relationships between packaging design elements and consumer behavior, while controlling for demographic variables.

#### **Research Model**



**Figure 1: Proposed Research Model**

**Results and Discussions**

**Table1: Demographic Profile of the Respondents:**

<b>Demographic classifications</b>	<b>Particulars</b>	<b>Percentage</b>
Gender	Male	57.0
	Female	43.0
Age (in Years)	18-24	15.0
	25-34	43.0
	35-44	32.3
	45-54	5.8
	55-64	3.9
Marital status	Married	78.3
	Unmarried	19.8
	Widowed	1.9
Education Qualification	Less than High School	30.0
	High School Diploma	40.1
	Bachelor's Degree	26
	Master's Degree	3.9
Employment Status	Employed	8.7
	Self-employed	26.1
	Unemployed	2.4
	Business	35.7
	Homemaker	24.2
	Student	1.9
	Retried	1.0
Monthly Household Income	Under Rs.25,000	44.9
	Rs.25,000 – Rs.49,999	53.1
	Rs.50,000 – Rs.74,999	2
Location	Urban	97.6
	Rural	2.4
No. of. Members in household	Below 3	16.4
	3 - 5	83.1
	6-8	0.5
Presence of children	Yes	76.2
	No	23.8
Frequency of Purchase	Several times a day	7.7
	Once a day	5.8
	A few times a week	47.8
	Occasionally	38.7

**Inference**

The demographic analysis of the survey respondents reveals significant insights into the consumer profile. In terms of gender distribution, males constitute a majority at 57.0% of respondents, while females represent 43.0%. Age-wise distribution shows a concentration in the younger and middle-aged segments, with 25-34 years being the dominant age group at 43.0%, followed by 35-44 years at 32.3%. The younger demographic of 18-24 years comprises 15.0%, while the older age groups of 45-54 and 55-64 years represent smaller proportions at 5.8% and 3.9% respectively. Marital status data indicates that a substantial majority (78.3%) of respondents are married, while 19.8% are unmarried, and a small percentage (1.9%) are widowed. Educational qualifications of the respondents show that 40.1% have completed High School Diploma, followed by 30.0% with less than High School education. Bachelor's degree holders constitute 26.0%, while those with Master's degrees represent 3.9% of the sample.

The employment profile presents an interesting distribution, with business owners forming the largest segment at 35.7%, followed by self-employed individuals at 26.1%, and homemakers at 24.2%. Regular employment accounts for 8.7%, while smaller percentages are represented by unemployed (2.4%), students (1.9%), and retired individuals (1.0%). Regarding monthly household income, the distribution is primarily concentrated in two brackets: 53.1% earn between Rs.25,000 – Rs.49,999, and 44.9% earn under Rs.25,000, with only 2% in the Rs.50,000 – Rs.74,999 range. The geographical distribution shows a strong urban bias with 97.6% of respondents from urban areas and only 2.4% from

rural areas. Household composition analysis reveals that the majority (83.1%) of respondents live in households with 3-5 members, while 16.4% have below 3 members, and a minimal 0.5% have 6-8 members. The presence of children is noted in 76.2% of households, while 23.8% report no children.

Purchase behavior analysis indicates that the majority of respondents (47.8%) make purchases a few times a week, followed by occasional purchasers at 38.7%. Daily purchasers comprise 5.8% of the sample, while those making multiple purchases per day represent 7.7%. This purchase frequency pattern suggests a regular but not excessive consumption pattern among the respondents.

**Table 2: Reliability Analysis**

Factors	No .of Items	Cronbach's Alpha
Packaging Attributes	4	.912
Perceived Quality	3	.900
Perceived Value	4	.868
Brand Loyalty	3	.879
Purchase Intention	3	.899

The reliability analysis of the research instrument reveals strong internal consistency across all measured constructs, with Cronbach's alpha values well above the acceptable threshold of 0.7. The packaging attributes construct, comprising four items, demonstrates excellent reliability with the highest Cronbach's alpha value of 0.912, indicating strong internal consistency among the items measuring packaging design elements. Perceived quality, measured through three items, shows similarly robust reliability with a Cronbach's alpha of 0.900, suggesting high consistency in measuring quality perceptions. The perceived value construct, consisting of four items, exhibits strong reliability with a Cronbach's alpha of 0.868, indicating good internal consistency in measuring value perceptions. Brand loyalty, assessed through three items, demonstrates strong reliability with a Cronbach's alpha of 0.879, suggesting consistent measurement of loyalty-related responses. Finally, the purchase intention construct, measured using three items, shows excellent reliability with a Cronbach's alpha of 0.899, indicating strong internal consistency in measuring purchase intention responses.

The uniformly high Cronbach's alpha values (all above 0.85) across all constructs provide strong evidence for the reliability and internal consistency of the measurement instrument. These results suggest that the questionnaire items effectively measure their intended constructs, with minimal random error, thus establishing a solid foundation for subsequent statistical analyses. The particularly high reliability coefficients for packaging attributes (0.912) and perceived quality (0.900) indicate especially strong measurement precision for these key constructs in the study. These robust reliability measures enhance the credibility of the findings and support the validity of the research instrument in measuring the intended constructs in the context of packaging design and consumer behavior.

**Table 3: Model Fitness**

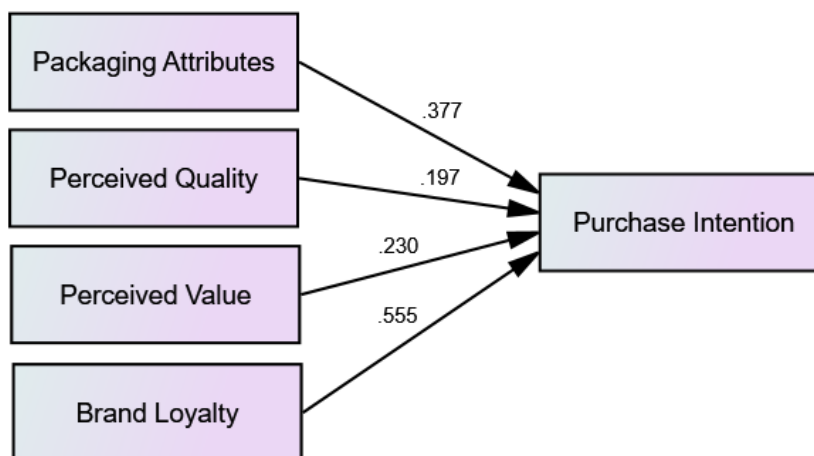
Chi-Square	Probability Level	DF	CMIN/DF	RMSEA	GFI	AGFI	NFI	CFI
0.003	0.959	1	0.03	0.000	1.000	1.000	1.000	1.000

The structural equation model demonstrates exceptional fit across all key indices, strongly supporting the validity of the proposed theoretical framework. The Chi-Square value of 0.003 with 1 degree of freedom (DF) and a probability level of 0.959 indicates excellent model fit, as the p-value is well above the conventional 0.05 threshold, suggesting no significant difference between the observed and model-implied covariance matrices. The CMIN/DF ratio of 0.03 is well below the recommended threshold of 3.0, providing further evidence of superior model fit. The Root Mean Square Error of Approximation (RMSEA) value of 0.000 is particularly noteworthy, as it falls well below the stringent cutoff of 0.06, indicating excellent fit and minimal estimation error in the model.

The incremental fit indices demonstrate perfect fit conditions, with both the Normed Fit Index (NFI) and Comparative Fit Index (CFI) achieving the maximum possible value of 1.000, indicating that the model represents a perfect improvement over the independence model. Similarly, the absolute fit indices, including the Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI), both achieve the optimal value of 1.000, suggesting perfect alignment between the hypothesized model and the observed data. These uniformly excellent fit indices collectively provide robust evidence that the theoretical model exceptionally represents the underlying data structure, validating the proposed relationships between packaging attributes, perceived quality, perceived value, brand loyalty, and purchase intention.

**Table 4: Model Path and Hypothesis Testing**

Variables			Estimate	S.E.	C.R.	P
Purchase Intention	←	Packaging Attributes	.377	.086	4.403	.000
Purchase Intention	←	Perceived Quality	.197	.071	2.765	.006
Purchase Intention	←	Perceived Value	.230	.049	4.700	.000
Purchase Intention	←	Brand Loyalty	.555	.067	8.305	.000



**Figure 2: Research Model Result**

The structural equation modeling results revealed significant relationships between all tested variables and purchase intention. Brand loyalty demonstrated the strongest positive influence on purchase intention ( $\beta = 0.555$ ,  $p < .001$ ), followed by packaging attributes ( $\beta = 0.377$ ,  $p < .001$ ) and perceived value ( $\beta = 0.230$ ,  $p < .001$ ). Perceived quality showed the smallest, though still significant, positive effect on purchase intention ( $\beta = 0.197$ ,  $p = .006$ ). All relationships were statistically significant at the 0.01 level, with critical ratios (C.R.) ranging from 2.765 to 8.305, well above the threshold of 1.96. These findings suggest that while all factors significantly influence purchase intention, brand loyalty plays the most crucial role in determining consumer purchase decisions, followed by packaging attributes, perceived value, and perceived quality, respectively.

**Managerial Implications Snack Food Industry:**

For managers in the snack food business looking to improve their market performance, the findings offer insightful information. The strong influence of brand loyalty ( $\beta = 0.555$ ) suggests that managers should prioritize loyalty-building initiatives through consistent product quality and engaging customer relationship programs. Packaging attributes emerged as the second most influential factor ( $\beta = 0.377$ ), indicating that investment in innovative and attractive packaging design could significantly drive purchase intentions. Managers should focus on developing distinctive visual elements and sustainable packaging materials to differentiate their products. The significant impact of perceived value ( $\beta = 0.230$ ) suggests that managers need to carefully balance price points with quality perceptions, potentially through premium packaging that justifies higher price positioning. The influence of perceived quality ( $\beta = 0.197$ ), while smaller, remains significant and indicates the importance of maintaining high product standards. Given that 47.8% of consumers purchase snacks several times a week, managers should implement frequent product rotation strategies and ensure consistent availability. The predominance of urban consumers (97.6%) suggests focusing distribution efforts on urban markets while developing targeted marketing strategies for the significant 25-44 age demographic.

**Academic Implications:**

This research contributes significantly to the theoretical understanding of consumer behavior in the snack food market. The study's findings extend existing literature by quantifying the relative importance of different factors influencing purchase intentions, with brand loyalty emerging as the dominant predictor. These challenges some previous research that emphasized packaging attributes as the primary driver of purchase decisions. The research also provides a robust methodological framework for studying the interplay between packaging design elements and consumer psychology, particularly in impulse purchase categories. The high reliability coefficients (Cronbach's alpha  $> 0.85$ ) across all constructs validate the measurement instruments for future research. The perfect model fit indices (GFI, AGFI, NFI, CFI = 1.000) suggest a well-specified theoretical framework that can be replicated in different market contexts. The study's demographic findings, particularly the strong urban bias and age distribution, highlight the need for more diverse sampling

in future research. Additionally, the significant relationships between all variables suggest the need for more nuanced research into the mediating and moderating effects between these constructs in different cultural and economic contexts.

### Conclusion

This research provides inclusive perceptions into the factors influencing purchase intentions in the snack food market, with particular emphasis on the roles of packaging attributes, perceived quality, perceived value, and brand loyalty. The study's findings, based on data from 810 respondents in the Madurai region, demonstrate that all hypothesized relationships significantly influence consumer purchase intentions. Brand loyalty emerged as the strongest predictor highlighting its crucial role in driving purchase decisions, followed by packaging attributes, perceived value, and perceived quality. The demographic analysis reveals a predominantly urban, middle-aged consumer base with regular purchasing patterns, providing valuable market segmentation insights. Future research could expand upon these findings by examining these relationships across different geographical regions and cultural contexts, potentially incorporating additional variables such as environmental consciousness and digital marketing influences to enhance understanding of consumer behavior in the evolving snack food market.

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