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The Influence of Dynamic Capabilities on Business Performance through Business Model Innovation among MSMEs in Surabaya

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Abstract

This study aims to analyze how dynamic capabilities (sensing, seizing, and transforming) influence the performance of MSMEs in Surabaya, with business model innovation (BMI) as a mediating variable. This quantitative study method used a causal design using PLS-SEM to survey data from 120 MSME decision-makers across diverse sectors in Surabaya. The results show that dynamic capabilities positively and significantly affect MSME performance, both directly and indirectly through BMI as a partial mediator. The capability set of sensing, seizing, and transforming fosters adaptive business model innovations that respond to market demands. BMI contributes to efficiency, competitiveness, and sales growth, strengthening sustainable performance. These findings underscore the need for targeted training, mentoring, and access to technology and resources to enhance MSME innovation and adaptability amid ongoing market challenges.

Keywords: business model innovation, decent work, dynamic capabilities, economic growth, industry, innovation, infrastructure, MSME performance

INTRODUCTION

Dynamic capabilities and business model innovation have become central themes in strategic management literature, especially in response to increasing complexity and the accelerating pace of change in the business environment. This condition, which is further intensified by the pressures of globalization, requires organizations, including Micro, Small, and Medium Enterprises (MSMEs), to develop adaptive capabilities to respond to market dynamics (Liu, Chung, Chiu, & Chen, 2024). Dynamic capabilities refer to an organization's capacity to continuously adapt, integrate, and reconfigure both internal and external resources to address emerging opportunities and challenges (Teece, Pisano, & Shuen, 1998; Wang & Photchanachan, 2021). In the context of MSMEs, these capabilities serve as a critical foundation for facing uncertainty and disruptions arising from technological advancement, global crises, and shifting consumer preferences (Kronblad & Pregmark, 2024; Saura, Palacios Marqués, & Soriano, 2023).

Dynamic capabilities have been proven to be central to improving business performance. Sensing, seizing, and transforming enable organizations to build sustainable competitive advantages (Huang & Ichikohji, 2024; Pascucci et al. (2024). However, these capabilities do not linearly influence performance but operate

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through a key mediator: business model innovation. Business model innovation (BMI) is redesigning or creating new business models that can more effectively create, deliver, and capture market value (Jingwen, Rahman, & Tong, 2022). BMI helps MSMEs adapt to the digital marketplace landscape through more flexible, efficient, and customer-oriented strategies (Mancuso, Petruzzelli, & Panniello, 2023; Jangjarat & Jewjinda, 2023).

In Indonesia, MSMEs play a highly vital role in the national economy. According to Komite Standar Akuntansi Pemerintahan (2025), the MSME sector contributed approximately 61% to the Gross Domestic Product (GDP), equivalent to IDR 9,580 trillion in 2023. In addition, MSMEs employ around 117 million people or 97% of the national workforce (Ahdiat, 2024). The number of MSMEs has continued to grow, from 59.26 million units in 2015 to about 66 million units in 2023 (Goodstats, 2025), making up 99.99% of total business actors (GETI Media, 2025). Furthermore, MSMEs contribute up to 60% to national investment and 15.6% to non-oil and gas exports. However, Indonesia's entrepreneurship ratio remains relatively low at 3.47%, indicating substantial room for developing an innovative and competitive MSME ecosystem (Kementerian Koordinator Bidang Perekonomian, 2022).

Beyond the national picture, Surabaya presents a distinct urban context with service- and trade-intensive dynamics. Surabaya functions as East Java's economic hub and logistics gateway, with its gross regional product concentrated in market-driven activities such as wholesale and retail trade and accommodation and food services (Ahdiat, 2024; GETI Media, 2025; GoodStats, 2025). Recent official tables show that these industries account for large shares of the city's output, underscoring a fast-moving competitive environment where firms must rapidly refresh value propositions and channels to keep pace with urban demand (Alzoubi et al., 2024; Nugroho & Fontana, 2023). In 2024, Surabaya's current-price GRDP reached about IDR 772.49 trillion, reflecting a dynamic metropolitan market that provides a relevant testbed for business model adaptation among MSMEs (Ahdiat, 2024; GoodStats, 2025).

Despite their significant contribution, MSMEs face several fundamental challenges. Data shows that 68% of MSMEs have an annual turnover of less than IDR 50 million, and 31% of micro businesses earn a net profit of less than IDR 1 million per month (GETI Media, 2025; Komite Standar Akuntansi Pemerintahan, 2025). Around 60% of MSMEs operate in rural areas, which, while reflecting economic inclusivity, also face obstacles such as limited infrastructure, restricted access to capital, and low levels of technology adoption (Putri, 2024). This situation is exacerbated by low digital literacy, with only 33.6% of MSMEs being digitized, despite digital transformation having been proven to increase turnover by up to 50% (INDEF, 2024).

The inability of MSMEs to adapt quickly has led to a high rate of business failure. Mariska (2024) reports that 65% of MSMEs cease operations within 10 years. One of the main factors is the limited implementation of dynamic capabilities and the low level of business model innovation. Recent data shows that only 24% of MSMEs have leveraged digitalization to innovate their business models, such as adopting e-commerce or online delivery services. Even though 50% of MSMEs use online platforms, only 17.32% utilize digital food delivery services as a diversification strategy (GETI Media, 2025). Other significant barriers include bureaucratic regulations, a tax system that is not

friendly to MSMEs (Mariska, 2024), and a low MSME credit ratio that accounts for only 20% of total national bank credit. This figure is far behind Thailand at 50% and Malaysia at 40% (INDEF, 2024).

Within Surabaya's urban market, these constraints intersect with expanding digital payment and e-commerce usage, implying pressure and opportunity for MSMEs that can reconfigure their models (Qohar & Darmawan, 2024; INDEF, 2024). The city government's MSME records indicate rising numbers of registered MSMEs in recent years, pointing to a broadened base of small firms that compete for urban consumers (Ahdiat, 2024; Putri, 2024). At the same time, digital payment usage has expanded in East Java. For example, the value of electronic money transactions rose 17.67 percent year-on-year in October 2023, and QRIS transactions also surged through late 2023 (INDEF, 2024; Komite Standar Akuntansi Pemerintahan, 2025). These patterns imply growing opportunities to reconfigure customer journeys, revenue logic, and partnering for MSMEs that can sense demand, seize digital channels, and transform internal activities (Alzoubi et al., 2024; Nugroho & Fontana, 2023).

MSME performance is not only measured in financial terms such as revenue and profitability but also includes business growth, customer satisfaction, and the ability to innovate and adapt to change (Sulasih, Novandari, & Suroso, 2023; Al-Omoush & Al-Qirem, 2023). In this context, the interrelationship between dynamic capabilities, business model innovation, and MSME performance becomes increasingly relevant for empirical study. Several prior studies have stated that adaptive capabilities supported by business model innovation can enhance operational efficiency, expand market reach, and create sustainable competitive advantages (Dejardin et al., 2023; Jingwen, Rahman, & Tong, 2022).

Previous research has shown that dynamic capabilities (DCs) significantly improve MSME competitiveness and performance. Liu et.al. (2024); Phong & Tam (2024) affirm the direct and indirect effects of DCs on competitive advantage and performance, including through the mediation of entrepreneurial orientation and innovation. Pascucci et al. (2024) highlight the role of DCs in managing tensions between innovation and sustainability. In times of crisis, Huang & Ichikohji (2024); Dejardin et al. (2023) report the contribution of DCs to MSME resilience and innovation during the pandemic . In Southeast Asia, Irfan et al. (2023); Liu et al. (2023) demonstrate the importance of business model innovation in strengthening the relationship between DCs and business performance. Additionally, Jingwen, Rahman, & Tong (2022) and Sudarnice, Wasik, & Lina (2024) emphasize BMI and digitalization as enhancers of dynamic capabilities in competitive and digitized business contexts.

However, several research gaps remain underexplored. Most studies focus on Global North contexts or major economies like China and Europe (Deyassa, 2023), overlooking the complexity of MSMEs in the Global South, such as Indonesia. The link between dynamic capabilities (DCs), business model innovation (BMI), and MSME performance is also understudied, especially in urban areas like Surabaya, which are marked by business diversity and digitalization (Huang & Ichikohji, 2024; Nugroho & Fontana, 2023). Moreover, the dominance of sectoral approaches and the limited use of quantitative methods like PLS-SEM highlight the need for this study (Ghozali, 2014; Cahyaningati et al., 2023). This research addresses these gaps by empirically examining the

relationship between DCs, BMI, and MSME performance amid market pressures and rapid digital transformation (Martins, 2023; Li et al., 2023).

The Resource-Based View (RBV) theory serves as the fundamental framework for understanding how organizations gain sustainable competitive advantage by utilizing internal resources characterized as valuable, rare, inimitable, and non-substitutable (Barney, 1991). Wernerfelt (1984) emphasized that firms need to possess strategic resources and actively manage them to create new value. In this context, dynamic capabilities (DCs) emerge as an extension of RBV that is more relevant to the rapidly changing business environment. Teece, Pisano, & Shuen (1998) define DCs as an organization's ability to continually sense, seize, and transform opportunities by integrating and reconfiguring resources. These three dimensions enable firms to become more adaptive, responsive, and innovative in facing market uncertainties (Kump et al., 2019; Martins, 2023).

Within the resource-based view, dynamic capabilities operate as higher-order managerial processes that reconfigure valuable, rare, inimitable, and non-substitutable resources so that these resources remain value-creating under environmental change. Through sensing, firms identify shifts in technologies, customers, and competitors. Through seizing, firms mobilize and allocate their resource base to pursue the identified opportunities. Through transforming, firms recombine and renew assets and routines to preserve the value and rarity of their resource portfolio. This RBV logic positions dynamic capabilities as the mechanism that translates resource endowments into adaptive advantage and performance outcomes (Barney, 1991; Teece, Pisano, & Shuen, 1998; Kump et al., 2019).

Numerous empirical studies highlight the significant impact of DCs on MSME performance and competitiveness. Bokhari et al. (2024) found that DCs strengthen SMEs' competitive advantage in developing countries via strategic resource management under the RBV framework. In Vietnam, Phong & Tam (2024) showed DCs affect SME performance both directly and through entrepreneurial orientation and innovation. Pascucci et al. (2024) emphasized DCs' role in managing paradoxical tensions during circular business model innovation. In crisis contexts, DCs help sustain performance: Huang & Ichikohji (2024) observed that Chinese MSMEs survived Covid-19 through business model innovation, while Dejardin et al. (2023) noted European SMEs pivoted from market exploration to product adaptation. In Southeast Asia, Sari, Susilowati, & Moko (2024); Mongkol (2022) confirmed DCs' positive influence on innovation and performance, especially in creative and manufacturing sectors.

DCs often contribute to performance through business model innovation (BMI), a systematic process of creating, delivering, and capturing new value by altering business model components (Clauss, 2016), including value creation, proposition, and capture. Jingwen, Rahman, & Tong (2022), in a study of 330 Chinese SMEs, found that enterprise risk management, agility, and entrepreneurial orientation drive effective BMI and enhance performance. In Indonesia, Sudarnice, Wasik, & Lina (2024) showed that IT-enabled DCs support agility and adaptive BMI in volatile environments. Similarly, Sari, Susilowati, & Moko (2024) found that BMI is a strategic link between DCs and performance in Malang's café industry.

From an RBV perspective, business model innovation is the structural manifestation of how firms configure and recombine their re-

source base to create, deliver, and capture value more effectively. By redesigning the value proposition, key activities, partnerships, and revenue logic, firms convert VRIN resources and complementary assets into superior value capture. Dynamic capabilities trigger and guide these reconfiguration moves, which makes BMI a proximal conduit through which resource-based advantages are realized in the market (Wernerfelt, 1984; Clauss, 2016; Martins, 2023).

MSME performance is commonly measured through financial indicators like profitability and revenue, growth, innovation, and customer satisfaction (Huang & Ichikohji, 2024). Jingwen, Rahman, & Tong (2022) identified BMI as a key mediator between DCs and business performance, while Huang & Ichikohji (2024) noted that DCs contribute more effectively when supported by relevant BMI. Thus, examining the interrelation among DCs, BMI, and MSME performance in an integrated and empirical way is essential, particularly for Indonesian MSMEs. Based on this review, a conceptual framework is proposed to explain their relationship in enhancing business competitiveness.

Integrating these arguments, RBV explains why resource endowments matter, dynamic capabilities explain how firms reconfigure those resources, and business model innovation explains what organizational form value creation and capture occur. Dynamic capabilities should improve performance directly by keeping the resource base valuable. They should also improve performance indirectly by enabling business model renewal that aligns offerings, revenue architecture, and cost structure with market conditions. This yields the expected paths DC → Performance, DC → BMI, BMI → Performance, and the mediating role of BMI in the DC → Performance link (Barney, 1991; Teece, Pisano, & Shuen, 1998; Clauss, 2016).

DCs enhance MSME performance by promoting strategic flexibility and effective resource use, strengthening market orientation, and boosting responsiveness to customer needs (Cahyaningati, Handayanto, & Sa'diyah, 2023). Even with capital constraints, DC investments positively impact financial outcomes (Difoasiha & Sihombing, 2023). In crisis contexts, such as the pandemic, DCs help sustain performance through adaptation and service reinforcement (Dejardin et al., 2023). Based on this, the following hypothesis is proposed:

H1: *Dynamic capabilities positively affect MSME performance in Surabaya, as DCs, under RBV logic, help preserve the value and rarity of resource bases during change, thereby improving performance.*

Dynamic capabilities (DCs) allow MSMEs to reconfigure processes and resources in response to environmental shifts (Wang & Photchanachan, 2021). A higher level of DCs enhances the ability to develop practical business model innovation (BMI). DC-driven innovation is recognized as a key driver of BMI. While digital technology supports DCs, its impact on BMI is often indirect (Qohar & Darmawan, 2024; Nugroho & Fontana, 2023). Despite their importance, measuring DCs empirically remains challenging (Pitelis, 2022). Based on this, the following hypothesis is proposed:

H2: *Dynamic capabilities positively affect business model innovation in MSMEs in Surabaya, as DCs orchestrate and recombine resources; under RBV, this reconfiguration drives change at the business model level.*

Furthermore, BMI may contribute to increased efficiency, the creation of new value, and improved adaptability of MSMEs in navigating market dynamics (Jingwen, Rahman, &

Tong, 2022). Although growth strategies and organizational capabilities often influence the direct impact of BMI on performance, the roles of business agility and digital capability can enhance the effect of BMI on business performance (Zulkifli et al., 2024). Based on this, the following hypothesis is proposed:

H3: *Business model innovation positively affects MSME performance in Surabaya, because BMI embodies resource recombination for superior value capture; hence, BMI should raise performance.*

BMI is a key mediator linking dynamic capabilities to MSME performance (Han, Zhou, & Lu, 2022; Ibarra et al., 2020). Han, Zhou, & Lu (2022) showed that BMI fully mediates the relationship between entrepreneurial orientation and performance. BMI strengthens the impact of DCs by aligning business models with external changes (Hartono & Ardini, 2022). Research across sectors—construction, manufacturing, and creative industries—confirms that BMI is a strategic channel through which DCs translate into sustainable competitive advantage (Song et al., 2022; Sari, Susilowati, & Moko, 2024). Since DCs operate via resource reconfiguration, their effect on performance is likely transmitted through BMI as the immediate mechanism of value creation and capture.

H4: *Business model innovation mediates the relationship between dynamic capabilities and MSME performance among MSMEs in Surabaya.*

METHOD

This study uses a quantitative approach with a causal design to examine the effect of dynamic capabilities on MSME performance, with business model innovation as a mediating variable. The design allows testing of cause-and-effect relationships derived from theory and evaluated using numerical data. Data were analyzed with Partial Least Squares Structural Equation Modeling, suitable for models that include multiple latent constructs and mediation and can be applied in exploratory and explanatory settings (Memon et al., 2020). The research population consists of MSMEs in Surabaya that have been in operation for at least three years and meet the business classification criteria in Law No. 20 of 2008. Sampling used a purposive technique with respondent criteria including owners, executives, or middle to senior managers directly involved in strategic decision making. 120 MSME decision makers from food and beverage, handicrafts, manufacturing, and services participated, representing the structural diversity of MSMEs in Surabaya. The sample size was determined using GPower to ensure adequate statistical power for model testing (Memon et al., 2020).

All constructs were measured with a five-point Likert scale. Dynamic capabilities were measured through sensing, seizing, and transforming, with items adapted from prior studies that operationalize these capability domains in small firm contexts (Kump et al., 2019; Martins, 2023). Business model innovation was measured through value creation, value proposition, and value capture, which capture changes to how firms design, deliver, and appropriate value (Clauss, 2016; Huang & Ichikohji, 2024). MSME performance was assessed using indicators that reflect profitability, sales growth, and new product innovation, which are commonly used in research on small firm outcomes (Huang & Ichikohji, 2024). Respondents were screened for eligibility based on role and tenure. Participation was voluntary, and each respondent provided informed consent before completing the questionnaire.

All constructs were measured on five-point Likert scales from 1 strongly disagree to 5 strongly agree. Items were adapted from validated sources and translated and back-translated for semantic equivalence in the Surabaya MSME context (Clauss, 2016; Huang & Ichikohji, 2024; Kump et al., 2019; Martins, 2023; Teece, Pisano, & Shuen, 1998). Within the PLS SEM workflow, we evaluated the reflective measurement model in the outer model and then estimated the inner model. To reduce common method bias, we used respondent anonymity and neutral wording.

Dynamic Capabilities were modeled with three dimensions adapted primarily from Kump et al. (2019), grounded in Teece, Pisano, & Shuen (1998), and applied in SME settings by Martins (2023). Sensing covers tracking best practices and trends, gathering market data, acquiring new information, monitoring competitors, and identifying market shifts. Seizing covers absorbing external knowledge, recognizing useful information, translating technological insights into innovation, and using current data to drive offerings. Transforming covers clarifying roles, persisting with change initiatives, consistent implementation, demonstrated change management capability, handling operations alongside change projects, and adjusting plans to current needs (Kump et al., 2019; Martins, 2023; Teece, Pisano, & Shuen, 1998).

Business Model Innovation is followed by three dimensions and recent SME applications in crisis contexts. Value proposition captures shifts in target markets, updated offerings, and altered positioning. Value creation captures changes to core competencies, key resources and processes, resource allocation, partner roles, and distribution. Value capture captures revisions to revenue strategy, cost calculation, and fixed and variable expenditures. MSME Performance was measured over the past three years with items on return on assets, profit level, sales growth, and the rate of new product or service launches relative to industry benchmarks (Clauss, 2016; Huang & Ichikohji, 2024).

The analysis proceeded in two stages. First, the measurement model was evaluated for convergent validity, discriminant validity, and reliability. Convergent validity was assessed using outer loadings and average variance extracted (AVE), reliability through composite reliability and Cronbach's alpha, and discriminant validity via the heterotrait-monotrait ratio (HTMT). Collinearity was checked using the variance inflation factor (VIF). Second, the structural model was estimated to test direct and indirect paths between dynamic capabilities, business model innovation, and MSME performance. Hypothesis testing employed bootstrapping to generate t- and p-values for path coefficients. The mediating role of BMI was assessed by comparing direct and indirect effects, following recommended mediation procedures in PLS-SEM (Ghozali, 2014). Where applicable, model assessment included the coefficient of determination (R^2) and predictive relevance (Q^2) to evaluate explanatory and predictive power. PLS-SEM was appropriate for this study due to its compatibility with the research objective, model complexity, and use of multiple latent constructs and mediation. It aligns with best practices for prediction-oriented, theory-driven analysis in small firm samples (Memon et al., 2020).

RESULT

Based on Table 1, all indicators of dynamic capability among MSMEs in Surabaya show mean values above 4.0, reflecting a generally positive perception. The highest-scoring indica-

Table 1 Descriptive Analysis of Dynamic Capability

Name	Mean	Min	Max	Standard Deviation	Excess Kurtosis
X1.1	4.075	2.000	5.000	0.635	0.971
X1.2	4.058	2.000	5.000	0.662	0.509
X1.3	4.075	2.000	5.000	0.635	0.971
X1.4	4.075	2.000	5.000	0.648	0.758
X1.5	4.058	2.000	5.000	0.662	0.509
X1.6	4.075	2.000	5.000	0.648	0.758
X1.7	4.083	2.000	5.000	0.640	0.896
X1.8	4.092	2.000	5.000	0.645	0.825
X1.9	4.075	2.000	5.000	0.648	0.758
X1.10	4.083	2.000	5.000	0.653	0.691
X1.11	4.067	2.000	5.000	0.667	0.447
X1.12	4.075	2.000	5.000	0.660	0.565
X1.13	4.075	2.000	5.000	0.660	0.565
X1.14	4.067	2.000	5.000	0.655	0.629
X1.15	4.058	2.000	5.000	0.662	0.509
X1.16	4.058	2.000	5.000	0.649	0.698

tor is X1.8 (“ability to recognize new and useful information”), with a mean of 4.092, indicating strength in absorptive capacity. Meanwhile, the lowest-scoring indicator is X1.2 (“constantly following the latest market trends”) with a mean of 4.058, suggesting a need to enhance market trend monitoring. These findings imply that although internal capabilities are relatively strong, strengthening external orientation remains essential to improving the sustainable competitiveness of MSMEs.

Based on Table 2, the Business Model Innovation (BMI) indicators among MSMEs in Surabaya indicate a moderate level of transformation, with average values above 3.5. The highest indicator is Z1.12 (“our fixed costs

Table 2 Descriptive Analysis of Business Model Innovation

Name	Mean	Min	Max	Standard Deviation	Excess Kurtosis
Z1.1	3.625	1.000	5.000	1.191	-0.754
Z1.2	3.833	1.000	5.000	1.083	0.531
Z1.3	3.650	1.000	5.000	1.093	-0.342
Z1.4	4.108	1.000	5.000	0.845	0.323
Z1.5	3.617	1.000	5.000	1.198	-0.199
Z1.6	3.817	1.000	5.000	1.072	-0.084
Z1.7	3.833	1.000	5.000	1.090	-0.047
Z1.8	3.933	1.000	5.000	0.883	-0.040
Z1.9	4.008	1.000	5.000	0.970	0.056
Z1.10	3.883	1.000	5.000	1.002	0.425
Z1.11	3.958	2.000	5.000	0.723	-0.385
Z1.12	4.017	2.000	5.000	0.741	-0.110
Z1.13	3.883	2.000	5.000	0.915	-0.760

Table 3 Fornell-Larcker Criterion

Name	Mean	Min	Max	Standard Deviation	Excess Kurtosis
Y1.1	3.900	2.000	5.000	0.926	-0.578
Y1.2	3.808	2.000	5.000	0.934	-0.662
Y1.3	3.917	1.000	5.000	0.962	-0.269
Y1.4	3.775	1.000	5.000	1.045	0.268

have changed"), with a mean score of 4.017, reflecting cost efficiency adaptations in response to market dynamics. On the other hand, the lowest indicator is Z1.5 ("our key resources have changed"), with a mean of 3.617, suggesting that internal resource shifts remain limited. These findings highlight the need for more substantial internal transformation efforts to support sustainable business model innovation.

Based on Table 3, the MSME performance indicator with the highest mean value is Y1.3 ("sales growth exceeds industry standards") at 3.917 with a standard deviation of 0.962, indicating a positive perception of sales performance improvement. Meanwhile, the lowest mean value is found in Y1.4 ("launch of new products/services exceeds industry average") at 3.775 with a standard deviation of 1.045, suggesting that product innovation is not yet a core strength. The relatively high average scores reflect good MSME performance, although innovation still needs to be strengthened.

Figure 2 presents the outer model used to evaluate indicator validity and reliability for latent constructs using PLS-SEM. All indicators showed outer loadings above 0.70, confirming

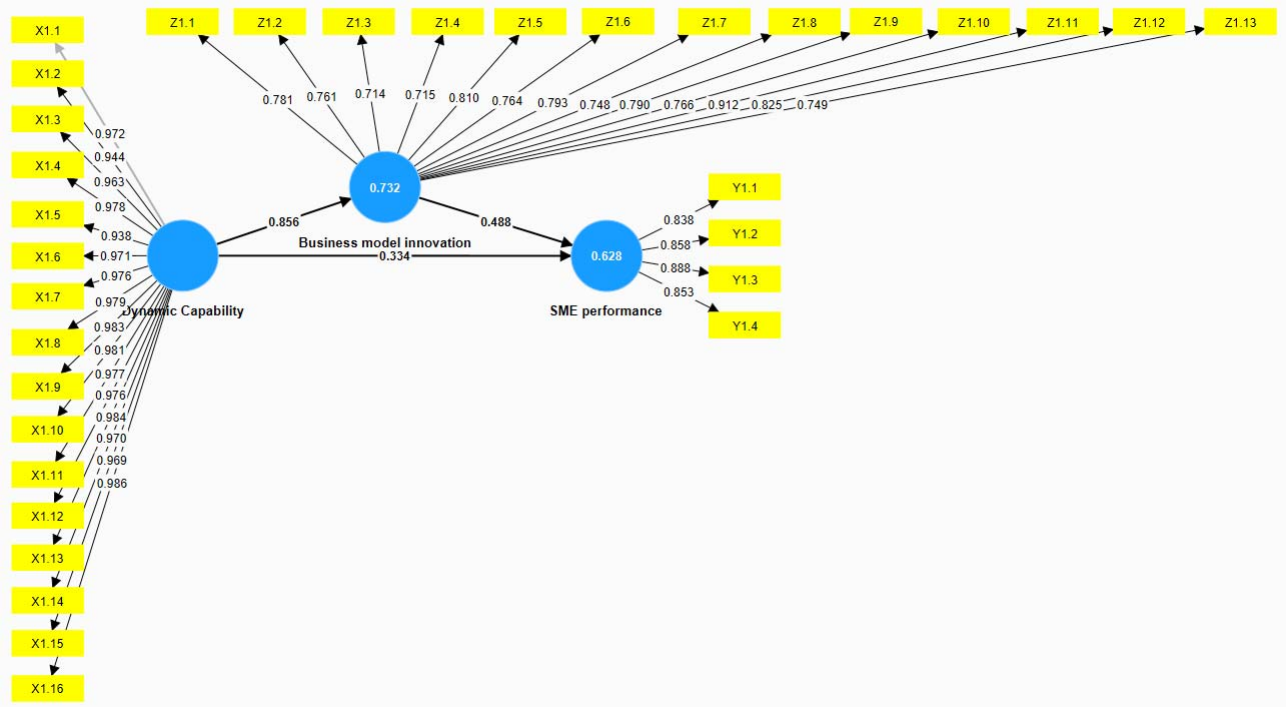

Figure 2 Outer Model

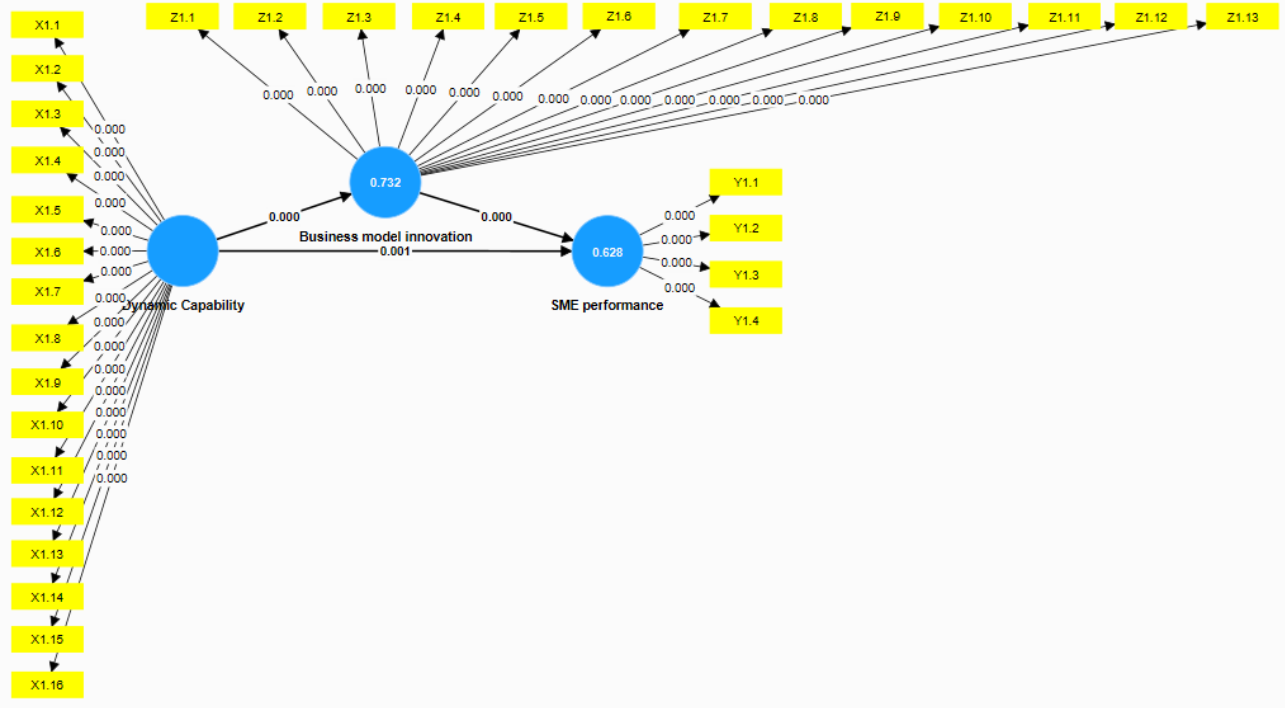

Figure 3 Inner Model Diagram

convergent validity. Second, discriminant validity was established, as each indicator correlated more strongly with its own construct than with others, and all HTMT values were below 0.90, indicating no multicollinearity and clear construct distinction. Third, reliability criteria were met, with Cronbach's Alpha and Composite Reliability values exceeding 0.70. Dynamic Capabilities showed the highest reliability (0.996), followed by Business Model Innovation (0.953) and MSME Performance (0.919), reflecting strong internal consistency. Overall, all indicators are valid and reliable, making them appropriate for structural model analysis.

Figure 3 presents the inner model, which depicts the structural relationships between the three primary constructs: Dynamic Capability, Business Model Innovation, and SME Performance. This model shows the direction and strength of the relationships among variables through path coefficients and is supported by R-square, Q-square, and effect size (f^2) analysis. Based on the R-square analysis, Business Model Innovation has a value of 0.732, and SME Performance has 0.628. This indicates that Dynamic Capability explains 73.2% of the variance in business model innovation, while Business Model Innovation and Dynamic Capability together explain 62.8% of the variance in MSME performance. These values fall within the moderate to strong category, suggesting that the model has sufficient explanatory power.

Predictive analysis using Q^2 indicates strong model predictability, with values of 0.430 for Business Model Innovation and 0.456 for MSME Performance—above the 0.35 threshold, confirming good predictive relevance. The Q^2 value for Dynamic Capability is 0.000, as it is an exogenous variable. For effect size (f^2), Dynamic Capability has a significant effect on Business Model Innovation (f^2 = 2.736), but only a small direct effect on MSME Perfor-

Table 4 Hypothesis Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values
Business model innovation -> MSME performance	0.488	0.495	0.101	4.837	0.000
Dynamic capability -> Business model innovation	0.856	0.856	0.023	37.154	0.000
Dynamic capability -> MSME performance	0.334	0.327	0.103	3.240	0.001

mance ($f^2 = 0.080$). In contrast, Business Model Innovation moderately affects MSME Performance ($f^2 = 0.171$). These results suggest that Dynamic Capability influences MSME performance primarily through Business Model Innovation. In conclusion, the structural model underscores innovation as the key mechanism linking dynamic capabilities to improved MSME performance.

Hypothesis testing in Table 4 used the bootstrapping technique and employed the t-statistic value as the basis for decision-making. The test results indicate that all path relationships among variables in the model are significant. Dynamic Capability significantly affects Business Model Innovation, with a t-statistic of 37.154 and a p-value of 0.000. Business Model Innovation also significantly influences SME Performance, with a t-statistic of 4.837 and a p-value of 0.000. Meanwhile, the direct relationship between Dynamic Capability and SME Performance yields a t-statistic of 3.240 and a p-value of 0.001, which is also significant. Thus, all three hypotheses in this study are supported by empirical data, indicating that each variable has a meaningful influence within the structural model.

The mediation test in Table 5 aims to determine whether Business Model Innovation mediates the relationship between Dynamic Capability and MSME Performance. Based on the test results, the t-statistic value of 4.685 and the p-value of 0.000 indicate that the mediation is highly significant. In addition, the direct effect between Dynamic Capability and MSME Performance is also significant ($t = 3.240$; $p = 0.001$), indicating that the mediation is partial. In other words, Business Model Innovation only partially mediates the relationship, meaning that Dynamic Capability affects MSME Performance directly and indirectly through Business Model Innovation.

Table 5 Mediation Hypothesis Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Dynamic capability -> Business model innovation -> MSME performance	0.417	0.424	0.089	4.685	0.000

DISCUSSION

Findings are consistent with the resource-based view, which holds that sustained advantage depends on how firms deploy and reconfigure valuable and rare resources (Barney, 1991; Wernerfelt, 1984). Dynamic capabilities operate as higher-order routines that help firms sense shifts, seize opportunities, and transform resource configurations so that value creation and capture remain effective under change (Teece, Pisano, & Shuen, 1998). The positive link from dynamic capabilities to business model innovation indicates that capability deployment materializes in redesigned value propositions, reworked value creation activities, and adjusted value capture mechanisms, which then improve performance through better market fit and efficiency (Clauss, 2016; Huang & Ichikohji, 2024).

Dynamic capabilities are positively associated with MSME performance in Surabaya. This supports the resource-based view argument that the strategic management of internal resources is foundational for outcomes, while also showing that dynamic capability offers a more adaptive extension to address environmental turbulence (Barney, 1991; Wernerfelt, 1984; Teece, Pisano, & Shuen, 1998). Evidence from prior studies aligns with this pattern. Dynamic capabilities strengthen resilience and competitive response in changing markets, enhance marketing effectiveness, and bolster financial results under capital constraints (Cetindamar & Phaal, 2021; Zahoor et al., 2024; Pandey et al., 2023). In addition, dynamic capabilities frequently spur business model renewal when market conditions evolve rapidly (Wang & Photchanachan, 2021).

The interrelationship among the variables shows that dynamic capabilities directly and indirectly affect performance through business model innovation. In conceptual terms, sensing, seizing, and transforming provide the managerial microfoundations that enable firms to redesign offerings, activities, partnerships, revenue logic, and cost architecture, supporting superior outcomes (Clauss, 2016; Huang & Ichikohji, 2024). This logic is consistent with the competitive reality of Surabaya's MSMEs, where adaptability and iterative change are necessary. Business model innovation itself is positively related to MSME performance. Changes to value propositions, channels, and revenue and cost structures are associated with higher efficiency, profitability, and competitiveness, reinforcing that business model renewal is a practical path for surviving and growing in dynamic markets (Jingwen, Rahman, & Tong, 2022). Prior work indicates that the success of business model innovation depends on its alignment with growth strategy and organizational capabilities, and that agility and digital capability strengthen its effect on outcomes (Witschel, Müller, & Voigt, 2023; Li et al., 2023).

The respondent profile highlights the link between dynamic capabilities and business model innovation. Most are owners or top decision-makers, enhancing sensing and seizing through close engagement with customers and suppliers (Kump et al., 2019; Martins, 2023). Firm ages mostly range from three to five years, with many over ten, balancing exploration and stability (Law No. 20 of 2008). Revenues mainly come from micro and small firms, reflecting tight resources that favor business model innovation (Clauss, 2016; Huang & Ichikohji, 2024). The sample focuses on food and beverage, retail and trade, and property and construction sectors, where channels, partnerships, and costs frequently change (Sari, Susilowati, & Moko, 2024). Distribution relies largely on direct selling with limited marketplace use and local reach, indicating

that adjusting value propositions and pricing can yield significant gains (Clauss, 2016). These traits support the mediation pattern where business model innovation transmits much of the capability effect to performance (Jingwen, Rahman, & Tong, 2022; Huang & Ichikohji, 2024).

Dynamic capabilities positively relate to business model innovation among Surabaya MSMEs. Firms with stronger sensing, seizing, and transforming abilities better identify opportunities, align processes, and reconfigure resources to achieve sustainable model changes (Wang & Photchanachan, 2021). Empirical studies support that capability deployment helps adapt structures and processes to external changes, with opportunity identification and transformation linked to BMI dimensions like value proposition, cost architecture, and channels (Alzoubi et al., 2024; Clauss, 2016; Huang & Ichikohji, 2024). Considering the sample's micro and small firms and sectors needing frequent channel and cost adjustments, these findings are contextually relevant and underscore the importance of training, mentoring, and resource access to build dynamic capabilities for rapid BMI implementation.

Business model innovation partially mediates the relationship between dynamic capabilities and performance, meaning capabilities impact outcomes directly but more strongly through updated business models. Prior studies agree that performance improves most when capabilities translate into model changes aligned with external dynamics and strategy (Han, Zhou, & Lu, 2022; Ibarra et al., 2020). Conceptually, dynamic capabilities provide adaptive capacity, while business model innovation channels this capacity into actions and results. Focusing on business model innovation and capability development is recommended for Surabaya MSMEs facing market dynamism and resource limits. Practical implications include programs aiding owners and managers in enhancing sensing, cross-functional coordination for seizing, disciplined transforming, and toolkits for adjusting offerings, activities, partnerships, and revenue models.

The study shows that dynamic capabilities matter for MSME performance both directly and through business model innovation. Capability-driven sensing, seizing, and transforming stimulate relevant and adaptive model changes, which support efficiency, competitiveness, and business sustainability in an urban MSME setting. The demographic profile of the respondents provides a coherent rationale for why capability deployment translates strongly into business model renewal and why the mediated path is salient in this context.

CONCLUSION

Dynamic capability has a positive and significant influence on MSME performance, both directly and through partial mediation by business model innovation. Dynamic capabilities, comprising sensing, seizing, and transforming, enable MSMEs in Surabaya to adapt to market changes and to develop new business models that are innovative and relevant, which enhances their competitiveness and sustainable performance. These findings emphasize that strengthening dynamic capabilities and business model innovation should be a priority in MSME development strategies. The implication is that governments and stakeholders must provide support through training, mentoring, and access to resources that encourage MSMEs to optimize their innovative and adaptive potential in responding to ever-evolving market dynamics.

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