



Packaging Design and Digital Marketing Management in Educational Culinary Ventures: Their Influence on Purchase Decisions Mediated by Brand Image

Nadia Sri Rezeki*, Fithriawan Nugroho

Universitas Pertiba, Indonesia

Email : fnugroho48@gmail.com

DOI: <https://doi.org/10.61987/jemr.v5i1.1796>

ABSTRACT

Keywords:

Educational Culinary Ventures, Digital Marketing Management, Brand Image

*Corresponding Author

This study aims to analyze the influence of packaging design and digital marketing management on purchase decisions in educational culinary ventures, with brand image serving as a mediating variable. The research is grounded in an educational management perspective, particularly in understanding how the managerial implementation of marketing-related competencies within educational-based culinary enterprises contributes to consumer decision-making. A quantitative approach with a causal associative design was employed. Data were collected from 140 consumers of culinary products produced by educational culinary ventures in Pangkalpinang using structured questionnaires. The data were analyzed using Structural Equation Modeling with the Partial Least Squares approach (SEM-PLS) through SmartPLS 4. The results indicate that packaging design and digital marketing management have significant positive effects on brand image. Furthermore, digital marketing management and brand image significantly influence purchase decisions. Packaging design does not exert a significant direct effect on purchase decisions; however, its effect becomes significant when mediated by brand image. Brand image emerges as the most dominant factor influencing purchase decisions. The structural model explains 57.1 percent of the variance in brand image and 59.3 percent of the variance in purchase decisions, demonstrating strong predictive power. These findings imply that effective educational management of culinary ventures should emphasize the integration of packaging design and digital marketing within entrepreneurship learning programs, as brand image plays a critical role in translating educational-based marketing practices into sustainable consumer purchasing behavior.

Article History:

Received: November 2025; Revised: December 2025; Accepted: January 2026

Please cite this article in APA style as:

Rezeki, N. S., & Nugroho, F. (2026). Packaging Design and Digital Marketing Management in Educational Culinary Ventures: Their Influence on Purchase Decisions Mediated by Brand Image. *Journal of Educational Management Research*, 5(1), 815-834.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in supporting economic sustainability and social welfare, particularly in developing regions. Their strategic importance lies in job creation, income distribution, and resilience during economic crises, making MSMEs a backbone of national economic stability. However, in an era of global competition and rapid digital transformation, MSMEs are no longer required merely to produce goods but must also manage value creation through competitive marketing strategies (Akbarinasasi & Panduwinata, 2023). Evidence from recent studies indicates that MSMEs with adaptive marketing management are more capable of maintaining market relevance and consumer trust compared to those relying on traditional approaches. This condition highlights that marketing competence is no longer optional but essential for long-term sustainability. Consequently, understanding how marketing elements such as packaging design and digital marketing influence consumer behavior becomes highly relevant for society at large, as MSME performance directly affects employment, local economic growth, and community welfare. Therefore, research that investigates marketing effectiveness in MSMEs contributes not only to academic discourse but also to practical solutions for strengthening community-based economic resilience.

Despite their strategic role, many MSMEs continue to face persistent challenges related to weak marketing management and limited innovation capacity. One of the most common problems lies in the inability of MSMEs to respond effectively to changing consumer preferences and competitive market structures. Culinary MSMEs, in particular, operate in highly saturated markets where product differentiation and brand perception strongly influence purchasing behavior. However, many business actors still prioritize production over marketing, resulting in products that lack visual appeal and strategic promotion. The weak marketing management often leads to sustainability problems, even when product quality is relatively good (Kusumawati, 2025; Najiburohman et al., 2025; Syafiih, 2025). Furthermore, limited managerial knowledge and restricted access to digital platforms exacerbate these issues, preventing MSMEs from expanding their market reach. As a result, many culinary MSMEs struggle to compete with larger brands that leverage professional branding and digital visibility. This structural problem underscores the need for empirical research that examines how marketing management variables influence consumer decisions, particularly within local MSME contexts.

The challenges faced by culinary MSMEs are clearly observable in Pangkalpinang City, the economic center of the Bangka Belitung Islands Province. Although the city has significant potential for developing community-based culinary industries, many local MSMEs continue to rely on conventional

business practices. Field observations reveal that packaging design remains a major weakness, as many products are presented in simple and unattractive packaging despite offering high taste quality. This condition reduces perceived product value, especially among modern consumers who tend to form initial judgments based on visual appearance. Junianto et al. (2025) and Anggadini et al. (2025) emphasize that visually appealing packaging is essential to differentiate products in competitive markets. Additionally, many MSMEs have not maximized digital marketing channels, resulting in limited online visibility and market reach. This phenomenon indicates a mismatch between market demands and managerial practices, highlighting the urgent need to integrate packaging design and digital marketing strategies to enhance brand competitiveness and consumer appeal.

Previous studies have extensively examined the role of packaging design and digital marketing in influencing consumer behavior. Packaging design is widely recognized as a strategic marketing communication tool, often referred to as “the silent salesman,” due to its ability to convey quality, value, and brand identity without direct interaction (Klimchuk & Krasovec, 2012; Junianto et al., 2025). Similarly, digital marketing has been proven effective in expanding market reach, strengthening customer engagement, and improving business resilience through platforms such as social media and e-marketplaces (Kristiawati et al., 2025). Studies by Nanda and Fitriyani (2023) further demonstrate that consistent branding across digital channels enhances consumer trust and perception. While these studies provide strong empirical evidence regarding marketing effectiveness, most of them focus on large firms or general MSME populations without exploring the integrated mechanism through which marketing strategies influence purchase decisions via brand image.

Although existing research confirms the individual effects of packaging design and digital marketing on purchase decisions, several gaps remain. First, many studies examine these variables independently rather than as an integrated marketing system that shapes brand image holistically. Second, brand image is often treated as a direct outcome rather than a mediating mechanism that translates marketing efforts into consumer purchasing behavior (Ulus, 2024). Third, empirical studies focusing on local culinary MSMEs in developing regions such as Pangkalpinang are still limited, despite their unique socio-economic characteristics. previous research rarely addresses marketing management from a strategic perspective that emphasizes long-term brand building rather than short-term sales outcomes (Akbarinasasi & Panduwinata, 2023). These limitations indicate the need for a comprehensive model that explains how packaging design and digital marketing interact to form brand image and subsequently influence purchase decisions within local culinary MSMEs.

The novelty of this study lies in its integrative approach, which positions brand image as a mediating variable between packaging design, digital marketing, and purchase decisions within the context of local culinary MSMEs. Unlike previous studies that focus on isolated marketing variables, this research adopts a holistic marketing management perspective that emphasizes consistency between physical product presentation and digital brand communication. Additionally, this study contributes empirical evidence from Pangkalpinang City, a region that has received limited academic attention despite its strong culinary potential. By applying Structural Equation Modeling with Partial Least Squares (SEM-PLS), this research offers a robust analytical framework to examine complex causal relationships among marketing variables. The findings are expected to enrich the marketing management literature while providing practical insights for MSMEs to develop sustainable branding strategies in competitive culinary markets.

Based on the theoretical framework and empirical gaps identified, this study addresses the following research problem: how do packaging design and digital marketing influence purchase decisions in culinary MSMEs, and to what extent does brand image mediate this relationship? Drawing on marketing management theory, it is argued that packaging design and digital marketing do not merely function as promotional tools but serve as strategic mechanisms for building brand image (Pratiwi & Suhendra, 2024; Ramadhani, 2024). A positive brand image strengthens consumer trust, perceived quality, and differentiation, which are critical determinants of purchase decisions (Ulus, 2024). Therefore, this study hypothesizes that packaging design and digital marketing positively influence brand image, which in turn significantly affects purchase decisions. The results are expected to contribute to marketing management theory by clarifying the mediating role of brand image and offering actionable insights for improving MSME competitiveness through integrated marketing strategies.

RESEACH METHOD

This study employs a quantitative approach with a causal associative research design to examine the cause effect relationships among research variables. The quantitative approach is selected because it allows objective measurement of constructs through numerical data and enables hypothesis testing using statistical analysis (Nurfajriani et al., 2024). The causal associative design is particularly appropriate for identifying both direct and indirect effects among variables, namely Packaging Design and Digital Marketing as independent variables, Purchase Decision as the dependent variable, and Brand Image as a mediating variable. This design facilitates a comprehensive understanding of how marketing management strategies influence consumer

decision-making mechanisms. Furthermore, the use of a mediation model aligns with contemporary marketing research that emphasizes explanatory mechanisms rather than merely identifying correlations (Hair et al., 2022).

The research was conducted in Pangkalpinang City, the economic center of the Bangka Belitung Islands Province. This location was selected due to its high concentration of culinary Micro, Small, and Medium Enterprises (MSMEs) and its strategic role in local economic development. Pangkalpinang hosts several culinary centers and active MSME communities, including Alun-Alun Taman Merdeka, Pasir Padi Beach, and the "PGK" MSME community, which represent diverse consumer segments. Despite its strong culinary potential, many MSMEs in this area still rely on conventional marketing practices, making it a relevant context for examining the effectiveness of packaging design and digital marketing strategies. Therefore, Pangkalpinang provides an appropriate empirical setting to investigate consumer behavior and marketing management challenges faced by local culinary MSMEs.

Primary data were collected using structured questionnaires distributed directly and online to respondents. The questionnaire items were developed based on established measurement scales from previous studies to ensure content validity (Klimchuk & Krasovec, 2012; Chaffey & Ellis-Chadwick, 2019; Keller, 2016). Respondents were selected using a non-probability sampling technique with purposive sampling, based on specific criteria: residing or temporarily staying in Pangkalpinang City, being at least 17 years old, having purchased culinary MSME products within the last three months, and actively using social media. These criteria were applied to ensure respondents' relevance to the digital marketing and purchase decision constructs. Data collection was conducted from October to December 2025, covering the stages of pre-survey, questionnaire distribution, and data compilation.

Data analysis was performed using variance-based Structural Equation Modeling through the Partial Least Squares approach (PLS-SEM) with SmartPLS version 4. PLS-SEM was chosen because it is suitable for complex research models involving mediating variables, relatively small sample sizes, and non-normal data distributions (Hair et al., 2022). The analysis followed a two-stage procedure: evaluation of the measurement model and evaluation of the structural model. The measurement model was assessed using convergent validity (loading factors and Average Variance Extracted), discriminant validity (Fornell–Larcker Criterion and Heterotrait–Monotrait ratio), and reliability (Cronbach's Alpha and Composite Reliability). The structural model evaluation examined relationships among variables using R-square values, f-square effect sizes, and variance inflation factor (VIF) values to detect multicollinearity. Hypothesis testing was conducted through bootstrapping with 5,000 subsamples, where path

coefficients, T-statistics, and P-values were used to assess direct and indirect effects.

To ensure the trustworthiness of the research findings, data validity and reliability were rigorously evaluated. Convergent validity was confirmed when factor loadings exceeded 0.70 and AVE values were greater than 0.50, indicating adequate construct representation (Hair et al., 2022). Discriminant validity was established using the Fornell–Larcker Criterion and HTMT ratio, ensuring that each construct was empirically distinct. Reliability was assessed using Cronbach’s Alpha and Composite Reliability values, with thresholds exceeding 0.70, demonstrating internal consistency. Additionally, multicollinearity was examined using VIF values below the recommended threshold of 5.0. These procedures collectively ensure that the measurement instruments and structural relationships are valid, reliable, and suitable for hypothesis testing (Sugiyono, 2019; Hair et al., 2022).

RESULT AND DISCUSSION

Based on the results of the study conducted on 140 respondents who were classified according to their experience of having purchased local culinary MSME products in Pangkalpinang at least once in the last three months, the respondent characteristics obtained from the questionnaire are as follows:

Table 1 : Respondent Characteristics

No	Characteristic	Category	Total	Percentage
1	Domicile	Pangkalpinang City	103	73%
		Bangka Regency	9	6%
		Central Bangka Regency	19	14%
		West Bangka Regency	5	4%
		South Bangka Regency	3	2%
		Outside the Bangka Belitung Islands Province	1	1%
2	Gender	Male	52	37%
		Female	88	63%
3	Age	17-25 years	86	61%
		26-35 years	12	9%
		36-45 years	26	19%
		Over 45 years	16	11%
4	Frequency of Purchasing Culinary MSME Products in Pangkalpinang (in the last 3 months)	1-2 times	47	34%
		3-5 times	34	24%
		More than 5 times	59	42%

Based on the results of the study involving 140 respondents who were classified as consumers who had purchased culinary MSME products in

Pangkalpinang City at least once in the last three months, an overview of respondent characteristics and their culinary information-seeking preferences was obtained. The majority of respondents resided in Pangkalpinang City (73%), indicating that the study was dominated by urban communities located close to culinary activity centers. The remaining respondents came from Central Bangka Regency (14%), Bangka Regency (6%), West Bangka Regency (4%), South Bangka Regency (2%), and only 1% lived outside the Bangka Belitung Islands Province. In terms of gender, female respondents were more dominant at 63%, while males accounted for 37%. This suggests that women tend to be more active in seeking information and making purchases of MSME culinary products.

In terms of age, the 17–25 age group was the most dominant at 61%, followed by the 36–45 age group (19%), over 45 years old (11%), and the 26–35 age group (9%). These data indicate that young adults constitute the primary consumer segment for culinary MSMEs in Pangkalpinang. The purchasing frequency within the past three months also reflects a relatively high level of consumption, with 42% of respondents purchasing more than five times, 34% purchasing 1–2 times, and 24% purchasing 3–5 times.

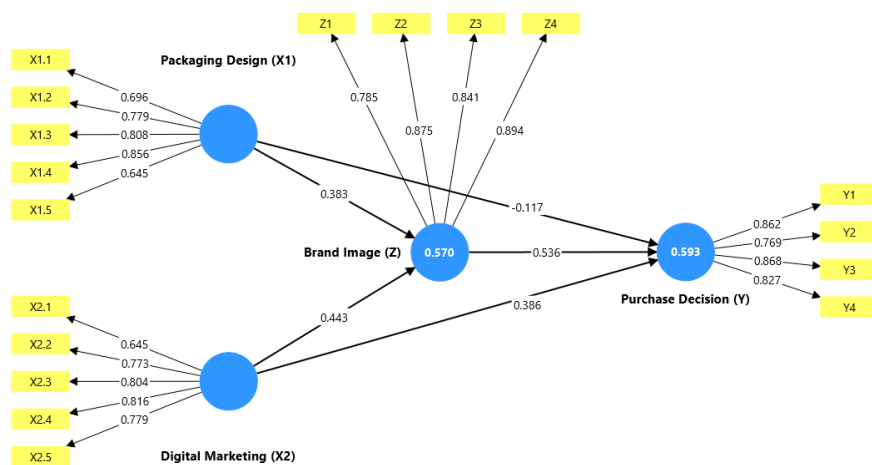


Figure 1 : Graphical Output PLS-SEM Algorithm

In this study, the analysis was conducted using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) approach with the assistance of SmartPLS 4 software to examine the influence of packaging design and digital marketing on purchase decisions, with brand image functioning as a mediating variable. The analysis followed the procedures developed by Hair et al. (2022), involving a comprehensive evaluation of both the measurement model (outer model) and the structural model (inner model).

Evaluation of the Measurement Model (Outer Model)

The evaluation of the measurement model, also referred to as the outer model, is conducted to assess the validity and reliability of the research instruments. This evaluation focuses on convergent validity, discriminant validity, and reliability testing to ensure that each indicator and construct accurately measures the intended latent variables.

Convergent validity examines the degree to which indicators of a latent variable are correlated with one another. This study uses loading factor values greater than 0.60 as the acceptance criterion, which indicates a strong relationship between indicators and their respective latent variables. The results of the outer loading analysis are presented in Table 2.

Table 2 : Outer Loadings Results

Indicator	Latent Variable	Loading Factor	Status
X1.1	Packaging Design (X1)	0.696	Valid
X1.2	Packaging Design (X1)	0.779	Valid
X1.3	Packaging Design (X1)	0.808	Valid
X1.4	Packaging Design (X1)	0.856	Valid
X1.5	Packaging Design (X1)	0.645	Valid
X2.1	Digital Marketing (X2)	0.645	Valid
X2.2	Digital Marketing (X2)	0.773	Valid
X2.3	Digital Marketing (X2)	0.804	Valid
X2.4	Digital Marketing (X2)	0.816	Valid
X2.5	Digital Marketing (X2)	0.779	Valid
Y1	Purchase Decision (Y)	0.862	Valid
Y2	Purchase Decision (Y)	0.769	Valid
Y3	Purchase Decision (Y)	0.868	Valid
Y4	Purchase Decision (Y)	0.827	Valid
Z1	Brand Image (Z)	0.785	Valid
Z2	Brand Image (Z)	0.875	Valid
Z3	Brand Image (Z)	0.841	Valid
Z4	Brand Image (Z)	0.894	Valid

All indicators demonstrate loading factor values above the threshold of 0.60, confirming that each indicator has a strong correlation with its corresponding latent variable. The lowest loading value of 0.645 appears in indicators X1.5 and X2.1, yet these values still meet the minimum requirement, indicating acceptable indicator reliability.

In addition to loading factors, convergent validity is also assessed using the Average Variance Extracted value. An AVE greater than 0.50 indicates that more than half of the variance of a latent variable is explained by its indicators. The AVE results are summarized in Table 3.

Table 3 : Average Variance Extracted (AVE)

Latent Variable	AVE	Description
Packaging Design (X1)	0.578	Valid (> 0.50)
Digital Marketing (X2)	0.586	Valid (> 0.50)
Purchase Decision (Y)	0.693	Valid (> 0.50)
Brand Image (Z)	0.722	Valid (> 0.50)

The AVE values for all latent variables exceed the recommended minimum of 0.50, indicating good convergent validity. Brand Image shows the highest AVE value, followed by Purchase Decision, Digital Marketing, and Packaging Design, which confirms that the indicators adequately represent their respective constructs.

Discriminant validity is evaluated to ensure that each latent variable is empirically distinct from other variables in the model. This study applies the Fornell–Larcker Criterion and the Heterotrait–Monotrait Ratio as assessment methods. Based on the Fornell–Larcker Criterion, the square root of the AVE for each construct must be higher than its correlations with other constructs. The results are presented in Table 4.

Table 4 : Fornell–Larcker Criterion

Variable	Brand Image (Z)	Packaging Design (X1)	Purchase Decision (Y)	Digital Marketing (X2)
Brand Image (Z)	0.850			
Packaging Design (X1)	0.680	0.761		
Purchase Decision (Y)	0.726	0.505	0.832	
Digital Marketing (X2)	0.700	0.669	0.682	0.766

All constructs satisfy the Fornell–Larcker Criterion because the square root of the AVE for each variable is greater than its correlations with other variables. This result confirms that each construct measures a unique concept within the model.

Further assessment of discriminant validity is performed using the Heterotrait–Monotrait Ratio, where values below 0.90 indicate adequate discriminant validity. The HTMT results are shown in Table 5.

Table 5 : Heterotrait–Monotrait Ratio (HTMT)

Variable	Brand Image (Z)	Packaging Design (X1)	Purchase Decision (Y)	Digital Marketing (X2)
Brand Image (Z)				
Packaging Design (X1)	0.802			

Variable	Brand Image (Z)	Packaging Design (X1)	Purchase Decision (Y)	Digital Marketing (X2)
Purchase Decision (Y)	0.835	0.594		
Digital Marketing (X2)	0.806	0.793	0.806	

All HTMT values are below 0.90, indicating that discriminant validity among the constructs is well established.

Reliability testing is conducted to evaluate the internal consistency of the measurement instruments using Cronbach's Alpha and Composite Reliability. A value greater than 0.70 for both measures indicates that the construct is reliable. The reliability results are presented in Table 6.

Table 6. Cronbach's Alpha and Composite Reliability Values

Latent Variable	Cronbach's Alpha	Composite Reliability	Description
Brand Image (Z)	0.815	0.872	Reliable (> 0.70)
Packaging Design (X1)	0.824	0.876	Reliable (> 0.70)
Purchase Decision (Y)	0.852	0.900	Reliable (> 0.70)
Digital Marketing (X2)	0.871	0.912	Reliable (> 0.70)

The results show that all latent variables have Cronbach's Alpha and Composite Reliability values exceeding 0.70. This finding confirms that all constructs in the measurement model demonstrate strong internal consistency and are reliable for further structural model analysis.

Evaluation of the Structural Model (Inner Model)

The evaluation of the structural model, also known as the inner model, is conducted to examine the relationships among latent variables and to assess the predictive capability of the proposed research model. This evaluation includes the analysis of the coefficient of determination, effect size, and collinearity assessment.

The coefficient of determination, or R-square, is used to measure the proportion of variance in the dependent variables that can be explained by the independent variables. The R-square results are presented in Table 7.

Table 7 : R-Square Value

Dependent Variable	R-Square	Description	Interpretation
Brand Image (Z)	0.570	Moderate	57.1% of the variance in Brand Image is explained by Packaging Design and Digital Marketing.
Purchase Decision (Y)	0.593	Moderate	59.3% of the variance in Purchase Decision is explained by Packaging Design, Digital Marketing, and Brand Image.

The results indicate that the model demonstrates a moderate to good level of predictive accuracy. Packaging Design and Digital Marketing explain 57.1% of the variance in Brand Image, while Packaging Design, Digital Marketing, and Brand Image together explain 59.3% of the variance in Purchase Decision. These findings confirm that the structural model has adequate explanatory power to describe consumer behavior in the context of culinary MSMEs.

The effect size analysis using f-square evaluates the relative contribution of each independent variable to the explanatory power of the dependent variable. The interpretation criteria classify values of 0.02 as small effects, 0.15 as moderate effects, and 0.35 as large effects. The f-square results are shown in Table 8.

Table 8. f-Square Value

Path	Independent Variable	Dependent Variable	f-Square	Effect
Path 1	Brand Image (Z)	Purchase Decision (Y)	0.303	Large
Path 2	Packaging Design (X1)	Brand Image (Z)	0.189	Moderate
Path 3	Packaging Design (X1)	Purchase Decision (Y)	0.016	Small
Path 4	Digital Marketing (X2)	Brand Image (Z)	0.252	Large
Path 5	Digital Marketing (X2)	Purchase Decision (Y)	0.161	Moderate

The f-square analysis shows that Brand Image has a large effect on Purchase Decision, while Digital Marketing has a large effect on Brand Image. Digital Marketing also demonstrates a moderate effect on Purchase Decision. Packaging Design contributes a moderate effect to Brand Image but only a small direct effect on Purchase Decision. These results indicate that brand image formation and digital marketing activities play a central role in shaping purchasing decisions, whereas packaging design functions more as a supporting factor within an integrated marketing framework.

Collinearity assessment is conducted using the Variance Inflation Factor to identify potential multicollinearity issues among independent variables. A VIF value below 5.0 indicates the absence of problematic multicollinearity. The VIF results are presented in Table 9.

Table 9 : Variance Inflation Factor (VIF)

Variabel Independen	Variabel Dependen	VIF	Status
Brand Image (Z)	Purchase Decision (Y)	2.328	No Multicollinearity
Packaging Design (X1)	Brand Image (Z)	1.812	No Multicollinearity
Packaging Design (X1)	Purchase Decision (Y)	2.154	No Multicollinearity
Digital Marketing (X2)	Brand Image (Z)	1.812	No Multicollinearity
Digital Marketing (X2)	Purchase Decision (Y)	2.278	No Multicollinearity

All VIF values range between 1.812 and 2.328, which are well below the threshold of 5.0. This result confirms that there is no multicollinearity among the independent variables. Therefore, the structural model is free from bias caused

by high intercorrelations among predictors and is suitable for hypothesis testing and further analysis.

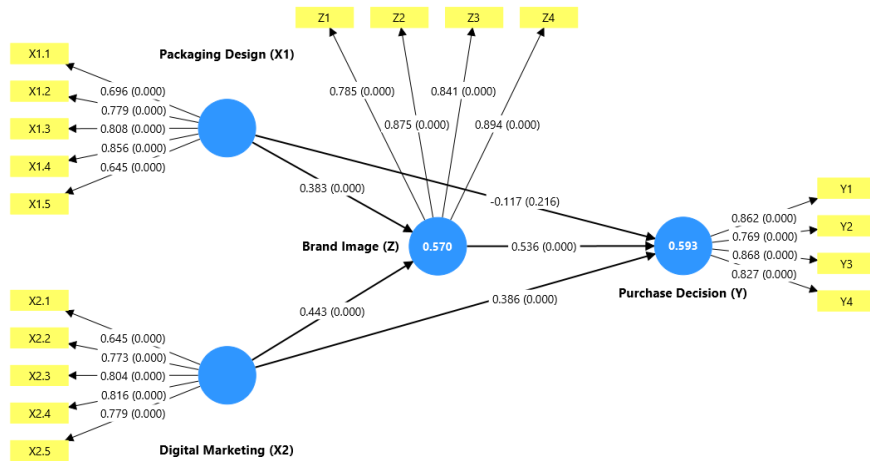


Figure 2 : Graphical Output Bootstrapping

Hypothesis Testing

Hypothesis testing in this study was carried out using the bootstrapping procedure with 5,000 subsamples through SmartPLS version 4. This approach was applied to evaluate the statistical significance of both direct and indirect relationships among latent variables. The decision criteria used in this analysis were a P-Value below 0.05 and a T-Statistic greater than 1.96 for a two-tailed test, indicating a significant effect.

Direct effect testing was conducted to examine the causal relationships among the constructs included in the structural model. The results of the direct effect analysis, as summarized in Table 10, show that most of the proposed hypotheses are statistically supported.

Table 10 : Results of Direct Effect Testing (Path Coefficients)

Hypothesis	Path	Path Coefficients	T-Statistic	P-Value	Status	Conclusion
H1	Packaging Design (X1) → Brand Image (Z)	0.383	3.762	0.000	Significant	Accepted
H2	Digital Marketing (X2) → Brand Image (Z)	0.443	4.185	0.000	Significant	Accepted
H3	Packaging Design (X1) → Purchase Decision (Y)	-0.117	1.238	0.216	Not Significant	Rejected
H4	Digital Marketing (X2) → Purchase Decision (Y)	0.386	4.404	0.000	Significant	Accepted

Hypothesis	Path	Path Coefficients	T-Statistic	P-Value	Status	Conclusion
	Marketing (X2) → Purchase Decision (Y)					
H5	Brand Image (Z) → Purchase Decision (Y)	0.536	6.268	0.000	Significant	Accepted

The direct effect results indicate that four out of five hypotheses are accepted. Packaging Design has a significant positive effect on Brand Image, as shown by a path coefficient of 0.383 with strong statistical support. Digital Marketing also has a significant and stronger positive influence on Brand Image, with a path coefficient of 0.443. These findings suggest that digital marketing activities play a more dominant role than packaging design in shaping brand perceptions.

In contrast, the direct relationship between Packaging Design and Purchase Decision is not statistically significant. The negative coefficient of -0.117 is not supported by the T-Statistic and P-Value, indicating that packaging design does not directly influence purchasing decisions. Digital Marketing, however, shows a significant positive effect on Purchase Decision, confirming its direct role in stimulating consumer buying behavior. Brand Image exhibits the strongest direct influence on Purchase Decision, with the highest path coefficient and T-Statistic in the model. This result confirms that brand image is the most influential determinant of consumer purchase decisions.

Indirect effect testing was performed to evaluate the mediating role of Brand Image in linking the independent variables to Purchase Decision. The results of the specific indirect effects analysis are presented in Table 11.

Table 11 : Results of Indirect Effect Testing (Specific Indirect Effects)

Hypot he sis	Path	Path Coefficients	T-Statistic	P-Value	Status	Conclusion
H6	Packaging Design (X1) → Brand Image (Z) → Purchase Decision (Y)	0.205	3.089	0.002	Significan t	Significant Mediation
H7	Digital Marketing (X2) → Brand Image (Z) → Purchase Decision (Y)	0.237	3.718	0.000	Significan t	Significant Mediation

The indirect effect analysis demonstrates that both mediation hypotheses are statistically supported. Brand Image significantly mediates the relationship between Packaging Design and Purchase Decision, even though the direct effect of packaging design on purchase decision is not significant. This finding indicates that packaging design influences purchasing decisions indirectly through the formation of a favorable brand image.

Brand Image also significantly mediates the relationship between Digital Marketing and Purchase Decision, with a stronger indirect effect compared to packaging design. The higher indirect coefficient and T-Statistic confirm that digital marketing contributes consistently to purchase decisions by strengthening brand image. Overall, these results validate the mediating role of Brand Image as a critical mechanism through which packaging design and digital marketing affect consumer purchase decisions. The findings confirm that the total effect on purchase decision arises from a combination of strong direct effects, particularly from digital marketing, and substantial indirect effects through brand image formation.

Discussion

Based on the results of the empirical analysis, this section discusses the relationships among the variables and interprets the findings in relation to relevant theories and previous studies.

The findings indicate that packaging design has a positive and significant effect on brand image, as reflected by a path coefficient of 0.383 with strong statistical support. This result confirms the first hypothesis and is consistent with the view that packaging functions as a strategic marketing communication tool rather than merely a protective container. Klimchuk and Krasovec (2012) conceptualize packaging as “The Silent Salesman,” a concept that remains relevant and is reinforced by recent empirical evidence from Junianto et al. (2025). In the context of culinary MSMEs in Pangkalpinang, attractive and well-designed packaging helps products stand out in a competitive market and shapes favorable consumer perceptions. Visual appeal, functional design, clear labeling, and durability are key elements that contribute to brand image formation (Anggadani et al., 2025). This finding aligns with Harsanto (2021), who emphasized that packaging design plays a crucial role in introducing products to consumers and indirectly supporting purchase decisions through the creation of a positive brand image. Therefore, for culinary MSMEs, investment in professional packaging design represents a strategic effort to build brand equity rather than a purely aesthetic consideration.

Digital marketing is found to have a positive and significant effect on brand image, with a path coefficient of 0.443, indicating a stronger influence than

packaging design. This result highlights the increasing dominance of technology-based marketing strategies in shaping brand perceptions in the era of digital marketing 5.0. Kristiawati et al. (2025) argue that the use of digital platforms such as e-marketplaces and social media enhances business resilience and expands market reach, a claim supported by the present findings. The high proportion of consumers using TikTok and Instagram to search for culinary information demonstrates that visually driven and interactive digital content plays a critical role in brand image formation. Elements such as information accessibility, interactivity, content creativity, and electronic word of mouth collectively shape consumer perceptions. This result is consistent with Salsabila et al. (2024) and Florensia (2024), who found that digital and social media marketing activities significantly influence brand image. These findings imply that culinary MSMEs in Pangkalpinang must treat digital marketing as a core branding mechanism rather than a supplementary promotional tool.

In contrast, packaging design does not show a significant direct effect on purchase decision, as indicated by a negative but insignificant path coefficient. This result leads to the rejection of the third hypothesis. Although this finding may appear inconsistent with some earlier studies, a deeper interpretation suggests that packaging design affects purchase decisions indirectly through brand image rather than through a direct pathway. Harsanto (2021) similarly reported that packaging design influences purchase decisions mainly via brand-related constructs such as brand awareness and brand image. In a modern culinary market characterized by multiple consumer touchpoints, purchasing decisions are shaped not only by packaging aesthetics but also by online reputation, digital word of mouth, and social media engagement (Abdullah and Asyraf, 2021). Therefore, packaging design functions as a supporting element within a broader and more complex consumer decision-making process.

Digital marketing, on the other hand, has a positive and significant direct effect on purchase decision, with a path coefficient of 0.386. This finding confirms that digital marketing activities directly stimulate consumer purchasing behavior. The result reflects changes in contemporary consumer behavior, where digital information search has become a critical stage prior to purchase (Anisti et al., 2024). The widespread use of social media platforms for culinary exploration indicates that visibility, content quality, and engagement intensity directly influence sales conversion. Kristiawati et al. (2025) further note that businesses failing to adapt to digital marketing strategies tend to experience stagnating sales due to limited online exposure. Thus, digital marketing affects purchase decisions both by strengthening brand image and by providing direct informational and transactional convenience. For culinary MSMEs, this finding demonstrates that investment in digital marketing produces tangible and

measurable returns.

Brand image emerges as the most influential variable affecting purchase decision, as evidenced by the highest path coefficient of 0.536 and the strongest T-statistic in the model. This result confirms that brand image is the dominant driver of consumer purchasing behavior. The finding aligns with the theory of reasoned action and Keller's (2016) brand equity framework, which emphasize that strong brand associations shape consumer preferences and behavioral intentions. In the culinary sector, consumers purchase not only products but also trust, perceived quality, and brand identity. Empirical support for this relationship is provided by Turnip (2023) and Widiania et al. (2024), who both reported a strong and significant influence of brand image on purchase decisions. These results suggest that culinary MSMEs must prioritize consistent branding efforts to enhance consumer confidence and purchase likelihood.

The mediation analysis reveals that brand image significantly mediates the relationship between packaging design and purchase decision. Although packaging design does not directly influence purchase decision, it exerts a meaningful indirect effect through brand image. This finding indicates that effective packaging design creates positive initial impressions that strengthen brand image, thereby driving purchase decisions. Abdullah and Asyraf (2021) reported similar results, showing that brand-related constructs mediate the impact of packaging design on purchasing behavior. This result implies that packaging design should be viewed as an integral component of a holistic branding strategy rather than as an isolated visual element.

Brand image also significantly mediates the relationship between digital marketing and purchase decisions, with a stronger indirect effect than packaging design. This finding demonstrates that digital marketing influences purchase decisions through two complementary mechanisms: a direct effect that facilitates immediate purchase behavior and an indirect effect that strengthens brand image. As a result, digital marketing represents the most versatile variable in the model. Similar mediation patterns were identified by Kurniawan (2024) and Rahmawaty et al. (2025), who found that brand image mediates the impact of various marketing strategies on purchase decisions. For MSMEs, this underscores the importance of high-quality digital content, responsive social media interaction, and positive customer reviews in building long-term brand equity while simultaneously driving sales.

Finally, the structural model demonstrates good predictive strength. The coefficient of determination indicates that packaging design and digital marketing explain 57.1 percent of the variance in brand image, while packaging design, digital marketing, and brand image jointly explain 59.3 percent of the variance in purchase decision. An R-square value of 0.593 is classified as

moderate and approaching strong, suggesting that the model explains more than half of consumer purchase decision behavior (Hair et al., 2022). The remaining unexplained variance may be attributed to other factors such as product taste, price, location, reputation, and external conditions. The effect size analysis further confirms the strategic importance of brand image and digital marketing, as both variables demonstrate moderate to large effects within the model, reinforcing their central roles in influencing consumer behavior.

CONCLUSION

This study highlights that the effectiveness of marketing strategies in culinary MSMEs is not solely determined by isolated promotional efforts but by the integration of packaging design and digital marketing through brand image as a central mediating mechanism. The most important insight derived from this research is that packaging design does not directly drive purchase decisions unless it successfully contributes to building a positive brand image. In contrast, digital marketing exerts both direct and indirect influences on consumer purchasing behavior, indicating its critical role in shaping consumer awareness, engagement, and trust in the digital era. Brand image emerges as the strongest determinant of purchase decisions, confirming that consumers primarily respond to perceived value, credibility, and emotional associations rather than functional product attributes alone. These findings provide practical lessons for culinary MSMEs, emphasizing that sustainable competitiveness depends on strategic brand-oriented marketing management rather than short-term sales tactics.

From a scholarly perspective, this study contributes to the marketing management literature by empirically validating brand image as a mediating variable that explains how packaging design and digital marketing influence purchase decisions, particularly among local culinary MSMEs. The use of SEM-PLS offers a robust analytical framework for examining complex causal relationships in emerging market settings. Nevertheless, this research is subject to certain limitations. The study focuses on a single geographic area, which may limit the generalizability of the findings to other regions with different socio-economic characteristics. Additionally, the cross-sectional design does not capture changes in consumer perceptions over time. Future research is encouraged to adopt longitudinal or comparative designs across regions, incorporate additional variables such as perceived quality, price fairness, or consumer trust, and explore the role of emerging digital platforms to further enrich the understanding of integrated marketing strategies in MSMEs.

REFERENCES

- Abdullah, M., & Asyraf, A. (2021). Pengaruh Desain Kemasan Produk dan Daya Tarik Iklan terhadap Keputusan Pembelian yang Dimediasi oleh Kesadaran Merek Produk Air Minum Cleo di Banda Aceh City. *Jurnal Manajemen dan Bisnis Sriwijaya*, 19(2), 45–58.
- Akbarinasasi, A. (2023). Digital Marketing Strategies for MSME Competitiveness in the Digital Era. *Jurnal Manajemen Indonesia*, 23(1), 45–56.
- Anggadini, S., Putra, A., & Rahayu, L. (2025). Effects of Packaging Design and Brand Image on Purchase Decisions in the Food Sector. *Jurnal Ilmu Ekonomi dan Bisnis*, 12(2), 101–112.
- Anisti, Sidarta, V., Imran, M., & Syatir. (2024). Tantangan Literasi Digital Generasi Z: Kajian Systematic Literature Review. *Media Bahasa, Sastra, dan Budaya Wahana*, 30(2), 152–161. <https://doi.org/10.33751/wahana.v30i2.11870>
- Florensia, W. A. (2024). The Influence of Social Media Marketing Activities and Brand Image on Purchase Intention at ZHM Premiere Hotel Padang. *Journal of Economics and Business Development*, 5(2), 112–128. <https://doi.org/10.47233/jebd.v26i2.1389>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (3rd ed.). Sage Publications. <https://doi.org/10.1007/978-3-030-80519-7>
- Harsanto, P. W. (2021). The Effect of Mineral Water Packaging Design on Consumer Purchase Decisions. *International Journal of Creative and Arts Studies*, 8(2), 78–95.
- Junianto, D., Widodo, A., & Kurniawan, R. (2025). Packaging Aesthetics and Consumer Perception in Culinary MSMEs. *Journal of Business and Marketing Research*, 14(1), 55–67.
- Junianto, J., Hanesty, R., Khoirunnisa, N., Banafsaj, K., & Zakira, H. (2025). Analysis of Added Value and Marketing Characteristics of Fried Fish Meatballs at JurBas Cimahi City, West Java. *Jurnal Perikanan Pantura*, 8(2), 881–890. <https://doi.org/10.30587/jpp.v8i2.9825>
- Kristiawati, D., Sari, N., & Putri, A. (2025). Digital Transformation and MSME Resilience: Evidence from Indonesian SMEs. *Jurnal Ekonomi dan Kewirausahaan*, 15(1), 77–90.
- Kristiawati, I., Mas'ud, M. I., Mudayat, M., Arifin, S., & Setiawan, A. (2025). The Role of E-Marketplaces and Digital Branding of Sustainable Fishery Products on Economic Resilience and Welfare of Urban Coastal Fish Farmers. *Community Development Journal: Jurnal Pengabdian Masyarakat*, 6(4), 5556–5559. <https://doi.org/10.31004/cdj.v6i4.50932>

- Kurniawan, F. (2024). Green Marketing and Purchase Decision: The Mediating Role of Brand Image. *Indonesian Business and Accounting Review*, 8(1), 34–48.
- Nanda, A. S., & Fitriyani. (2023). Digital-Based Community Empowerment Program for Onion Crackers MSMEs in Mojosari. *Proceedings of PKM-CSR National Conference on Community Service and Corporate Social Responsibility*, 2140–2148. <https://doi.org/10.37695/pkmcsr.v6i0.2140>
- Nanda, R., & Fitriyani, D. (2023). The Influence of Digital Marketing on Brand Image in the Culinary Industry. *Jurnal Pemasaran Nusantara*, 6(1), 12–24.
- Panduwinata, L. F. (2023). The Influence of Entrepreneurial Knowledge, Social Skills, and Business Opportunities on Angkringan Business Success. *Nomicpedia: Journal of Economics and Business*, 3(1), 45–58.
- Pratama, G., Tamzil, F., & Elistia. (2022). The Utilization of Marketing Strategy 5.0 to Increase Sales in Farmer Groups of Cidokom Village. *Jurnal Komunitas: Jurnal Pengabdian kepada Masyarakat*, 4(2), 182–190. <https://doi.org/10.31334/jks.v4i2.2112>
- Putra, D., & Dewi, M. (2023). Social Media Branding and Its Impact on Consumer Behavior. *Jurnal Komunikasi dan Bisnis*, 11(2), 150–162.
- Rahmawaty, P., Sumartono, & Sukanto. (2025). Brand Image as a Mediator between Influencer Credibility and Purchase Decision among Generation Z. *Jurnal Inovasi Manajemen*, 12(3), 234–251.
- Surtikanti, S., & Ekawardhani, Y. A. (2025). Optimizing Product Packaging and Financial Management to Increase Sales of Single-Mother MSMEs. *Indonesian Community Service and Empowerment Journal*, 6(2), 719–727. <https://doi.org/10.34010/icomse.v6i2.17027>
- Suryani, I., & Lestari, P. (2022). Digital Marketing 5.0 and Consumer Purchase Intention. *International Journal of Digital Business*, 4(3), 88–95.
- Kusumawati, I. (2025). AI-Based Human Capital as a Catalyst for Increasing the Strategic Agility of Educational Organizations. *International Journal of Multidisciplinary Research*, 1(5), 239–245.
- Najiburohman, N., Hefniy, H., R., A. H. A., & Alwahedi, M. A. A. (2025). Virtual School Tours: Boosting Community Interest and Attracting Prospective Students. *Evaluasi: Jurnal Manajemen Pendidikan Islam*, 9(2), 340–353. <https://doi.org/10.32478/3gtzvf72>
- Nurfajriani, W. V., Ilhami, M. W., Mahendra, A., Afgani, M. W., & Sirodj, R. A. (2024). Data Triangulation in Qualitative Data Analysis. *Jurnal Ilmiah Wahana Pendidikan*, 10(17), 826–833.
- Pratiwi, F. S., & Suhendra. (2024). The Role of Digital Communication in Shaping Public Opinion: A Social Media Case Study. *IAPA Proceedings Conference*, 293–315. <https://doi.org/10.30589/proceedings.2024.1059>

- Ramadhani, Z. (2024). Qualitative Content Analysis of Educational Content Related to Sustainable Fashion on TikTok Account @Dosen_Fashyun. *Jurnal Komunikasi dan Media*, 5(1), 72–86. <https://doi.org/10.24167/jkm.v5i1.12613>
- Salsabila, B. T., Soliha, E., & Mardiana, S. (2024). The Influence of Digital Marketing and Brand Image on Purchase Decisions through Purchase Intention as an Intervening Variable. *Bisman: The Journal of Business and Management*, 7(3), 321–338. <https://doi.org/10.36815/bisman.v7i3.3728>
- Syafiih, M. (2025). The Future of Education in the Digital Era: Between Technological Innovation and Equitable Access. *Proceeding of the International Conference on Education, Society and Humanity*, 3(1), 737–741.
- Turnip, S. D. (2023). The Influence of Brand Image and Product Quality on Purchase Decisions: A Survey of Wardah Consumers in Bekasi City. *Jurnal Tribuna Bisnis*, 5(2), 145–158. <https://doi.org/10.59806/tribisnis.v5i2.305>
- Ulus, A. (2024). Brand Image as a Mediator between Marketing Strategy and Purchase Decisions. *Journal of Consumer Studies*, 9(1), 33–47.
- Ulus, A. A. (2024). Analysis of Sharia Marketing Strategies to Increase Sales of Processed Cassava in Facing Business Competition. *Jurnal Ekosiana*, 11(1), 40–52. <https://doi.org/10.47077/ekosiana.v11i1.484>
- Widiana, I. G. A., Sukawati, T. G. R., & Nugroho, A. (2024). Brand Image, Product Quality, and Consumer Purchase Decisions at Mixue in Kintamani. *Journal of Management and Applied Economics*, 6(3), 189–205. <https://doi.org/10.23887/jmpp.v7i2.78216>