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From Innovation to Pricing: Examining the Mediating Role of Product Quality in SME Coffee Shops

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Abstract

In recent years, small and medium-sized coffee shops have faced intense competition, requiring innovative strategies to enhance product quality and pricing decisions. This study examines the effect of product innovation on price, with product quality as a mediating variable, in SME coffee shops in Jakarta, Indonesia. The purpose of this study is to clarify how innovation translates into price through improvements in product quality, providing both theoretical and practical insights for competitive market management. A quantitative approach was employed, using a survey of 500 coffee shop consumers, which was analysed using Structural Equation Modelling (SEM) with SmartPLS 4. The results indicate that product innovation significantly improves product quality, enhancing menu variety, taste consistency, and overall customer experience. Product innovation also has a significant direct effect on price, while product quality positively influences price. Mediation analysis shows that product quality does not mediate the relationship between product innovation and price. These findings suggest that product innovation primarily drives differentiation and perceived value, but its impact on price through product quality is not significant. The study contributes to marketing and innovation literature by clarifying the relationships linking product innovation, product quality, and price. Practically, SME coffee shop managers are encouraged to integrate product innovation with quality management to strengthen competitive positioning and set prices effectively.

Keywords: product innovation; product quality; price; SME coffee shops

A. Introduction

In recent decades, coffee shops have evolved beyond their traditional function as places for coffee consumption to become important social and lifestyle spaces within urban environments (Han, et al., 2024). This transformation reflects broader shifts in consumer behaviour, where consumption is increasingly driven not only by functional value but also by experiential and symbolic value; as a result, coffee shops now serve as spaces for social interaction, work, and leisure, making the industry highly competitive and innovation-driven (Wang, et al., 2025). The rapid growth of small and medium-sized coffee shop businesses, combined with the rising popularity of specialty coffee culture, has intensified market competition (Zhang et al., 2026). Moreover, the post–COVID-19 environment has accelerated changes in consumer expectations and business practices, encouraging firms to adopt digital technologies and operational innovations to sustain competitiveness and enhance customer experience (Grossman & Rachamim, 2024).

From a marketing perspective, firm competitiveness has traditionally been explained using the marketing mix framework (product, price, place, and promotion). While still relevant, this framework is increasingly criticised for its limited ability to capture the complexity of contemporary business environments characterised by rapid technological development and innovation-driven competition (Wichmann et al., 2022; Pinto et al., 2022; Lahtinen et al., 2020; Varadisa & Kusuma, 2024). In such environments, pricing decisions are strongly influenced by consumers' perceptions of product quality and value, rather than solely by production costs or promotional strategies. Therefore, product quality becomes a critical determinant of firms' ability to implement premium or value-based pricing strategies.

Innovation plays an important role in enhancing product quality. Product innovation enables firms to introduce new menu items, unique flavour profiles, or differentiated concepts that increase perceived customer value. This innovation directly contributes to improvements in product quality and customer experience, which may ultimately influence consumers' willingness to accept specific price levels. However, many coffee shop businesses still face challenges in linking innovation with effective pricing strategies.

Empirical studies support the importance of innovation in coffee shop performance. For example, Aprilia et al. (2023) show that innovation positively contributes to the growth performance of SME coffee shops. However, few studies examine how innovation's impact on product quality specifically influences pricing strategies. The current literature often investigates innovation, product quality, and pricing in isolation, without clearly connecting their interactions. Some studies, such as Shi et al. (2018), Ishikawa & Suzuki (2018), and Law et al. (2019), treat product quality as a dependent variable affected by innovation. In contrast, Chenavaz & Giovanni (2025), Mukherjee & Pandelaere (2023), Olbrich et al. (2017), and Zhou et al. (2002) focus on the influence of product quality on pricing, but primarily treat quality as an

independent variable rather than as a mediator. Other research, including Palikot (2023), Bogetoft et al. (2024), and Song et al. (2021), examines the direct effect of innovation on pricing strategies without considering the mediating role of product quality. Consequently, existing research provides a fragmented understanding of the pathways through which innovation shapes pricing strategies.

To address this gap, this study proposes an integrated framework linking product innovation, product quality, and pricing strategy, with product quality serving as a mediating variable. Empirically, the study focuses on small- and medium-sized coffee shop businesses in Jakarta, Indonesia. In this region, rapid industry growth and intense competition create strong pressure to adopt effective innovation and pricing strategies. By investigating these relationships, the study aims to clarify how innovation affects pricing strategy through improvements in product quality. It also seeks to contribute to the marketing and innovation literature and to offer practical insights for SME coffee shop entrepreneurs in highly competitive markets.

B. Literature Review

Product Innovation

Have you ever wondered how a company creates products that stand out in a crowded market? Product innovation involves the development or introduction of new products that differ from existing offerings through novel features, design modifications, technological adoption, or improvements in performance and efficiency (Liu & Atuahene-Gima, 2018). By implementing product innovation, firms strive to create superior value propositions that better meet your evolving needs and preferences, thereby strengthening competitive advantage (Janik et al., 2021).

This study examines product innovation through the lens of Disruptive Innovation Theory (Christensen, 1997), which emphasises how simpler, more efficient, or accessible products can reshape market structures and challenge established market leaders. In the context of SMEs, especially coffee shops, product innovation is not only about technological improvements but also about creating new customer value that influences preferences and market competition.

Imagine industries where new technology continuously replaces the old. Prior studies highlight how disruptive innovation strategically boosts firm performance and reshapes industry positioning (Fischer-Kreer et al., 2025; Antonio & Kanbach, 2023). But have you ever considered how these innovations influence pricing decisions by altering product quality? While existing research mostly explores innovation's effects on firm performance, this study explores the under-examined connection between innovation-driven product quality and pricing, inviting you to rethink how value is established.

Product Quality

Product quality refers to how well a product meets or exceeds customer expectations in performance, durability, reliability, design, and functionality (Alzoubi et al., 2022; Idris & Durmuşoğlu, 2023). High-quality products boost customer satisfaction, strengthen the brand, and foster loyalty (Tunahan & Kutlu, 2023). This study adopts Total Quality Management (TQM) principles (Oakland, 2014) to examine product quality. TQM emphasises continuous improvement, employee involvement, and customer orientation, often integrating digital technologies to optimise quality management systems. Research shows that TQM practices significantly enhance product performance, customer satisfaction, and organisational productivity (Liu et al., 2023; Tavana et al., 2024; Alsaqer et al., 2024; Olayiwola et al., 2024).

Although prior studies recognise the importance of quality, most investigate product quality as an independent variable affecting outcomes such as customer satisfaction rather than as a mediating mechanism linking innovation to pricing strategy. This gap highlights the novelty of the current study in positioning product quality as a mediator.

Price

Pricing strategy reflects the monetary value consumers pay for a product or service and is influenced by production costs, demand, competition, and regulatory factors (Simon & Fassnacht, 2010; Chavas et al., 2020). Beyond its economic role, pricing communicates product value and quality to customers (Li & Liu, 2021). This study applies the value-based pricing approach (Hinterhuber, 2008), which emphasises setting prices based on customer-perceived value rather than production costs alone. Firms that effectively integrate customer evaluations of product benefits into pricing decisions achieve higher profitability and stronger market positioning (Liozu, 2017; Raja et al., 2020). Recent analytical approaches further confirm the link between perceived value, product quality, and pricing strategies in service-oriented sectors (Boccali et al., 2022; Roll & Geerties, 2025).

However, despite clear theoretical connections, empirical studies investigating the mechanisms by which innovation-driven improvements in product quality influence firms' pricing strategies are scarce. This study addresses this research gap by empirically exploring the relationship between product quality enhancements arising from innovation and the consequent adjustments in pricing strategy.

Hypothesis Development

Product innovation is widely recognised as an important driver of product quality improvement. Through it, firms introduce new features, designs, or functional benefits that align with evolving consumer preferences. According to disruptive innovation theory (Christensen, 1997), such innovation can reshape market competition by creating new forms of customer value that improve

product performance and user experience. By continuously developing attributes like improved flavour profiles or enhanced consumption experiences, firms enable customers to perceive superior quality. Empirical studies confirm that product innovation contributes to perceived quality by enhancing differentiation and increasing the value delivered to customers (Kim et al., 2021; Suarez, 2024). Therefore, product innovation is expected to improve product quality.

H1: Product innovation positively influences product quality

Product innovation may influence pricing strategies by enabling firms to offer unique benefits and differentiated value compared to competitors. According to value-based pricing theory (Hinterhuber, 2008), firms can set prices based on the value customers perceive rather than only on production costs. When innovation increases a product's perceived value, firms can adopt premium pricing or adjust prices to reflect that extra value. Empirical studies indicate that differentiation and innovation enhance consumers' willingness to pay (Fu & Elliott, 2013; Ge & Li, 2024). Thus, product innovation is expected to positively affect pricing decisions.

H2: Product innovation positively influences pricing

Product quality is widely recognised as a key determinant of pricing decisions. High product quality, reflected in superior performance, reliability, durability, and design, enhances customer trust and perceived value. When customers perceive a product as higher quality, they are generally more willing to pay higher prices because it is viewed as offering greater benefits and lower consumption risk. Previous studies demonstrate that improvements in product quality significantly increase consumers' willingness to pay and support premium pricing strategies (Traore et al., 2018; Sepúlveda et al., 2016). Therefore, product quality is expected to positively influence pricing.

H3: Product quality positively influences pricing

Although prior studies have examined the relationships among innovation, product quality, and pricing separately, limited research has examined the mediating role of product quality in how product innovation influences pricing strategies. The value-based pricing perspective emphasises that firms must first create superior product value before determining appropriate pricing decisions (Hinterhuber & Snelgrove, 2016). Product innovation can enhance product attributes and functional benefits, thereby improving perceived product quality. As perceived quality increases, firms gain stronger justification for setting prices that reflect the additional value they deliver to customers. Therefore, product quality is expected to mediate the relationship between product innovation and pricing.

H4: Product innovation positively influences pricing through product quality

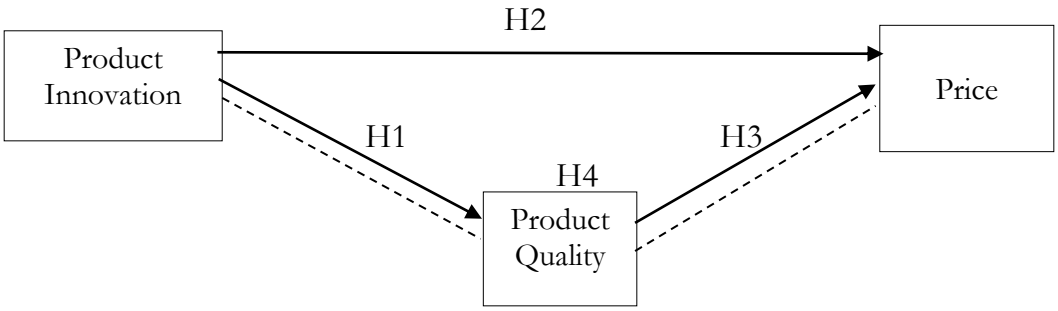


Figure 1. Research Framework

C. Research Methodology

This study employed a quantitative explanatory research design to examine the causal relationships among product innovation, process innovation, product quality, and pricing. The explanatory approach was selected because it enables testing theoretically grounded hypotheses and identifying causal relationships among latent constructs. The study adopted a cross-sectional design, in which data were collected from respondents at a single point in time.

The research context focused on coffee shops operating in Jakarta, Indonesia, where competition in the speciality coffee industry has intensified in recent years due to rapid market growth and increasing consumer demand for differentiated coffee experiences. The unit of analysis was the consumer, as the study aimed to capture consumers' perceptions of product innovation, process innovation, product quality, and price within the coffee shop industry.

The population consisted of all consumers who had visited coffee shops in Jakarta. The sample size was determined using G*Power statistical power analysis developed by Franz Faul and Axel Buchner. Based on the G*Power calculation (Faul & Buchner, 2007), a minimum sample size sufficient to achieve a statistical power of 0.80 or higher was required to detect the relationships specified in the research model. A total of 500 respondents were therefore targeted to ensure adequate statistical power and model stability for Partial Least Squares Structural Equation Modelling (PLS-SEM) analysis.

The study used purposive sampling to ensure that respondents met the criteria relevant to the research objectives. Respondents were selected based on the following criteria: (1) individuals who had visited and purchased products from a coffee shop in Jakarta; (2) individuals who had visited a coffee shop at least once within the last three months; (3) individuals aged 17 years or older; and (4) individuals willing to complete the questionnaire voluntarily. Data were collected using a structured questionnaire distributed both online and offline to reach a wider range of coffee shop consumers. All constructs were measured using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Variable measurement was based on established frameworks. Product innovation followed Christensen's (1997) disruptive innovation perspective,

emphasising new attributes that add customer value. Measurement dimensions included product features, design, variety, and functional benefits. Product quality was measured from a Total Quality Management (TQM) perspective, as proposed by Oakland (2014), emphasising customer orientation, standardisation, and process control as key elements of quality management. Finally, pricing was measured using the value-based pricing approach proposed by Andreas Hinterhuber (2008), which focuses on the alignment between perceived customer value and the price charged by firms. The measurement dimensions included balance of benefit value, price reasonableness, and price-to-quality ratio.

Data analysis was conducted using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS. PLS-SEM was selected because it is particularly suitable for predictive research models that include multiple latent constructs and mediation relationships, as well as for complex models with relatively large sample sizes. The analysis followed a two-stage evaluation procedure. The first stage involved assessing the measurement model (outer model) to evaluate the reliability and validity of the constructs. Convergent validity was assessed using factor loadings and Average Variance Extracted (AVE), while discriminant validity was evaluated using the Heterotrait–Monotrait Ratio (HTMT). Reliability was examined using Cronbach's Alpha and Composite Reliability (CR).

The second stage involved evaluating the structural model (the inner model) to test the research hypotheses. This stage included assessing the coefficient of determination (R^2) to evaluate the model's explanatory power and conducting hypothesis tests for direct and indirect effects. The significance of path coefficients was determined using the bootstrapping procedure, which generated t-statistics and p-values to assess the statistical significance of the proposed relationships.

Table 1. Measurement of Variables

Variable	Dimension	Questionnaire Item
Product Innovation	Features	This coffee shop offers diverse product attributes such as flavor profiles, bean origins, or roast levels
		This coffee shop allows customers to customize product composition (e.g., coffee intensity, syrup, or extra shot)
	Design	The products are presented with visually attractive designs
	Variety	This coffee shop offers various product options such as hot/iced beverages, flavors, or seasonal menu
	Product Benefits	The products provide functional benefits such as energy or refreshment
		The products provide a satisfying and premium consumption experience
Product	Customer	The products match customer needs and preference

Variable	Dimension	Questionnaire Item
Quality	Orientation	The coffee shop understands and meets customer expectations
	Standardization	Product taste and quality are consistent across visits
		Product composition and presentation remain stable over time
	Process Control	Errors in product preparation rarely occur
		Preparation processes (e.g., measurement, temperature, time) are well controlled
Price	Balance of Benefit Value	The price is proportional to the benefits received
		The product offers value consistent with its price
	Price Reasonableness	The price is reasonable compared with similar competitors
		The price is appropriate for the quality and experience offered
	Price-to-Quality Ratio	The product quality matches the price level
		Higher perceived quality makes the price more acceptable

Source: (Christensen, 1997; Oakland, 2014; Hinterhuber, 2008)

D. Result and Discussion

Table 1. Respondent Characteristics

Characteristics	Category	Frequency	Percentage
Gender	Male	200	40%
	Female	300	60%
Age	17–24 years	150	30%
	25–34 years	200	40%
	35–44 years	100	20%
	45 years and above	50	10%
Visit Frequency	1–3 times per month	250	50%
	4–6 times per month	150	30%
	7 times or more per month	100	20%
Education Level	High School/Vocational School	100	20%
	Diploma (D3)	150	30%
	Bachelor's Degree (S1)	200	40%
	Master's Degree or higher	50	10%
Occupation	Student	100	20%
	Private Employee	250	50%
	Freelancer	50	10%
	Entrepreneur	50	10%
	Others	50	10%

Source: Processed data (2025)

The table above describes respondent characteristics in this study, which examines consumer experiences with innovation, product quality, and price perception in Jakarta coffee shops. Most respondents are female (60%), while males account for 40%. This pattern suggests female consumers may value social experiences and comfortable environments in coffee shops. By age, respondents aged 25–34 dominate the sample (40%), followed by those aged 17–24 (30%). Young adults are the primary consumers of coffee shops, given their purchasing power and openness to innovation and new consumption trends.

Regarding visit frequency, 50% of respondents visit coffee shops 1–3 times per month. Another 30% visit 4–6 times per month. The final 20% visit 7 or more times per month. Most visits occur once to three times per month, suggesting that coffee shops are used for social gatherings, leisure, or special occasions rather than for daily routines. Regarding educational background, most respondents (70%) have at least a diploma. Of those, 40% hold a bachelor's degree, and 10% hold a master's or higher. Individuals with higher levels of education often have greater exposure to diverse market offerings and may prefer products with superior quality or unique characteristics.

Finally, based on occupation, the majority of respondents are private employees (50%), followed by students (20%), freelancers (10%), and entrepreneurs (10%). The dominance of private employees may be explained by the common practice among office workers of visiting coffee shops during breaks, meetings, or after working hours, making coffee shops an important social and professional space in urban environments.

Table 2. Validity Test

Variable	Dimension	Loading Factor	Average variance extracted	Result
Product Innovation	Features1	0.806	0.759	Valid
	Features2	0.876		
	Design	0.909		
	Variation	0.835		
	ProductBenefit1	0.879		
	ProductBenefits2	0.715		
Product Quality	CustomerOrientation1	0.761	0.707	Valid
	CustomerOrientation2	0.723		
	Standardization1	0.781		
	Standardization2	0.784		
	ProcessControl1	0.767		
	ProcessControl2	0.769		
Price	BalanceofBenefitValue1	0.788	0.800	Valid
	BalanceofBenefitValue2	0.846		
	PriceReasonableness1	0.728		
	PriceReasonableness2	0.793		

Price-to-qualityratio1	0.773
Price-to-qualityratio2	0.730

Source: Data processed with SmartPLS (2025)

All questionnaire items in Table 2 are considered valid because they have factor loadings greater than 0.7 and average variance extracted (AVE) values exceeding 0.7. This indicates that each item significantly and accurately measures the intended construct, and the constructs under study exhibit high convergent validity. Therefore, the questionnaire data can be reliably used for further analysis in this study.

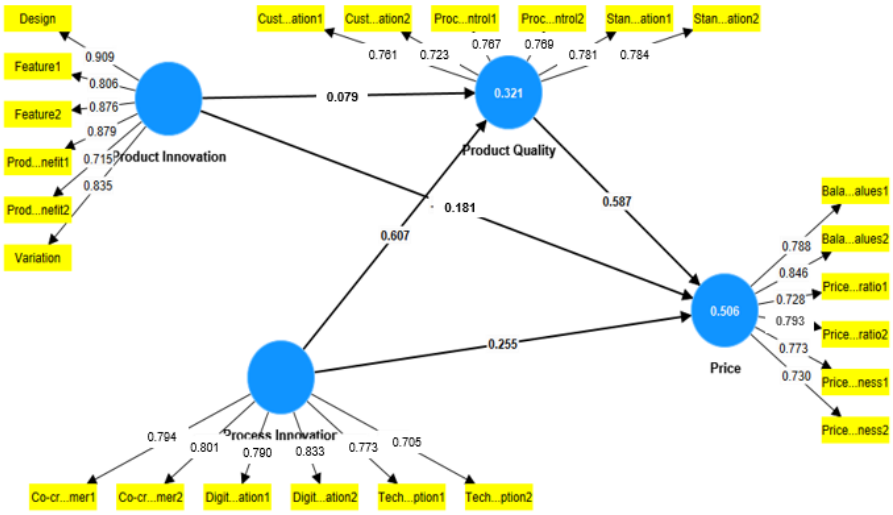


Figure 1. PLS-SEM Algorithm
Source: Data processed with SmartPLS (2025)

Figure 1 PLS-SEM Algorithm menunjukkan bahwa seluruh indikator pada konstruk product innovation, process innovation, product quality, dan price memiliki outer loading tinggi (umumnya >0,70), sehingga valid secara konvergen, sementara nilai R-Square menunjukkan bahwa product quality dijelaskan sebesar 0,321 oleh inovasi produk dan proses (kategori moderat), dan price sebesar 0,506 (cukup kuat), dengan pengaruh terbesar berasal dari product quality (0,587), diikuti process innovation (0,255) dan product innovation (0,181), sehingga dapat disimpulkan bahwa kualitas produk menjadi determinan utama dalam membentuk harga.

Table 3. Discriminant Validity

Construct	Product Innovation	Process Innovation	Product Quality	Price
Product Innovation	0.992			
Product Quality	0.750	0.790	0.987	
Price	0.710	0.787	0.729	0.954

Source: Data processed with SmartPLS (2025)

Table 3 presents the results of discriminant validity testing using the Heterotrait-Monotrait Ratio (HTMT). In this table, the diagonal values (0.992, 0.987, 0.954) represent the relationship of each construct with itself, which is always close to 1. The off-diagonal values indicate the relationships between different constructs. All values indicate that the constructs are well differentiated from one another. Overall, these results indicate that the research model has good discriminant validity, as no HTMT values exceed the accepted threshold of 0.850. In other words, the constructs in this model are sufficiently distinct and do not significantly overlap.

Table 4. Reliability Test

Variable	Cronbach's Alpha	Composite Reliability	Result
Product Innovation	0.710	0.798	Reliable
Process Innovation	0.762	0.765	Reliable
Product Quality	0.709	0.727	Reliable
Price	0.734	0.777	Reliable

Source: Data processed with SmartPLS (2025)

Table 4 presents Cronbach's alpha and composite reliability. All variables meet the reliability criteria, with Cronbach's alpha and composite reliability values above 0.70, indicating good internal consistency. Thus, the research instrument is reliable and suitable for further analysis within the research model.

Table 5. R-Square (R^2)

Variable	R^2
Quality Product	0.321
Price	0.506

Source: Data processed with SmartPLS (2025)

The product quality variable has an R^2 value of 0.321, which means that 32.1% of the variation in product quality can be explained by product innovation and process innovation. The price variable has an R^2 value of 0.506, indicating that 50.6% of the variation in price can be explained by product innovation, process innovation, and product quality.

Table 6. Direct Effect Test

Relationship	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T-Statustic	P Values	Result
Product Innovation → Quality Product	0.079	0.074	0.040	1.965	0.049	Significant
Product Innovation → Price	0.199	0.181	0.044	4.528	0.000	Significant
Quality Product →	0.594	0.587	0.041	14.495	0.000	Significant

Relationship	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T-Statistic	P Values	Result
Price						

Source: Data processed with SmartPLS (2025)

Table 6 presents the results of the direct influence test between the independent and dependent variables. All tested relationships showed significant results. (1) Product innovation significantly affects product quality, with a t-statistic of 1.965 (above the t-table value of 1.960) and a p-value of 0.049 (below 0.05); (2) Product innovation also significantly affects price, with a t-statistic of 4.528 and a p-value of 0.000; (3) Product quality has a very significant relationship with price, with a t-statistic of 14.495 and a p-value of 0.000. Overall, the relationships between the independent and dependent variables in this model are significant.

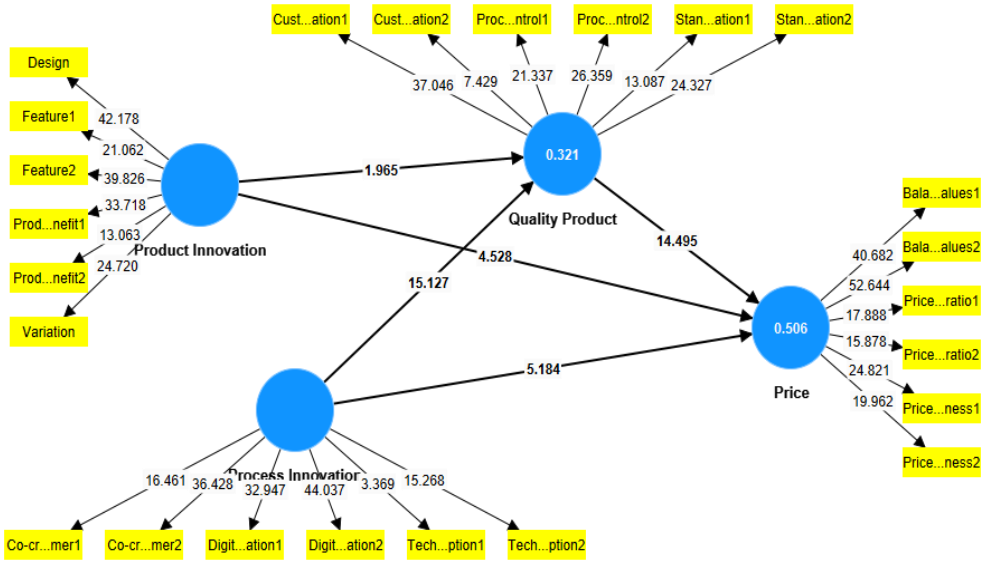


Figure 2. Bootstrapping Result
Source: Data processed with SmartPLS (2025)

Figure 2 illustrates the Smart PLS Structural Equation Modelling (SEM) used to depict the relationships between latent variables and their observed indicators. There are three main latent variables: Product Innovation, Product Quality, and Price. Each is measured through several observed indicators shown in yellow boxes. Arrows represent relationships between latent variables. Standardised coefficients (e.g., 0.321 and 0.506) show the strength of these relationships. For example, Product Innovation affects Product Quality with a coefficient of 0.321 and Price with a coefficient of 0.506. Other values near the arrows are factor loadings or regression coefficients. These reflect the strength of each observed indicator's relationship with its latent variable.

Table 7. Indirect Effect

Relationship	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T-Statustic	P Values	Result
Product Innovation → Quality Product → Price	0.046	0.046	0.025	1.875	0.061	No Significant

Source: Data processed with SmartPLS (2025)

Table 7 indicates that the indirect effect of product innovation on price through product quality has a coefficient value of 0.046, suggesting a positive but relatively weak relationship. The t-statistic value of 1.875 is lower than the critical value of 1.960, and the p-value of 0.061 is greater than 0.05, meaning that the relationship is not statistically significant. This implies that product quality is not able to mediate the effect of product innovation on price. In other words, although product innovation tends to improve product quality, this improvement is not strong enough to significantly influence pricing decisions in the context of this study.

Effect of Product Innovation on Product Quality

The results indicate that product innovation significantly affects product quality in small and medium coffee shops in Jakarta ($t = 1.965$; $p = 0.049$). This finding suggests that improvements in product features, menu variety, flavour combinations, and presentation play an important role in shaping consumers' perceptions of product quality. In the coffee shop industry, product innovation goes beyond introducing new menu items; it also involves creating unique sensory experiences that enhance customer engagement and perceived value. From a theoretical perspective, innovation serves as a mechanism through which firms continuously adapt to changing consumer preferences and competitive market dynamics. When coffee shops introduce new beverage concepts or improve product presentation, consumers often interpret these innovations as indicators of superior product attributes. As a result, innovation functions not only as a creative activity but also as a signal of quality that strengthens consumer confidence in the product.

These findings are consistent with Suarez (2024) and Kim et al. (2021), who argue that product innovation enhances differentiation and strengthens a firm's capability to respond to dynamic customer needs. Empirical studies by Mustafa et al. (2024), Arianto & Aminah (2025), and Jebril & Al Shawabkeh (2024) similarly show that product innovation improves perceived product quality and stimulates customer repurchase behaviour across different industries. This result also contributes to the innovation literature by confirming that in service-oriented sectors such as coffee shops, innovation-driven product development plays a critical role in shaping perceived quality.

Unlike manufacturing industries, where quality may be evaluated based on technical attributes, quality in service-based food and beverage businesses is strongly influenced by experiential elements created through product innovation.

Effect of Product Innovation on Price

The analysis shows that product innovation positively affects price ($t = 4.528$; $p = 0.001$). This finding indicates that innovative menu offerings, new flavour combinations, and creative product presentation increase the perceived value of coffee products, enabling firms to set higher or more flexible prices. In highly competitive urban coffee markets, product innovation serves as a differentiation strategy, enabling firms to distinguish their offerings from competitors. When customers perceive products as unique or innovative, they are generally more willing to accept premium prices because the products provide additional experiential or symbolic value.

This result aligns with the concept of value-based pricing, which emphasises that prices should reflect customer-perceived value rather than production costs. Research by Hinterhuber (2008) and Ge & Li (2024) supports this perspective by showing that firms that successfully create differentiated value through innovation can strengthen their pricing power in competitive markets. Therefore, product innovation not only enhances product attractiveness but also becomes an important strategic tool for value creation and market positioning in the coffee shop industry.

Effect of Product Quality on Price

Product quality has a significant effect on price ($t = 14.495$; $p = 0.001$). This finding indicates that consumers are willing to pay higher prices when they perceive a product as having superior quality attributes. In the coffee shop industry, product quality may be reflected in consistent taste, high-quality ingredients, appealing presentation, and reliable service. High product quality increases perceived product value and strengthens customer trust. When consumers consistently receive products that meet their expectations, they are more willing to accept higher prices because the product is associated with reliability and satisfaction.

These findings support prior research by Shamsi & Abad (2024) and Mukherjee & Pandelaere (2023), which emphasise that product quality underpins value-based pricing strategies. Therefore, maintaining consistent product quality is essential for sustaining premium pricing and strengthening customer loyalty.

Effect of Product Innovation on Price through Product Quality

Interestingly, the mediation effect of product innovation on price through product quality is not significant ($t = 1.875$; $p = 0.061$). This finding indicates that although product innovation improves menu variety and enhances the

customer experience, its impact on pricing does not necessarily flow through product quality. In small coffee shops, pricing decisions are often influenced by multiple market factors, such as consumer purchasing power, local competition, and brand positioning. As a result, innovative products may directly influence customer perceptions of uniqueness or novelty rather than affect pricing indirectly through quality improvements.

Hinterhuber & Snelgrove (2016) argue that pricing decisions are influenced by complex strategic considerations, including market positioning and competitive dynamics. Therefore, the absence of a significant mediation effect suggests that innovation-driven differentiation may influence pricing more directly through perceived uniqueness rather than through improvements in product quality alone.

Theoretical Contribution and Managerial Implications

This study provides important insights into how different types of innovation influence pricing strategies through product quality in the coffee shop industry. Specifically, the findings demonstrate that product innovation and process innovation affect product quality and pricing decisions through different mechanisms. Building on these insights, the study, from a theoretical perspective, contributes to the innovation and pricing literature by clarifying the pathways through which innovation translates into pricing outcomes. While product innovation primarily influences pricing through differentiation and experiential value creation, process innovation strengthens the relationship between product quality and pricing by ensuring operational stability and consistent product performance.

Extending these implications to practice, from a managerial perspective, the results suggest that coffee shop managers should adopt an integrated innovation strategy. Product innovation is essential for attracting customers and creating unique product experiences, while process innovation is critical for maintaining consistent quality and operational efficiency. By combining both innovation strategies, coffee shops can strengthen their competitive positioning and implement sustainable pricing strategies in increasingly competitive urban markets.

D. Conclusion

This study analyzes how product innovation affects price, with product quality as a mediating variable, in small and medium-sized coffee shops in Jakarta. The results show that product innovation significantly improves product quality, as reflected in menu variety, taste consistency, and enhanced customer experience. Product innovation also directly influences pricing by enabling differentiation and increasing perceived value. Product quality has a strong effect on price, providing greater flexibility for business owners to set higher or more competitive prices. However, the mediation analysis indicates that product quality does not mediate the relationship between product

innovation and price. This suggests that although product innovation improves quality, the improvement is not strong enough to significantly influence price through a mediating mechanism. This study highlights the importance of aligning innovation with quality enhancement to maintain competitiveness and set prices effectively in small and medium-sized coffee shops.

This study has several limitations. The research model only includes product innovation, product quality, and price, while other factors that may influence pricing strategies, such as brand image, customer loyalty, customer experience, or market competition, were not analyzed. The study focuses only on small and medium-sized coffee shops in Jakarta, so the findings may not be generalizable to other regions or the broader food and beverage industry. The cross-sectional design limits causal interpretation between variables and does not capture changes over time. The mediation analysis is also limited to product quality as the mediating variable, meaning other potential mediating pathways influencing price were not examined.

Future research could expand the geographical scope by including coffee shops in other cities or regions, providing a more comprehensive understanding of business dynamics and consumer behavior across different market contexts. The research model could also be extended by incorporating variables such as brand image, customer experience, customer satisfaction, or customer loyalty to gain deeper insights into the factors influencing pricing strategies. Methodological approaches may also be broadened, for example by using a mixed-method design that combines quantitative and qualitative techniques or a longitudinal design to observe relationships between variables over time. Furthermore, this research model can be applied to other food and beverage industries or businesses of different sizes, allowing the findings to be generalized and offering broader practical relevance for the sector.

E. Conflict of Interest

The authors have no financial stakes, commercial commitments, or personal interests related to the SME coffee shops examined that constitute a competing interest in this study.

F. Declaration of AI Use

ChatGPT by OpenAI assisted with the initial conceptual framework and preliminary drafting of portions of this manuscript. The authors examined the proposed relationships among product innovation, product quality, and price against established theories and original scholarly sources. They subsequently revised the AI-assisted drafts, verified factual statements and references, and checked their consistency with the research methods and findings. All final conceptual, analytical, and editorial decisions remained with the authors, who assume full responsibility for the manuscript's accuracy, originality, and integrity.

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