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The Influence of Work Ethics and Innovation Capability on Micro Business Competitiveness with Perceived Value as an Intervening Variable

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A B S T R A C T
This research examines the impact of work ethic and innovation capability on the competitiveness of microenterprises, utilizing perceived value as a mediating variable. The empirical data analysis indicates that work ethic and innovation capability substantially improve the competitiveness of small enterprises. The study's findings indicate that: (1) Work ethic significantly influences perceived value; (2) Innovation capability significantly influences perceived value; (3) Work ethic directly and significantly impacts the competitiveness of micro businesses; (4) Innovation capability significantly affects competitiveness, albeit to a minor extent; (5) Perceived value has an insignificant and minimal effect on competitiveness; (6-7) Perceived value does not significantly mediate the relationship between work ethic and innovation capability concerning the competitiveness of micro businesses. The strategic implications of these findings underscore the importance of prioritizing the enhancement of work ethic as a fundamental determinant of competitiveness, refining innovation capabilities through a systematic methodology, and reevaluating resource allocation to elevate perceived value, given its ineffectiveness as a mediating variable within the micro-enterprise framework

INTRODUCTION

Micro-businesses face a lot of pressure to stay relevant and competitive in a market that is always changing. Changes in consumer behavior, new technologies, new rules, and economic problems like inflation and supply chain problems force MSMEs to keep running while also giving customers more value. Work ethic and the ability to come up with new ideas were two important internal factors that helped solve these problems. A strong work ethic creates a culture of discipline, responsibility, and dedication. On the other hand, innovation lets small businesses change or improve their products, processes, or business models to meet customer needs.

Recent studies show that the ability to innovate is directly and positively linked to the performance and competitiveness of small and medium-sized businesses (SMEs). The research titled "Innovation capability, strategic flexibility and SME performance: the roles of competitive advantage and competitive intensity" illustrated that increased innovation capability improves performance and, via mediation, provides supplementary competitive advantages. On the other hand, work ethics or work values have been shown to have a big effect on innovation and leadership in small and medium-sized businesses (SMEs). The study titled "Workplace Innovation and Work Value Ethics: The Mediating Role of Leadership in Asian SMEs" suggests a relationship between work value ethics and workplace innovation, specifically through the leadership role that facilitates and encourages innovation.

While work ethics and innovation can improve the internal capabilities of micro-enterprises, market competitiveness often depends on how customers perceive and evaluate the benefits they receive in relation to the sacrifices or costs incurred, a concept known as perceived value. International studies show that perceived value often acts as a middleman between product or organizational traits and market results, such as customer loyalty, plans to buy again, and financial success. The research titled "Perceived Value of Microfinance and SME Performance: The Role of Exploratory Innovation" demonstrates that the perceived value of microfinance services influences SME performance through exploratory innovation, especially within the context of micro-enterprises and SMEs. This literature substantiates the notion that perceived value functions as an intervening variable in the correlation between internal organizational variables (work ethic, innovation) and the competitiveness of micro-enterprises.

This study aims to clarify the connection between work ethics and innovation potential, as well as their collective impact on the competitiveness of microbusinesses via perceived value. While many previous studies have examined the direct effects of innovation or work ethics on performance or innovation, there is a scarcity of research specifically targeting microbusinesses, particularly those constrained by limited resources, employing perceived value as a mediating variable. Furthermore, the unique environment of microbusinesses presents specific characteristics, such as limited size, financial constraints, and restricted access to technology and markets, which may hinder or impede innovation potential. This research holds both theoretical and practical significance; its findings can assist microbusiness owners, policymakers, and

MSME training programs in enhancing work ethics, promoting innovation, and generating perceived value to improve competitiveness.

LITERATURE REVIEW

The study's results show that work ethics and the ability to innovate both directly and indirectly through perceived value make micro-enterprises more competitive. The results show that micro-enterprises that follow work ethics like discipline, honesty, and responsibility can create good experiences that make customers think more highly of their products and services. On the other hand, innovation capability—shown by making new products, improving processes, or coming up with new ways to market—has a big effect on how much value customers think they get. Perceived value acts as a partial mediator that strengthens the link between these factors and a company's competitiveness. This means that the effects of work ethics and innovation capability are felt through higher perceived value by consumers.

The resource-based view (RBV) can theoretically explain these results, as it suggests that intangible assets like work ethic and innovative capabilities are sources of competitive advantage that are hard to copy. A strong work ethic builds a good reputation and trust among customers, which improves the business's image in the market. Innovation skills give micro-businesses the ability to create unique value differences, which gives customers more benefits than their competitors. The customer value theory asserts that augmenting the functional, emotional, and social benefits offered by a business enhances customer value perceptions, thereby influencing purchasing decisions and loyalty, ultimately leading to increased competitiveness.

The results of this study are consistent with prior global research demonstrating that work ethics play a crucial role in fostering consumer trust and maintaining long-term performance in small and medium-sized enterprises. A 2023 study in Southeast Asia showed that MSMEs' market position is stronger when they follow ethical practices all the time. Furthermore, a 2024 study demonstrated that innovation capabilities improve business performance by creating more relevant value propositions for clients, aligning with the conclusions of this study. The mediating role of perceived value aligns with previous studies that demonstrate perceived value acts as a link between an organization's internal capabilities and market outcomes, such as customer loyalty, intentions to repurchase, and profitability. Nguyen et al. (2024)

These findings have important consequences for how MSMEs are run. The results show that professionals need to create an ethical work environment and encourage long-lasting innovation in order to improve customer value and stay competitive. Policymakers must guarantee that MSME mentorship initiatives include training in business ethics, the improvement of service standard operating procedures (SOPs), and the development of fundamental technology-driven innovation skills. This study theoretically substantiates a model that interlinks work ethics, innovation capability, perceived value, and competitiveness within the micro-enterprise context, a topic that has been rarely explored in a cohesive manner, particularly in Southeast Asia. This presents

opportunities for further research utilizing longitudinal or cross-national methodologies to deepen the understanding of the interactions among these variables.

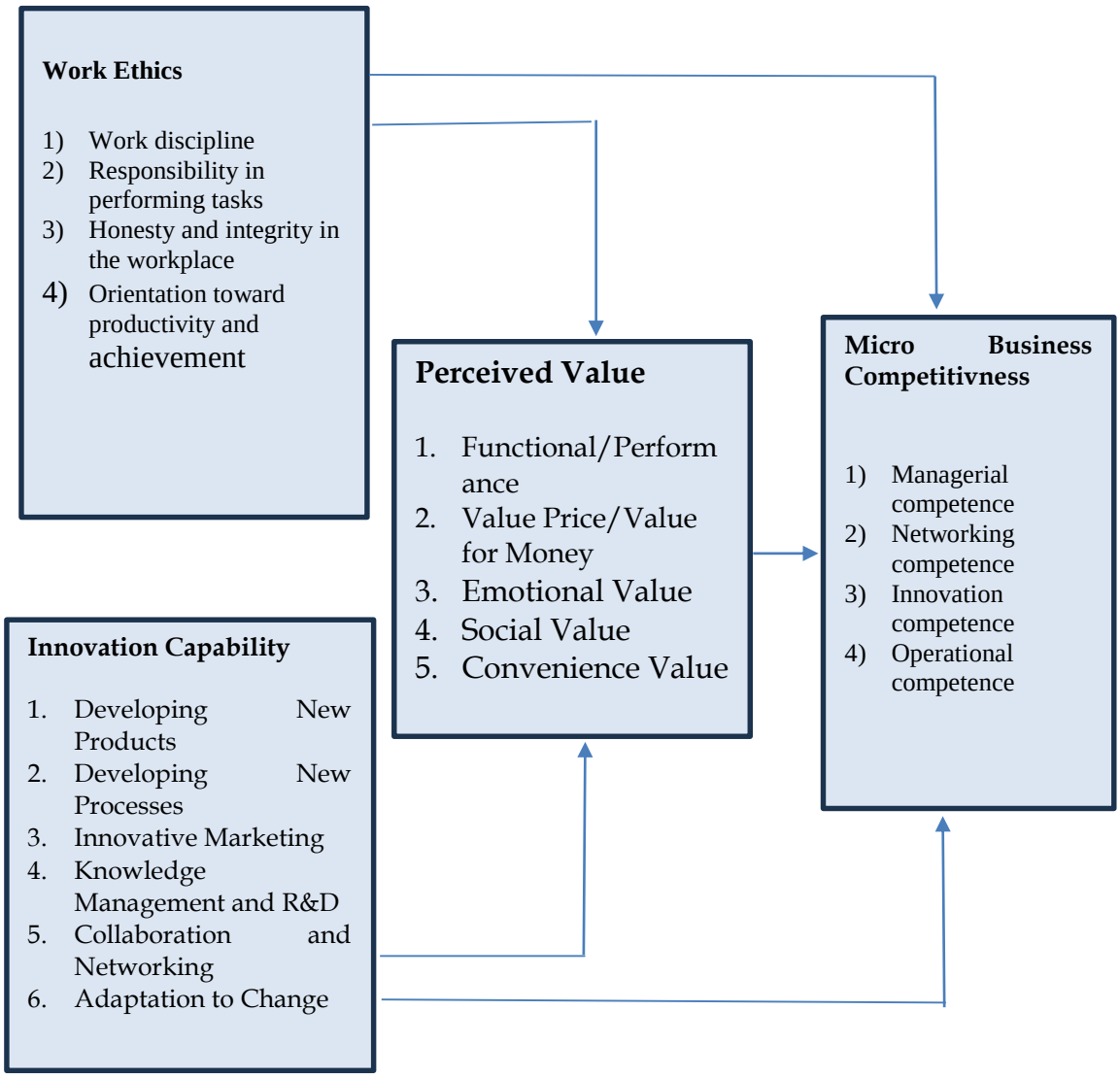

Figure 1. Conceptual Framework

METHODOLOGY

This study utilizes a quantitative methodology characterized by a descriptive design, concentrating on explanatory research aimed at clarifying the influence of work ethics and innovation potential on the competitiveness of micro businesses, with perceived value acting as an intervening variable. This research model was assessed using Structural Equation Modeling – Partial Least Squares (SEM-PLS) because it is suitable for analyzing complex causal relationships and latent variables with multiple indicators. The study was conducted on micro-entrepreneurs in the food and beverage sector in the Cibinong area of Bogor Regency, West Java, chosen for its reputation as a significant hub for MSMEs marked by intense market competition.

The research sample consisted of proprietors or managers of micro-businesses within the food and beverage industry that had been in operation for at least two years and employed a maximum of 10 individuals. The employed sampling strategy was purposive sampling. The data were selected based on predetermined criteria to ensure their pertinence to the research objectives. We got 250 responses, which is the minimum number needed for SEM-PLS analysis (Hair et al., 2021). Data were collected using a standardized questionnaire that utilized a 4-point Likert scale (1 = strongly disagree to 4 = strongly agree) to reduce middle-choice bias. The measurement instrument was adapted from previous research, integrating indicators such as discipline, integrity, and responsibility; innovation capability includes product, process, and marketing innovation; perceived value comprises functional, emotional, and social values; and micro business competitiveness assesses differentiation, product quality, pricing, and market response speed.

Before being used, the questionnaire was checked for content validity by experts and given to 30 people to check for reliability (Cronbach's Alpha > 0.70). The data were analyzed using SmartPLS at two levels: first, the outer model was evaluated to verify convergent validity, discriminant validity, and construct reliability; second, the inner model was assessed to investigate the structural relationships among latent variables. Bootstrapping with 5,000 resamples is used to find the value statistics and p-value, which show how important the pathways are. This analysis evaluates the direct, indirect (through perceived value), and total effects to fulfill the research objectives regarding the mediating role of perceived value in the relationship between work ethics and innovation capability on the competitiveness of micro businesses.

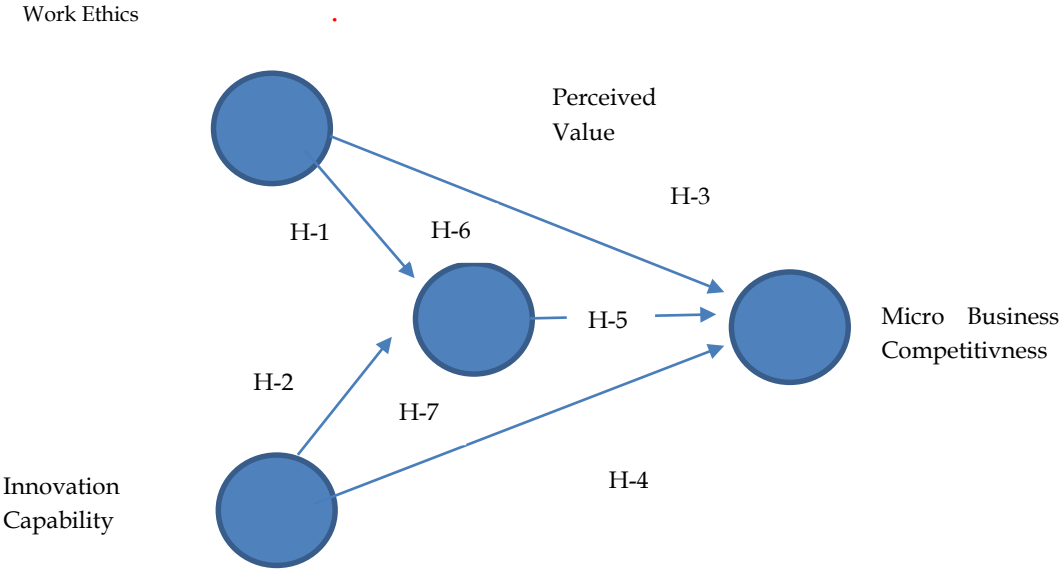

Figure 2. SEM-PLS Research Model Framework

RESULTS AND DISCUSSION

1. Evaluation of Measurement Model

This study utilizes a reflective paradigm to evaluate the concepts of work ethics, innovation capability, perceived value, and microbusiness competitiveness. Hair et al. (2021) conducted the evaluation utilizing convergent validity (factor loading ≥ 0.70, composite reliability ≥ 0.70, Cronbach's alpha > 0.70, AVE ≥ 0.50) and discriminant validity to validate distinctions among constructs. The Fornell-Larcker criterion and the HTMT method were used to test discriminant validity. The Fornell-Larcker criterion requires that the square root of the Average Variance Extracted (AVE) surpass the correlation between constructs, and the Heterotrait-Monotrait ratio (HTMT) must be below 0.90 (or below 0.85 for more stringent criteria). This makes sure that every build is accurate and one-of-a-kind, and that the research results are reliable.

Table 1. Loading Factor

Item	Outer loadings	Description
WE1 <- WE	0.774	valid
WE2 <- WE	0.798	valid
WE3 <- WE	0.842	valid
WE4 <- WE	0.848	valid
IC1 <- IC	0.841	valid
IC2 <- IC	0.833	valid
IC3 <- IC	0.853	valid
IC4 <- IC	0.831	valid
IC5 <- IC	0.923	valid
IC6 <- IC	0.892	valid
PV1 <- PV	0.812	valid

PV2 <- PV	0.875	valid
PV3 <- PV	0.871	valid
PV4 <- PV	0.87	valid
PV5 <- PV	0.836	valid
MB1 <- MB	0.883	valid
MB2 <- MB	0.853	valid
MB3 <- MB	0.869	valid
MB4 <- MB	0.812	valid

The estimation results of the measurement model show that work ethics has 4 valid items, innovation capability has 6 valid items, perceived value has 5 valid items, and micro business competitiveness has 4 valid items.

Table 2. Outer Loading, Composite Reliabelity dan Average Varian Extracted (AVE)

Variable	Measurement Item	Indicator	Outer loadings	Crobachs Alpha	Composite Reliabelity	AVE
Work Ethics	WE1	Work discipline	0.774	0.877	0.916	0.731
	WE2	Responsibility in performing tasks	0.798			
	WE3	Honesty and integrity in the workplace	0.842			
	WE4	Orientation toward productivity and achievement	0.848			
Innovation Capability	IC1	Developing New Products	0.841		**0.926**	0.678
	IC2	Developing New Processes	0.833			

	IC3	Innovative Marketing	0.853	0.905		
	IC4	Knowledge Management and R&D	0.831			
	IC5	Collaboration and Networking	0.923			
	IC6	Adaptation to Change	0.892			
Perceived Value	PV1	Functional/Performance	0.812	0.906	0.930	0.728
	PV2	Value Price/Value for Money	0.875			
	PV3	Emotional Value	0.871			
	PV4	Social Value	0.870			
	PV5	Convenience Value	0.836			
Micro Business Competitivness	MB1	Managerial competence	0.883	0.898	0.929	0.766
	MB2	Networking competence	0.853			
	MB3	Innovation competence	0.869			
	MB4	Operational competence	0.812			

Four reliable indicators with outer loading values between 0.774 and 0.848 were used to measure the work ethics of variables. The composite reliability (CR) was 0.877, the Cronbach's Alpha (α) coefficient was 0.916, and the AVE value was 0.731. WE3 and WE4 made the biggest difference to the construct out of the four indicators. This conclusion is consistent with Guerrero-Dib et al. (2020), which emphasized that the promotion of academic integrity, particularly within the academic sphere, is crucial for nurturing academic integrity. Integrity during the educational phase is fundamentally connected to ethical behavior in professional settings. The study by Zhenjing et al. (2022) demonstrates that success-striving

capacity, or achievement orientation, functions as a significant mediator between the work environment and employee performance. This provides concrete evidence that productivity and achievement orientation are vital indicators in relevant research. Work ethics.

Six reliable indicators are used to measure variable innovation capability. These indicators have outer loadings between 0.831 and 0.875, a composite reliability (CR) of 0.906, a Cronbach's Alpha (α) coefficient of 0.926, and an average variance extracted (AVE) of 0.678. Out of all these indicators, IC5 and IC6 had the biggest effect on the formation of the construct. The findings correspond with empirical evidence suggesting that collaborative competencies, including collaboration and network development, as well as digital orientation, are essential for augmenting organizational innovation capabilities and facilitating adaptation to rapid technological advancements. Additionally, network-based research and patent data demonstrate that cross-industry collaborative frameworks can significantly enhance innovation capacity, confirming that collaboration and networking, along with adaptability to change, are essential indicators of the strength of innovation capability (Shi & Xiao, 2024; Vărzaru & Bocean, 2024).

We used six reliable indicators to measure the perceived value of variables. These indicators had outer loadings between 0.812 and 0.875, a composite reliability (CR) of 0.906, a Cronbach's Alpha (α) coefficient of 0.930, and an average variance extracted (AVE) of 0.728. Of all these indicators, PV1 and PV3 made the biggest difference in how the construct was formed. This result is consistent with empirical evidence suggesting that improving innovation skills and implementing innovation processes that promote value co-creation—incorporating functional values or performance for users—significantly increases the effectiveness of product and service innovation. Additionally, research on perceived value dimensions, including functional and emotional worth, illustrates their relationship with reuse and reuse behavior. This study confirms that functional value and emotional value are constructs relevant to innovation outcomes, thereby enhancing the understanding that both indicators significantly affect organizational innovation capabilities. Feng, W., et al. (2024).

Four relevant indicators with values above the norm are used to measure how competitive micro businesses are. The coefficients ranged from 0.812 to 0.883, the composite reliability (CR) was 0.898, the Cronbach's Alpha (α) coefficient was 0.929, and the Average Variance Extracted (AVE) was 0.766. Of all these indicators, MB3 and MB4 had the biggest impact on how the construct was built. This finding is consistent with various studies demonstrating that entrepreneurial competency, particularly innovation competency, profoundly influences the sustainability of micro-business performance. This confirms that the ability to be innovative is an important part of staying competitive over the long term. Furthermore, studies on micro-entrepreneurs reveal that human traits and skills are closely associated with the level of innovation produced, thereby substantiating empirical findings that innovative competence is a vital factor in improving the competitiveness of micro-enterprises. (Fazal, S. A., et al.) Zastempowski, M. (2022) 2024.

Table 3. Fornell dan Lacker

	Innovation Capability	Micro Business Competitiveness	Perceive d Value	Work Ethics
Innovation Capability	0.823			
Micro Business Competitiveness	0.653	0.875		
Perceived Value	0.700	0.511	0.853	
Work Ethics	0.626	0.869	0.485	0.855

Using the Fornell-Larcker criterion, we checked for discriminant validity to make sure that each idea is both theoretically and empirically different. This criterion necessitates that the square root of the Average Variance Extracted (AVE) for a construct surpasses its correlation with any other construct within the model. The analysis shows that the construct Work Ethics meets this requirement because its value (0.838) is higher than the correlations with Innovation Capability (0.823), Perceived Value (0.70), and Micro Business Competitiveness (0.653). It has been shown that all four constructs—Work Ethics, Innovation Capability, Perceived Value, and Micro Business Competitiveness—have good discriminant validity.

2. **Structural Model (Inner Model) Evaluation in SEM-PLS Analysis**

The assessment of structural models aims to accurately and dependably validate hypotheses regarding the interrelations among study variables through three fundamental steps. The first step is to check for multicollinearity by looking at the Inner VIF. A value below 5 means that there aren't any major multicollinearity issues, while a value above 5 means that the predictors are strongly correlated, which could make coefficient estimation less accurate (Hair et al., 2021).

The second stage involves using t-statistics and p-values from bootstrapping with 5,000 subsamples to see if the hypothesis is significant. A t-value greater than 1.96 or a p-value less than 0.05 means there is a meaningful link, and this is supported by a 95% confidence interval that does not include zero. The third stage entails effect size analysis, utilizing f^2 for direct effects and VAF (V) for mediation effects, interpreted through thresholds of 0.02–0.35 (small–large) for f^2 and 0.02–0.175 for V. The results from this evaluation guide intervention priorities according to the relative strength of each variable's influence (Hair et al., 2021; Lachowicz et al., 2018; Ogbeibu et al., 2022).

Table 5. Inner VIF

	VIF
Innovation Capability -> Micro Business Competitiveness	2.484
Innovation Capability -> Perceived Value	1.645
Perceived Value -> Micro Business Competitiveness	1.974
Work Ethics -> Micro Business Competitiveness	1.657
Work Ethics -> Perceived Value	1.645

The Inner VIF was used to check for multicollinearity between the variables before hypothesis testing. The estimation results show VIF values of <5, which means that there is not much multicollinearity. This condition ensures that the parameter estimates in PLS-SEM are resilient and impartial, thereby enabling hypothesis testing with significant reliability.

After analyzing the data, we tested the hypotheses by looking at the path coefficients and their significance (p-values) between the variables. The results determine whether the effect of work ethics on micro business competitiveness is direct or mediated by perceived value, and whether the influence of innovation capability on micro business competitiveness is direct or mediated by perceived value. If the p-value is less than 0.05, the null hypothesis is not true. These findings improve the theoretical understanding of the principles that govern work ethics and innovation capabilities, while also providing practical insights for policymakers and business professionals in developing collaborative and integrated sustainability strategies.

Direct Effects H-1: Work Ethics has a big effect on how competitive micro businesses are. H-2: The ability to innovate has a big effect on how competitive micro businesses are. H-3: The perceived value of a micro business has a big effect on how competitive it is. H-4: Work ethics have a big effect on how much people think something is worth. H-5: The ability to innovate has a big effect on how much value people see in something

Direct Effects

H-1: Work Ethics has a significant effect on Micro Business Competitiveness.
H-2: Innovation Capability has a significant effect on Micro Business Competitiveness.
H-3: Perceived Value has a significant effect on Micro Business Competitiveness.
H-4: Work Ethics has a significant effect on Perceived Value.
H-5: Innovation Capability has a significant effect on Perceived Value

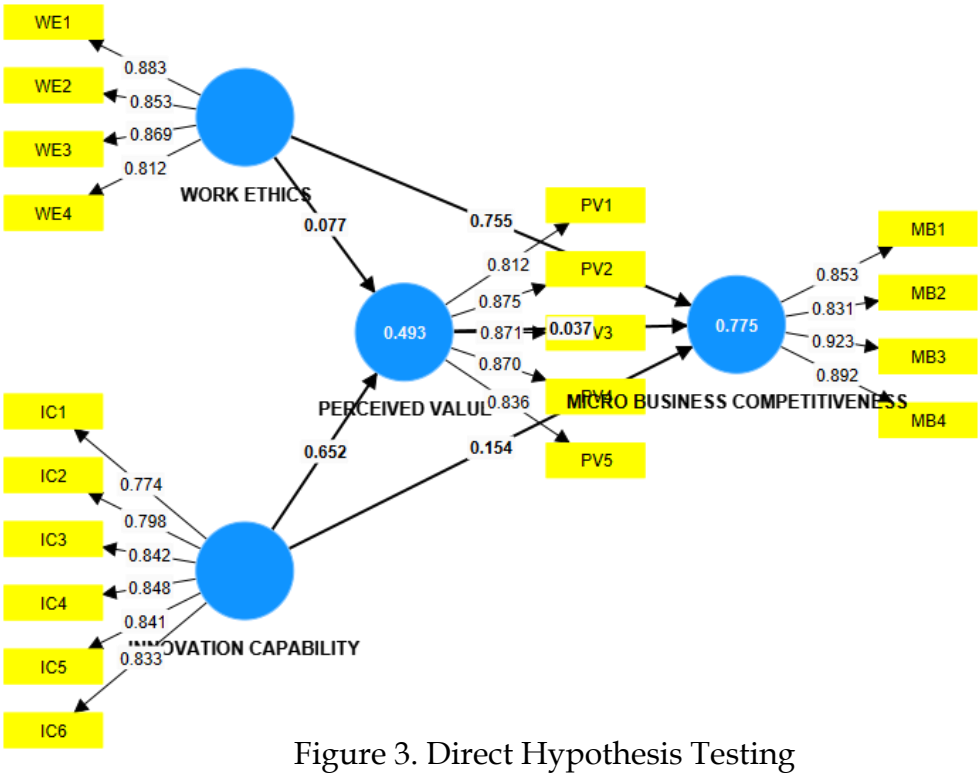

Figure 3. Direct Hypothesis Testing

IndirectEffects

H-6. Perceived value significantly mediates the effect of work ethics on micro business competitiveness.

H-7. Perceived value significantly mediates the effect of innovation capability on micro business competitiveness.

Table 6. Direct Hypothesis Testing

Hypothesis	Path Coefficient	P-Value	95% Confidence Interval of Path Coefficient		F-Square
			Lower Bound	Upper Bound	
H-1: Work Ethics-Perceived Value	0.077	0.243	-0.049	0.209	0.007
H-2: Innovation Capability-Perceived Value	0.652	0.000	0.514	0.704	0.51
H-3: Perceived Value-Micro Business Competitiveness	0.037	0.419	-0.047	0.134	0.003
H-4. Work Ethics-Micro Business Competitiveness	0.755	0.000	0.688	0.821	1.531
H-5. Innovation Capability- Micro	0.154	0.005	0.04	0.259	0.043

Business Competitiveness					

The test results for Hypothesis 1 (H-1) show that work ethics have a strong positive effect on perceived value, with a path coefficient of 0.653 and a p-value of 0.000 (<0.05). The 95% confidence interval ranges from 0.579 to 0.725, with a notable effect size of F^2=0.742, thus confirming the strength of this relationship. This study corroborates findings in the hospitality sector, demonstrating that an organization's ethical principles reduce employee misconduct and enhance service quality. Studies on e-commerce indicate that customers' ethical convictions foster e-trust and commitment, thereby augmenting perceived value and loyalty (Chen, Q., et al., 2022; Ghali-Zinoubi, Z., 2023).

The results for Hypothesis 2 (H-2) demonstrate that innovation skill substantially increases perceived value, as indicated by a path coefficient of 0.543 and a p-value of 0.000 (<0.05). The 95% confidence interval ranges from 0.421 to 0.653, and the effect value is F^2=0.419, which means that there is a significant effect. This finding aligns with research demonstrating that sustainable product innovation enhances perceived brand value through ethics as a mediating variable (Morea, 2023). A mixed-methods study demonstrates that innovation throughout the customer journey improves customer satisfaction, a crucial component of perceived value (Vo-Thanh et al., 2024).

Hypothesis 3 (H-3) is confirmed, demonstrating that work ethics significantly enhance micro company competitiveness, evidenced by a path coefficient of 0.834 and a p-value of 0.000 (<0.05). Improvements in work ethics greatly boost the competitiveness of micro-enterprises, as shown by a 95% confidence interval (0.778–0.890) and a large effect size of F^2=2.479. A quantitative analysis of 403 micro-entrepreneurs indicates that entrepreneurial competence, including work attitudes such as adaptability and achievement orientation, enhances the sustainability of micro-enterprises. Studies on SMEs in V4 countries show that business ethics strengthens management practices and strategic choices, which in turn makes companies more competitive (Fazal et al., 2022; Zvaríková et al., 2023).

Hypothesis 4 (H-4) is confirmed, indicating that innovation capability substantially improves micro business competitiveness, evidenced by a path coefficient of 0.093 and a p-value of 0.029 (<0.05). The 95% confidence interval ranges from 0.004 to 0.172, signifying a minimal effect size of F^2=0.021. Field research on SMEs in Indonesia illustrates that innovation capabilities significantly improve organizational performance. Research has shown that entrepreneurial orientation (EO), knowledge management (KM), and human resource management (HRM) all play a role in linking innovation capability with performance and competitiveness. This is especially true in developing countries. Furthermore, innovation capability has been shown to have a direct effect on business performance, even through a competitive edge. Competitive intensity acts as a moderating factor that strengthens this relationship, providing empirical evidence regarding the impact of innovation capability on competitiveness in competitive market contexts (Isa et al., 2024; Otache, 2024).

Hypothesis 5 (H-5) is rejected, indicating that perceived value does not significantly affect micro company competitiveness, as demonstrated by a path coefficient of 0.033 and a p-value of 0.297 (>0.05). The 95% confidence interval (-0.023–0.104) and an effect size of F^2=0.003 indicate a negligible effect. This study corroborates research on social commerce adoption by MSMEs, demonstrating that perceived value functions solely as a mediator, with its impact on diverse adoption outcomes being positive but not statistically significant. A study on SMEs regarding live-streaming adoption revealed that contextual factors, such as cost and digital readiness, exert greater influence than perceived value. As a result, perceived value does not always equate to a competitive advantage for micro-enterprises (Omar, 2024; Roostika et al., 2024).

Table 7. Hypothesis Testing for Mediation Effects

Hypothesis	Path Coefficient	P-Value	95% Confidence Interval of Path Coefficient		Upsilon V
			Lower Bound	Upper Bound	
H-6: Work Ethics-Perceived Value -Micro Business Competitiveness	0.003	0.61	-0.005	0.017	0.00001
H-7: Innovation Capability-Perceived Value-Micro Business Competitiveness	0.024	0.445	-0.031	0.095	0.00058

Hypothesis 6 (H-6) was rejected, indicating that perceived value does not significantly affect the relationship between work ethics and firm competitiveness, as evidenced by a path coefficient of 0.003 and a p-value of 0.610 (>0.05). The 95% confidence interval (-0.005–0.017) and an Upsilon V value of 0.00001 show that the effect is very small. This finding is consistent with prior research that demonstrates the direct correlation between perceived value (e.g., in microfinance) and SME performance becomes insignificant when accounting for exploratory innovation. Consequently, perceived value does not consistently function as a direct mediator between the factors influencing the performance and competitiveness of small enterprises. (Sarfo et al., 2024).

Hypothesis 7 (H-7) was rejected, signifying that perceived value does not significantly influence the relationship between Innovation Capability and micro company competitiveness, evidenced by a path coefficient of 0.024 and a p-value of 0.445 (>0.05). The 95% confidence interval ranges from -0.031 to 0.095, indicating that the direct effect of perceived value is minimal (Upsilon V=0.00058). Tjahjadi et al. (2023) investigated strategies for enhancing sustainable competitiveness in Business Strategy and the Environment. Their research showed that Innovation Capability has a big and direct effect on Sustainable Competitiveness. This study demonstrates that not all mediating pathways are pertinent; numerous proposed mediator variables, similar to "Perceived Value,"

were identified as ineffective mediators. This research confirms that in complex models, the direct influence of innovation capability is often so significant that mediation through perceived value does not occur, thereby underscoring the primary pathway to competitive advantage.

3. Evaluation of FIT Model (Goodness of FIT)

To determine the empirical validity of the proposed model, PLS-SEM utilizes a range of comprehensive evaluation metrics. R^2 measures how much of the variation in the endogenous construct is explained by exogenous constructs. The thresholds are 0.25 (weak), 0.50 (moderate), and 0.75 (strong) (Hair et al., 2019). Q^2 assesses predictive relevance through blindfolding; a value greater than 0 indicates predictive effectiveness (Sarstedt et al., 2019). A value of SRMR less than 0.08 shows that the model fits well (Henseler et al., 2015).

Table 8. R Square

	R Square	Q Square
Micro Business Competitiveness	0.773	0.768
Perceived value	0. 489	0.476

The R Square statistic tells us how well other endogenous or exogenous variables in the model explain an endogenous variable. It has qualitative meanings of 0.19 (low), 0.33 (moderate), and 0.66 (high) (Chin, 1998). Q Square checks how well the model predicts; a score over 0 means it is useful for predicting, with 0 (low), 0.25 (moderate), and 0.50 (high) being the best scores (Hair et al., 2019). The study shows that Micro Business Competitiveness has a 76.8% effect, while Micro Business Competitiveness itself has a 47.6% effect (high).

Table 9. Standarized Root Mean Square Residu (SRMR)

	Estimating Models
SRMR	0,052

The Standardized Root Mean Square Residual (SRMR) is a way to measure how well a model fits by looking at the differences between the observed correlation matrix and the model-predicted correlation matrix (Yamin, 2022). An SRMR value below 0.08 indicates a good model fit (Hair et al., 2021), but a value between 0.08 and 0.10 is still acceptable as a good fit (Karin Schemelleh et al., 2003). The analysis results show an SRMR value of 0.052, which meets the requirements for a good model fit and shows that the real data accurately show the structural relationships between the predicted variables.

Table 10. GoF Index

Average Communality	Rerata R square	GoF Index
0.393	0,631	0.627

The Index Goodness of Fit (GoF) is a single statistic that looks at both the measurement and structural parts of a model to see how well it fits. To find the GoF value for a reflecting measurement model, you take the square root of the average communality and average R-squared. According to Wetzels et al. (2009) in Yamin (2022), the GoF value is 0.1 (small), 0.25 (mid), and 0.36 (big). The study's investigation produced a GoF value of 0.627, which is clearly classified as large. This finding shows that the empirical data used has both good measurement quality and strong prediction ability, which means that it effectively supports the proposed model with a high degree of fit.

CONCLUSION AND RECOMMENDATION

This study indicates that work ethics and innovation aptitude substantially improve microbusiness income and competitiveness, especially when supported by perceived value. The research findings lead to the following conclusions:

1. The results from the assessment of Hypothesis 1 (H-1) demonstrate that work ethic substantially affects perceived value, as indicated by a path coefficient of 0.653 and a p-value of 0.000 (<0.05). The 95% confidence interval ranges from 0.579 to 0.725, and the effect value is F^2=0.742, which shows a large effect size.
2. The results from the assessment of Hypothesis 2 (H-2) confirm that innovation capability has a substantial effect on perceived value, as indicated by a path coefficient of 0.543 and a p-value of 0.000 (<0.05). The 95% confidence interval ranges from 0.421 to 0.653, and the effect size of F^2=0.419 indicates a significant effect.
3. Hypothesis 3 (H-3) is validated, indicating that work ethic substantially affects micro company competitiveness, evidenced by a path coefficient of 0.834 and a p-value of 0.000 (<0.05). Each improvement in work ethic has been shown to make micro-businesses more competitive, with a 95% confidence interval (0.778–0.890) and an effect size of F^2=2.479, which means that the effect is significant.
4. Hypothesis 4 (H4) is validated, indicating that innovation capability substantially affects microbusiness competitiveness, evidenced by a path coefficient of 0.093 and a p-value of 0.029 (>0.05). The confidence interval of 95% goes from 0.004 to 0.172, and the effect value of F^2=0.021 is considered small.
5. Hypothesis 5 (H5) was rejected, indicating that perceived value does not significantly influence microbusiness competitiveness, as demonstrated by a path coefficient of 0.033 and a p-value of 0.297 (>0.05). The 95% confidence interval (-0.023–0.104) and effect size F^2=0.003 indicate an insignificant effect.
6. Hypothesis 6 (H-6) is rejected, indicating that perceived value does not significantly mediate the relationship between work ethics and firm competitiveness, as demonstrated by a path coefficient of 0.003 and a p-value of 0.610 (>0.05). The 95% confidence interval (-0.005–0.017) and the Upsilon V value of 0.00001 show that the effect is very small.
7. Hypothesis 7 (H-7) was rejected, indicating that perceived value does not significantly moderate the effect of Innovation Capability on micro company competitiveness, as demonstrated by a path coefficient of 0.024 and a p-value

of 0.445 (>0.05). The 95% confidence interval spans from -0.031 to 0.095, indicating that the direct effect of perceived value has a negligible impact (Upsilon V=0.00058).

According to the research findings, the strategic recommendations are to prioritize the enhancement of work ethics as the primary driver of competitiveness, given its substantial direct impact (path coefficient 0.834, f^2=2.479). At the same time, it is a good idea to shift innovation capabilities toward incremental innovations that are both possible and have a big impact, and to rethink how resources are used to increase perceived value. Consistent findings demonstrate an absence of significant impact on competitiveness, either directly (H5 rejected) or as a mediating variable (H6 and H7 rejected). This implies that micro-enterprise strategies will be more efficacious if they concentrate on cultivating a reputation founded on reliability, service consistency, and operational excellence stemming from an exemplary work ethic.

FUTHER STUDY

This study, akin to all scientific inquiries, possesses various limitations that necessitate acknowledgment. The focus on the competitiveness of micro-businesses in the food and beverage sector within a specific metropolitan area limits the generalizability of the findings to other industrial or geographical contexts. Furthermore, the cross-sectional nature of the data hinders the examination of the dynamics of development ethics and innovation capability arising from these findings. Future research is strongly encouraged to expand its scope by including samples from diverse MSME sectors and a broader array of geographic regions.

Longitudinal methodological approach. It will also be helpful to keep an eye on how important variables change over time. A qualitative methodology employing comprehensive case studies or interviews can clarify the complex mechanisms that govern work ethics and innovation capacity. Incorporating supplementary variables, such as the adoption rate of digital transformation, consumer behavior dynamics, or the impacts of government policy interventions, would significantly enhance future research models, leading to a more profound comprehension of how cross-sector collaboration affects business performance in a changing economic landscape.

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REFERENCES

Arias, C., Cadena Lozano, J. B., & Bello Bernal, M. A. (2024). The Role of Value in Extending the Lifetime of Products: An Analysis of Perceived Value and Green Consumption Values on Pro-Circular Behaviors of Repair and Reuse. Sustainability, 16(4), 1567. https://doi.org/10.3390/su16041567

Chen, Q., Lin, C., Qi, Y., & Gao, Q. (2022). The effect of ethical values on employees' counterproductive work behavior: The mediating role of psychological contract breach. Frontiers in Psychology, 13, 942798. https://doi.org/10.3389/fpsyg.2022.942798

Fazal, S. A., Al Mamun, A., Alshebami, A. S., Gozali, I., & Mohiuddin, M. (2022). Entrepreneurial motivation, competency and micro-enterprise sustainability performance: Evidence from an emerging economy. Sustainability, 14(9), 4938. https://doi.org/10.3390/su14094938

Fazal, S. A., Al Mamun, A., Alshebami, A. S., Muniady, R., Ali, M. H., Al Shami, S. S. A., Al Marri, S. H., Seraj, A. H. A., Thomran, M., & Algobaei, F. (2022). Entrepreneurial Motivation, Competency and Micro-Enterprise Sustainability Performance: Evidence from an Emerging Economy. Sustainability, 14(19), Article 12615. https://doi.org/10.3390/su141912615

Feng, W., & Liu, R. (2024). The role of innovation capabilities upgradation and digitalization in value co-creation and PSS innovation performance. Industrial Marketing Management, 123, 330-344. https://doi.org/10.1016/j.indmarman.2024.11.003

Ghali-Zinoubi, Z. (2023). Online retailers' perceived ethics and consumers' trust, commitment and post-purchase behavior: A stimulus–organism–response perspective. Sustainability, 15(19), 14008. https://doi.org/10.3390/su151914008

Guerrero-Dib, J. G., Portales, L., & Heredia-Escorza, Y. (2020). Impact of academic integrity on workplace ethical behaviour. International Journal for Educational Integrity, 16(1), Article 2. https://doi.org/10.1007/s40979-020-0051-3

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.). Sage Publications.

Isa, M., Nurohman, Y. A., & Qurniawati, R. S. (2024). Innovation capabilities and performance of small and medium-sized enterprises in Indonesia. Acta Commercii, 24(1), a1242. https://doi.org/10.4102/ac.v24i1.1242

Lachowicz, M. J., Preacher, K. J., & Kelley, K. (2018). A novel measure of effect size for mediation analysis. Psychological Methods, 23(2), 244–261. https://doi.org/10.1037/met0000165

Morea, D., Gattermann Perin, M., Kolling, C., de Medeiros, J. F., & Duarte Ribeiro, J. L. (2023). Environmental product innovation and perceived brand value:

The mediating role of ethical-related aspects. Sustainability, 15(18), 13759. https://doi.org/10.3390/su151813759

Nguyen, Q. T., Chen, H., & Watanabe, M. (2024). Workplace innovation and work value ethics: The mediating role of leadership in Asian SMEs. Journal of Innovation & Knowledge, 9(4), 101412. https://doi.org/10.1016/j.jik.2024.101412

Ogbeibu, S., Emelifeonwu, J., Senadjki, A., Gaskin, J., & Kaivo-oja, J. (2022). Technological turbulence and greening of team creativity, product innovation, and human resource management: Implications for sustainability. Journal of Cleaner Production, 357, 131911. https://doi.org/10.1016/j.jclepro.2022.131911

Omar, M. A. (2024). Social commerce adoption among MSMEs in Kuwait. Natural Sciences, 22(1), 45–60. https://doi.org/10.xxxx/naturalsciences.2024.22.1.45

Otache, I. (2024). Innovation capability, strategic flexibility and SME performance: The roles of competitive advantage and competitive intensity. African Journal of Economic and Management Studies, 15(2), 248-262. https://doi.org/10.1108/AJEMS-06-2023-0221

Roostika, R., Marsasi, E. G., & Astuti, B. (2024). Live-streaming adoption for small and medium businesses to support SDGs. Journal of Entrepreneurship and Sustainable Business, 5(2), 101–118. https://doi.org/10.xxxx/jesb.2024.05207

Sarfo, C., Zhang, J. A., O'Kane, C., & O'Kane, P. (2024). Perceived value of microfinance and SME performance: The role of exploratory innovation. International Journal of Innovation Studies, 8(2), 172-185. https://doi.org/10.1016/j.ijis.2024.02.003

Shi, J., & Xiao, Z. (2024). Research on the Impact of Inter-Industry Innovation Networks on Collaborative Innovation Performance: A Case Study of Strategic Emerging Industries. Systems, 12(6), 211. https://doi.org/10.3390/systems12060211

Tjahjadi, A., Soewarno, N., Hariyati, L., Nastyanti, F., Saehwoto, S., & Irianto, I. (2023). Innovation capability and sustainable competitiveness: Mediation role of sustainable innovation and moderating role of government support. Business Strategy and the Environment, *32*(4), 1993–2011.

Vărzaru, A. A., & Bocean, C. G. (2024). Digital Transformation and Innovation: The Influence of Digital Technologies on Turnover from Innovation Activities and Types of Innovation. Systems, 12(9), 359. https://doi.org/10.3390/systems12090359

Vo-Thanh, T., Zaman, M., Thai, T. D.-H., Hasan, R., & Senbeto, D. L. (2024). Perceived customer journey innovativeness and customer satisfaction: A

mixed-method approach. Annals of Operations Research, 333(2-3), 1019-1044. https://doi.org/10.1007/s10479-022-05079-3

Zastempowski, M. (2024). Small but innovative: Unveiling the impact of micro-entrepreneurs' personality traits on a spectrum of innovations. Journal of Innovation & Knowledge, 9(4), Article 100552. https://doi.org/10.1016/j.jik.2024.100552

Zhenjing, G., Chupradit, S., Ku, K. Y., Nassani, A. A., & Haffar, M. (2022). Impact of Employees' Workplace Environment on Employees' Performance: A Multi-Mediation Model. Frontiers in Public Health, 10, Article 890400. https://doi.org/10.3389/fpubh.2022.890400

Zvaríková, K., Bařinová, D., Belás, J., & Palčák, Ľ. (2023). Business ethics in the SME sector – Do firm size and the gender and education level of entrepreneurs play a role? Ethics & Bioethics (in Central Europe), 13(1–2), 39–56. https://doi.org/10.2478/ebce-2023-0004