

Examining the Influence of Green Packaging on Customer Trust and Customer Satisfaction in the Fast Food Sector in Hanoi, Vietnam

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Abstract: This study aims to investigate the impact of green packaging on customer trust and satisfaction in the fast food industry in Hanoi, Vietnam. It also examines the mediating role of green trust in the relationship between green packaging and green satisfaction. Data were collected from 201 customers living in Hanoi through a questionnaire-based survey. The research model was analyzed using Structural Equation Modeling (SEM). The findings show that green packaging has a positive influence on both green trust and green satisfaction. In addition, green trust significantly affects green satisfaction. More importantly, green trust is found to partially mediate the relationship between green packaging and green satisfaction. This suggests that the effect of green packaging is not only direct but also works indirectly through customers' perceptions and psychological responses. These results indicate that adopting green packaging can improve customer experience while strengthening trust, which in turn enhances overall satisfaction. Based on these findings, the study offers several managerial implications to help fast food businesses develop more sustainable packaging strategies for long-term development.

Keywords: Customer Satisfaction; Customer Trust; Eco-Friendly Packaging; Fast Food; Sustainable Consumption.

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I. INTRODUCTION

In recent years, rising environmental issues have significantly influenced consumer behavior, bringing sustainability to the forefront of purchasing considerations. This shift is especially prominent in the fast food sector, where packaging - often the first physical interaction between a brand and its customers - has become a key indicator of a company's environmental commitment. As awareness grows around climate change, pollution, and waste, consumers are showing a stronger preference for products with environmentally responsible packaging. This movement is not only seen globally but is also gaining momentum in Vietnam, particularly in metropolitan areas like Hanoi. According to a report by Trivium (2023), approximately 71% of consumers prefer products with sustainable packaging, 59% actively seek information about recyclability on product labels, and nearly 80% are willing to use reusable packaging to mitigate environmental impact [1]. In this regard, packaging has evolved into an essential instrument for communicating information and enhancing brand perception in addition to preserving goods. Packaging features like design, materials, and label information can have a big impact on consumer

perceptions and behavior, according to a number of studies[2, 3]. Eco-friendly packaging in particular is thought to be a crucial way to reduce the impact on the environment and encourage sustainable consumption. According to recent research, using eco-friendly packaging can improve consumers' opinions of the quality and safety of products while also boosting their confidence in companies [4]. Additionally, green packaging can evoke positive emotions during the consumption process, thereby increasing customer satisfaction [5],[6].

In Vietnam, research on green packaging and sustainable consumption has begun to gain attention in recent years. According to some research, customers' intentions to buy eco-friendly items are positively influenced by green packaging, and environmental consciousness and willingness to pay are important factors in encouraging sustainable consumption [7],[8]. However, the majority of recent research focuses mainly on views or purchase intentions regarding green products; crucial psychological elements like consumer satisfaction and trust have not yet been thoroughly examined, especially when it comes to the fast-food sector. One of the largest cities with a dense population is Hanoi, where young

consumers frequently eat fast food and are becoming more concerned about environmental issues. Nevertheless, there are still few empirical studies on how green packaging affects consumer happiness and confidence in Hanoi's fast-food sector. Thus, researching the connection between green packaging, consumer happiness, and trust in this setting is crucial from an academic and practical standpoint.

This study was carried out to examine the effect of green packaging on consumer trust and happiness in the food business, based on the previously indicated research gaps and practical demands. From a theoretical standpoint, this study closes a knowledge gap by elucidating the ways in which green packaging affects customer trust, a topic that has received little attention in other studies. Practically speaking, the study's conclusions provide fast-food companies with a scientific basis for creating a sustainable packaging transition path. The study's conclusions will offer managerial implications to assist companies in enhancing packaging design in the fast-food sector, thereby maximizing the customer experience, as well as empirical proof on the significance of green packaging on consumer behavior. The study's findings will provide empirical evidence on the role of green packaging in consumer behavior, while offering managerial implications to help businesses improve packaging design in the fast-food industry, thereby optimizing the customer experience and enhancing customer loyalty in the era of the green economy.

II. LITERATURE REVIEWS AND HYPOTHESES

➤ *Stimulus-Organism-Response Model (SOR)*

The Stimulus–Organism–Response (S-O-R) theory is one of the classical frameworks that seeks to explain patterns of consumer behavior by evaluating human responses to external stimuli [9][10]. According to this model, environmental factors can stimulate individuals' internal states, which in turn lead to specific behavioral responses. As noted by Hochreiter et al. (2023) [11], the S-O-R framework enables researchers to better understand how consumers process information and make decisions based on the transformation of observable external factors (such as product attributes, price, and packaging) into unobservable internal states (such as cognition, emotions, and beliefs). When evaluating packaging, consumers are exposed to various perceptual stimuli. For instance, brand labels and origin information are considered search attributes; visual and tactile elements are categorized as experience attributes; while safety, quality certifications, sustainability, and other concerns are regarded as credence attributes [12][13]. Moreover, product packaging represents the direct physical interface between the supply chain and the end consumer; therefore, it is identified as a significant stimulus within the S-O-R model [12]. Subsequently, consumers' affective and cognitive states are activated as they evaluate these stimulus attributes, ultimately influencing their purchase intentions [14].

➤ *Signaling Theory*

Signaling theory explains the phenomenon of information asymmetry among parties in the market [15]. In

the fast-food industry, suppliers typically possess a substantial amount of important information regarding product quality, including ingredients, production processes, quality control, certifications, and consumer feedback. In contrast, consumers have limited information about the products and bear greater risks, such as financial and health risks. Nelson (1974) [16] highlighted the potential risks that consumers may face with experience goods due to uncertainty about their true quality. Green packaging can be viewed as a tangible signal reflecting a firm's environmental commitment. It helps reduce information asymmetry and enhances customer trust [17, 18]. When consumers observe characteristics such as packaging made from recycled materials, the use of paper instead of plastic or nylon, or information indicating environmental friendliness, they tend to infer that the firm is environmentally responsible and provides eco-friendly products, thereby increasing their trust in green products [19, 20]. Chen (2010) [21] and Ng et al. (2014) [22] also found that environmental signals can positively influence trust, which in turn affects consumer attitudes and behaviors.

➤ *Green Packaging*

Green packaging, also known as “eco-packaging” or “environmentally friendly packaging,” refers to packaging solutions developed based on sustainability principles. Accordingly, this type of packaging is produced from natural materials, recyclable or reusable materials, or resources derived from renewable sources [23]. From a product life cycle perspective, green packaging must ensure the minimization of negative impacts on ecosystems, human health, and animals from the production stage to disposal [24].

➤ *Customer Trust*

Customer trust is one of the most important concepts in modern business, focusing on meeting customers' needs and expectations. Customer trust is defined as the level of confidence and willingness to rely on a brand, based on expectations of its reliability and integrity [25]. Building trust helps ensure that customers continue to maintain transactional relationships, enabling businesses to increase sales and achieve higher profitability. It is considered a key driver of customer loyalty and overall business success [26] [27].

➤ *Customer Satisfaction*

Consumer satisfaction is understood as an emotional state arising from the comparison between initial expectations and the actual performance of a product or service after use [28]. When performance meets or exceeds expectations, consumers tend to feel satisfied; conversely, if performance falls short of expectations, they experience dissatisfaction. In a constantly changing market environment, consumers' needs and preferences also evolve rapidly. Therefore, businesses need to proactively monitor and adapt to these changes in order to maintain and enhance customer satisfaction [29].

III. HYPOTHESIS DEVELOPMENT

Green packaging safety is understood as the ability of packaging to protect food from microbial contamination, prevent the presence of harmful substances, and ensure hygiene throughout the entire supply chain. In the fast-food

industry, where products come into direct contact with packaging and have a short consumption cycle, this factor plays a particularly important role in reducing perceived risk and strengthening customer trust. Beyond its physical protection function, safe packaging also contributes to protecting consumer health and enhancing information transparency. Empirical studies have confirmed this relationship. Specifically, authentic green quality and the effective implementation of environmental commitments positively influence consumer trust, whereas misleading or false environmental claims may weaken trust by increasing uncertainty in consumer perceptions [30]. At the same time, packaging plays an important role in protecting products, maintaining quality, and controlling environmental factors, thereby enhancing consumers' perceptions of safety and reliability [31],[32],[33]. Conversely, inconsistent safety signals may erode consumer trust. Accordingly, the hypothesis H1 is proposed:

- *H1: Green packaging safety has a positive effect on customer trust in the fast-food industry.*

Green packaging design is not limited to aesthetic elements but also includes the ability to communicate environmental messages through colors, recycling symbols, sustainable identification signs, as well as functional characteristics of the packaging [34],[35]. Packaging design serves as the first point of contact between a product and consumers, thereby directly influencing their perceptions and initial evaluations. Packaging design is considered a "silent salesman," performing a strategic communication function through Signaling Theory. In the Hanoi market, where consumer choices are strongly influenced by visual elements at the point of contact, transparent green packaging design serves as an effective tool to reduce consumer skepticism regarding the authenticity of environmental claims. A study by Yang & Zhao (2019) [36] indicated that green packaging design, considering aesthetic, identification, and functional aspects, is the most important predictor of green trust, thereby enhancing engagement with green brands. Other research also confirms that environmentally friendly packaging design helps reduce skepticism toward greenwashing and strengthens customer trust [37]. Design elements such as colors (green representing nature and white representing purity), recycling symbols, and eco-labels help customers instantly recognize sustainable values [38],[39]. Underwood (2003) [35] argued that packaging design creates brand associations related to integrity and responsibility. Professionally designed green packaging that provides complete information about material origins and post-use disposal instructions sends a strong signal of corporate transparency. This is particularly important in Hanoi, where consumers are becoming increasingly knowledgeable and tend to verify marketing messages before placing their trust. Therefore, the hypothesis H2 is proposed:

- *H2: Green Packaging Design has a Positive Effect on Customer Trust in the Fast-Food Industry.*

Environmental friendliness is considered a core attribute of green packaging, reflected in the use of recycled materials,

biodegradable materials, the reduction of plastic waste, and the optimization of product life cycles. This attribute not only represents the technical characteristics of packaging but also demonstrates a firm's commitment to sustainable development and corporate social responsibility. Under conditions of information asymmetry, consumers tend to rely on observable signals to evaluate the quality and credibility of firms [15]. Based on Signaling Theory, the use of environmentally friendly packaging can communicate a firm's responsibility, transparency, and long-term sustainability commitment, thereby contributing to the formation of customer trust. Empirical studies have supported this relationship. Green perceived quality has a positive effect on green trust, while greenwashing increases perceived risk and reduces consumer trust, and brands demonstrating integrity and consistency in their social commitments are more likely to build sustainable trust [30], [40]. In addition, the use of recycled or bio-based packaging materials creates positive perceptions of environmental responsibility, thereby enhancing brand trust [41]. In the context of Vietnam, where policies aimed at reducing single-use plastic are being actively promoted, and consumers in Hanoi are becoming increasingly concerned about sustainable consumption, the environmental friendliness of packaging is expected to be an important factor in strengthening customer trust. Based on these arguments, the hypothesis H3 is proposed.

- *H3: The environmental friendliness of green packaging has a positive effect on customer trust in the fast-food industry.*

A distinctive characteristic of the fast-food industry is serving the busy lifestyles of urban residents in Hanoi, where speed and convenience are top priorities. Convenience attributes such as ease of opening, portability, heat retention, and leak resistance have become essential requirements, especially in the context of food delivery services. However, one of the major barriers of green packaging is the trade-off between sustainability and functionality. Although green packaging is environmentally friendly, it may be negatively evaluated by customers if it lacks convenience. Yang & Zhao (2019) [36] indicated that convenience is an important component of green packaging design that directly affects trust. If a fast-food business in Hanoi can provide packaging solutions that are both environmentally friendly and highly convenient (for example, sugarcane containers with heat retention performance comparable to foam boxes), this sends a signal of the firm's R&D capability and commitment to customer experience. This balanced combination helps eliminate the perception of a trade-off between sustainability and usability, thereby strengthening trust in the professionalism of the brand. Especially in the post-COVID-19 context, where food delivery has become increasingly popular, packaging often represents the only physical point of contact before customers consume the product. Convenient packaging that prevents problems such as tearing, leakage, or heat loss sends a signal of a professional and reliable operational system. Conversely, packaging inconvenience may increase doubts about overall product quality. In the context of the fast-food industry in Hanoi, where speed and convenience are key competitive factors, the convenience of

green packaging reinforces customer trust by demonstrating that businesses truly understand consumer needs. Based on the above arguments, the following hypothesis is proposed:

- *H4: The convenience of green packaging has a positive effect on customer trust toward fast-food industry.*

Trust is considered an important mediating variable in the relationship between brands and customers, playing a fundamental role in establishing and maintaining long-term relationships. According to Morgan (1994) [42], customer trust is defined as the expectation that a firm will fulfill its commitments in a reliable and ethical manner. Meanwhile, satisfaction is an emotional state arising from the evaluation of the extent to which product performance meets customer expectations [43]. Based on the Stimulus-Organism-Response (S-O-R) model proposed by Mehrabian (1974) [44], external factors such as packaging safety, design, convenience, and environmental friendliness act as stimuli that influence consumers' internal psychological states, in which trust is considered the central component of the "organism." This psychological state subsequently influences customer responses, particularly satisfaction and post-purchase behaviors. In consumer behavior models, trust plays an important mediating role in leading to satisfaction and post-purchase behavior. The study Greenwash and Green Trust indicated that green trust has a positive effect on customer [30]. Trust enhances perceived value, reduces uncertainty, and promotes both customer satisfaction and customer loyalty [45] [46]. In the context of fast-food consumption in Hanoi, trust in green packaging acts as a psychological bridge. When customers trust the safety, design, convenience, and sustainability of packaging, they form positive expectations

regarding the overall consumption experience. When the actual experience meets or exceeds these initial expectations, customers achieve a higher level of satisfaction. Trust also reduces concerns related to plastic waste and environmental pollution, enhances the emotional value of the consumption experience, and ultimately promotes sustainable satisfaction and long-term loyalty toward green brands in the Hanoi market. Based on these arguments, the following hypothesis is proposed.

- *H5: Customer trust has a positive effect on customer satisfaction in the fast-food products.*
- *H6: Customer trust serves as a mediator in the relationship between the safety of green packaging and customer satisfaction.*
- *H7: Customer trust serves as a mediator in the relationship between green packaging design and customer satisfaction.*
- *H8: Customer trust serves as a mediator in the relationship between the environmental friendliness of green packaging and customer satisfaction.*
- *H9: Customer trust serves as a mediator in the relationship between the convenience of green packaging and customer satisfaction.*

Based on the above arguments, the proposed research model is presented as Figure 1:

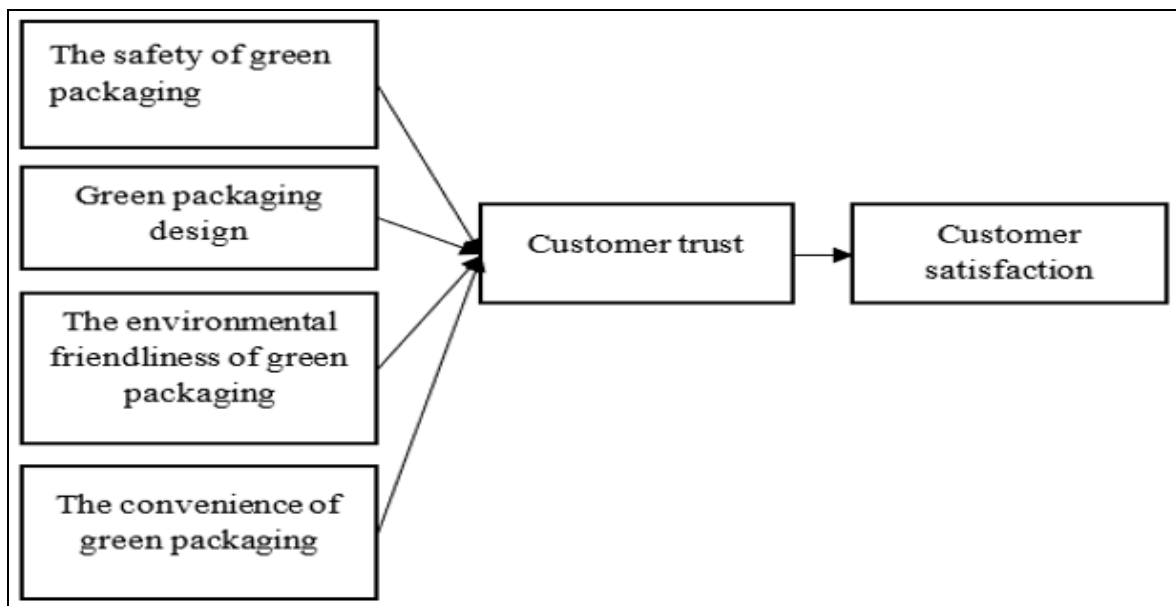


Fig 1 The Research Model

IV. RESEARCH METHODOLOGY

➤ *Measurement Scale*

Based on a comprehensive review of prior studies in the field, the authors adopted and adapted measurement scales

from existing research to develop the proposed research model. Specifically: (1) The safety of green packaging was measured using five observed variables ([47],[48]); (2) The environmental friendliness of green packaging was assessed through five observed variables ([49]); (3) Green packaging

design was measured by four observed variables ([50],[51]); (4) The convenience of green packaging was measured using five observed variables ([52],[47],[53]); (5) Customer trust was measured by four observed variables ([54],[55],[56],[57],[50]); and (6) Customer satisfaction was measured using four observed variables ([58],[57]).

➤ *Research Sample*

Quantitative data for this study were gathered using an online survey distributed via Google Forms, along with questionnaires sent directly by email to experts in the fast-food industry in Hanoi. This approach enabled efficient distribution, expanded access to potential participants, and helped reduce missing responses, thereby limiting the number of invalid questionnaires excluded from the analysis. Before conducting the official survey, the questionnaire was

developed in two phases. In the first phase, a draft version was reviewed by ten industry experts to evaluate its relevance and reliability. Based on their feedback, adjustments were made to improve the wording and structure, ensuring better alignment with the fast-food context in Hanoi. In the second phase, a pilot test involving ten customers was carried out to confirm the questionnaire’s suitability prior to full deployment. The official survey was conducted from April 15 to April 20, 2026, yielding a total of 221 responses. After screening, 201 valid responses were retained for analysis, while the remaining were excluded due to signs of random answering. The final dataset was analyzed using SPSS 21 and AMOS 22, applying techniques such as reliability analysis, exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and hypothesis testing.

V. RESULTS

➤ *Descriptive Statistics*

Table 1 Descriptive Statistics of the Sample

Characteristic	Category	Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	76	37.8	37.8	37.8
	Female	125	62.2	62.2	100.0
Age	<18	3	1.5	1.5	1.5
	18 - 25	111	55.2	55.2	56.7
	26 - 35	41	20.4	20.4	77.1
	36 - 45	27	13.4	13.4	90.5
	> 45	19	9.5	9.5	100.0
Occupation	Student	97	48.3	48.3	48.3
	Homemaker	28	13.9	13.9	62.2
	Office worker	56	27.9	27.9	90.0
	Self-employed	20	10.0	10.0	100.0
Usage	Yes	162	80.6	80.6	80.6
	No	39	19.4	19.4	100.0
Fast Food Consumption Frequency	Rarely	22	10.9	10.9	10.9
	1-2 times/week	61	30.3	30.3	41.3
	Over 3 times/week	41	20.4	20.4	61.7
	1-2 times/month	77	38.3	38.3	100.0
Attention to Packaging When Buying Fast Food	Yes	159	79.1	79.1	79.1
	No	42	20.9	20.9	100.0
Willingness to Pay Extra for Green Packaging	Not willing	10	5.0	5.0	5.0
	Slightly willing	30	14.9	14.9	19.9
	Neutral	84	41.8	41.8	61.7
	Willing	55	27.4	27.4	89.1
	Very willing	22	10.9	10.9	100.0

In terms of demographic characteristics, females accounted for a higher proportion at 62.2%, while males represented 37.8%. Regarding age, the 18-25 age group had the dominant proportion at 55.2%, showing that the majority of customers using the product are young people; followed by the 26-35 age group (20.4%), 36-45 age group (13.4%), over 45 years old (9.5%), and under 18 years old accounting for 1.5%. Regarding occupation, students accounted for the highest proportion at 48.3%, followed by office workers

(27.9%), homemakers (13.9%), and self-employed (10.0%). This data reflects that the main customer group of the product is primarily young people in the study age and working in offices.

Regarding usage behavior, the vast majority of survey subjects have purchased or used products from fast food brands in the past 3 months at the rate of 80.6%, while only 19.4% did not use them. This shows that fast food has

become an indispensable part of people's consumption habits, especially the young demographic group. Regarding the frequency of fast food consumption, the group using it at a frequency of 1-2 times/month accounted for the highest proportion (38.3%), followed by 1-2 times/week (30.3%), over 3 times/week (20.4%), and rarely (10.9%). This data reflects that the level of fast food use at moderate to frequent frequency is common, with over 50% of consumers using it at least 1-2 times per week.

Regarding the level of attention to packaging when buying fast food, the majority of consumers pay attention to this factor at the rate of 79.1%, while only 20.9% do not pay attention. This shows that packaging plays an important role in consumers' purchasing decisions for fast food products.

When considering the willingness to pay extra to use products with green packaging, the "neutral" level group accounted for the highest proportion at 41.8%, followed by "willing" at 27.4%, "slightly willing" 14.9%, "very willing" 10.9%, and "not willing" accounting for only 5.0%. If combining the positive groups (willing + very willing = 38.3%), it shows that nearly 40% of consumers have a positive attitude toward paying extra for green packaging. However, the largest group is still at the "neutral" level (41.8%), reflecting hesitation and the need for more information or motivation to shift from a neutral attitude to positive action. This shows that the market potential for

green packaging exists, but businesses need appropriate strategies to persuade this neutral customer group.

➤ *Reliability Assessment and Exploratory Factor Analysis (EFA)*

The reliability test results using Cronbach's Alpha coefficient showed that all scales achieved values greater than 0.7. Specifically, "Safety of Green Packaging" scale had a Cronbach's Alpha coefficient of 0.851; "Green Packaging Design" reached 0.811; "Environmental Friendliness of Green Packaging" reached 0.880; "Convenience of Green Packaging" reached 0.859; "Customer Trust" reached 0.839; and "Customer Satisfaction" reached 0.842.

In addition, the correlation coefficient between the item and the adjusted total score for all observed variables was greater than 0.3. This demonstrates that the structures developed from the observed variables are reliable and suitable for further factor analysis.

The Kaiser–Meyer–Olkin (KMO) in table 2 coefficient was 0.927 (> 0.5), indicating that the data were appropriate for factor analysis. In addition, Bartlett's Test of Sphericity yielded a significant value of Sig. = 0.000 (< 0.05), confirming statistical significance and demonstrating that the observed variables are correlated. Therefore, exploratory factor analysis (EFA) was deemed appropriate.

Table 2 KMO and Bartlett's Test Results

KMO and Bartlett's Test		
Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		.927
Bartlett's Test of Sphericity	Approx. Chi–Square	2962.868
	df	351
	Sig.	.000

➤ *Confirmatory Factor Analysis (CFA)*

The results of Confirmatory factor analysis (CFA) demonstrated that the measurement model exhibited good fit with the research data. The model fit indices satisfied the recommended thresholds: Chi-square/df = 1.118 (< 3), TLI = 0.985 (> 0.8), CFI = 0.987 (> 0.9), GFI = 0.892 (> 0.8), and RMSEA = 0.024 (< 0.08). These findings confirm that the measurement model is statistically valid and that the scales employed in the study are reliable.

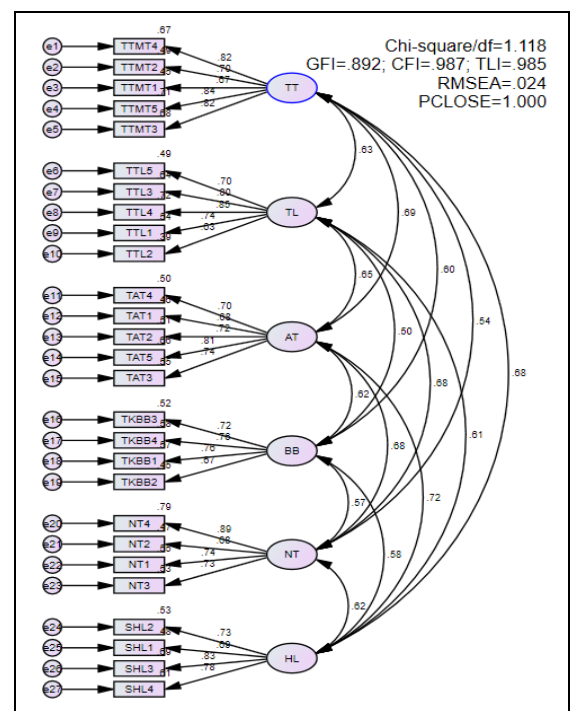


Fig 2 Results of Confirmatory Factor Analysis for the Measurement Scales

➤ *Structural Equation Modeling (SEM)*

Table 3 Hypothesis Testing Results

			Estimate	S.E.	C.R.	P	Decision
NT	<-	TAT	.546	.155	.533	***	Accepted
NT	<-	TKBB	.275	.121	2.279	.023	Accepted
NT	<-	TTMT	-.024	.084	-.288	.773	Rejected
NT	<-	TTL	.457	.105	4.338	***	Accepted
SHL	<-	NT	.638	.078	8.201	***	Accepted

The SEM model in table 3 testing results indicate that the Safety of Green Packaging (SGP) is the factor with the strongest impact on the formation of customer trust. With an estimated coefficient of 0.546 (C.R. = 0.533; $p < 0.001$), hypothesis H1 is accepted. This finding demonstrates that in the food industry, consumers place particular importance on health safety when interacting with new packaging materials. When green packaging meets safety standards, customers tend to place greater trust in the product and the brand.

Regarding aesthetic and structural aspects, Green Packaging Design (GPD) has a positive effect on customer trust, leading to the acceptance of hypothesis H2 (Estimate = 0.275; C.R. = 2.279; $p = 0.023$). Although its impact is not as strong as safety or convenience, packaging design remains an important touchpoint for conveying environmental protection messages in a professional manner. A well-designed package helps customers recognize the company's values and sustainability commitment, thereby strengthening their initial trust. One notable finding of the study is that the Environmental Friendliness of Green Packaging (EFGP) does not have a statistically significant effect on customer trust in this model. With a p-value of 0.773 (> 0.05), hypothesis H3 is rejected. This result suggests that in the practical context of Hanoi, the "green" or environmentally friendly aspect alone is insufficient for consumers to fully trust a product if it lacks commitments related to quality and usability. Therefore, businesses need to integrate environmental attributes with other practical usage values.

In addition to safety, the Convenience of Green Packaging (CGP) also plays a key role in promoting customer trust. The empirical results support the acceptance of hypothesis H4, with an impact coefficient of 0.457 (C.R. = 4.338; $p < 0.001$). This finding emphasizes that regardless of how environmentally friendly packaging may be, practical usability features such as ease of opening, handling, and storage remain essential conditions for customers to trust and continue using it. Convenience helps remove customers' psychological barriers when transitioning from traditional packaging to green packaging.

Finally, the study confirms the close relationship between psychology and behavior through the testing of hypothesis H5. Customer Trust (CT) has an extremely strong impact on Customer Satisfaction (CS), with the highest estimated coefficient in the model at 0.638 (C.R. = 8.201; $p < 0.001$). This result confirms that trust serves as the core foundation; once customers trust the characteristics

of green packaging, they are more likely to achieve a high level of satisfaction during their product consumption experience. The mediation analysis results indicate that customer trust (TR) plays a full mediating role in the relationships between packaging safety (SA), green packaging design (DE), and the convenience of green packaging (CO) on customer satisfaction (SAT). Specifically, SA, DE, and CO all have positive effects on customer trust, with coefficients of $\beta = 0.375$; $p = 0.001$, $\beta = 0.196$; $p = 0.042$, and $\beta = 0.391$; $p = 0.002$, respectively (Standardized Regression Weights table). In addition, these factors indirectly affect SAT through TR, with coefficients of $\beta = 0.260$, $\beta = 0.136$, and $\beta = 0.271$, respectively (Standardized Indirect Effects table), while their direct effects on SAT are all equal to 0 (Standardized Direct Effects table). These findings indicate that SA, DE, and CO influence customer satisfaction only through customer trust.

In contrast, the environmental friendliness of green packaging (EN) does not have a statistically significant effect on customer trust ($\beta = -0.027$; $p = 0.799$ – Standardized Regression Weights table), and its indirect effect on SAT through TR is very small ($\beta = -0.019$ – Standardized Indirect Effects table). Therefore, customer trust does not play a mediating role in the relationship between the environmental friendliness of green packaging and customer satisfaction.

VI. CONCLUSION

➤ *Discussion of Research Results*

The research results show that green packaging has a positive impact on the trust and satisfaction of customers in the fast-food segment. This finding is consistent with the S-O-R model [59] and signaling theory [15], in which green packaging is considered a signal that helps reduce information asymmetry and increase trust [17, 21].

In addition, customer trust has a positive effect on customer satisfaction, reinforcing the important role of trust in consumer behavior [60]. More importantly, trust serves as a mediating variable in the relationships between packaging safety, packaging design, packaging convenience, and customer satisfaction. This result confirms that customer satisfaction is not only influenced by packaging attributes but is also formed through a psychological process in which trust plays a central role.

➤ *Theoretical and Practical Contributions*

The study contributes to expanding the theoretical framework of green consumer behavior in the context of

Vietnam's digital economy. While previous studies mainly focused on purchase intention or attitudes toward green products, this study develops and tests an integrated model linking green packaging, customer trust, and customer satisfaction.

From a practical perspective, the findings suggest that fast-food businesses should invest in sustainable packaging as a long-term strategy to strengthen customer trust and satisfaction. However, businesses should not only focus on environmental friendliness but also ensure packaging safety, convenience, and effective design to improve customer experience and enhance competitive advantage.

➤ *Limitations and Future Research Directions*

Although the study provides valuable insights into the role of green packaging, several limitations remain. First, the sample size and research scope are limited, which may reduce the generalizability of the findings. Second, the study does not consider other potential factors such as green skepticism, perceived risk, or brand image. Third, the research only focuses on the fast-food industry and applies a cross-sectional design based on consumers' subjective evaluations.

Therefore, future studies should expand the sample size and research scope to improve representativeness. Future research is also encouraged to examine additional variables and apply longitudinal research designs to better understand changes in customer perceptions and behaviors over time. Moreover, future studies may investigate outcomes such as customer loyalty or brand performance to provide a more comprehensive understanding of the value of green packaging for businesses.

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