

Beyond the Product: How Smart Packaging Shapes Consumer Engagement and Repeat Purchase in Food Brands

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Abstract: In competitive food markets, packaging has evolved from a protective container to a strategic interface between the brand and the consumer. This study examines how advancements in packaging design influence consumers' experiential engagement with food products and, in turn, their tendency to repurchase and remain loyal to brands. Specifically, the research explores how packaging features, such as sensory appeal, sustainability-oriented materials, and functional design elements, shape consumers' cognitive and emotional responses during product consumption. Using data from 232 valid consumer responses collected through a structured survey, the study employs empirical analysis to assess the relationships between packaging-driven experiences and consumer patronage behaviour. The findings reveal that innovative packaging significantly enhances consumers' overall product experience by stimulating sensory involvement, reinforcing environmental values, and improving ease of use. These enriched experiences, in turn, contribute positively to repeat purchase intentions and brand preference. The study highlights packaging innovation as a critical yet underexplored mechanism for strengthening consumer-brand relationships in the food industry. By aligning packaging strategies with evolving consumer expectations and experiential values, food brands can foster deeper engagement, enhance satisfaction, and sustain long-term patronage in highly competitive environments.

Keywords: Packaging Design Innovation; Consumer Experience; Brand Engagement; Repurchase Intention; Food Marketing; Sustainable Consumption; Packaging Strategies.

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1. Introduction

The role of packaging can be an essential marketing resource, as it enhances aesthetics and the perception of the visual and sensory experience while fulfilling the protection aspect of product quality [41]. The significance lies in its use as the physical corner of the consumer-brand interaction [34]. Researchers claim that the particulars of packaging, such as material, design, and colour, significantly influence a consumer's initial impression of the product. New packaging aesthetics, including ergonomic shapes, biodegradable packaging, or gamified designs, have been found to enhance product appeal by resonating with changing consumer expectations [28]; [22]. These inventions also align with the growing customer demand for environmentally friendly products. By sharing brand values, packaging design also encourages people to form emotional

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associations and brand loyalty to the product throughout their lives. The impact of packaging on consumer experience is also highlighted in this study, as it influences their decision to purchase and their satisfaction [29]. A sense of touch, such as the material texture or the heaviness or weight of the item, develops a connection between the product and the customer and enhances perceptions of value and quality. It is particularly applicable to food packaging, where aesthetics plays the most significant role.

The need to find a novice packaging solution grows as environmental sustainability and health awareness among meta-customers rise [36]. Sustainable packaging has had a significant impact on consumer decisions, and consumers are willing to pay extra for products with eco-friendly packaging, suggesting that their values and priorities align with sustainability [22]. This transformation underscores the importance of packaging innovation as a strategic tool for competitive distinction in markets. One-time purchases can be transformed into regular patronage when presented in a way that aligns with consumer-packaged goods expectations and enhances the product experience [41]; [34]. Through innovative packaging, there is a gap in relevance between the product's functions and the consumer's aspirations, which is filled by the promoter of convenience, aesthetic enjoyment, and a sense of congruency [13]. The industry is evolving, and businesses can pursue innovative strategies to meet consumer expectations and shifts in preferences [18]. This depicts how organisations can use packaging as an operational tool to enhance customer retention and competitiveness. This is where the mediating variable, product experience, in the relationship between packaging innovation and consumer patronage has not been examined. The study examined the effects of psychological factors that have been applied, such as sensory satisfaction, affective involvement, and value perception. The research indicates that an individual factor, product experience, serves as a mediator in the interrelationship between packaging innovation and consumer patronage. The mediating role of product experience reflects its transformatory capabilities in turning innovative package structure into a long-term consumer experience. The effect of the relationship between packaging innovation and consumer patronage through product experience aligns with the current literature, which emphasises the significance of sensory and affective bonding across the decision-making process [29].

To build trust and drive purchases, attractive, sustainable packaging is essential for generating positive responses. The research presents business actions that can be implemented to package innovations with consumer expectations. This research contributes to a comprehensive study by eliminating theoretical slack and offering practical recommendations to industry actors. The current exploration aims to examine the influence of packaging innovations on consumer patronage, mediated through product experience. The findings will help understand consumer behaviour and provide viable solutions to leverage packaging as a competitive advantage in the food industry. The study investigates the interconnectedness of the conceptual framework regarding package innovation, product experience, and consumer patronising using a robust quantitative method. To present practical, useful results, the researchers narrow the scope to two hotels in the territory known to use creative packaging methods. Consumer surveys are conducted using a structured questionnaire that captures consumer perceptions, experiences, and patronage behaviours [16]; [14]. SEM is used to analyse data. SEM is an extremely powerful multivariate statistical analysis that examines both direct and indirect relationships within the research framework and confirms two primary research hypotheses [19]; [6]. Data should be collected on consumers who have encountered the creative packaging of the chosen hotels; hence, they are prioritised. The validated measures are presented in the structured, labelled survey, which serves as the prerequisite for both construct validity and reliability [11]. Several theoretical and practical gaps exist in the literature on the issue, and the study addresses them by focusing on the product experience as a mediator in food sector packaging innovation.

2. Literature Review

2.1. Packaging Innovation

The idea of packaging has changed over the last several years, when it became an important marketing tool that greatly influences consumers. One of the key drivers of packaging innovation is the growing demand for sustainable solutions. Consumers are increasingly environmentally conscious, which is why they expect food packaging to be recyclable, compostable, or biodegradable. Consequently, food companies are turning to substitutes such as biodegradable materials and coatings, recycled paper, and plant-based plastics [35]; [15]. According to the research, consumers, especially younger consumers, tend to buy products with sustainable packaging more often, even when the products are more expensive [21]. As a result, it is not only regulatory pressure that prompts the food industry to switch to a sustainable model; potential consumers are also increasingly interested in environmentally friendly packaging options. Technological developments have greatly contributed to packaging innovation, emerging alongside sustainability. Consumers can use these technologies to get access to detailed information about the nutritional value and origin of the food and even its freshness [10]. Moreover, smart packaging systems with temperature and humidity sensors help monitor the environment in which food is stored and transported, thus minimising deterioration and ensuring product quality [26]. To illustrate, the ability to track refrigerated food products in real time has made the food chain more transparent and enabled consumers to feel safer about the quality and safety of the products.

Moreover, the inclusion of Internet of Things (IoT) technologies has increased customer individualisation, thereby enhancing customer service and enabling personal product suggestions. Package design is also a decisive factor in consumer decision-making. Packaging is the first point of contact with a product and can convey meaningful signals that connote food quality, freshness, and genuineness. It has been shown that the visual appeal of packaging can increase a product's perceived value and significantly affect the intention to buy. Moreover, branded packaging that indicates a company's level of sustainability contribution can have a significant positive effect on brand loyalty, especially among environmentally oriented consumers [24]. Likewise, a study found that transparent packaging can change consumers' perceptions of a product's freshness and confidence, as it allows them to see inside the package. Also, transparent labelling, that is, highlighting eco-friendly, fair-trade, or organic certification, can help food brands meet the growing demand from clients for ethical products [12]. In the food industry, the visual identity conveyed through packaging plays a vital role in shaping consumer perceptions and purchasing decisions as the industry becomes increasingly competitive [8]. The consumer need for convenience in the food industry, along with technological change and sustainability, has driven innovations in packaging. The growing trend in packaging has been toward resealable, portion-controlled, easy-to-open, and easy-to-handle packaging that can also be used for on-the-go consumption, driven by consumers' hectic lifestyles.

Individual packets, resealable plastic bags, and microwave dishware have become popular, which allows people to consume food with little effort. Such innovations provide consumers with comfort, aligning with their preferences, and help reduce food waste by enabling products to be consumed in easy-to-digest units. Besides, user-friendly packaging, i.e., packages with removable lids or easy-opening seals, will most certainly lead to repeat buying and enhance the consumer experience in general [10]. Given that convenience remains a key concern for consumers, it is the responsibility of food brands to ensure their packaging solutions are sustainable, easy on the eye, and utilitarian and convenient [17]. Many obstacles are faced by the food industry, even though it seems apparent that packaging innovation presents its benefits. The high cost of adopting sustainable packaging materials is a major hindrance. Biodegradable and plant-based plastics are often less cost-efficient than conventional plastic packaging, which is a barrier for small and medium-sized enterprises (SMEs) interested in adopting more sustainable materials [26]. Moreover, sustainable materials are quickly gaining popularity, but in most cases, they come with trade-offs in performance, including durability, moisture resistance, and shelf life, especially for perishable foodstuffs. The food business is obligated to address those barriers by leveraging research and innovation to develop more productive, cost-efficient resources to maintain the quality and safety of the contents they contain [12]. There should be reliability in communicating the environmental targets of packaging solutions, while ensuring consumer satisfaction and that product quality is not compromised. Therefore, it is highly necessary to advance materials science.

Concentrating on technological improvements, convenience, and sustainability, the food packaging industry is likely to shape the future of packaging. As consumer bases change, consumers will force food companies to adopt packaging strategies that are consumer-friendly and environmentally conscious. It is projected that adoption of intelligent packaging, which provides real-time information on food freshness and safety, and active packaging, which reacts with the contents of the package and alters them to maintain food quality, will rise in the upcoming years. Moreover, integrating the latest technologies, such as blockchain and IoT, will enhance supply chain transparency, enabling the food's route to be tracked from the farm to the Table [15]. As these technologies continue to develop, food brands will have to balance sustainability, functionality, and cost to ensure their packaging meets the needs of both consumers and regulatory authorities [25]. Packaging innovation in the food industry is a vibrant and fundamental sector, driven by the need to address sustainability issues, enhance consumer experience, and improve the usefulness of food packaging. As the industry evolves, it will remain crucial to consider packaging in shaping brand perceptions that affect its consumer purchasing decisions, as well as in controlling its environmental impact. Innovation that is mutually beneficial to companies and the environment can still be achieved by food companies through consumer-centric design, leveraging existing sustainable practices, and adopting new technologies. These innovations will determine their future success and depend on continuous research and development in materials science, packaging design, and smart technologies [24].

2.2. Consumer Patronage

The future sustainability and success of food-related operations, including restaurants, food manufacturing, and food retailing, largely depend on consumer patronage. It summarises the likelihood that buyers will return to or repurchase the same establishments or brands, which involves multidimensional interactions with factors such as brand loyalty, value, and preferences [3]. To maintain and develop regular patronage, the food industry should consider diverse aspects that drive consumer satisfaction and loyalty. One of the critical factors in deciding which consumers will patronise a brand is brand loyalty. It has been found that highly brand-loyal consumers are more likely to shop at the same establishment or brand for a long time. This loyalty often results from an emotional connection with the brand, formed through consistent positive associations. It can include stimuli such as getting pleasure from using what was bought before, not being new to the menu, or belief in the brand [1]. In the food service scenario, the brand connection is augmented through both physical and digital interactions, enhancing the overall consumer experience. Liu [4] has concluded that companies that specialise in creating

memorable, unique experiences are more likely to attract repeat customers, as consumers tend to revisit an establishment to renew a pleasant experience. Service consistency and the convenience of location are external factors that contribute significantly to frequent patronage, along with emotional commitment. Studies show that users of food facilities are more likely to revisit them when facilities are close to their homes or workplaces.

Although some competitors may offer a quality of experience similar to the defender's, convenient locations can drive repeat business, especially in the quick-service restaurant (QSR) segment, where people spend time [7]. This aspect of convenience is especially important in highly populated cities, where people are concerned about the accessibility of food services. Loyalty programs and incentives also play a significant role in shaping consumer patronage in the food sector. Many restaurants use so-called loyalty programs that give buyers the privilege of receiving discounts or special offers, as well as other material benefits upon return [4]. The programs aim to create a perception of greater value in customer patronage, thus leading to continuous business. Digital loyalty programs, including mobile applications and rewards cards, have proven very successful at inducing repeat business in fast-food and coffee shops, among others, according to research by Kovalev et al. [9]. Such incentives not only drive repeat traffic but also instil brand appreciation among customers, thus solidifying brand attachment and fostering long-term loyalty. The food industry is also one where social influence and word-of-mouth recommendations are highly significant in consumer patronage. It has been found that people who are satisfied after a positive experience with a culinary brand or restaurant tend to share it with others, thereby leading to the acquisition of new clients [23]. Consumer reviews in the digital age can extend their impact on brand presence, as services such as Yelp and TripAdvisor enhance their reach, making them a highly powerful form of social influence.

Online reviews and social media endorsements of brands can be highly effective in making potential consumers aware of a product or service and persuading them to use it, by making brands more credible and attracting more business. The integrity of culinary offerings in terms of its diversity and innovation greatly determines the patronage by consumers. Studies suggest that food variety, including new and diverse as well as health-oriented choices, is a dominant factor in consumer choice in the restaurant and food service industries [20]. It is believed that businesses that alter their menus to include plant-based, organic, or gluten-free options will be able to keep customers engaged and maximise loyalty as consumer demands and tastes change. Moreover, it is possible to introduce periodic or temporary menu items and special offers to encourage consumers to return more often to explore new dishes. Hence, there is a strong need to sustain customer interest and recapture them through continued innovation in the dishes they offer. The factors that motivate consumer patronage of the food industry include the interplay among brand loyalty, convenient location, service consistency, loyalty incentives, social influence, and community participation. Companies that can control these factors effectively may enhance their ability to attract and retain loyal customers, thereby ensuring long-term success. To meet the ever-growing consumer demand for convenient, tailor-made, and sustainable experiences, food companies must constantly evolve and transform across all aspects, without compromising on quality and service [23].

2.3. Product Experience

The food sector is one where product experience has become an important factor in shaping consumer behaviour, influencing purchase decisions, customer satisfaction, and future brand loyalty. The sensorial, affective, and intellectual reactions a consumer develops upon exposure to a product can significantly influence its quality, value, and overall satisfaction [30]. Regarding food, the product experience refers to the overall sensory experience consumers have when engaging with food products, encompassing flavour, texture, appearance, packaging, and overall effect. According to recent studies, the role of product experience in the food industry is shifting, as consumers seek personalised, innovative, and unique experiences that align with their preferences and values. Sensory appeal is one of the main factors that influence the product experience. Sensory experiences, which may include flavour, smell, texture, and visual appearance, as well as the ability to affect consumer perception and decisions, are vital in the food industry. Researchers have shown that multisensory experiences of food products significantly affect consumer satisfaction and purchase intentions [33]. In this respect, a perception of the visual delight of food with its colours, enticing packaging, etc., may make people experience positive emotions and develop an expectation regarding high taste. Also, food products have a strong impact on consumer satisfaction and entertainment through their texture and aroma. Creating the possibility of activating numerous senses is another contribution to the overall product experience and prepares consumers to become more loyal. Another attribute of the product experience relates to the role of product innovation. Brands that offer new products with unique tastes, ingredients, or cooking techniques are more likely to attract consumer attention and deliver positive experiences.

The innovation of food products has recently shown strong potential to shape consumer recognition and buying behaviour, particularly when it focuses on healthy food solutions such as mineral, organic, or plant-based foods. In the modern world, consumers are increasingly dependent on products aligned with new health trends. It is thus important to develop product innovations that align with these preferences to enhance the product experience. On the same note, menu reintroductions in the food service industry, such as seasonal offerings and limited-time offers, are among the factors driving improvements in the

overall experience and consumer retention [32]. Other product experience issues besides sensory and product innovation are packaging in the food industry. The packaging itself can serve as protection for the product and enhance its sensual and emotional arousal. A study by Rundh [2] found that packaging design significantly affected consumers' attitudes toward quality and value, including factors such as colour, material, and messaging. For example, new environmentally aware consumers have adopted environmentally friendly packaging preferences. Many food brands have adopted environmentally friendly packaging practices to improve their image and satisfy their socially conscious customers [35]. This enhanced product experience can be attained through finding a way to remind consumers of important product characteristics, which may include freshness, origin, or health benefits, in their packaging, which will lead to increased consumer confidence and gratification. Consumers' expectations and perceptions also significantly affect how the product is described. In a study by Veale and Quester [7], the authors claim that product experience should align with consumer expectations to build loyalty and satisfaction. When a product consistently meets or surpasses consumer expectations, achieving a positive experience becomes easier, and repeat patronage becomes the norm. On the other hand, when the product does not work as anticipated, it can lead to disappointment and ultimately result in the loss of consumer loyalty (Figure 1).

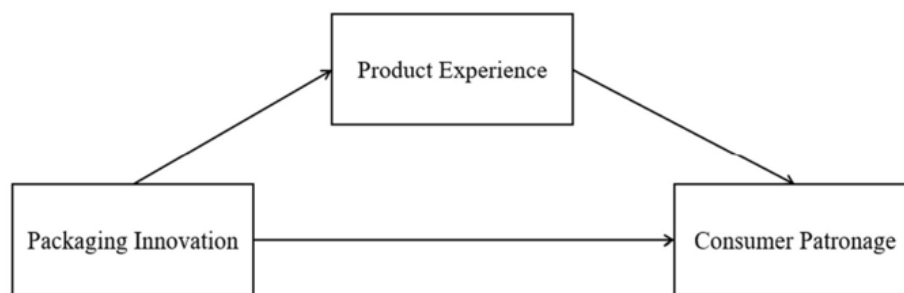


Figure 1: Proposed conceptual framework

This emphasises the importance of ensuring that the quality- and value-based consumer experience is not compromised, from product development through marketing and packaging. The consideration of the sustainability of the product experience has grown significantly in recent years. Food brands' product offerings combine sustainability with products, as consumers are increasingly concerned about the environmental impact of the products they use. Globally, research by Duarte et al. [31] suggests that food brands that place significant emphasis on environmental protection measures through sound sourcing, eco-friendly farming methods, and waste management efforts are more likely to deliver positive product experiences that appeal to consumers with ecologically minded values. Such a shift towards sustainability will not only create a better product experience but also strengthen the brand's reputation, thereby cultivating lasting consumer loyalty. The product experience highly influences consumer behaviour in the food industry. The product experience is all-encompassing, including product innovation, sensory, packaging, and in-store design, sustainability, and products aligned with consumer expectations. With the consumer preferences constantly evolving, food companies will have to adapt to these changes, offering innovative, personalised, and environmentally-friendly items to enhance the consumer experience and generate long-lasting consistency in its desire to remain loyal. By understanding the multidimensional nature of the product experience, food brands can better align with the needs of the ever more quality-conscious, conformist consumer base and position themselves as successful organisations in the long term [3]; [32]. The following hypotheses are developed from the literature review. Based on the literature review, the following hypotheses are formulated:

- **H1:** Packaging Innovation has a significant effect on Consumer Patronage.
- **H2:** Packaging Innovation has a significant effect on Product Experience.
- **H3:** Product Experience has a significant impact on Consumer Patronage.
- **H4:** Packaging Innovation positively affects Consumer Patronage through Product Experience.

3. Research Methodology

The research approach used in this study was a quantitative design, supported by a survey, given its advantages for studying phenomena in depth.

3.1. Sampling

Convenience sampling was used to gather people who purchase food items in restaurants. Questionnaires were used to send out the survey to 280 people. Completed surveys were received, amounting to 256. The final sample was 232 after inconsistent

and incomplete responses were removed. There are two sections in the questionnaire. It was done using demographic data, including gender, age, and preferred e-commerce platforms. In the second section, questions of scale measurement will be incorporated, i.e., a 5-point Likert scale (1=strongly disagree, 5=strongly agree).

3.2. Measuring Instruments

- **Product Experience:** Ordinarily, measurement is performed using scales for appearance, senses, usability, and emotional responses. Brakus et al. [5] developed a popular length of brand experience that incorporated sensory, affective, intellectual, and behavioural aspects.
- **Packaging Innovation:** Measures can be based on constructs such as its functional benefits, Aesthetic appeal, and ease of use. Silayoi and Speece highlight the effects of packaging factors on consumer purchases.
- **Consumer Patronage:** Factors such as brand loyalty, intent to repeat purchase, and customer satisfaction are often included in scales. Zekiri and Hasani [39] provide insight into the packaging concept and its use to promote patronage behaviour.

4. Results

4.1. Demography

Table 1 illustrates the demographic and behavioural characteristics of the respondents by gender, age, occupation, preferred restaurant, and purchase frequency. The gender analysis indicates that male respondents (64.7%) outnumber female respondents (35.3%). By age, the largest percentage of respondents (40.1 per cent) falls between 21 and 30, with respondents under 20 at 37.5 per cent. Lower proportions are in the 31–40 years (12.9%) and 40+ years (9.5%) categories. Occupationally, the largest percentages are among private-sector employees (25.9%), students (23.2%), and state employees (22.4%). The percentage of self-employed respondents is 16.4%, whereas the proportion of unemployed respondents is only 12.1%. Restaurant R2 has the highest popularity (38.4%), followed by R1 (28.9%) and R3 (24.1%), which is moderately popular. The least popular choice is restaurant R4 with its 8.6 per cent rating among the respondents. According to the purchase frequency data, the most frequent purchase frequency is weekly, with 25.9 per cent of respondents indicating this. Monthly and daily acquisitions (24.6% and 7.3%, respectively) are other large-scale trends. Irregular purchases made over three months or infrequently account for 23.7% of the total figure.

Table 1: Demographic factors

Particulars	Items	Frequency	(%)
Gender	Female	82	35.3
	Male	150	64.7
Age	Below 20	87	37.5
	21-30	93	40.1
	31-40	30	12.9
	Above 40	22	9.5
Occupation	Student	54	23.2
	Private sector employee	60	25.9
	Public sector employee	52	22.4
	Unemployed	28	12.1
	Self-employed	38	16.4
Most Preferred Restaurants	R1	67	28.9
	R2	89	38.4
	R3	56	24.1
	R4	20	8.6
Frequency of purchase	Daily	17	7.3
	Weekly once	60	25.9
	Monthly one	43	18.5
	Monthly twice	57	24.6
	Three months once	28	12.1
	Rarely	27	11.6

4.2. Confirmatory Factor Analysis

Table 2 shows the factor analysis of the constructs Packaging Innovation, Product Experience, and Consumer Patronage, including eigenvalues, amounts of variance explained, and measures of sampling adequacy. The Packaging Innovation's eigenvalue of 3.436 indicates good retention of the factors aspect, as it explains 68.72% of the variance. KMO (Kaiser-Meyer-Olkin) value is 0.858, indicating an ideal use of factor analysis, and Bartlett's test is significant ($p = 0.000$), indicating the appropriateness of the correlation matrix. Likewise, the eigenvalue of Product Experience is 2.827 and accounts for 70.68 per cent of the variance. Appropriate sampling adequacy is indicated by the KMO value (0.797), and the Bartlett test is also significant ($p = 0.000$), which indicates the analysis is correct. There is an eigenvalue of Consumer Patronage of 2.823, with a standardised value of 70.56 per cent, which explains the variance, and a KMO score of 0.800, indicating satisfactory sampling adequacy. Bartlett's test ($p = 0.000$) confirms the importance of the factor model, indicating its appropriateness. All in all, the findings indicate sound factor loadings, with large variances and strong indicators of sampling adequacy and correlation, affirming the dimensionality of the constructs and their measurement properties.

Table 2: Confirmatory factor analysis

Constructs and Dimensions	Eigenvalue	% Variance	KMO Measure of Sampling Adequacy	Bartlett's Test Significance
Packaging Innovation	3.436	68.72	0.858	0.000
Product Experience	2.827	70.68	0.797	0.000
Consumer Patronage	2.823	70.56	0.800	0.000

4.3. Measurement Model Analysis

4.3.1. Packaging Innovation

The items (PI1 to PI4) show factor loadings ranging from 0.893 to 0.94, indicating high indicator variance. The CR is 0.960, and the Cronbach's alpha is 0.883, indicating high internal consistency. The average variance extracted (AVE) of 0.857 also demonstrates strong convergent validity, as it exceeds the stipulated requirement of 0.5.

4.3.2. Product Experience

The items loading on the factor range from 0.81 to 0.86 and show satisfactory internal reliability. It has a CR of 0.903 and an alpha (Cronbach's alpha) of 0.811, indicating good internal consistency. This construct has convergent validity, as indicated by an AVE of 0.701.

4.3.3. Consumer Patronage

The component loadings (CP1-CP4) are very high, ranging from 0.921 to 0.957, indicating excellent indicator reliability. Cronbach's alpha = 0.884, and the CR value is 0.966, both of which are good. This construction is highly valid, with an AVE of 0.878. The findings on reliability and validity support all three constructions (Table 3).

Table 3: Measurement model analysis

Constructs	Factors	Loadings	Composite Reliability	Cronbach's Alpha	AVE
Packaging Innovation	PI1	0.94	0.960	0.883	0.857
	PI2	0.94			
	PI3	0.93			
	PI4	0.893			
Product Experience	PE1	0.84	0.903	0.811	0.701
	PE2	0.84			
	PE3	0.86			
	PE4	0.81			
Consumer Patronage	CP1	0.941	0.966	0.884	0.878
	CP2	0.921			
	CP3	0.929			
	CP4	0.957			

The composite reliability and Cronbach's alpha are high, indicating high internal consistency. In contrast, the AVEs are high, indicating high convergent validity and helping ensure that the constructions are well represented by the assessment items designed to measure them.

4.4. Hypothesis Testing

Table 4 clarifies the results of hypothesis testing in the conceptual model, including the path coefficients, p-values, and levels of support. The paper shows a strong relationship among packaging innovation, product experience, and consumer loyalty. To begin with, the correlation between Packaging Innovation and Consumer Patronage is 0.631 (p-value = 0.000), indicating a significant, large negative impact. This supports the idea that the innovation of the packages directly leads to higher consumer patronage, where packaging is paramount in conditioning consumer behaviour and choice. Also, the significance of the Paklink variable is good, with a p-value of 0.623 and <0.000. This paper supports the idea that new packaging enhances the overall product experience, meaning clients view packaging as a critical element in their relationship with the product.

Table 4: Hypothesis testing

Hypothesis	Path Coefficient	P-Values	Supported/Not Supported
Packaging Innovation --> Consumer Patronage	0.631	0.000	Supported
Packaging Innovation --> Product Experience	0.623	0.000	Supported
Product Experience --> Consumer Patronage	0.432	0.000	Supported

4.5. Discriminant Validity

The discriminant validity Table 5 indicates that the three constructs, namely the packaging innovation, product experience, and consumer patronage, have passed the Fornell-Larcker criterion. The concept of discriminant validity examines whether a specified concept is distinct from other concepts by comparing the square root of each construct's average variance extracted (AVE) with the correlations among constructs. The diagonal elements are the square roots of the AVEs for the individual constructs, with Packaging Innovation (0.926), Product Experience (0.837), and Consumer Patronage (0.937) performing extremely well compared to the off-diagonal correlations. To illustrate, the correlation between Packaging Innovation and Product Experience is 0.623, and that between Packaging Innovation and Consumer Patronage is 0.631, whereas that between Product Experience and Consumer Patronage is 0.432. These findings indicate that both constructs differ, as the square roots of their AVEs exceed their correlations with other constructs, a criterion for establishing discriminant validity.

Table 5: Discriminant validity

Constructs	Packaging Innovation	Product Experience	Consumer Patronage
Packaging Innovation	0.926	-	-
Product Experience	0.623	0.837	-
Consumer Patronage	0.631	0.432	0.937

4.6. Structural Model Analysis

The goodness-of-fit of a structural model is generally assessed using model fit statistics. The ratio CMIN/df is 4.6, indicating an acceptable fit between the model and the data. The Comparative Fit Index (CFI) is 0.960, exceeding the recommended threshold of 0.90 and indicating an excellent fit. On the same note, the Goodness-of-Fit Index (GFI) is 0.917, which exceeds the acceptable cutoff of 0.90, confirming the model fit (Table 6).

Table 6: Structural model analysis

Model	Value
Chi-Square/df (CMIN/df)	4.6
Comparative Fit Index (CFI)	0.960
Goodness of Fit Index (GFI)	0.917
Tucker-Lewis Index (TLI)	0.952
Standardised Root Mean Square Residual (SRMR)	0.035
Root Mean Square Error of Approximation (RMSEA)	0.067

The Tucker-Lewis Index (TLI) is 0.952, exceeding the recommended value of 0.90 and indicating a well-fitting model. The Standardised Root Mean Square Residual (SRMR) is 0.035, which is below the required value of 0.08, indicating a good fit of the residuals. Lastly, RMSEA is 0.067, which is lower than the criterion of 0.08; therefore, the model fits the data well and does not exhibit serious approximation errors.

4.7. Mediation Analysis

The mediation analysis was conducted in Table 7 to see the indirect effect of Packing Innovation (PI) on consumer patronage (CP) through Product experience (PE). The direct impact of PI on CP is computed as 0.631, with a p-value of 0.000, indicating a statistically significant direct connection between PI and CP.

Table 7: Mediation analysis

Relationship	Direct Effect	Indirect Effect	Confidence Interval		P- Value	Conclusion
PI->PE-> CP	0.631	0.269	Lower bond	Upper bond	0.000	Partial Mediation
	0.000		0.20	0.35		

The indirect effect, that is, the mediation path through PE, is 0.269 (p=0.000), indicating a significant mediation effect. The confidence interval for the indirect effect is between 0.20 and 0.35 and does not include zero, indicating a significant indirect effect. Theoretical: Implications 5.1 As the results indicate, there is partial mediation given that Product Experience is significant in explaining the relationship between Packaging Innovation and Consumer Patronage.

5. Discussion

This research investigated the direct and indirect impacts of Packaging Innovation (PI) on Consumer Patronage (CP) via Product Experience (PE) through structural equation modelling (SEM). Product Experience serves as a partial intermediary gateway, whereas Packaging Innovation directly enhances consumer patronage. In congested dining establishments, culinary rivalry is intense; thus, innovative packaging is essential. Innovative packaging attracts consumers and enhances perceptions of sensuality, according to research. Packaging is the initial element that captures attention, shaping brand perception and product utilisation. Silayoi and Speece [40] found that substantial food containers enhance customer loyalty and promote repeat purchases. Food packaging constitutes another facet of brand communication. Gunaratne et al. [13] assert that packaging serves as a silent salesperson, conveying essential information on a product's health benefits, sustainability, and quality. Consumers evaluate product quality and brand values based on the colours, shapes, and messages of packaging design. This study demonstrates that package innovation directly affects consumer patronage, indicating that packaging may safeguard and enhance client loyalty. PE emerged as a crucial entity independent of CP and Packaging Innovation. PE partially mediates the relationship between PI and CP, enhancing customers' subsequent product experience through innovative packaging. This enhances brand allegiance and encourages repeat acquisitions. The mediation of PE indicates that package innovation influences customer behaviour in various ways. Innovative packaging amplifies client sensory interaction beyond mere cosmetic appeal and protective functions.

The attributes of texture, colour, form, and practical features such as portion control and resealability enhance customer happiness. Sensorial engagement enhances product perception and emotional attachment. The sensory attributes of a food product, its texture, appearance, and aroma, impact flavour, quality, and likelihood of repurchase. The product experience includes emotional package innovation. Schifferstein et al. [28] found that emotionally evocative packaging can affect consumer behaviour post-purchase. Packaging design that elicits passion, nostalgia, or trust influences consumer impression of the product and brand. Consequently, packaging innovations that align with consumer lifestyle preferences or environmental considerations, such as the use of sustainable materials, enhance customer loyalty. The product experience shapes the perception of packaging as more than a mere container. The experience facilitator influences brand impression, emotional engagement, flavour, and convenience. Duarte et al. [31] assert that this emotional and sensory bond enhances product loyalty and encourages repeat purchases. Product experience affects consumer patronage in accordance with consumer choice theories. According to Schifferstein et al. [28], sensory impressions and emotional responses impact consumer decisions over time. Marketing emotional experiences influences brand loyalty and selection beyond mere pricing and utility. Innovative packaging can enhance sales by fostering a favourable product experience and promoting repeat purchases. This essay demonstrates that product experiences driven by packaging innovation foster long-term consumer involvement. Regular utilisation and innovative packaging foster consumer confidence in both the product and its manufacturer.

This method engenders brand loyalty and encourages repeat purchases. The experience with a product influences consumer pleasure and brand preference, which, in turn, fosters customer loyalty. The study provides theoretical insights into Packaging Innovation (PI), product experience (PE), and consumer patronage (CP) within the food industry. The Product Experience (PE)

affects Packaging Innovation (PI) and Consumer Patronage (CP), hence corroborating previous research. This study report indicates that, in contrast to previous research emphasising packaging's direct influence on consumer behaviour, customers' product experiences shaped by innovative packaging are essential for fostering customer loyalty and repeat business. This study demonstrates how packaging influences immediate perception and long-term consumer behaviour, resulting in repeat purchases, with PE serving as a mediating variable. The research challenges the utilitarian perspective on packaging by demonstrating that Packaging Innovation (PI) is intricate. Historically, the primary objectives of packaging have been protection and functionality, with aesthetics as a secondary consideration. This study asserts that packaging influences product experience as both a sensory input and a functional asset. All theories of consumer behaviour, including those proposed by Schifferstein et al. [28], concentrate on product interaction and may elucidate their conclusions. Packaging enhances the sensory, emotional, functional, and aesthetic dimensions of the product experience. The study demonstrates that packaging elicits strong emotional responses that affect client behaviour, hence reinforcing emotional engagement. Emotions, particularly responses to the visual, tactile, and olfactory aspects of products, influence consumer choices. The experiential consumption model proposed by Sevtsuk [38] suggests that sensory experiences and emotions affect consumer decision-making alongside rationality. Products and packaging can establish emotional connections that foster loyalty and repeat purchases.

The study will finish by examining the growing impact of sustainability on packaging design in consumer behaviour research. Sustainable product packaging enhances brand loyalty and customer trust. This discovery enhances customer decision-making by integrating environmental cues into both emotional and practical product experiences. Sustainable packaging and its ethical considerations align with consumers' moral inclinations and enhance brand experience, hence playing a vital role in fostering enduring customer relationships. Sustainability fosters consumer loyalty and facilitates the food industry's shift towards eco-friendly packaging. The study's findings have significant practical consequences for the organisation in the food industry, as consumer loyalty and repeat purchases drive growth. The study initially emphasises the approach of package innovation. Food packaging possesses sensory and emotional allure, in addition to safeguarding the brand and conveying messages. Innovative packaging enables food companies to differentiate themselves in a competitive market and foster a memorable, favourable product experience that promotes brand loyalty and repeat purchases. Research indicates that sensory packaging enhances consumer experience. Enhance food product impressions through tactile elements, design, and packaging fragrance. Selecting colours, textures, and shapes that align with the brand's identity, or incorporating creative attributes like resealability or portion control to enhance practicality, can elicit emotional connections through relationships. The significance of sustainable packaging is paramount. As consumers grow more environmentally aware, food enterprises ought to advocate for biodegradable, recyclable, or reusable packaging. Sustainable packaging enhances corporate credibility and consumer loyalty while benefiting the environment. Cheng et al. [37] and Bakhshian et al. [27] assert that consumers seek openness and ethical practices in commerce.

6. Conclusion

Finally, this paper underscores the significant role of Packaging Innovation (PI) in shaping Consumer Patronage (CP), particularly in the food industry. The research suggests that creative packaging can play a vital role in developing customer loyalty and repeat business, while enhancing a product's sensory and emotional appeal. The use of eye-catching, functional packaging will help food firms build and strengthen customer relationships, improve the overall product experience, and foster consumer loyalty in the long run. The mediation role of Product Experience (PE) emphasizes that a novel packaging is more than visual; it also shapes perceptions and interest in the product. Easy access and convenience, greenness and environmental sustainability, and the appeal of the senses are just a few components that make using the product an enjoyable experience, which improves customer loyalty. Also, the packaging, which reflects sustainability principles, not only meets customer expectations but also builds brand loyalty and trust as more customers become aware of environmental and sustainability issues. Further investigation of Packaging Innovation (PI), Product Experience (PE), and Consumer Patronage (CP) may focus on a longitudinal study of products to evaluate the long-term effects of packaging on consumer loyalty and the influence of demographic factors. Further, delineating the sustainability issue in packaging and its impact on consumer trust and brand loyalty would be worthwhile. By investigating the effects of digital and smart packaging, researchers may gain insight into the interactive features that orchestrate consumer behavior.

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