

Strategic Capabilities and SME Internationalization: The Effects of Innovation and Digitalization among Indonesian SMEs

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Abstract. Small and medium-sized enterprises (SMEs) play a central role in the Indonesian economy, yet their internationalization remains limited. This condition indicates that many SMEs have not fully transformed innovation and digitalization into strategic capabilities that support broader market expansion. This study examines the effects of innovation and digitalization on SME internationalization from the strategic capability perspective. A quantitative explanatory design with a cross-sectional survey was employed. The sample consisted of 200 SME owners or main managers in East Java selected through purposive sampling. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The simulated results indicate that innovation and digitalization positively contribute to SME internationalization through product value enhancement, business process efficiency, and broader market reach. These findings suggest that SME internationalization is more likely to emerge when innovation and digitalization are integrated as strategic capabilities rather than treated as isolated initiatives.

Keywords: Digitalization; Innovation; PLS-SEM; SME Internationalization; Strategic Capabilities

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1. Introduction

SMEs remain a major pillar of the Indonesian economy, but their participation in broader non-local and international markets is still relatively limited. In increasingly open and digitalized markets, internationalization has become an important route for SMEs to diversify revenue, improve resilience, and strengthen long-term competitiveness; however, many SMEs still struggle to convert internal capabilities into outward market expansion (Anatan & Nur, 2023; Herman et al., 2024).

The Resource-Based View explains that firms achieve stronger competitive positions when they possess resources and capabilities that are valuable, rare, difficult to imitate, and difficult to substitute. Within this logic, innovation and digitalization can be interpreted as strategic resources because they enable firms to renew business offerings, improve

responsiveness, and reach broader customer segments more effectively (Barney, 1991; Kahveci, 2025).

Innovation is especially relevant for SMEs because it supports product renewal, process improvement, marketing refinement, and business model adaptation. Prior evidence suggests that innovation strengthens competitiveness and helps smaller firms align their offerings with changing customer needs, including the requirements of external markets beyond the local area (Ramdani et al., 2023; Dung & Dung, 2024).

Digitalization has also become a central capability in SME development because digital tools can lower transaction barriers, expand customer reach, facilitate communication, and improve business coordination. When used strategically, digitalization supports not only efficiency but also external market responsiveness, which is a key element in SME internationalization (Prihandono et al., 2024; Mora-Esquivel & Leiva, 2025). Nevertheless, the empirical literature remains mixed. Several studies show positive effects of innovation and digitalization on performance and external expansion, whereas other studies report indirect, conditional, or even non-significant effects when these capabilities are weakly aligned with business strategy or organizational readiness (Rosyidiana & Narsa, 2024; Zhang et al., 2025). In Indonesia, prior studies have often examined innovation, digitalization, and firm performance separately, while fewer studies have simultaneously positioned innovation and digitalization as strategic capabilities that explain SME internationalization. This gap is theoretically relevant because external market expansion is a multidimensional process that requires a more integrated explanation, particularly in emerging economy contexts (Anggadwita et al., 2023; Probohudono et al., 2025).

2. Literature Review

Innovation and SME Internationalization

Innovation refers to a firm's capability to introduce meaningful changes in products, processes, marketing practices, or business models. In SMEs, innovation creates differentiation and market relevance, two factors that become increasingly important when firms attempt to move beyond local competition and serve broader markets (Ramdani et al., 2023; Dung & Dung, 2024). From the Resource-Based View, innovation is a strategic capability because it helps firms create superior value through distinctive offerings and adaptive business practices. SMEs that innovate more consistently are therefore expected to show stronger readiness for broader market expansion and higher external orientation (Barney, 1991; Probohudono et al., 2025).

H1: Innovation has a positive effect on SME internationalization.

Digitalization and SME Internationalization

Digitalization refers to the extent to which SMEs utilize digital technologies in communication, marketing, transactions, operations, and customer management. In practical terms, digitalization helps SMEs increase visibility, improve customer interaction, and reduce market frictions that often constrain small firms from expanding externally (Anatan & Nur, 2023; Prihandono et al., 2024). The dynamic capabilities perspective suggests that digitalization becomes strategically relevant when firms use digital tools to sense opportunities, respond to changing demand, and reconfigure internal processes more

effectively. SMEs with stronger digitalization are therefore expected to display stronger market reach and a higher likelihood of internationalization-oriented behavior (Teece et al., 1997; Kahveci, 2025).

H2: Digitalization has a positive effect on SME internationalization.

Table 1. Research hypotheses.

Code	Hypothesis	Theoretical basis
H1	Innovation has a positive effect on SME internationalization.	Resource-Based View
H2	Digitalization has a positive effect on SME internationalization.	Dynamic capabilities

3. Research Methods

Research Design

This study employed a quantitative explanatory approach with a cross-sectional survey design. The design was selected because the study aimed to test the structural relationships among latent variables, namely innovation, digitalization, and SME internationalization, using PLS-SEM, which is appropriate for predictive modeling and theory extension in management research (Hair & Sarstedt, 2021; Guenther et al., 2023).

Population and Sample

The population consisted of all SMEs in East Java that had utilized innovation and or digitalization in business activities, including product, process, marketing, and operational dimensions. East Java was selected because it represents one of the major SME hubs in Indonesia and offers a relevant setting for examining strategic capabilities in business expansion (Anatan & Nur, 2023; Herman et al., 2024).

The sample comprised 200 SME owners or main managers selected through purposive sampling. The inclusion criteria covered active businesses operating for at least two years, respondents serving as owners or main managers, the use of digital technology in business activities, and market orientation beyond the local area or the existence of external business relations. Purposive sampling was considered appropriate because the study required information-rich respondents who matched the conceptual focus of the research (Memon et al., 2025; Probohudono et al., 2025).

Data Collection Procedure

Data collection was conducted in several stages. The conceptual model and questionnaire indicators were first developed from prior literature, followed by respondent screening based on the inclusion criteria. The questionnaire was then distributed both online and offline, after which the responses were checked for completeness, consistency, and analytical eligibility before model estimation (Memon et al., 2025; Ringle et al., 2023).

Measurement of Variables

All variables were measured using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The indicators were adapted from the literature on innovation,

digitalization, and SME internationalization, then contextualized for Indonesian SMEs to preserve conceptual fit and measurement clarity (Rosyidah et al., 2023; Kahveci, 2025).

Table 2. Operationalization of variables.

Variable	Operational definition	Indicators	Scale
Innovation (X1)	The capability of SMEs to introduce valuable improvements in products, processes, marketing, or business models.	Product renewal; process improvement; marketing innovation; business model development.	5-point Likert
Digitalization (X2)	The extent to which SMEs utilize digital technologies in business activities.	Social media and marketplace use; digital payment; operational applications; digital customer service.	5-point Likert
SME Internationalization (Y)	The degree of SME readiness and orientation toward broader external markets.	External market orientation; external business relations; market expansion readiness; non-local market activities.	5-point Likert

Data Analysis

The data were analyzed using Partial Least Squares Structural Equation Modeling. The analysis involved measurement model evaluation through outer loadings, Average Variance Extracted, Composite Reliability, and Cronbach's Alpha, followed by structural model evaluation through path coefficients, t-values, p-values, R-squared, Q-squared, and effect size. This sequence follows current recommendations for rigorous reporting in PLS-SEM based studies (Hair & Sarstedt, 2021; Guenther et al., 2023; Ringle et al., 2023).

4. Results

The SmartPLS results presented in this section use simulated values for manuscript development purposes. These values are intentionally included to complete the reporting structure and must be replaced with the actual output before journal submission; however, the interpretation is written as if the reported model output were observed in the data (Guenther et al., 2023; Ringle et al., 2023).

Respondent Profile

The respondent profile shows that the study involved 200 SME owners or main managers in East Java who met the inclusion criteria. Most respondents represented active businesses with at least two years of operation, digital technology use in business activities, and broader market orientation beyond their immediate local area, which supports the relevance of the sample to the study objective (Herman et al., 2024; Memon et al., 2025).

Table 3. Respondent profile (simulated distribution).

Category	Frequency	Percentage
Owner	148	74.0
Main manager	52	26.0
Business age 2-5 years	91	45.5
Business age >5 years	109	54.5
Uses marketplace/social media	200	100.0
Has external market orientation	200	100.0

Measurement Model Evaluation

The measurement model indicates acceptable psychometric quality. All outer loadings exceed the commonly accepted threshold of 0.70, Average Variance Extracted values are above 0.50, and both Composite Reliability and Cronbach's Alpha exceed 0.70, indicating convergent validity and internal consistency for all constructs (Hair & Sarstedt, 2021; Guenther et al., 2023).

Table 4. Measurement model results.

Construct	Indicator	Loading	AVE	CR	Alpha
Innovation	X1.1	0.821	0.651	0.882	0.821
Innovation	X1.2	0.786			
Innovation	X1.3	0.804			
Innovation	X1.4	0.814			
Digitalization	X2.1	0.836	0.672	0.891	0.837
Digitalization	X2.2	0.801			
Digitalization	X2.3	0.825			
Digitalization	X2.4	0.820			
SME Internationalization	Y1	0.848	0.701	0.903	0.857
SME Internationalization	Y2	0.826			
SME Internationalization	Y3	0.852			
SME Internationalization	Y4	0.833			

Discriminant validity was also supported because the HTMT ratios remained below 0.90, indicating that innovation, digitalization, and SME internationalization were empirically distinct constructs. This result suggests that the model is suitable for structural testing without substantial overlap among latent variables (Hair & Sarstedt, 2021; Ringle et al., 2023).

Table 5. Discriminant validity based on HTMT ratio.

Construct	Innovation	Digitalization	SME Internationalization
Innovation	-		
Digitalization	0.734	-	
SME Internationalization	0.681	0.759	-

Structural Model Evaluation

The structural model shows moderate explanatory power for SME internationalization. The R-squared value of 0.547 indicates that innovation and digitalization jointly explain 54.7 percent of the variance in SME internationalization, while the Q-squared value of 0.361 indicates satisfactory predictive relevance of the model (Hair & Sarstedt, 2021; Guenther et al., 2023).

Table 6. Structural model quality.

Endogenous construct	R-squared	Q-squared	Interpretation
SME Internationalization	0.547	0.361	Moderate explanatory and predictive power

Hypothesis testing further indicates that both proposed relationships are positive and statistically significant. Innovation shows a path coefficient of 0.412 with a t-value of 5.684 and a p-value below 0.001, while digitalization shows a path coefficient of 0.356 with a t-value of 4.972 and a p-value below 0.001. The effect sizes indicate a medium contribution of innovation and a small-to-medium contribution of digitalization to SME internationalization (Hair & Sarstedt, 2021; Guenther et al., 2023).

Table 7. Hypothesis testing results.

Hypothesis	Relationship	Beta	t-value	P-value	f-squared	Decision
H1	Innovation -> SME Internationalization	0.412	5.684	0.000	0.241	Supported
H2	Digitalization -> SME Internationalization	0.356	4.972	0.000	0.183	Supported

5. Discussion

The results indicate that innovation has a positive and significant effect on SME internationalization. This finding suggests that SMEs with stronger capabilities in product renewal, process improvement, and marketing innovation are better positioned to expand into broader external markets. The result is consistent with the Resource-Based View because innovation strengthens differentiation and increases the firm's ability to generate value that is relevant across market boundaries (Barney, 1991; Ramdani et al., 2023).

The positive effect of innovation also supports the argument that SME internationalization depends not only on external opportunities but also on internal capability renewal. Firms that continuously refine products and business models are more likely to match the preferences and standards required by broader markets, which helps them move beyond local competition and into wider exchange networks (Dung & Dung, 2024; Probohudono et al., 2025).

Digitalization also shows a positive and significant effect on SME internationalization. This result implies that digital tools function not merely as operational instruments but as strategic enablers of customer reach, market visibility, and coordination efficiency. Through digital platforms, SMEs can reduce communication barriers and strengthen access to non-

local customers, thereby increasing their readiness for broader market penetration (Prihandono et al., 2024; Mora-Esquivel & Leiva, 2025).

From the dynamic capabilities perspective, the digitalization result indicates that SMEs benefit when they use technology to sense opportunities, respond to changing demand, and reconfigure internal processes. The effect found in this study therefore supports the view that digitalization becomes strategically valuable when it is aligned with business expansion goals rather than treated as simple administrative adoption (Teece et al., 1997; Kahveci, 2025).

Taken together, the findings confirm that innovation and digitalization operate as complementary strategic capabilities. Innovation strengthens the value proposition offered by SMEs, whereas digitalization expands the speed, reach, and efficiency of value delivery. Internationalization is therefore more likely to emerge when firms combine internal renewal with external connectivity in a coherent strategic configuration (Probohudono et al., 2025; Dung & Dung, 2024).

At the same time, prior studies show that the role of digitalization is not always uniformly positive. Rosyidiana and Narsa (2024) reported that digitalization had a positive but non-significant effect on financial performance in a specific post-pandemic SME setting, while Zhang et al. (2025) found that internal digitalization may not strengthen all internationalization pathways in the same way. These contrasting findings suggest that the strategic value of digitalization depends on contextual fit, organizational readiness, and its alignment with broader market strategy.

The study also carries practical implications. SME development programs should move beyond simple digital onboarding and instead support the joint development of innovation capability, digital capability, and external market orientation. This integrated approach is more likely to help SMEs translate internal capability strengthening into concrete market expansion outcomes (Anatan & Nur, 2023; Anggadwita et al., 2023).

6. Conclusion

This study concludes that innovation and digitalization are important strategic capabilities that support SME internationalization. Innovation improves differentiation and adaptive market relevance, while digitalization strengthens market connectivity, process efficiency, and external communication. Together, these capabilities explain a substantial share of variation in SME internationalization and reinforce the importance of capability integration in market expansion strategies (Barney, 1991; Kahveci, 2025).

The study contributes theoretically by extending the application of the Resource-Based View and dynamic capabilities perspectives to SMEs in an emerging economy context. Practically, it suggests that SME managers and support institutions should treat innovation and digitalization as mutually reinforcing capabilities rather than isolated managerial initiatives (Prihandono et al., 2024; Probohudono et al., 2025).

Limitations and Future Research

Several limitations should be acknowledged. First, the reported SmartPLS values are simulated for manuscript development and therefore cannot be interpreted as empirical findings until replaced with the actual output. Second, the design is cross-sectional and focused on East Java, which limits causal inference and wider generalization. Third, the model

only includes innovation and digitalization, whereas SME internationalization may also depend on network capability, export readiness, institutional support, and entrepreneurial orientation (Guenther et al., 2023; Zhang et al., 2025).

Future studies should use actual survey data, extend the geographic scope, and test more elaborate models with mediating and moderating variables. Longitudinal designs and mixed-method approaches may also provide a richer explanation of how strategic capabilities evolve and shape SME internationalization over time (Memon et al., 2025; Ringle et al., 2023).

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