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The Influence of Product Innovation and Innovation Based Marketing on the Competitiveness of MSMEs and Their Impact on Local Economic Growth in West Java

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ABSTRACT

Objective: *Regional economic growth is greatly influenced by the ability of micro, small, and medium enterprises (MSMEs) to innovate and adapt to market changes. This study aims to analyze the effect of product innovation and innovation-based marketing on the competitiveness of MSMEs and their impact on local economic growth in West Java Province.*

Methodology: *This research is an explanatory quantitative study using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach. The research population includes all MSME actors in the creative industry, agribusiness, and service sectors in West Java, with a sample of 200 respondents selected using purposive sampling. Data collection was conducted through a structured questionnaire that had been tested for validity and reliability.*

Findings: *Product innovation and innovation-based marketing were positively associated with MSME competitiveness ($\beta = 0.450$ and $\beta = 0.534$, respectively; $p < 0.001$). Both variables also showed significant direct relationships with the local economic growth construct ($\beta = 0.292$ and $\beta = 0.388$; $p < 0.001$). MSME competitiveness was positively related to local economic growth ($\beta = 0.352$; $p < 0.001$) and partially mediated both innovation–growth relationships.*

Conclusion: *Product and marketing innovation are important complementary factors in strengthening MSME competitiveness and respondents' assessments of local economic growth. The findings highlight the relevance of innovation support, digital marketing capabilities, and business development programmes for MSMEs in West Java.*

Keywords*: Product Innovation; Innovation Based Marketing; SME Competitiveness; Local Economic Growth; West Java.*

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INTRODUCTION

In an era of globalisation marked by increasingly intense competition, Micro, Small, and Medium Enterprises (MSMEs) have become a key pillar of the national economy in various countries, including Indonesia. According to data from the Ministry of Cooperatives and SMEs of the Republic of Indonesia (2024), MSMEs contribute around 60 per cent to the Gross Domestic Product (GDP) and absorb more than 97 per cent of the workforce in the non-agricultural sector, making them the largest provider of employment and a pillar of national economic stability. Despite their enormous contribution, MSMEs still face various challenges such as limited access to capital, low adoption of digital technology, and limited market penetration, which impact their competitiveness (Arnita et al., 2024). In this context, the ability to innovate is a crucial factor that determines the survival and growth of MSMEs.

One key strategy for increasing competitiveness is through product innovation and innovation-based marketing. Product innovation is not only limited to the creation of new products, but also includes improvements in quality, production efficiency, design, and added value for consumers (Hanaysha & Hilman, 2015; Ismanu et al., 2021). Several studies have demonstrated that product innovation has a positive impact on the performance and sustainability of SMEs (Octasylva et al., 2022; Prabowo & Firdaus, 2024). On the other hand, the success of product innovation greatly depends on how the innovation is communicated to the market through effective marketing strategies. Innovation-based marketing, as explained by Purchase and Volery (2020) and Kotler (2016), is an approach that emphasises the integration of creativity and technology in the marketing mix to build differentiation and create customer value.

The relationship between product innovation and innovative marketing is reciprocal: innovation creates product differentiation, which is the main attraction for consumers, while innovative marketing ensures that the product has optimal visibility and market acceptance. Research by Pramuki and Kusumawati (2024) indicates that combining the two can enhance the competitiveness and marketing performance of MSMEs in Indonesia. Furthermore, the use of digital technology in marketing strategies also plays a crucial role in expanding market reach and strengthening the competitive position of MSMEs, particularly in the rapidly growing creative and agribusiness sectors (Wiweko & Anggara, 2025).

However, despite numerous studies examining the relationship between innovation and SME business performance, a gap remains in the literature directly linking product innovation and innovative marketing to local economic growth. Herlinawati and Machmud (2020) found that innovation has a positive effect on business performance; however, they did not extensively discuss its impact on regional economic development. Meanwhile, the macroeconomic perspectives of the OECD (2021) and Robra et al. (2023) within the Schumpeterian growth theory framework emphasise that innovation is the main driving force behind the process of "creative destruction", whereby innovation replaces old technologies with more efficient and productive ones, thereby accelerating local economic growth and job creation.

In this context, this study is grounded in three complementary theoretical approaches. First, Schumpeterian growth theory posits that innovation is the driving force behind productivity and economic development through the process of creative destruction (Schumpeter; Robra et al., 2023; OECD, 2021). Second, the marketing innovation framework, which explains how innovation in the marketing mix and processes can create customer value and differentiation that become sources of competitive advantage (Purchase & Volery, 2020; Kotler, 2016; Pramuki & Kusumawati, 2024). Third, the perspective of sustainable competitiveness in MSMEs emphasizes the importance of sustainable innovation, operational efficiency, and

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product quality as the basis for forming a sustainable competitive advantage (Octasylva et al., 2022; Thi et al., 2023).

Based on this theoretical foundation, this study aims to analyse the influence of product innovation and innovation-based marketing on the competitiveness of SMEs and their impact on local economic growth in West Java Province. This study is expected to make empirical contributions to the development of innovation theory in the context of MSMEs in developing countries, while also providing practical recommendations for local governments and business actors on strengthening the innovation ecosystem that supports inclusive and sustainable regional economic growth.

LITERATURE REVIEW

Product Innovation

Product innovation is a key strategy in modern business, enabling companies to meet the ever-changing needs of the market. Research by Prabowo and Firdaus (2024) shows that strategic orientation, market power, and organisational collaboration have a significant positive impact on product innovation in SMEs, which in turn strengthens company performance. Furthermore, Hidayat and Pok (2025) found that intangible factors, such as creativity, knowledge, and adaptability, also enhance product innovation among SMEs, although resource constraints remain a significant obstacle to this process. These findings confirm that for SMEs, product innovation involves not only the creation of new products but also improvements in quality, design, and production efficiency, to remain relevant in a rapidly changing market. By focusing on sustainable innovation, SMEs can extend product life cycles, increase customer satisfaction, and expand market opportunities.

Product Innovation-Based Marketing

Innovation-based marketing enhances the market position of innovative products. A literature study by Wiweko and Anggara (2025) shows that MSMEs in Indonesia that adopt digital marketing practices such as social media, e-commerce, and creative content have greater opportunities to expand their market and increase product visibility. Research by Astriani et al. (2022) even reveals that marketing innovation has a greater influence on SME performance during the pandemic than product or process innovation. This shows that product innovation must be balanced with innovative marketing strategies so that its added value can be recognised, accepted, and purchased by consumers.

With advances in digital technology, innovation-based marketing enables SMEs to reach a broader market at a relatively low cost. This approach also plays a crucial role in building a brand image, increasing customer loyalty, and enhancing competitiveness in a competitive global market.

Local Economic Growth

Local economic growth reflects a region's ability to create jobs, increase per capita income, and strengthen regional economic resilience. Hidayat and Pok (2025) emphasize that product innovation, achieved through the strengthening of intangible factors, contributes to improved business performance, which can have a broader impact on the local economy. MSMEs, as the dominant sector in Indonesia's economic structure, have the potential to accelerate regional economic growth through innovation and effective marketing strategies.

p-ISSN: 2088-1231
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However, a gap remains in the literature that directly links MSME innovation with macroeconomic indicators, such as job creation and regional income growth. Therefore, recent studies emphasise the need for a cross-sectoral approach that combines product innovation, digital marketing, and collaboration between business actors to promote inclusive local economic development.

Competitive Skills and SME Business Sustainability

The competitiveness of SMEs is greatly influenced by their ability to innovate sustainably, operational efficiency, and product differentiation. Isa and Mardalis (2024) demonstrate, in the context of Indonesian SMEs, that entrepreneurial orientation and innovation capabilities have a significant impact on business performance. Similar results were presented by Octasylva et al. (2022), who emphasised that planned and sustainable innovation is the key to the long-term growth of MSMEs. Product and marketing innovation are not one-off activities, but rather a continuous process that enables MSMEs to maintain their competitive advantage in a dynamic market.

By strengthening their capacity for innovation and adaptation to market changes, MSMEs can build business sustainability and consistently improve local economic resilience.

Dynamic Innovation and Marketing Model for SMEs

A dynamic model that integrates product and marketing innovation emphasises that these two variables reinforce each other. Ramawati et al. (2024) found that product innovation strategies in the food and beverage SME sector, supported by digital technology and innovative marketing, can significantly increase competitiveness. This integration demonstrates that the success of innovation depends not only on product quality but also on the ability to effectively communicate product value to the market through the proper marketing channels.

Advances in digital technology and e-commerce platforms present significant opportunities for MSMEs to market innovative products efficiently and reach a global audience. Therefore, an innovation-marketing model that is adaptable to technological changes is a crucial foundation for the sustainable growth of MSMEs in the digital era.

Local Economic Innovation and Synergy

The Schumpeterian growth theory framework posits that innovation is the primary driver of economic development through the process of creative destruction, which involves replacing outdated products, technologies, and methods with more efficient and relevant ones. This process drives productivity growth and creates new economic opportunities (Aghion & Howitt, 2023; Caballero, 2008). In the context of the local economy, innovations made by MSMEs can spur structural transformation through job creation, increased competitiveness, and product diversification based on regional potential.

Although empirical studies on creative destruction in Indonesia are still limited, several studies confirm the strategic role of MSME innovation in strengthening the local economy. Hidayat and Pok (2025) demonstrate that the innovative and collaborative capabilities of MSME actors contribute to enhanced business performance and regional economic growth. Meanwhile, the OECD (2021) highlights that MSME innovation in the creative industry, agribusiness, and service sectors has a multiplier effect on local economic growth. Thus, sustainable product and marketing innovation not only drives micro-business success but also catalyzes inclusive and sustainable economic development.

p-ISSN: 2088-1231
e-ISSN: 2460-5328

HYPOTHESIS AND RESEARCH FRAMEWORK

The Relationship between Product Innovation and SME Competitiveness

Product innovation is a key business strategy that enables SMEs to remain competitive in the market. Prabowo and Firdaus (2024) demonstrate that strategic orientation, market power, and organisational collaboration have a significant positive impact on product innovation, which in turn enhances the performance and competitiveness of SMEs. Similar results were found by Octasylva et al. (2022), who confirmed that sustainable innovation enhances competitive advantage and business sustainability.

A study by Ibrahim, Wolok, and Abdussamad (2024) also confirms that product innovation has a positive and significant effect on the competitiveness of MSMEs in Gorontalo City. Meanwhile, research by Hidayat & Pratama (2023) found that internal strategy flexibility and the organisational environment support the success of SME product innovation in enhancing competitiveness in the digital era. Thus, product innovation encompasses not only the development of new products but also the improvement of existing products, the expansion of product lines, and the rapid adaptation to changes in consumer needs and preferences.

H1: Product innovation has a positive impact on the competitiveness of SMEs.

The Relationship between Product Innovation and Local Economic Growth

Product innovation not only impacts a company's internal performance but also has positive implications for local economic growth. Within the Schumpeterian growth theory framework, innovation drives the process of creative destruction, which involves replacing old technologies and products with more efficient and relevant ones, thereby increasing productivity and promoting economic growth (Aghion & Howitt, 2023; Caballero, 2008).

An OECD study (2021) confirms that MSME innovation has a multiplier effect on local production capacity, creating jobs and opening up new business opportunities in the agribusiness, manufacturing, and creative industries. In line with this, Hidayat and Pok (2025) state that the innovative capacity of MSMEs has a positive correlation with increased economic activity at the regional level.

H2: Product innovation has a positive impact on local economic growth.

The Relationship between Product Innovation-Based Marketing and SME Competitiveness

Product innovation-based marketing plays a crucial role in ensuring that innovative products can reach and be well-received by the market. Kotler (2016) states that effective marketing strategies can create strong differentiation and increase customer value. In the digital context, Wiweko and Anggara (2025) show that the use of social media, e-commerce, and creative content-based marketing significantly expands the market reach of SMEs and increases product visibility.

Research by Hidayat and Pratama (2023) found that innovation in the marketing mix (product, price, place, promotion) directly increases the competitiveness of MSMEs by strengthening brand image and customer relationships. Therefore, innovation in marketing is a strategic element that complements product innovation in creating a competitive advantage.

H3: Product innovation-based marketing has a positive impact on the competitiveness of SMEs.

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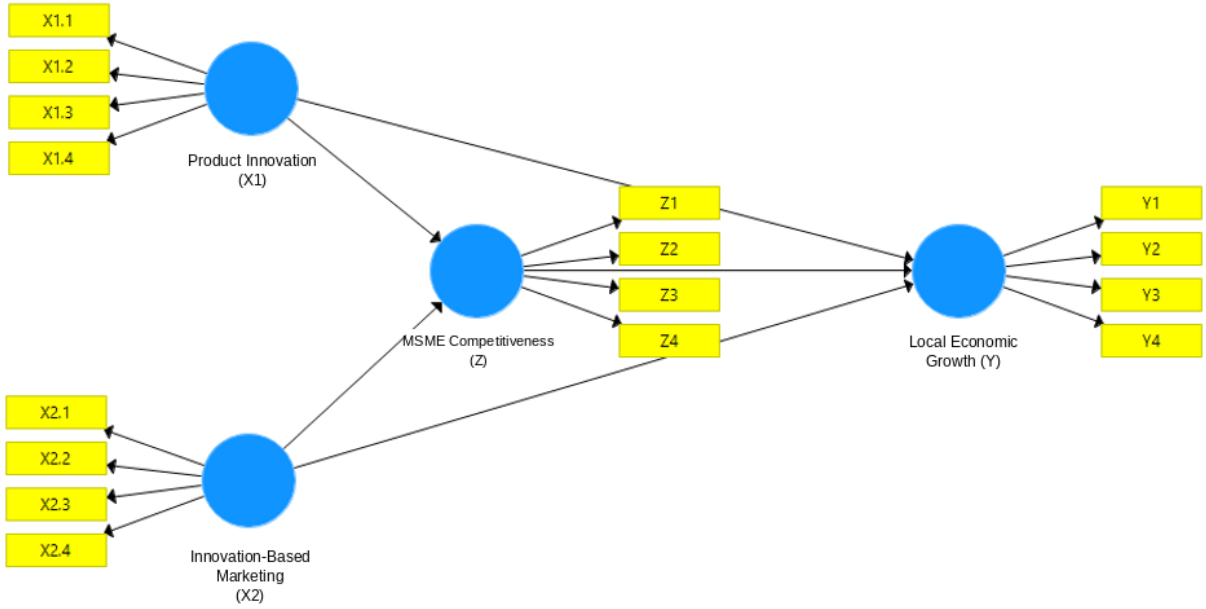
The Relationship between SME Competitiveness and Local Economic Growth

The competitiveness of MSMEs plays an essential role in driving local economic growth. Isa and Mardalis (2024) demonstrate that entrepreneurial orientation and innovation capabilities have a significant impact on enhancing the performance of MSMEs. From a Schumpeterian perspective, innovation and strong competitiveness expand markets, increase production efficiency, and create new jobs, thereby strengthening the local economic structure (Caballero, 2008; Aghion & Howitt, 2023).

The research by Ibrahim et al. (2024) confirms that highly competitive MSMEs can create added value for the regional economy through their contributions to the GRDP and community empowerment. Therefore, the competitiveness of MSMEs is a crucial variable that bridges the relationship between innovation and local economic growth.

H4: The competitiveness of MSMEs has a positive impact on local economic growth.

Figure 1 Conceptual Framework



Source: Data processing with PLS, 2025

METHOD

This study uses a quantitative approach with a correlational research design. The primary objective of this study is to analyze the influence of exogenous variables product innovation and innovation-based marketing on endogenous variables, specifically the competitiveness of MSMEs and local economic growth. The quantitative approach was chosen because it allows for the systematic measurement of relationships between variables through numerical data and hypothesis testing using inferential statistical tools (Creswell & Creswell, 2018; Sugiyono, 2022).

Analysis Approach

Data analysis was conducted using Structural Equation Modelling–Partial Least Squares (SEM-PLS) through the latest version of SmartPLS software (v4.0). The SEM-PLS approach was chosen because it is well-suited for research models that involve numerous latent constructs

p-ISSN: 2088-1231
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and complex relationships between variables (Hair et al., 2021). Additionally, this method does not require standard distribution assumptions and can handle moderate sample sizes (Henseler et al., 2015; Sarstedt et al., 2017).
The SEM-PLS method also enables researchers to evaluate two primary models: the measurement model (construct Validity and Reliability) and the structural model (relationships between latent variables), while testing direct, indirect (mediation), and total effects between constructs (Jiemar et al., 2022).

Research Instruments
The main instrument was a closed-ended questionnaire designed based on empirical indicators and theories that had been validated in previous studies. Each item used a 1–5 Likert scale, with one indicating "strongly disagree" and five indicating "strongly agree." This scale was chosen because it is commonly used in behavioural and organisational research to measure respondents' perceptions and attitudes quantitatively (Sekaran & Bougie, 2020).
The indicators for each construct were compiled based on previous literature: product innovation (Kotler, 2016; Febrianti, 2025), innovation-based marketing (Hendrawan et al., 2024), MSME competitiveness (Octasylva et al., 2022; Thi et al., 2023), and local economic growth (Schumpeter; Robra et al., 2023; Dasaraju et al., 2020).

Data Sources
The research data consists of two types:
1. Primary data was collected through the distribution of questionnaires to SME actors in West Java Province.
2. Secondary data, obtained from supporting documents such as SME annual reports, publications from the Ministry of Cooperatives and SMEs, and previous research results.

The combination of these two sources allows for data triangulation to strengthen the external Validity of the research (Creswell & Plano Clark, 2017; Sekaran & Bougie, 2020).

Research Location and Time
The research was conducted in West Java Province, which is known to have the highest SME growth rate in Indonesia, particularly in the creative industry, agribusiness, and service sectors (West Java BPS, 2024). Data collection was conducted from January to June 2024, covering the preparation of instruments, pilot testing, data collection, and data analysis using SmartPLS (Hair et al., 2021).

Population and Sampling Technique
The research population consisted of all MSMEs operating in West Java across the creative industry, agribusiness, and service sectors. The sampling technique used was purposive sampling, which is the selection of respondents based on specific criteria—MSMEs that have been operating for at least two years and have product innovation activities. The total sample size was set at 200 respondents, in accordance with the recommendation by Hair et al. (2014) that the minimum sample size in a PLS-SEM model is 5–10 times the number of indicators tested.

p-ISSN: 2088-1231
e-ISSN: 2460-5328

Variable Operationalisation

Each variable was measured using reflective indicators designed based on previous theories and research:

1. Product Innovation: new product development, quality improvement, product line expansion, application of new technology (Kotler, 2016; Febrianti, 2025).
2. Innovation-Based Marketing: digital marketing, product differentiation, data-based strategies, customer experience (Hendrawan et al., 2024).
3. MSME Competitiveness: sustainable innovation, operational efficiency, brand differentiation, service quality (Octasylva et al., 2022; Thi et al., 2023).
4. Local Economic Growth: job creation, increased per capita income, regional investment, and infrastructure development (Robra et al., 2023; Dasaraju et al., 2020).

Instrument Validity and Reliability Test

Before conducting the structural model analysis, Validity and reliability tests were performed on all constructs.

1. Convergent Validity: Each indicator is considered valid if it has an outer loading value > 0.70 and an Average Variance Extracted (AVE) value > 0.50 (Hair et al., 2021).
2. Discriminant Validity: evaluated through the Fornell–Larcker criterion and the indicator cross-loading matrix. The square root of AVE for each construct was compared with interconstruct correlations, while indicators were assessed for stronger loadings on their own constructs than on other constructs. HTMT may serve as an additional diagnostic when reported (Henseler et al., 2015).
3. Internal Reliability: determined through Composite Reliability (CR) and Cronbach's Alpha, each with a minimum of ≥ 0.70 (JPTI Journal, 2023; Hair et al., 2021).

The measurement model was assessed using outer loadings, reliability coefficients, AVE, the Fornell–Larcker criterion and cross-loadings. Collinearity was examined at the structural predictor level and, as supplementary information, at the indicator level.

Data Analysis Techniques

The analysis was conducted in several stages:

1. Measurement Model Evaluation (Outer Model): to assess the Validity and Reliability of latent constructs.
2. Structural Model Evaluation (Inner Model): to test the direction and strength of relationships between variables using path coefficients and t-statistic values through bootstrapping.
3. Direct and Indirect Effect Tests: to identify the mediating role of SME competitiveness between innovation and local economic growth.
4. Explanatory and Predictive Assessment: R^2, adjusted R^2 and f^2 were used to evaluate explanatory performance, while the reported five-fold cross-validated R^2 values were used as a distinct predictive diagnostic. Model fit was described using the indices presented in the fit-assessment results.
5. Interpretation and Implications: The results are then compared with previous research findings to draw empirical and theoretical conclusions.

p-ISSN: 2088-1231
e-ISSN: 2460-5328

RESULTS AND DISCUSSION

Respondent Characteristics

The analysis was based on questionnaire responses from 200 MSME operators in the creative industries, agribusiness and service sectors of West Java. Data were collected between January and June 2024. Table 1 presents the respondents' demographic characteristics, business profiles and principal product innovation activities, providing the context for the subsequent PLS-SEM analysis.

Table 1 Distribution of MSME Respondents in West Java

Characteristic	Category	Frequency	Percentage
Gender	Male	92	46.0%
	Female	108	54.0%
	Total	200	100%
Age	18–25 years	24	12.0%
	26–35 years	68	34.0%
	36–45 years	62	31.0%
	46–55 years	34	17.0%
	Over 55 years	12	6.0%
	Total	200	100%
Highest Education	Elementary school/equivalent	8	4.0%
	Junior high school/equivalent	20	10.0%
	Senior high/vocational school	94	47.0%
	Diploma (D1–D3)	26	13.0%
	Bachelor's degree (S1)	46	23.0%
	Postgraduate (S2/S3)	6	3.0%
	Total	200	100%
Business Sector	Creative industries	86	43.0%
	Agribusiness	52	26.0%
	Services	62	31.0%
	Total	200	100%
Business Age	2–3 years	48	24.0%
	4–5 years	66	33.0%
	6–10 years	58	29.0%
	Over 10 years	28	14.0%
	Total	200	100%
Annual Turnover	≤ IDR 100 million	58	29.0%
	> IDR 100–500 million	82	41.0%
	> IDR 500 million–1 billion	38	19.0%
	> IDR 1–5 billion	18	9.0%
	> IDR 5 billion	4	2.0%
	Total	200	100%
Number of Employees	1–4 people	96	48.0%
	5–9 people	62	31.0%
	10–19 people	28	14.0%
	≥ 20 people	14	7.0%

p-ISSN: 2088-1231
e-ISSN: 2460-5328

Characteristic	Category	Frequency	Percentage
	Total	200	100%
Product Innovation Activity	New product development	54	27.0%
	Product quality improvement	62	31.0%
	Design or packaging development	46	23.0%
	Product feature/function development	38	19.0%
	Total	200	100%

Source: Processed primary data (2024)

Table 1 shows that 108 respondents (54.0%) were women and 92 (46.0%) were men. The largest age group was 26–35 years (34.0%), followed by 36–45 years (31.0%). Creative industries represented 43.0% of participating businesses, while services and agribusiness accounted for 31.0% and 26.0%, respectively. Nearly half of the MSMEs employed one to four workers (48.0%), and the most frequent annual turnover category was above IDR 100 million to IDR 500 million (41.0%). Product quality improvement was the most common innovation activity (31.0%), followed by new product development (27.0%).

These findings describe a sample predominantly comprising established, small-scale enterprises operating in a range of sectors. All participating businesses had operated for at least two years and had undertaken product innovation activities, in accordance with the purposive sampling criteria. Consequently, the characteristics in Table 1 describe the surveyed MSMEs rather than population-wide proportions. The structural analysis examines relationships between the measured constructs using these respondents' primary survey data. In particular, Local Economic Growth is operationalised through questionnaire indicators of perceived local economic conditions; it is not a direct estimate of changes in official regional economic statistics.

Measurement Model Assessment (Outer Model)

The measurement model was examined through indicator loadings, internal consistency reliability, average variance extracted (AVE), Fornell–Larcker discriminant validity and cross-loadings. Predictor and indicator collinearity diagnostics complement this evaluation. All results relate to the four measured constructs: Product Innovation (X1), Innovation-Based Marketing (X2), MSME Competitiveness (Z) and Local Economic Growth (Y).

Convergent Validity

Table 2 reports the outer loadings generated by SmartPLS 4 for the 16 reflective indicators. An outer loading above 0.70 was used as the principal threshold for indicator reliability.

Table 2 Outer Loadings of the Reflective Measurement Model

Indicator	Product Innovation (X1)	Innovation-Based Marketing (X2)	MSME Competitiveness (Z)	Local Economic Growth (Y)
X1_1	0.916			
X1_2	0.915			
X1_3	0.920			
X1_4	0.915			
X2_1		0.933		

p-ISSN: 2088-1231
e-ISSN: 2460-5328

Indicator	Product Innovation (X1)	Innovation-Based Marketing (X2)	MSME Competitiveness (Z)	Local Economic Growth (Y)
X2_2		0.932		
X2_3		0.915		
X2_4		0.919		
Y_1				0.921
Y_2				0.909
Y_3				0.916
Y_4				0.915
Z_1			0.904	
Z_2			0.910	
Z_3			0.907	
Z_4			0.918	

Source: Data processing with PLS, 2025

All 16 indicators met the loading criterion (Table 2). Product Innovation recorded loadings from 0.915 to 0.920, Innovation-Based Marketing from 0.915 to 0.933, MSME Competitiveness from 0.904 to 0.918, and Local Economic Growth from 0.909 to 0.921. The consistently high coefficients indicate that each observed indicator is strongly associated with its designated construct. No indicator required exclusion on the basis of the reported outer-loading threshold. The loading pattern is particularly consistent across the four constructs. Innovation-Based Marketing recorded the highest single outer loading (X2_1 = 0.933), while the lowest loading was found for the first MSME Competitiveness indicator (Z_1 = 0.904); both exceed the recommended threshold. These results provide evidence of indicator reliability, which is further evaluated at the construct level through reliability coefficients and AVE.

Inner-Model Collinearity Assessment

Collinearity among the predictors was evaluated using the variance inflation factor (VIF). The values reported in Table 3 describe the predictor relationships in each endogenous equation. Lower VIF values indicate less shared variance among the predictors and make the estimated structural coefficients easier to interpret.

Table 3 Inner-Model Variance Inflation Factor (VIF) Results

Endogenous construct	Predictor	Inner VIF	Predictor set
MSME Competitiveness (Z)	Product Innovation (X1)	1.038	X1 and X2
MSME Competitiveness (Z)	Innovation-Based Marketing (X2)	1.038	X1 and X2
Local Economic Growth (Y)	Product Innovation (X1)	1.519	X1, X2 and Z
Local Economic Growth (Y)	Innovation-Based Marketing (X2)	1.716	X1, X2 and Z
Local Economic Growth (Y)	MSME Competitiveness (Z)	2.378	X1, X2 and Z

p-ISSN: 2088-1231
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Source: Data processing with PLS, 2025

The inner-model VIF values in Table 3 range from 1.038 to 2.378. In the equation predicting MSME Competitiveness, Product Innovation and Innovation-Based Marketing each have a VIF of 1.038. For Local Economic Growth, the values are 1.519 for Product Innovation, 1.716 for Innovation-Based Marketing and 2.378 for MSME Competitiveness. All are below the commonly used threshold of 3.3, indicating that problematic multicollinearity is not evident among the predictors in either structural equation.
The highest inner VIF is associated with MSME Competitiveness in the equation predicting Local Economic Growth (2.378). This is consistent with its substantive association with both innovation constructs, although the magnitude remains within an acceptable range for the structural analysis. Consequently, the direct effects reported later can be interpreted without evidence of substantial distortion from predictor collinearity.

Indicator-Level Collinearity (Outer VIF)
The indicator-level VIF results are presented in Table 4 for all 16 reflective indicators. These values provide supplementary information about the degree of shared information among indicators within each construct. Because all four constructs are specified reflectively, outer loadings, reliability and construct validity remain the primary criteria for evaluating the measurement model.

Table 4 Indicator-Level Variance Inflation Factor (Outer VIF)

Indicator	Construct	Outer VIF	VIF range assessment
X1_1	Product Innovation	4.742	Below 5.0
X1_2	Product Innovation	4.708	Below 5.0
X1_3	Product Innovation	4.881	Below 5.0
X1_4	Product Innovation	4.708	Below 5.0
X2_1	Innovation-Based Marketing	5.638	Above 5.0
X2_2	Innovation-Based Marketing	5.591	Above 5.0
X2_3	Innovation-Based Marketing	4.875	Below 5.0
X2_4	Innovation-Based Marketing	5.030	Above 5.0
Z_1	MSME Competitiveness	4.265	Below 5.0
Z_2	MSME Competitiveness	4.436	Below 5.0
Z_3	MSME Competitiveness	4.349	Below 5.0
Z_4	MSME Competitiveness	4.679	Below 5.0
Y_1	Local Economic Growth	4.892	Below 5.0

p-ISSN: 2088-1231
e-ISSN: 2460-5328

Indicator	Construct	Outer VIF	VIF range assessment
Y_2	Local Economic Growth	4.495	Below 5.0
Y_3	Local Economic Growth	4.721	Below 5.0
Y_4	Local Economic Growth	4.687	Below 5.0

Source: Data processing with PLS, 2025

Table 4 reports outer VIF values ranging from 4.265 (Z_1) to 5.638 (X2_1). The Product Innovation indicators range from 4.708 to 4.881, while the Innovation-Based Marketing indicators range from 4.875 to 5.638. Values for MSME Competitiveness range from 4.265 to 4.679 and those for Local Economic Growth from 4.495 to 4.892. Three marketing indicators (X2_1, X2_2 and X2_4) exceed 5.0 and therefore show comparatively high overlap with other items within the same construct.

The outer VIF findings are interpreted alongside the reflective loading and reliability results rather than as an independent basis for excluding indicators. The relatively elevated values among marketing indicators warrant attention to possible item redundancy; however, all four X2 indicators have substantial primary loadings (0.915–0.933), and the construct meets the reported reliability and convergent-validity criteria. The indicators are therefore retained in the model reported here, with attention to potential wording overlap in future instrument refinement.

Construct Reliability and Convergent Validity

Construct reliability and convergent validity were assessed using Cronbach's alpha, rho_A, composite reliability (rho_C) and AVE. Table 5 presents the corresponding SmartPLS 4 results for the four research constructs.

Table 5 Construct Reliability and Convergent Validity

Construct	Cronbach's α	rho_A	rho_C	AVE
Innovation-Based Marketing (X2)	0.944	0.944	0.960	0.856
Local Economic Growth (Y)	0.935	0.936	0.954	0.838
MSMEs Competitiveness (Z)	0.931	0.931	0.951	0.828
Product Innovation (X1)	0.937	0.938	0.955	0.840

Source: Data processing with PLS, 2025

The results in Table 5 indicate satisfactory internal consistency across all constructs. Cronbach's alpha ranges from 0.931 to 0.944, rho_A from 0.931 to 0.944, and composite reliability (rho_C) from 0.951 to 0.960. The AVE values are 0.840 for Product Innovation, 0.856 for Innovation-Based Marketing, 0.828 for MSME Competitiveness and 0.838 for Local Economic Growth. Each value exceeds the conventional minimum of 0.50, confirming convergent validity under the specified criterion.

Innovation-Based Marketing has the highest composite reliability (0.960) and AVE (0.856), indicating strong consistency and shared variance among its indicators. The remaining

p-ISSN: 2088-1231
e-ISSN: 2460-5328

constructs show similarly satisfactory measurement properties. Taken together with the outer loadings, these results support the use of the four reflective constructs in the structural model.

Discriminant Validity: Fornell–Larcker Criterion

Discriminant validity was evaluated using the Fornell–Larcker criterion. The square root of each construct's AVE was compared with its correlations with the other constructs, as reported in Table 6.

Table 6 Fornell–Larcker Discriminant Validity Results

Construct	X2	Y	Z	X1
Innovation-Based Marketing (X2)	0.925			
Local Economic Growth (Y)	0.662	0.915		
MSME Competitiveness (Z)	0.620	0.754	0.910	
Product Innovation (X1)	0.191	0.560	0.552	0.917

Source: Data processing with PLS, 2025

Table 6 shows diagonal values of 0.925 for Innovation-Based Marketing, 0.915 for Local Economic Growth, 0.910 for MSME Competitiveness and 0.917 for Product Innovation. Each diagonal value is higher than the correlations of the corresponding construct with the other variables. The highest interconstruct correlation is between MSME Competitiveness and Local Economic Growth (r = 0.754), which remains below the relevant diagonal values. The findings therefore satisfy the Fornell–Larcker criterion for discriminant validity.

The Fornell–Larcker results show that each construct has a stronger association with its own indicators, on average, than with the other constructs under this criterion. The correlation between MSME Competitiveness and Local Economic Growth (0.754) is the largest interconstruct correlation, yet remains lower than the relevant square roots of AVE (0.910 and 0.915). The item-level cross-loading results provide a further check on whether indicators are primarily associated with their intended constructs (Table 7).

Cross-Loading Verification

Cross-loadings were examined to evaluate the extent to which each indicator correlates more strongly with its intended latent construct than with the alternative constructs. Table 7 presents the indicator-level results across Product Innovation, Innovation-Based Marketing, MSME Competitiveness and Local Economic Growth.

Table 7 Cross-Loading Results for the Measurement Model

Indicator	X1	X2	Z	Y
X1_1	0.916	0.175	0.506	0.513
X1_2	0.915	0.175	0.505	0.512
X1_3	0.920	0.176	0.508	0.515
X1_4	0.915	0.175	0.505	0.512
X2_1	0.178	0.933	0.578	0.618
X2_2	0.178	0.932	0.578	0.617
X2_3	0.175	0.915	0.567	0.606
X2_4	0.176	0.919	0.570	0.608
Z_1	0.499	0.560	0.904	0.682
Z_2	0.502	0.564	0.910	0.686

p-ISSN: 2088-1231
e-ISSN: 2460-5328

Indicator	X1	X2	Z	Y
Z_3	0.501	0.562	0.907	0.684
Z_4	0.507	0.569	0.918	0.692
Y_1	0.516	0.610	0.694	0.921
Y_2	0.509	0.602	0.685	0.909
Y_3	0.513	0.606	0.691	0.916
Y_4	0.512	0.606	0.690	0.915

Source: Data processing with PLS, 2025

Table 7 indicates that each indicator has its highest loading on its designated construct. Product Innovation indicators have primary loadings of 0.915–0.920, which exceed their cross-loadings on X2 (0.175–0.176), Z (0.505–0.508) and Y (0.512–0.515). For Innovation-Based Marketing, primary loadings of 0.915–0.933 are likewise higher than the correlations with X1, Z and Y. The four competitiveness indicators load most strongly on Z (0.904–0.918), while the four local economic growth indicators load most strongly on Y (0.909–0.921).

The separation is also evident in the two constructs with the strongest interconstruct correlation. For the Local Economic Growth indicators, cross-loadings on MSME Competitiveness range from 0.685 to 0.694, below their corresponding primary loadings. Similarly, the competitiveness indicators have cross-loadings on Local Economic Growth of 0.682–0.692, which remain below their loadings on Z. Together with the Fornell–Larcker results in Table 6, this pattern supports discriminant validity under the reported criteria.

Structural Model Assessment (Inner Model)

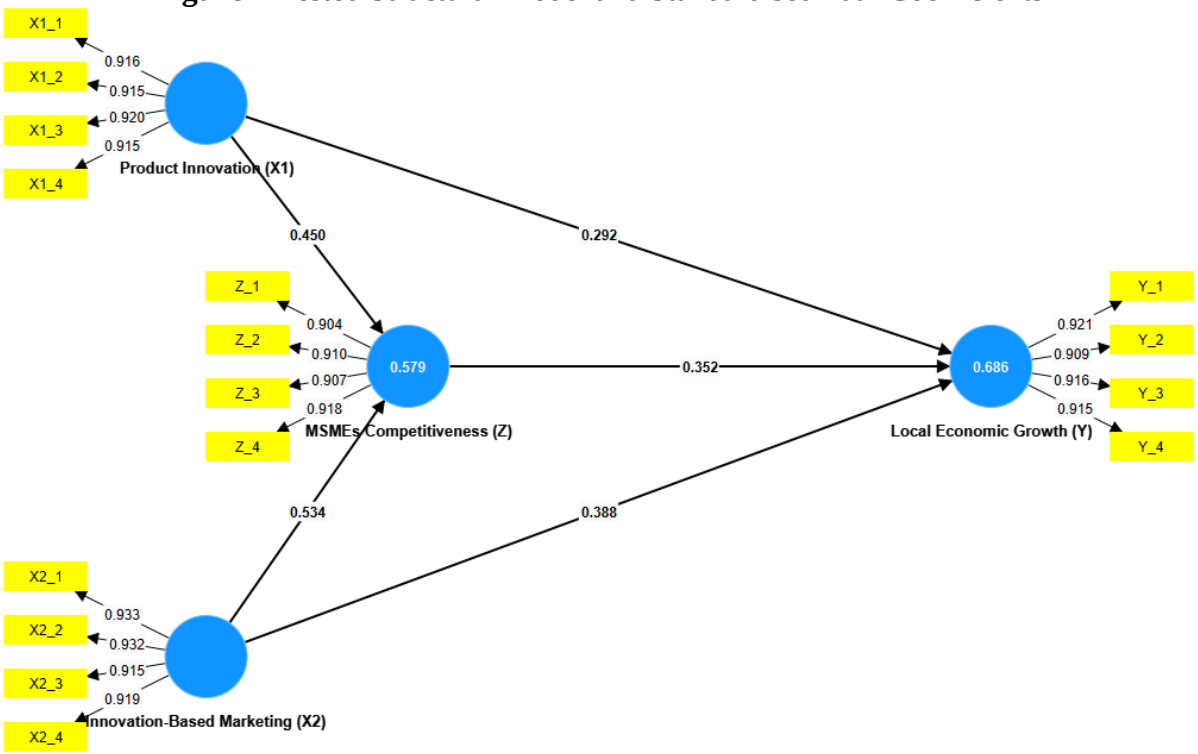
Following the measurement model assessment, the structural model was evaluated using standardised path coefficients, bootstrapping significance tests, specific indirect effects, R^2 and f^2. Predictive performance and the reported model-fit diagnostics were examined separately. Figure 2 presents the estimated relationships among Product Innovation, Innovation-Based Marketing, MSME Competitiveness and Local Economic Growth.

Figure 2 illustrates two pathways linking innovation to the outcome construct. Product Innovation and Innovation-Based Marketing are both related to MSME Competitiveness; the two innovation variables and MSME Competitiveness also have direct paths to Local Economic Growth. The model accounts for 57.9% of the variance in MSME Competitiveness and 68.6% in Local Economic Growth. Statistical significance and mediation are examined in Tables 8–10.

The estimated structure indicates that innovation is associated with local economic growth through both direct relationships and indirect pathways involving MSME Competitiveness. The model therefore enables the relative contributions of product development, marketing practices and competitive capability to be assessed within the surveyed businesses. As the data were obtained through a cross-sectional questionnaire, the coefficients should be interpreted as statistically estimated relationships among the measured constructs rather than as direct evidence of changes in provincial gross regional domestic product.

p-ISSN: 2088-1231
e-ISSN: 2460-5328

Figure 2 Tested Structural Model and Standardised Path Coefficients



Source: Data processing with PLS, 2025

Bootstrapping Results for Direct Effects

Direct effects were examined using SmartPLS 4 bootstrapping results and a two-tailed significance criterion of 5%. Table 8 presents the standardised path coefficients, t-statistics, p-values and decisions for the five estimated structural relationships.

Table 8 Direct-Effect Hypothesis Testing Summary

Structural path	β	t statistic	p value	Decision
Product Innovation (X1) → MSME Competitiveness (Z)	0.450	9.676	< 0.001	Significant
Innovation-Based Marketing (X2) → MSME Competitiveness (Z)	0.534	11.653	< 0.001	Significant
Product Innovation (X1) → Local Economic Growth (Y)	0.292	5.621	< 0.001	Significant

p-ISSN: 2088-1231
e-ISSN: 2460-5328

Structural path	β	t statistic	p value	Decision
Innovation-Based Marketing (X2) → Local Economic Growth (Y)	0.388	6.732	< 0.001	Significant
MSME Competitiveness (Z) → Local Economic Growth (Y)	0.352	5.215	< 0.001	Significant

Source: Data processing with PLS, 2025

All five structural paths are positive and statistically significant (Table 8). Product Innovation is positively related to MSME Competitiveness (β = 0.450; t = 9.676; p < 0.001), as is Innovation-Based Marketing (β = 0.534; t = 11.653; p < 0.001). Product Innovation also has a significant direct relationship with Local Economic Growth (β = 0.292; t = 5.621; p < 0.001), alongside Innovation-Based Marketing (β = 0.388; t = 6.732; p < 0.001). MSME Competitiveness is significantly related to Local Economic Growth (β = 0.352; t = 5.215; p < 0.001). These results support the positive relationships proposed in the structural model.

Path Coefficients and Bootstrap Estimation

Table 9 provides the original-sample coefficients, bootstrap means and standard deviations for the five direct relationships. These statistics complement the hypothesis-testing results reported in Table 8.

Table 9 Bootstrapping Path Coefficients and Sampling Statistics

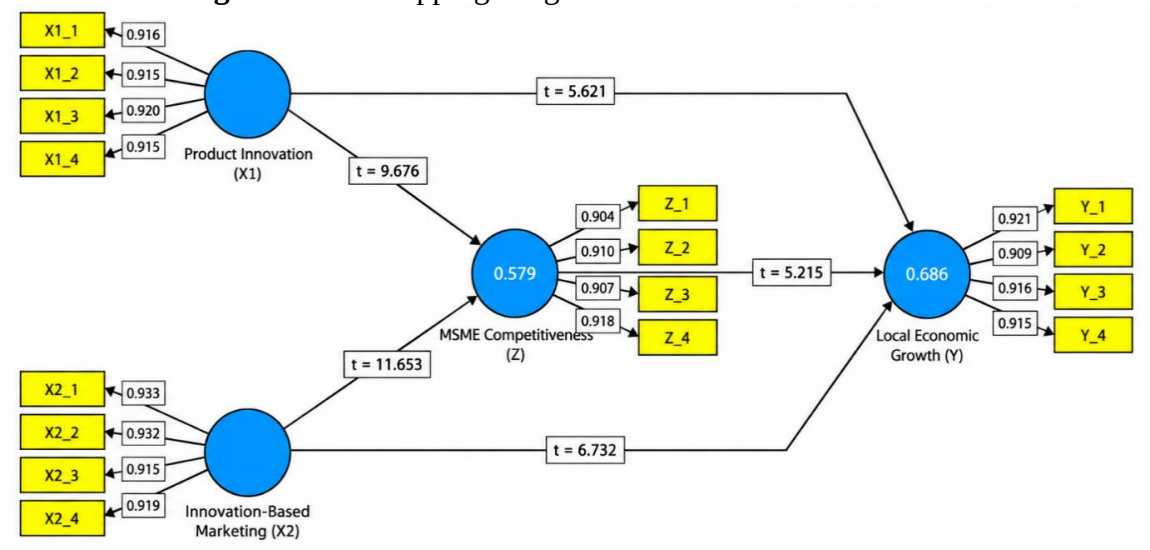
Structural Path	β (O)	Mean (M)	SD	t-statistic	p-value
X1 → Z	0.450	0.450	0.046	9.676	<0.001
X2 → Z	0.534	0.533	0.046	11.653	<0.001
X1 → Y	0.292	0.292	0.052	5.621	<0.001
X2 → Y	0.388	0.386	0.058	6.732	<0.001
Z → Y	0.352	0.353	0.068	5.215	<0.001

Source: Data processing with PLS, 2025

The original coefficients and the corresponding bootstrap means are closely aligned (Table 9). The estimated means range from 0.292 to 0.533, while their standard deviations range from 0.046 to 0.068. Each t-statistic exceeds 1.96, and all p-values are below 0.001. The bootstrap results therefore provide consistent statistical support for the five positive direct relationships. The separate tests of the indirect pathways are presented in Table 10.

p-ISSN: 2088-1231
e-ISSN: 2460-5328

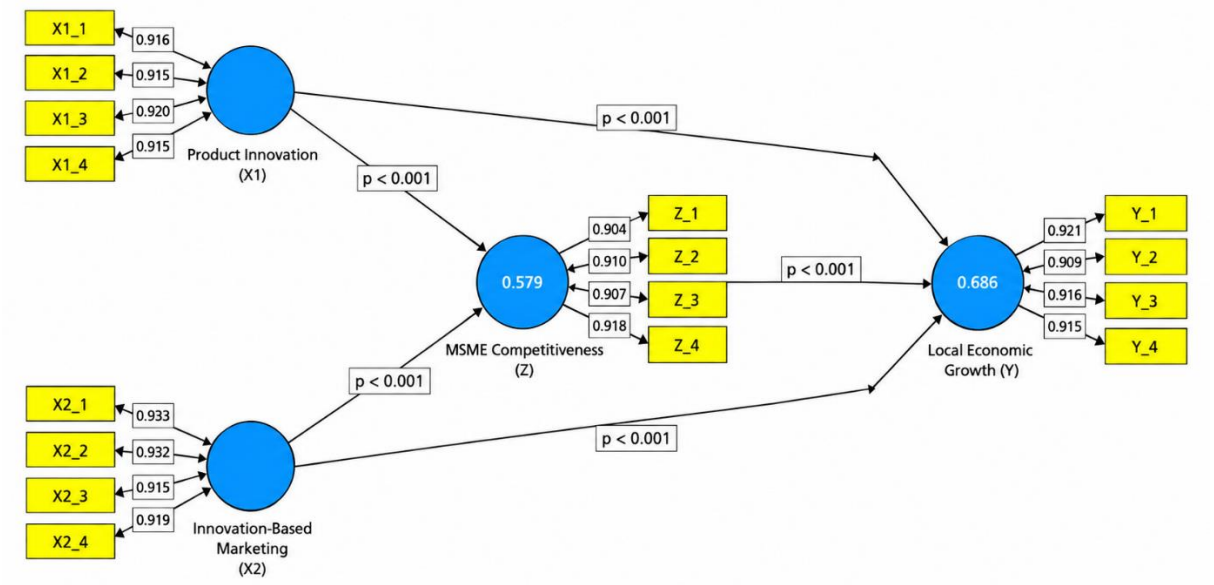
Figure 3 Bootstrapping Diagram of Direct-Effect t-Statistics



Source: Data processing with PLS, 2025

Figure 3 displays the t-statistics for the five direct effects. Their values range from 5.215 to 11.653 and exceed the two-tailed reference threshold of 1.96, consistent with the significant relationships reported in Tables 8 and 9.

Figure 4 Bootstrapping Diagram of Direct-Effect p-Values



Source: Data processing with PLS, 2025

Figure 4 presents the significance levels of the five tested direct paths. Each result meets the $p < 0.001$ criterion, corroborating the significance decisions shown in Table 8.

The magnitude of the path coefficients further clarifies the relationships. Innovation-Based Marketing has a larger coefficient than Product Innovation in the equation predicting MSME Competitiveness (0.534 versus 0.450), as well as in the equation predicting Local Economic Growth (0.388 versus 0.292). These are comparisons of estimated coefficients; establishing

p-ISSN: 2088-1231
e-ISSN: 2460-5328

whether the differences themselves are statistically significant would require a separate contrast test. The central finding is that both forms of innovation and MSME Competitiveness contribute positively to the relationships estimated in the study.

Indirect Effects and Mediation

To examine the mediating role of MSME Competitiveness, specific indirect effects were estimated using the SmartPLS 4 bootstrapping procedure. The corresponding results are presented in Table 10.

Table 10 Specific Indirect Effects and Bootstrap Significance

Mediated Path	β (O)	Mean (M)	SD	t-statistic	p-value
X1 → Z → Y	0.158	0.159	0.034	4.687	<0.001
X2 → Z → Y	0.188	0.188	0.040	4.690	<0.001

Source: Data processing with PLS, 2025

Table 10 shows a positive indirect effect of Product Innovation on Local Economic Growth through MSME Competitiveness (β = 0.158; t = 4.687; p < 0.001). Innovation-Based Marketing also has a positive, significant indirect effect through the same mediator (β = 0.188; t = 4.690; p < 0.001). Because the relevant direct effects are also positive and significant, the findings indicate complementary partial mediation for both relationships.

The mediation results demonstrate that MSME Competitiveness constitutes an additional pathway connecting innovation to respondents' assessments of local economic growth. Product Innovation maintains a direct coefficient of 0.292 alongside an indirect coefficient of 0.158. Innovation-Based Marketing similarly shows a direct coefficient of 0.388 and an indirect coefficient of 0.188. Thus, competitiveness explains part, but not all, of the estimated association between innovation and local economic outcomes. The mediation interpretation concerns the statistical structure of the observed relationships and should be considered within the cross-sectional research design.

Total Effects: Direct and Indirect Components

Total effects were obtained by summing the direct and specific indirect path coefficients. Table 11 brings together the direct, indirect and total estimates, allowing the combined relationships to be compared within the structural model.

Table 11 Direct, Indirect and Total Path Coefficients

Structural relationship	Direct β	Indirect β	Total β	Significance of component paths
X1 → Z	0.450	Not applicable	0.450	<0.001 (direct)
X2 → Z	0.534	Not applicable	0.534	<0.001 (direct)
Z → Y	0.352	Not applicable	0.352	<0.001 (direct)
X1 → Y	0.292	0.158	0.450	Direct and indirect: p < 0.001

p-ISSN: 2088-1231
e-ISSN: 2460-5328

Structural relationship	Direct β	Indirect β	Total β	Significance of component paths
X2 → Y	0.388	0.188	0.576	Direct and indirect: p < 0.001

Source: Data processing with PLS, 2025

The total relationship between Product Innovation and Local Economic Growth is 0.450, comprising a direct coefficient of 0.292 and an indirect coefficient of 0.158 (Table 11). For Innovation-Based Marketing, the corresponding total coefficient is 0.576, comprising direct and indirect coefficients of 0.388 and 0.188. Both pathways therefore contribute to the combined association of innovation with Local Economic Growth.
The total coefficients are arithmetic sums of the corresponding estimates. Statistical significance has been established separately for the reported direct and specific indirect paths; a distinct bootstrapped total-effect test is not reported in the present table. Accordingly, the total-effect coefficients are discussed as magnitudes rather than as independently tested inferential results.

Coefficient of Determination (R-Square)
The model's explanatory power was assessed using R^2 and adjusted R^2 for the two endogenous constructs. Table 12 summarises the results generated by SmartPLS 4.

Table 12 R-Square and Adjusted R-Square Results

Endogenous Construct	R-Square	Adjusted R-Square
Local Economic Growth (Y)	0.686	0.681
MSMEs Competitiveness (Z)	0.579	0.575

Source: Data processing with PLS, 2025

As reported in Table 12, Product Innovation and Innovation-Based Marketing jointly explain 57.9% of the variance in MSME Competitiveness ($R^2 = 0.579$; adjusted $R^2 = 0.575$). For Local Economic Growth, the model explains 68.6% of the variance ($R^2 = 0.686$; adjusted $R^2 = 0.681$) through the combined contribution of Product Innovation, Innovation-Based Marketing and MSME Competitiveness. Both values indicate substantial explanatory capacity within the specified PLS-SEM model.
The R^2 coefficients show that the variables in the research model explain a sizeable proportion of the respondent-level variation in both endogenous constructs. Explanatory performance is stronger for Local Economic Growth ($R^2 = 0.686$) than for MSME Competitiveness ($R^2 = 0.579$). These statistics concern variation explained in the measured constructs; predictive performance is considered separately using the cross-validated results in Table 14.

Effect Size (f-Square)
The contribution of each predictor to the model's explanatory power was further evaluated using the f^2 effect-size statistic. Values around 0.02, 0.15 and 0.35 are commonly interpreted as small, medium and large, respectively.

p-ISSN: 2088-1231
e-ISSN: 2460-5328

Table 13 Effect Sizes of Structural Relationships

Path	f^2	Interpretation
X1 → Z	0.464	Large
X2 → Z	0.654	Large
Z → Y	0.166	Medium
X1 → Y	0.179	Medium
X2 → Y	0.278	Medium

Source: Data processing with PLS, 2025

Table 13 indicates large effects on MSME Competitiveness for both Product Innovation (f^2 = 0.464) and Innovation-Based Marketing (f^2 = 0.654). The latter contributes more strongly to explained variance in competitiveness within the fitted model. For Local Economic Growth, Product Innovation (f^2 = 0.179), Innovation-Based Marketing (f^2 = 0.278) and MSME Competitiveness (f^2 = 0.166) each have medium effects. All five relationships therefore make meaningful contributions to the explanatory performance of their respective equations.
The f^2 results complement the positive path coefficients and R^2 values. Marketing innovation has the largest contribution to MSME Competitiveness, while the Local Economic Growth construct reflects the joint contribution of both innovation variables and competitiveness. Viewed together, these findings indicate that product development and marketing capabilities have distinct, mutually relevant roles in the competitive performance of the participating MSMEs and its relationship with perceived local economic growth.

Predictive Assessment (Five-Fold Cross-Validated R^2)
Predictive performance was assessed using the five-fold cross-validated R^2 statistics reported for the two endogenous constructs. Cross-validation evaluates the model's ability to account for observations outside the estimation fold and complements the in-sample R^2 results. Table 14 presents the cross-validated values for MSME Competitiveness and Local Economic Growth.

Table 14 Five-Fold Cross-Validated R^2 Results

Endogenous construct	Five-fold CV R^2	Assessment
MSME Competitiveness (Z)	0.564	Positive cross-validated result
Local Economic Growth (Y)	0.669	Positive cross-validated result

Source: Data processing with PLS, 2025

As reported in Table 14, the five-fold cross-validated R^2 values are 0.564 for MSME Competitiveness and 0.669 for Local Economic Growth. Both are positive, indicating that the predictive models retain explanatory value when assessed through the reported cross-validation procedure. The value for Local Economic Growth is higher, consistent with its stronger in-sample explanatory performance.
The cross-validated results are close to, but lower than, the corresponding in-sample R^2 values of 0.579 and 0.686 (Table 12). This modest difference suggests that the performance described by the original estimates is not confined entirely to the data used for model estimation. These

p-ISSN: 2088-1231
e-ISSN: 2460-5328

values are reported as cross-validated R^2 and should not be conflated with Stone–Geisser Q^2 or Q^2predict, which use different definitions and reporting procedures.

Model Fit Assessment

The model-fit diagnostics reported for the estimated measurement and structural specification are presented in Table 15. The table includes the Standardised Root Mean Square Residual (SRMR), unweighted least squares discrepancy (d_ULS), geodesic discrepancy (d_G), chi-square, Normed Fit Index (NFI) and rms Theta. These indices are considered together rather than interpreted through any single numerical criterion.

Table 15 Model-Fit Assessment Results

Fit index	Reported value	Diagnostic
SRMR	0.025	Residual correlation discrepancy
d_ULS	0.075	Least-squares discrepancy
d_G	1.122	Geodesic discrepancy
Chi-square	106.131	Model comparison statistic
NFI	0.973	Normed fit index
rms Theta	0.068	Residual covariance assessment

Source: Data processing with PLS, 2025

The results in Table 15 show an SRMR of 0.025 and an NFI of 0.973. The low SRMR indicates a small average difference between observed and model-implied correlations, while the NFI value is close to 1. The reported rms Theta is 0.068. These indices are consistent with a favourable overall fit assessment under commonly applied descriptive benchmarks, although no single indicator establishes every aspect of model adequacy.

The other reported diagnostics are d_ULS = 0.075, d_G = 1.122 and chi-square = 106.131. The interpretation of d_ULS and d_G ordinarily depends on comparison with bootstrap-based reference distributions; their numerical values alone do not demonstrate a statistically acceptable fit. The chi-square statistic is also reported descriptively because its significance information is not presented in the table. Viewed alongside the measurement-model and structural results, these diagnostics provide additional information on model adequacy without replacing the validity, reliability and path-significance assessments.

Integrated Interpretation of the Empirical Results

The findings present a consistent pattern across the measurement, structural, predictive and model-fit assessments. All 16 indicators meet the reported outer-loading criterion, the constructs achieve satisfactory internal consistency and convergent validity, and discriminant validity is supported by the Fornell–Larcker and cross-loading results. Inner VIF values indicate no substantial predictor collinearity, while the outer VIF results identify relatively high item overlap in part of the marketing construct. All five direct paths and both specific indirect paths are positive and statistically significant. The explanatory, cross-validated and fit results provide complementary evidence about the statistical performance of the model within the surveyed MSMEs.

p-ISSN: 2088-1231
e-ISSN: 2460-5328

Discussion

The Relationship Between Product Innovation and the Competitiveness of MSMEs

The results demonstrate a positive, statistically significant relationship between Product Innovation and MSME Competitiveness in West Java ($\beta = 0.450$; $t = 9.676$; $p < 0.001$). Improvements in product quality, design, functionality and product development are therefore relevant dimensions of the competitive capabilities measured among participating firms. The finding accords with Oukil, Chrouki, and El Hadad-Gauthier (2021), who emphasise the competitive value of product differentiation, and with evidence on product innovation and SME performance reported by Pramuki and Kusumawati (2024) and Ismanu, Kusmintarti, and Riwajanti (2021).

Although innovation supports competitive differentiation, its contribution can depend on production efficiency, market conditions and the resources available to individual businesses. The present results should therefore be understood within the characteristics of the West Java MSMEs represented in the sample. The model also identifies a positive indirect relationship between Product Innovation and Local Economic Growth through competitiveness ($\beta = 0.158$; $p < 0.001$), indicating that competitive capability forms part of the estimated connection between product development and local economic outcomes.

The Influence of Innovation Based Marketing on SME Competitiveness

Innovation-Based Marketing is positively and significantly related to MSME Competitiveness ($\beta = 0.534$; $t = 11.653$; $p < 0.001$). Its estimated coefficient is larger than that of Product Innovation within the same equation, suggesting that digital communication, differentiation, data-informed marketing and customer experience are particularly relevant to the competitiveness of the surveyed firms. This interpretation is consistent with the marketing innovation perspective discussed by Kotler (2016), Alford and Page (2020), and Wiweko and Anggara (2025).

Innovation-Based Marketing also has a significant direct relationship with Local Economic Growth ($\beta = 0.388$; $p < 0.001$), together with an indirect relationship through competitiveness ($\beta = 0.188$; $p < 0.001$). These findings suggest that innovative marketing is associated with local economic outcomes both through its own relationship with the outcome construct and through its association with stronger competitive capability. Research on digital marketing capacities in other SME settings, including Chavarría-Barrientos et al. (2021) and Rahman and Rachmawati (2022), provides further context for the importance of adapting marketing practices to changing markets.

The Role of SME Competitiveness in Local Economic Growth

MSME Competitiveness is positively associated with the Local Economic Growth construct ($\beta = 0.352$; $t = 5.215$; $p < 0.001$). The model also indicates significant indirect relationships from both innovation constructs through competitiveness, supporting its mediating role. These empirical findings are consistent with the broader proposition that stronger enterprise capabilities can be associated with favourable local economic conditions, a relationship discussed in Schumpeterian approaches to innovation and development (Schumpeter, 1934; Sharma et al., 2020).

Importantly, the Local Economic Growth construct in this study is measured from MSME respondents' questionnaire assessments of job creation, income, investment and infrastructure-related conditions. The results therefore represent respondent-level evidence rather than direct

p-ISSN: 2088-1231
e-ISSN: 2460-5328

measurements of gross regional domestic product or observed regional employment changes. This distinction does not diminish the empirical nature of the analysis; rather, it defines the level at which its findings can be interpreted. Future studies combining enterprise survey results with official economic statistics could examine the extent to which these firm-level relationships correspond to changes in regional outcomes.

CONCLUSION

This study examines the relationships between Product Innovation, Innovation-Based Marketing, MSME Competitiveness and Local Economic Growth using primary survey data from 200 MSME operators in West Java and PLS-SEM analysis in SmartPLS 4. Both innovation constructs show positive and significant relationships with competitiveness and with the measured local economic growth construct. Competitiveness also has a positive and significant relationship with local economic growth and partially mediates both innovation–growth relationships. Together, the results indicate that product development, adaptive marketing and competitive capabilities are complementary dimensions of the surveyed MSMEs' economic activities.

Theoretically, the results of this study enrich the literature on the creative economy and resource-based entrepreneurship (Resource Based View) by showing that the competitive advantage of MSMEs can be formed through a combination of internal resources (product innovation) and external strategies (innovation-based marketing). This study also reinforces Schumpeterian growth theory, in which the innovation process becomes the driving force of economic growth through creative destruction that is, the creation of new value that replaces the old system. In addition, these findings deepen our understanding of the mediating role of competitiveness in linking innovation with economic outcomes at the local level.

From a practical perspective, the findings support initiatives that help MSMEs strengthen product development, marketing digitalisation and competitive capability. Local governments and business development institutions can use these results to inform programmes addressing innovation capacity, access to market information, digital marketing skills and collaboration among business actors. Such measures are relevant to the conditions assessed in this study, although their broader regional economic effects require evaluation using complementary longitudinal or administrative data.

The findings are subject to several limitations. The sample was selected purposively from MSMEs in West Java and does not represent every enterprise or industry in the province. The cross-sectional design supports the estimation of statistical relationships but does not establish temporal or causal direction. In addition, local economic growth was measured through respondents' assessments rather than official macroeconomic indicators. These considerations define the scope of the empirical conclusions and provide a basis for subsequent research using longitudinal designs and administrative regional economic statistics.

For future research, it is recommended to use a longitudinal design to capture changes in the relationship between variables over time and the sustainable impact of innovation on economic growth. Subsequent researchers should also expand the scope of the study to include other provinces with different financial characteristics, such as Central Java, North Sumatra, or East Kalimantan, to compare the dynamics of innovation ecosystems across regions. In addition, moderating and mediating variables, such as government policy support, digital literacy, or access to financing, should be considered to deepen the understanding of the factors that strengthen the relationship between variables. Research is also recommended to explore non-

p-ISSN: 2088-1231
e-ISSN: 2460-5328

creative and technology-based sectors, such as small manufacturing or environmentally friendly industries, to identify the most relevant forms of innovation in each context. With the development of research in this direction, empirical and theoretical contributions to the literature on innovation and local economic growth are expected to be more comprehensive, contextual, and applicable.

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