

Research Paper

From Resources to Performance: How Social and Intellectual Capital Drive MSME Innovation

Ahmad Yani*, Aripin, Harry Wiyanto

Sekolah Tinggi Manajemen LABORA, Jakarta, Indonesia

* Corresponding email: ahmad_yani@labora.ac.id

ARTICLE INFO	ABSTRACT
Keywords Innovation; Intellectual Capital; Managerial Ability; MSME Performance; Social Capital Article history Received: 10 March 2026 Revised: 25 August 2026 Accepted: 28 September 2026 Available online: 04 October 2026 To cite in APA style Yani, A., Aripin & Wiyanto, H. (2026). From resources to performance: How social and intellectual capital drive MSME innovation. <i>Shirkah: Journal of Economics and Business</i>, 11(3), 420-442.	Micro, small, and medium enterprises (MSMEs) operate under persistent resource constraints, making the effective mobilization of intangible resources increasingly important for sustaining business performance. This study examines how social capital and intellectual capital contribute to MSME performance and investigates whether innovation serves as a mechanism through which these resources are transformed into business outcomes. It also examines the role of managerial ability in strengthening the relationship between social capital and MSME performance. Drawing on Resource-Based Theory, the study employed a quantitative explanatory design involving 204 ultra-micro food and beverage entrepreneurs. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS. The findings demonstrate that social capital contributes to both innovation and MSME performance, while intellectual capital strengthens innovation and has a particularly important contribution to performance. Innovation also functions as a significant pathway linking both social capital and intellectual capital with MSME performance. Managerial ability contributes directly to performance but does not significantly moderate the social capital–performance relationship. These findings indicate that MSME performance depends not simply on possessing relational and knowledge-based resources, but on the capacity to mobilize and transform these resources through innovation and effective managerial action. The study extends the resource-based perspective by highlighting innovation as a critical resource-conversion mechanism in ultra-micro enterprises.

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Introduction

Micro, small, and medium enterprises (MSMEs) remain central to local economic activity because they provide livelihoods, sustain community-based markets, and demonstrate resilience under changing economic conditions. Their capacity to survive severe disruption was evident during the 1998 monetary crisis, when MSMEs continued to support the people's economy (Saefullah, 2022). Yet resilience does not necessarily translate into sustained performance. Evidence from Bekasi City and Regency indicates a declining trend in MSME performance between 2020 and 2024, highlighting continuing difficulties in maintaining and improving business outcomes (West Java Cooperatives and SMEs Service, 2024). This situation raises an important question concerning how resource-constrained MSMEs can convert available relationships, knowledge, and capabilities into productive value. Social capital, intellectual capital, innovation, and managerial ability therefore emerge as interconnected resources and capabilities that may explain differences in MSME adaptation, competitiveness, and performance.

The urgency of examining these relationships is reinforced by the resource constraints and rapidly changing market environment faced by MSMEs. Social capital, reflected in networks, trust, and social norms, can facilitate information access, cooperation, customer relationships, and business opportunities (Liu et al., 2022). Strong customer relationships may preserve turnover through consumer loyalty, while social capital can reduce business isolation during economic crises (Shehzad et al., 2022; Xu et al., 2023). The experience of culinary MSMEs in Bekasi also illustrates how participation in an ultra-micro community can support survival and sustainability (Jannah et al., 2023). At the same time, intellectual capital, encompassing knowledge, skills, competencies, and organizational capabilities, helps MSMEs respond to market and technological change (Khalique & Abdul, 2020). Digital platforms further expand these possibilities, enabling businesses to move toward e-commerce, marketplaces, and app-based delivery services.

Previous studies on social capital and MSME performance can be broadly grouped into two perspectives: studies emphasizing its direct contribution to performance and studies questioning whether such effects are consistently realized without an intervening mechanism. Evidence supporting a direct relationship suggests that social capital, through trust, networks, cooperation, and access to information, can strengthen MSME performance (Aisjah et al., 2024; Ibeku & Nwagwu, 2024; Muna et al., 2024; Ojokuku et al., 2024; Rustiarini et al., 2022; Welhelmina et al., 2024). However, other studies report non-significant relationships, indicating that social connections alone may not automatically generate superior business outcomes (Ahmed & Guozhu, 2020; Kanini, 2022). This inconsistency points to the importance of examining how social capital is converted into productive organizational outcomes rather than treating it as a direct source of performance. From this perspective, innovation represents a potentially important mechanism because social capital facilitates knowledge exchange, collaboration, and access to external information that can stimulate innovative activities (Ozgun et al., 2022; Rehman et al., 2021; Rustiarini et al., 2022). Innovation may therefore provide the pathway through which relational resources are transformed into improved MSME performance (Rosari et al., 2024; Susanto et al., 2024).

A second stream of research highlights intellectual capital as a knowledge-based resource that supports innovation, adaptation, and business performance. Existing studies demonstrate that intellectual capital contributes to organizational value creation and MSME

development, while also suggesting that its performance effects may operate through broader organizational capabilities and processes (Ali & Castro, 2025; Aljuboori et al., 2022; Khaliq & Abdul, 2020; Prasad & Mondal, 2025; Shahbaz & Ahmad, 2024; Sohu et al., 2024; Zahid et al., 2024). In particular, intellectual capital can facilitate organizational adaptation, digital transformation, and business growth by enabling firms to utilize knowledge and competencies more effectively (Rosyidiana & Narsa, 2024; Yilmaz, 2023). Within this process, innovation has been identified as an important determinant of MSME success and financial performance (Amimakmur et al., 2024; Amoa-gyarteng et al., 2024; Ekaterina et al., 2021; Hutahayan, 2021; Ji & Suwandej, 2024). At the managerial level, managerial ability complements these resource-based perspectives by influencing financial management, decision-making, planning, and resource allocation (Hao, 2024; Hasan & Alam, 2025; Haque & Puwanenthiren, 2025), while managerial skills can further support digital marketing, resource utilization, and product quality (Pasko, 2024; Rasoulkhan, 2024; Sewpersadh, 2025). Collectively, these studies indicate that MSME performance may depend not only on the availability of social and intellectual resources, but also on the organizational and managerial capacity to mobilize these resources through innovation.

Despite this literature, three limitations remain. First, inconsistent findings concerning social capital and MSME performance suggest that direct-effect models may not capture how relational resources generate outcomes. Second, although intellectual capital is repeatedly associated with performance, greater attention is needed to how knowledge and competencies are converted into business value. Evidence suggests that innovation may provide this mechanism because social and intellectual resources can stimulate innovative activity and innovation can improve performance (Kadiyono & Susanto, 2025; Susanto, 2025). Third, managerial ability has been studied as a condition shaping resource organization and allocation, yet its role alongside social capital, intellectual capital, and innovation has not been sufficiently integrated within one framework. From the Resource-Based Theory perspective, resources such as social capital require effective utilization to generate valuable outcomes (Barney, 1991). These limitations motivate a more integrated innovation-driven model of MSME performance.

Drawing on this backdrop, the present study examines an innovation-driven model of MSME performance by investigating the effects of social capital and intellectual capital on MSME performance and innovation, the effect of innovation on performance, the mediating roles of innovation, and the moderating role of managerial ability in the social capital–performance relationship. It integrates relational resources, knowledge-based resources, innovation, and managerial capability within one empirical framework focused on ultra-micro food and beverage entrepreneurs, thereby addressing how different forms of intangible resources interact in resource-constrained business settings. Theoretically, the study extends the resource-based perspective by distinguishing the respective contributions of relational and knowledge-based resources and by positioning innovation as a resource-conversion mechanism through which intangible resources can be transformed into performance outcomes. Practically, the findings provide a basis for MSME owners to strengthen networks, knowledge, innovation practices, and managerial capabilities as complementary dimensions of business development rather than treating them as isolated resources. The findings may also inform entrepreneurship support programs and MSME policies by emphasizing interventions that facilitate knowledge exchange, collaborative

networks, innovation capability, and managerial development, particularly among ultra-micro enterprises facing substantial resource constraints.

Theoretical Foundation and Hypotheses Development

Theoretical Foundation: Resource-Based Theory

This study is grounded in Resource-Based Theory (RBT), which explains organizational performance in terms of the resources and capabilities that firms possess and their ability to deploy those resources to create value. Barney (1991) argues that organizational resources can provide the basis for sustained competitive advantage when they are valuable and effectively utilized. This perspective is particularly relevant to MSMEs because their limited physical and financial resources increase their dependence on intangible resources, including relationships, knowledge, competencies, and managerial capabilities. Accordingly, this study conceptualizes social capital and intellectual capital as strategic resources, while innovation represents a mechanism through which these resources are transformed into business value. Managerial ability is incorporated as an organizational capability that may determine how effectively available resources are converted into performance. The resulting framework therefore extends the resource-based perspective beyond resource possession toward the process of resource utilization and transformation.

RBT shapes the foundation of this study in two important ways. First, it suggests that social capital and intellectual capital can constitute valuable resources that provide MSMEs with access to information, knowledge, relationships, competencies, and opportunities that would otherwise be difficult to obtain. Social capital facilitates information sharing, cooperation, and access to external opportunities, whereas intellectual capital provides knowledge, skills, experience, and organizational capabilities. However, possessing resources does not necessarily ensure superior performance. Their value depends on the firm's ability to mobilize and transform them into productive activities. Second, RBT provides a rationale for positioning innovation as a mediating mechanism and managerial ability as a contextual capability. Innovation represents the process through which relational and knowledge-based resources can be converted into new products, processes, technologies, and strategies, while managerial ability determines how resources are organized, allocated, and implemented. Thus, the theoretical model links resources → transformation through innovation → performance, with managerial ability potentially shaping this process.

Social Capital and MSME Performance

Social capital refers to the networks, trust, relationships, and shared norms that enable MSMEs to access information, establish cooperation, identify opportunities, and reduce business uncertainty. From the RBT perspective, these relationships constitute valuable intangible resources because entrepreneurs can mobilize them to obtain resources and opportunities that may not be available internally. Empirical studies provide substantial support for the contribution of social capital to MSME performance. Aisjah et al. (2024) found that social capital contributes significantly to firm performance, while Ojokuku et al. (2024) demonstrated its contribution to financial performance. Ibeku and Nwagwu (2024) emphasized that social trust facilitates access to capital, reduces uncertainty, and supports

informed decision-making. Similarly, [Muna et al. \(2024\)](#) highlighted the contribution of MSME associations and community-based training, while [Welhelmina et al. \(2024\)](#) found that social capital linkages support business growth and adaptability. These arguments indicate that stronger social capital can provide MSMEs with relational resources that enhance business performance.

H1: Social capital significantly influences MSME performance.

Social Capital and Innovation

Social capital can also serve as an important foundation for innovation because relationships provide channels through which entrepreneurs exchange information, knowledge, experience, and ideas. Rather than functioning only as a source of business contacts, social capital can expose MSMEs to diverse perspectives and external knowledge that stimulate the development of new solutions. [Ozgun et al. \(2022\)](#) argues that strong social networks enhance knowledge sharing among business actors, while [Rehman et al. \(2021\)](#) found that social capital is associated with product and process innovation. [Rustiarini et al. \(2022\)](#) likewise demonstrated that social capital can directly stimulate innovation and strengthen MSMEs' ability to absorb external knowledge. Through these relational processes, entrepreneurs can recognize emerging market opportunities, obtain new information, and collaborate with other business actors. Therefore, social capital can provide the relational conditions necessary for transforming externally obtained knowledge into new products, processes, services, and business strategies.

H2: Social capital significantly influences innovation.

Intellectual Capital and MSME Performance

Intellectual capital represents knowledge-based resources encompassing skills, experience, competencies, human capabilities, and organizational knowledge that enable MSMEs to create value despite limitations in physical and financial resources. Consistent with RBT, intellectual capital can become a strategic resource when it enables an enterprise to use knowledge more effectively than competitors. [Sohu et al. \(2024\)](#) explain that stronger intellectual capital enhances business survival and growth, while [Faturachman et al. \(2024\)](#) emphasize its contribution to productivity, organizational knowledge, market expansion, and business positioning. Evidence from [Aljuboori et al. \(2022\)](#), [Ali and Castro \(2025\)](#), [Prasad and Mondal \(2025\)](#), [Shahbaz and Ahmad \(2024\)](#), [Khalique and Abdul \(2020\)](#), and [Zahid et al. \(2024\)](#) further demonstrates the strategic relevance of intellectual capital to business performance. For resource-constrained MSMEs, knowledge, skills, and experience can support more effective decisions, efficient processes, customer relationships, and competitive responses. Accordingly, stronger intellectual capital is expected to improve MSME performance.

H3: Intellectual capital significantly influences MSME performance.

Intellectual Capital and Innovation

Innovation depends substantially on the capacity of an enterprise to identify, combine, develop, and apply knowledge. Intellectual capital therefore provides an important knowledge-based foundation for innovation. [Ahmed and Guozhu \(2020\)](#) explain that

intellectual capital involves combining knowledge in ways that generate value, while [Ali and Castro \(2025\)](#) characterize it as a strategic resource that strengthens organizational innovation capability. Evidence also indicates that knowledge, individual capabilities, and organizational competencies contribute to innovative performance. [Welhelmina \(2024\)](#) emphasizes the contribution of knowledge and creativity to innovation, while [Rideg et al. \(2023\)](#) identifies the role of intellectual capital in SME innovation. [Aljuboori \(2022\)](#) likewise demonstrates the relationship between intellectual capital and innovation capability. [Susanto et al. \(2024\)](#) further emphasizes that knowledge must be managed and transformed so that it can be collectively utilized for innovation. Thus, intellectual capital provides the cognitive and organizational foundation through which MSMEs can identify opportunities and develop new products, processes, services, and strategies.

H4: Intellectual capital significantly influences innovation.

Innovation and MSME Performance

Innovation represents the process through which MSMEs transform ideas, knowledge, and available resources into new or improved products, processes, technologies, and business practices. This transformation can enhance product quality, operational efficiency, marketing effectiveness, customer satisfaction, sales, and profitability. [Rideg et al. \(2023\)](#) found that innovation enables small businesses to survive and grow through improvements in product quality, operational efficiency, and marketing strategies. [Susanto et al. \(2024\)](#) similarly identified a positive relationship between innovation orientation and organizational performance. Innovation can also strengthen organizational adaptability because innovation-oriented firms are better positioned to respond to changing market conditions ([Aljuboori, 2022](#)). Evidence from [Hama and Cavusoglu \(2023\)](#), [Vijayakumar and Chandrasekar \(2022\)](#), and [Faturachman \(2023\)](#) further supports innovation as an important driver of organizational competitiveness and performance. Consequently, innovation is expected to provide MSMEs with a means of converting resources and opportunities into tangible improvements in business outcomes.

H5: Innovation significantly influences MSME performance.

Innovation as a Mediator between Social Capital and MSME Performance

The relationship between social capital and MSME performance may involve a transformation process rather than a purely direct pathway. Social capital provides networks, trust, relationships, and access to information, but these relational resources must be mobilized and converted into productive business activities to generate greater performance outcomes. Innovation can provide this conversion mechanism. [Ozgun et al. \(2022\)](#) demonstrates the contribution of social capital to innovation, while [Analia et al. \(2020\)](#) identifies its contribution to MSME performance. [Kanini \(2022\)](#) further demonstrates that organizational innovation mediates the relationship between social capital and performance, suggesting that relational resources generate greater value when translated into innovative activities. The proposed process is therefore sequential: social capital facilitates information and knowledge exchange, these resources stimulate innovation, and innovation subsequently generates improvements in business performance. Accordingly, innovation provides an explanatory pathway connecting relational resources with measurable MSME outcomes.

H6: Innovation mediates the relationship between social capital and MSME performance.

Innovation as a Mediator between Intellectual Capital and MSME Performance

A similar transformation mechanism can be expected for intellectual capital. Knowledge, skills, experience, and organizational capabilities may directly contribute to performance, but their value can be further enhanced when they are transformed into innovative products, processes, services, and business practices. Ozgun's et al. (2022) research demonstrates the contribution of intellectual capital to performance, while Rideg et al. (2023) identifies a positive relationship between intellectual capital and innovation. Rustiarini et al. (2022) and Ji and Suwandej (2024) further indicate that knowledge-based resources contribute to innovation and that innovation is associated with improved performance. Aljuboori et al. (2022), Khalique (2022), and Saleh and Koliby (2024) similarly provide evidence concerning the role of intellectual resources in innovation and business outcomes. Thus, intellectual capital supplies the knowledge and capabilities necessary for innovation, while innovation transforms those resources into value-generating activities. Innovation is consequently expected to mediate the intellectual capital–performance relationship.

H7: Innovation mediates the relationship between intellectual capital and MSME performance.

Managerial Ability as a Moderator of the Social Capital–MSME Performance Relationship

Managerial ability represents the capacity to plan, organize, make decisions, allocate resources, communicate, lead, and implement business strategies. Its potential moderating role arises because social capital does not automatically generate superior performance; networks, trust, information, and relationships must be recognized, coordinated, and converted into actionable opportunities. Hutahayan (2021) demonstrated that managerial ability can moderate the relationship between social capital and performance. Vijayakumar and Chandrasekar (2022) similarly indicated that the relationship involving MSME performance and social capital may depend on managerial capabilities, while Faturachman (2023) emphasized the contribution of managerial skills to the relationship between social capital and performance. Related evidence also highlights managerial ability as an important determinant of MSME performance (Ratnawati et al., 2021; Agustia et al., 2022). Accordingly, managers with stronger abilities may be better positioned to identify opportunities embedded in social networks and convert relational resources into productive business activities.

H8: Managerial ability moderates the relationship between social capital and MSME performance.

The relationships proposed in the hypotheses are integrated into a conceptual research model to illustrate how social capital and intellectual capital are expected to influence MSME performance directly and indirectly through innovation, while managerial ability is positioned as a moderating factor. The model provides a visual representation of the hypothesized relationships and clarifies the role of innovation as a mechanism through which capital-based resources may translate into performance outcomes. The overall configuration of the proposed relationships is presented in Figure 1.

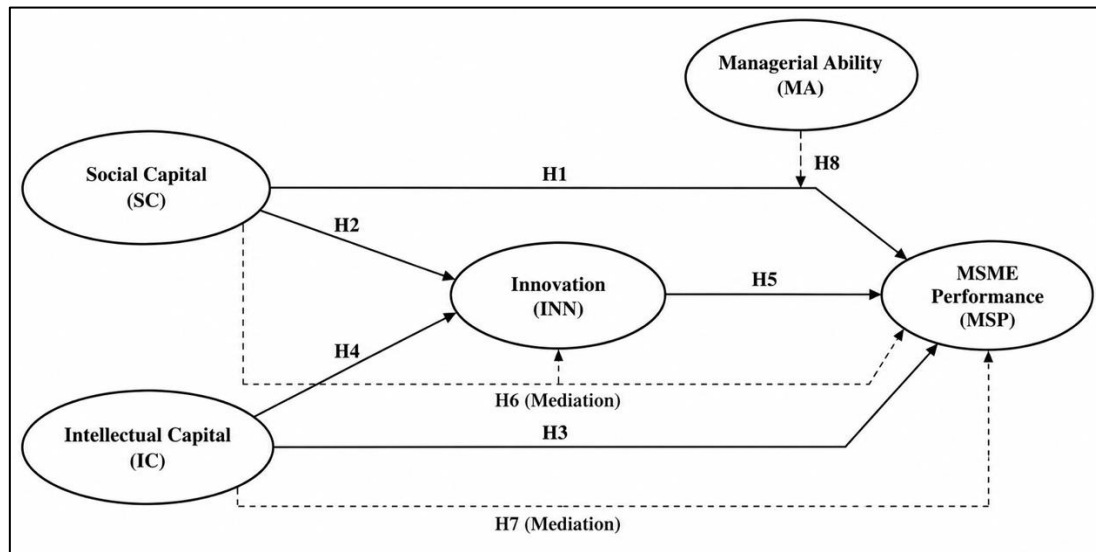


Figure 1. Research Model

Method

Research Design and Rationale

This study employed a quantitative explanatory research design to examine the proposed relationships among social capital, intellectual capital, innovation, managerial ability, and MSME performance. An explanatory design was appropriate because the study sought to empirically test theoretically derived relationships, including the direct effects of social capital and intellectual capital on MSME performance and innovation, the effect of innovation on MSME performance, the mediating role of innovation, and the moderating role of managerial ability. The unit of analysis was the individual ultra-micro food and beverage entrepreneur who was directly involved in managerial decision-making. Focusing on entrepreneurs with direct responsibility for operational planning and business control was intended to ensure that respondents possessed sufficient knowledge and experience to assess their business conditions and the constructs examined in the study.

Research Setting and Respondents

The study focused on ultra-micro enterprises operating in the food and beverage sector, particularly ultra-micro restaurant businesses. The population comprised 209,714 MSMEs representing the relevant units of analysis. Given the size of the population, the sample size was determined using the Taro Yamane formula with a 7% margin of error, following [Sekaran and Bougie \(2016\)](#), resulting in 204 respondents. The study employed purposive sampling to select respondents who met predetermined criteria relevant to the research objectives. Specifically, respondents were required to be owners of ultra-micro businesses in the food and beverage sector, particularly restaurant businesses, and their businesses were required to have a maximum investment of IDR 20 million. These criteria were applied to ensure that the characteristics of the respondents were consistent with the specific empirical context of the study and that participants had direct experience in managing and operating ultra-micro businesses.

Instrument and Data Collection

The study utilized both primary and secondary data. Primary data were collected directly from the respondents using a structured questionnaire designed to measure five principal constructs: social capital, intellectual capital, innovation, managerial ability, and MSME performance. In the research model, social capital and intellectual capital functioned as the main explanatory variables, innovation served as the mediating variable, managerial ability served as the moderating variable, and MSME performance was the dependent variable. Secondary data were obtained from relevant institutional sources, including the Ministry of Finance, the Cooperatives and MSMEs Office, and Bank Indonesia, and were used to provide supporting information concerning the MSME context and research setting. The questionnaire data were subsequently prepared for analysis by treating the constructs as latent variables within the PLS-SEM framework.

Data Analysis and Variable Measurement

The empirical analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS software. PLS-SEM was selected because the proposed model contains multiple latent constructs and simultaneously examines direct, mediating, and moderating relationships. As a variance-based multivariate technique, PLS-SEM is suitable for examining theoretically specified relationships while also emphasizing the explanatory and predictive relationships among constructs (Hair, 2023). The analysis proceeded through assessment of the measurement model and structural model. The measurement model was evaluated to establish the adequacy of the indicators and constructs before examining the hypothesized structural relationships. Reliability was assessed using Cronbach's alpha and composite reliability, while convergent validity was assessed using indicator loadings and average variance extracted (AVE). Discriminant validity was examined to establish that the constructs represented empirically distinguishable concepts. Collinearity was also assessed using the variance inflation factor (VIF), particularly for the indicators and interaction term included in the structural model.

Following the assessment of the measurement model, the structural model was evaluated to examine the explanatory capacity and hypothesized relationships among the constructs. The coefficient of determination (R^2) was used to assess the proportion of variance in the endogenous constructs explained by the predictors in the model. Hypothesis testing was conducted through bootstrapping, with the significance of the structural relationships assessed using the estimated path coefficients, t-statistics, and p-values. Direct-effect analysis examined the relationships of social capital and intellectual capital with MSME performance and innovation, as well as the relationship between innovation and MSME performance. Indirect-effect analysis was used to test whether innovation mediated the relationships between social capital and MSME performance and between intellectual capital and MSME performance. The moderating effect was examined through the interaction between social capital and managerial ability in predicting MSME performance. Accordingly, the analytical procedure provided direct correspondence with the eight hypotheses: H₁–H₅ tested the direct relationships, H₆–H₇ tested the mediating effects of innovation, and H₈ tested the moderating effect of managerial ability on the social capital–MSME performance relationship.

Results

Respondents' Demographic Profile

The study involved 204 owners of ultra-micro food and beverage enterprises who met the specified sampling criteria. The respondent profile was described according to age, educational attainment, business age, and business capital. These characteristics provide the contextual background for interpreting the empirical relationships examined in the structural model. As illustrated in Figure 1, the study focuses on the relationships among social capital, intellectual capital, innovation, managerial ability, and MSME performance; therefore, the respondent characteristics are presented primarily to describe the empirical context in which these relationships were examined.

Table 1 shows that the largest proportion of respondents were aged 26–35 years (40.7%), followed by those aged below 25 years (29.4%). Respondents aged 36–45 years accounted for 17.6%, while those above 45 years represented 12.3%. Thus, the sample was concentrated among relatively younger and middle-aged entrepreneurs. This composition provides a relevant empirical context for examining resource utilization, innovation, and managerial practices in ultra-micro enterprises.

Table 1. Respondent Profile of Ultra-Micro Food and Beverage Entrepreneurs (N = 204)

Characteristics	Sub-characteristics	Frequency (n)	Percentage (%)
Age	< 25 years	60	29.4
	26 - 35	83	40.7
	36 – 45	36	17.6
	> 45 years	25	12.3
Education	No formal education	4	2.0
	Elementary school	16	7.9
	Middle school	39	19.1
	Senior high school	90	44.1
	Diploma 3	8	3.9
	Bachelor's / Master's Degree	47	23.0
Business age	< 4 years	69	33.8
	4 – 8 years	93	45.6
	> 8 years	41	20.1
Business capital	< IDR 5 million	57	27.9
	IDR 5.1 – 9.9 million	78	38.2
	IDR 10 – 14.9 million	42	20.6
	IDR 15 – 20 million	27	13.2

In terms of education, senior high school graduates constituted the largest group (44.1%), followed by respondents with a bachelor's or master's degree (23.0%) and middle-school education (19.1%). Smaller proportions had elementary education (7.9%), Diploma 3 qualifications (3.9%), or no formal education (2.0%). Regarding business age, the largest reported group had operated for 4–8 years (45.6%), followed by businesses operating for

less than four years (33.8%). In terms of capital, businesses with IDR 5.1–9.9 million represented the largest category (38.2%), followed by those with less than IDR 5 million (27.9%). Overall, the profile confirms that the empirical setting is dominated by small-scale businesses operating with relatively limited financial resources, making relational, knowledge-based, innovative, and managerial resources particularly relevant to the analytical model.

Measurement Model Assessment

The measurement model was assessed before examining the structural relationships proposed in Figure 1. The assessment covered internal consistency reliability, convergent validity, discriminant validity, and collinearity. The results are presented sequentially in Tables 2, Table 3, and Table 4.

As depicted in Table 2, all five substantive constructs demonstrate high internal consistency. Cronbach's alpha values range from 0.869 for MSME Performance to 0.896 for Managerial Ability, while composite reliability values range from 0.920 to 0.951. These results indicate that the indicators associated with each substantive construct exhibit consistent measurement properties.

The convergent validity results are likewise strong. The AVE values range from 0.753 for Innovation to 0.906 for Managerial Ability, with all values exceeding 0.50. This indicates that each substantive construct accounts for more than half of the variance in its respective indicators. Managerial Ability has the highest AVE (0.906), whereas Innovation has the lowest (0.753), although both remain well above the reported minimum criterion. The Moderating Effect 1 term has values of 1.000 because it represents the interaction construct used to estimate the moderating effect and should therefore not be interpreted as an ordinary reflective measurement construct. Overall, the results in Table 2 indicate satisfactory reliability and convergent validity for the substantive constructs.

Table 2. Reliability and Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE
Social capital	0.895	0.934	0.826
Intellectual capital	0.879	0.925	0.805
Innovation	0.889	0.924	0.753
Managerial activity	0.896	0.951	0.906
MSME performance	0.869	0.920	0.794
Moderation effect 1	1.000	1.000	1.000

Discriminant validity was assessed using the Fornell–Larcker criterion. The diagonal values in Table 3 represent the square roots of the AVE for each construct, while the off-diagonal values represent the correlations between constructs. The results in Table 3 show relatively high correlations among several constructs. In particular, Social Capital has a correlation of 0.947 with Innovation and 0.955 with Managerial Ability, while Intellectual Capital has a correlation of 0.964 with MSME Performance. These correlations are high relative to the corresponding diagonal values.

Table 3. Fornell-Larcker Criterion

Construct	Innovation	Intellectual Capital	Managerial Ability	Moderating Effect 1	MSME Performance	Social Capital
Innovation	0.868					
Intellectual Capital	0.886	0.897				
Managerial Ability	0.898	0.846	0.952			
Moderating Effect 1	-0.812	-0.781	-0.845	1.000		
MSME Performance	0.863	0.964	0.903	-0.806	0.891	
Social capital	0.947	0.860	0.955	-0.850	0.870	0.909

Under a strict application of the Fornell–Larcker criterion, an off-diagonal correlation should generally remain below the square root of the AVE of the corresponding constructs. The results therefore indicate that discriminant validity warrants careful consideration rather than being interpreted as unequivocally established. Nevertheless, the constructs remain theoretically specified as distinct variables in the structural model, with differentiated roles as antecedents, mediator, moderator, and outcome. Because several correlations are particularly high, the discriminant-validity findings should be interpreted cautiously. This issue is important when interpreting the subsequent structural estimates because strong associations among constructs may affect the empirical distinction between their respective effects.

Collinearity was assessed using the variance inflation factor (VIF). The results are presented in Table 4. The VIF values range from 1.000 to 4.028. All reported values are below 5.00, indicating that the model does not exhibit problematic collinearity according to the criterion applied in the study. The highest VIF is observed for indicator Y1 (4.028), followed by X1.3 (3.648) and Z2 (3.498), but these values remain below the reported threshold. The interaction term between Social Capital and Managerial Ability has a VIF of 1.000. Overall, the collinearity assessment does not indicate substantial linear redundancy among the indicators or the interaction term, supporting continuation to the structural model assessment.

Table 4. Collinearity Statistics (VIF)

Indicator / Construct	VIF
M1	2.941
M2	2.941
Social capital x Managerial ability	1.000
X1.1	2.620
X1.2	2.539

Indicator / Construct	VIF
X1.3	3.648
X2.1	2.339
X2.2	2.302
X2.3	3.178
Y1	4.028
Y2	2.345
Y3	2.754
Y4	2.298
Z1	2.238
Z2	3.498
Z3	2.317

Structural Model Analysis and Hypotheses Testing

Following evaluation of the measurement model, the structural model was assessed to determine the explanatory capacity of the endogenous constructs and to test the hypothesized relationships illustrated in [Figure 1](#). The analysis examined the coefficient of determination (R^2), direct effects, and indirect effects.

Table 5. Coefficient of Determination (R^2)

Endogenous Construct	R^2	Adjusted R^2
Innovation	0.916	0.915
MSME performance	0.969	0.968

[Table 5](#) indicates substantial explanatory power for both endogenous constructs. Social Capital and Intellectual Capital jointly explain 91.6% of the variance in Innovation ($R^2 = 0.916$; adjusted $R^2 = 0.915$). This indicates that the two resource-based antecedents account for a large proportion of the observed variance in Innovation within the sample. For MSME Performance, the R^2 value is 0.969, with an adjusted R^2 of 0.968. Thus, Social Capital, Intellectual Capital, Innovation, Managerial Ability, and the specified interaction term collectively explain 96.9% of the variance in MSME Performance. The remaining 3.1% represents variance associated with factors outside the structural model. These results demonstrate strong explanatory power within the observed sample, although the R^2 values themselves should not be interpreted as evidence of causality independently of the hypothesis-testing results.

The direct structural relationships were evaluated using bootstrapping. The estimated path coefficients, t-statistics, and p-values are reported in [Table 6](#). The results in [Table 6](#) show that Social Capital has a positive and statistically significant relationship with MSME Performance ($\beta = 0.234$, $t = 4.009$, $p < 0.001$), supporting H1. Social Capital also has a strong

positive relationship with Innovation ($\beta = 0.708$, $t = 19.620$, $p < 0.001$), supporting H2. The magnitude of this coefficient indicates that the Social Capital–Innovation relationship is particularly pronounced within the observed sample.

Intellectual Capital demonstrates a positive and statistically significant relationship with MSME Performance ($\beta = 0.812$, $t = 24.549$, $p < 0.001$), supporting H3. This is the largest direct coefficient among the hypothesized predictor-to-outcome relationships. Intellectual Capital also positively relates to Innovation ($\beta = 0.277$, $t = 7.380$, $p < 0.001$), supporting H4. Innovation itself has a positive and significant relationship with MSME Performance ($\beta = 0.163$, $t = 3.633$, $p < 0.001$), supporting H5.

Managerial Ability also exhibits a positive and statistically significant direct relationship with MSME Performance ($\beta = 0.564$, $t = 10.366$, $p < 0.001$). The interaction between Social Capital and Managerial Ability has a negative but statistically insignificant effect on MSME Performance ($\beta = -0.009$, $t = 1.237$, $p = 0.216$). Because the p-value exceeds the conventional 0.05 significance level, H8 is not supported. This result indicates that managerial ability does not significantly alter the strength of the relationship between social capital and MSME performance in the observed sample. Notably, Managerial Ability has a significant direct relationship with MSME Performance ($\beta = 0.564$, $t = 10.366$, $p < 0.001$), suggesting that its contribution to performance operates as a direct effect rather than through the hypothesized moderation of social capital.

Table 6. Hypotheses Testing Results (Direct Effects)

Hypothesis	Relationship	Original Sample (β)	t-statistic	p-value	Decision
H1	Social Capital → MSME Performance	0.234	4.009	<0.001	Supported
H2	Social Capital → Innovation	0.708	19.620	<0.001	Supported
H3	Intellectual Capital → MSME Performance	0.812	24.549	<0.001	Supported
H4	Intellectual Capital → Innovation	0.277	7.380	<0.001	Supported
H5	Innovation → MSME Performance	0.163	3.633	<0.001	Supported
-	Managerial Ability → MSME Performance	0.564	10.366	<0.001	Main effect
H8	Social Capital × Managerial Ability → MSME Performance	-0.009	1.237	0.216	Not Supported

Moreover, The mediating role of Innovation was assessed by examining the indirect effects of Social Capital and Intellectual Capital on MSME Performance through Innovation. The results are presented in Table 7. Social Capital has a positive and statistically significant

indirect relationship with MSME Performance through Innovation ($\beta = 0.115$, $t = 3.562$, $p < 0.001$). This result supports H₆ and demonstrates that Innovation represents a significant pathway through which Social Capital is associated with MSME Performance. The indirect effect complements the significant direct Social Capital–MSME Performance relationship reported in Table 6, indicating that the relationship operates through both direct and innovation-mediated pathways. Similarly, Intellectual Capital has a positive and statistically significant indirect relationship with MSME Performance through Innovation ($\beta = 0.045$, $t = 3.434$, $p = 0.001$), supporting H₇. Thus, the results indicate that Intellectual Capital is associated with MSME Performance not only through its direct relationship but also through Innovation. Taken together, Tables 6 and Table 7 establish that both Social Capital and Intellectual Capital have significant direct and indirect relationships with MSME Performance, while Innovation constitutes an empirically significant intermediary pathway. Managerial Ability, meanwhile, demonstrates a significant direct relationship with MSME Performance but does not significantly moderate the Social Capital–MSME Performance relationship.

Table 7. Hypothesis Testing Results (Indirect Effects)

Hypothesis	Indirect Relationship	Original Sample (β)	t-statistic	p-value	Decision
H ₆	Social Capital → Innovation → MSME Performance	0.115	3.562	<0.001	Supported
H ₇	Intellectual Capital → Innovation → MSME Performance	0.045	3.434	0.001	Supported

Discussion

The positive and significant relationship between Social Capital and MSME Performance indicates that relational resources remain consequential for ultra-micro enterprises operating with constrained financial and physical resources. Rather than functioning merely as a social asset, networks, trust, cooperation, and solidarity provide entrepreneurs with access to information, referrals, suppliers, customers, and opportunities that may otherwise be difficult to obtain. This finding is consistent with [Aisjah et al. \(2024\)](#), [Ojokuku et al. \(2024\)](#), [Ibeku and Nwagwu \(2024\)](#), [Muna et al. \(2024\)](#), and [Welhelmina et al. \(2024\)](#), who emphasize the contribution of social relationships to information access, collaboration, and business outcomes. However, the relatively moderate coefficient ($\beta = 0.234$) suggests that social connections alone do not explain performance as strongly as knowledge-based resources. Thus, the finding refines a simple “more social capital, better performance” interpretation: relational resources appear valuable, but their economic contribution depends on how entrepreneurs mobilize and convert them into productive activities.

The particularly strong relationship between Social Capital and Innovation ($\beta = 0.708$) provides an important explanation for why relational resources matter in the performance of resource-constrained MSMEs. The finding suggests that the primary value of social

capital may lie not simply in generating immediate business benefits but in facilitating the circulation of information, experience, ideas, and market knowledge that supports innovation. This interpretation is consistent with [Ozgun et al. \(2022\)](#), [Rehman et al. \(2021\)](#), and [Rustiarini et al. \(2022\)](#), who emphasize the role of social interaction, trust, and knowledge exchange in stimulating innovation. The magnitude of the coefficient nevertheless warrants careful interpretation because it represents an association within the observed model rather than proof that social relationships automatically produce innovation. More substantively, the finding indicates that social capital can become economically productive when networks function as channels for knowledge recombination and opportunity recognition. Innovation therefore provides a plausible mechanism through which relational resources acquire strategic value.

The strongest direct relationship in the model is between Intellectual Capital and MSME Performance ($\beta = 0.812$), highlighting the importance of knowledge-based resources for ultra-micro enterprises. This finding is particularly meaningful in settings where entrepreneurs have limited access to financial capital, technology, and other tangible resources. Knowledge, competencies, experience, human-resource capabilities, and established work systems can partially compensate for these constraints by improving decision quality, operational efficiency, customer understanding, and resource utilization. The result is consistent with the Resource-Based Theory proposed by [Barney \(1991\)](#) and with [Sohu \(2024\)](#), [Ali and Castro \(2025\)](#), [Prasad and Mondal \(2025\)](#), [Shahbaz and Ahmad \(2024\)](#), and [Zahid et al. \(2024\)](#), who emphasize intellectual capital as a source of business performance. However, the magnitude of the coefficient should not be interpreted as evidence that intellectual capital independently determines performance. Rather, it suggests that knowledge-based capabilities constitute a particularly important resource within this empirical context, warranting greater attention to how such resources are developed and deployed.

The significant relationship between Intellectual Capital and Innovation ($\beta = 0.277$) indicates that knowledge and competencies contribute to innovation, although the association is considerably weaker than that between Social Capital and Innovation. This difference is theoretically informative. Whereas social capital appears strongly associated with access to external information and interaction, intellectual capital may represent the internal capacity required to interpret, combine, and apply such information. The finding is consistent with [Rideg et al. \(2023\)](#) and [Aljuboori \(2022\)](#), who emphasize the importance of individual knowledge, creativity, and intellectual resources for organizational innovation. The result therefore suggests that innovation requires both access to knowledge and the capacity to process it. Intellectual Capital provides the cognitive and organizational foundation for transforming experience and knowledge into new products, processes, or business practices. Its contribution to innovation also helps explain why intellectual capital can influence performance through a pathway that extends beyond its direct relationship with business outcomes.

The positive relationship between Innovation and MSME Performance ($\beta = 0.163$) confirms that innovation has a meaningful, although comparatively modest, direct association with performance. This distinction is important because it suggests that innovation should not be conceptualized as an automatic source of superior outcomes. Innovation creates performance value when new products, processes, technologies, marketing approaches, or business practices are successfully implemented and aligned with

market needs. The finding is consistent with [Hama and Cavusoglu \(2023\)](#), [Vijayakumar and Chandrasekar \(2022\)](#), and [Faturachman \(2023\)](#), who identify innovation as an important contributor to competitiveness and performance. The smaller coefficient relative to Intellectual Capital also implies that possessing innovative capacity is not equivalent to possessing the resources needed for broader performance improvements. Consequently, innovation is better understood as a conversion mechanism: it translates resources and ideas into potentially valuable business changes, but the magnitude of resulting performance gains depends on how effectively those changes are implemented.

The significant indirect relationship between Social Capital and MSME Performance through Innovation ($\beta = 0.115$) provides stronger evidence for the proposed innovation-driven mechanism than a direct-effect interpretation alone. Social relationships appear to create performance value partly because they facilitate the exchange of information and knowledge that can subsequently be transformed into innovative activities. This interpretation is consistent with [Kanini \(2022\)](#), [Aljuboori et al. \(2022\)](#), [Khalique \(2022\)](#), and [Saleh and Koliby \(2024\)](#), who identify social networks and trust as potential sources of knowledge creation and innovation. Importantly, the simultaneous presence of a significant direct effect ($\beta = 0.234$) and indirect effect ($\beta = 0.115$) suggests that Innovation does not replace the direct value of Social Capital; rather, it constitutes an additional pathway through which relational resources are converted into performance. Thus, the finding supports a more nuanced understanding in which social capital generates value both through immediate relational advantages and through innovation-enabled resource transformation.

Innovation also provides a significant pathway linking Intellectual Capital with MSME Performance, although the indirect coefficient ($\beta = 0.045$) is smaller than the corresponding indirect effect of Social Capital. This difference suggests that intellectual resources contribute substantially to performance through their direct application, while their transformation into innovation provides an additional but comparatively smaller pathway. The finding is consistent with [Aljuboori et al. \(2022\)](#), [Khalique \(2022\)](#), and [Saleh and Koliby \(2024\)](#), who emphasize intellectual capital as a strategic foundation for innovation and business performance. The distinction between the direct and mediated pathways is theoretically important. Intellectual Capital appears to possess substantial immediate performance value because knowledge and competencies can improve business decisions and operations without necessarily requiring innovation. At the same time, innovation increases the value extracted from those resources by translating knowledge and experience into new products, processes, and business practices. Innovation therefore complements rather than substitutes intellectual capital.

Managerial Ability demonstrates a significant direct relationship with MSME Performance ($\beta = 0.564$), supporting its role as an important performance-enhancing capability. This finding is consistent with [Hama and Cavusoglu \(2023\)](#), [Aljuboori \(2022\)](#), [Rustiarini \(2022\)](#), [Vijayakumar and Chandrasekar \(2022\)](#), and [Faturachman \(2023\)](#), which emphasize managerial capabilities in operational effectiveness and organizational goal achievement. However, the interaction between Social Capital and Managerial Ability is not significant ($\beta = -0.009$, $p = 0.216$). This result is theoretically more informative than simply concluding that H8 is rejected. It suggests that managerial ability may generate performance independently rather than determining how effectively social capital is converted into performance. This finding differs from [Sinuraya and Mayangsari \(2024\)](#), [Ratnawati et al.](#)

(2021), and Ruwanti and Harymawan (2024), whose findings provide a basis for expecting managerial ability to influence resource–performance relationships. The present evidence therefore calls for greater differentiation between managerial ability as a direct capability and managerial ability as a contingent capability.

The findings support an innovation-driven interpretation of MSME performance in which different resource categories perform different functions. Social Capital has its strongest empirical association with Innovation ($\beta = 0.708$), whereas Intellectual Capital has the strongest direct association with MSME Performance ($\beta = 0.812$). Innovation subsequently links both resource categories to performance through significant indirect effects. This pattern extends the Resource-Based Theory perspective by suggesting that resources should not be evaluated solely according to their existence or possession but also according to the mechanisms through which they are transformed into value. Social Capital primarily appears to facilitate access, exchange, and interaction, while Intellectual Capital provides knowledge and capability for utilizing resources. Innovation connects these resource processes with performance outcomes. Managerial Ability adds another dimension by contributing directly to performance without significantly altering the Social Capital–Performance relationship. The model therefore indicates differentiated rather than interchangeable resource functions.

The findings provide both theoretical and practical implications. Theoretically, the study extends the Resource-Based Theory perspective by integrating relational resources, knowledge-based resources, innovation, and managerial capability into a single model and demonstrating that their contributions to MSME performance are not uniform. In particular, the significant mediation results position Innovation as a resource-conversion mechanism, while the non-significant moderation result suggests that managerial ability should not automatically be conceptualized as a boundary condition for every resource–performance relationship. Practically, MSME development programs should therefore move beyond providing financial assistance alone and strengthen entrepreneurs' networks, knowledge, innovation capabilities, and managerial competencies simultaneously. Network-building initiatives can facilitate knowledge exchange, while training should focus on converting knowledge and relationships into market-relevant innovation. Managerial development should likewise emphasize planning, decision-making, and implementation capabilities as direct performance resources. For ultra-micro enterprises, these interventions can help transform limited tangible resources into more productive intangible capabilities.

Conclusion

This study demonstrates that MSME performance is shaped by the interaction of relational resources, knowledge-based resources, innovation, and managerial capability. Social Capital contributes to performance while also providing an important foundation for Innovation, indicating that networks, trust, cooperation, and information exchange become more valuable when they facilitate the development of new products, processes, and business practices. Intellectual Capital emerges as a particularly important resource for strengthening performance, while also supporting the capacity of MSMEs to innovate through the utilization of knowledge, skills, experience, and competencies. Innovation consequently functions as an important mechanism through which both social and intellectual resources are transformed into improved business outcomes. The findings

further show that Managerial Ability contributes directly to MSME Performance, but does not significantly alter the relationship between Social Capital and performance. Overall, the study suggests that sustainable MSME development depends not simply on possessing resources, but on the capacity to mobilize, combine, and transform intangible resources into innovation and effective managerial action.

The study has several limitations that should be considered when interpreting its findings. First, the study focused on 204 ultra-micro food and beverage entrepreneurs, limiting the extent to which the findings can be generalized to MSMEs operating in other sectors, regions, or business-size categories. Second, the cross-sectional quantitative design limits the ability to establish temporal changes in the relationships among resources, innovation, managerial ability, and performance. Third, the study relies primarily on structured questionnaire data, which may be affected by respondents' subjective assessments. Future studies could address these limitations by employing larger and more diverse samples across sectors and geographical settings, adopting longitudinal or mixed-method designs, and incorporating objective indicators of business performance. Future research could also examine additional contingencies that may explain when social capital becomes more or less valuable for MSME performance, while further investigating how managerial ability operates as a direct capability rather than as a moderator. Such extensions would help refine the innovation-driven resource-based explanation of MSME performance.

Authors' Contribution and ORCID

Ahmad Yani  <https://orcid.org/0009-0001-2617-1620>

Conceptualization, research design, interpretation of findings, and overall coordination of the research and publication process.

Aripin  <https://orcid.org/0009-0000-3758-8846>

Methodological support, data collection, data analysis, and interpretation of results.

Harry Wiyanto  -

Literature review and critical revision of the manuscript.

All authors: Reviewed and approved the final version of the manuscript and agreed to be accountable for all aspects of the work.

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AI Use Declaration

Artificial intelligence (AI) tool [ChatGPT] was used solely to assist with language enhancement, including improving grammar, clarity, readability, and academic expression. AI tools were not used to generate, analyze, or interpret the research data, determine the findings, or make substantive research decisions. The authors remain fully responsible for the content, accuracy, interpretation, and conclusions of the manuscript.

Conflict of Interest

The authors declare that they have no conflicts of interest related to the research, authorship, or publication of this paper.

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