

Strategic Digital Orientation and Firm Performance: the Mediating Role of Business Agility in Makassar, Indonesia

Wendy Kala Tikupadang^{1*}, Otto Randa Payangan², Carolus Askikarno Pala'langan³

Universitas Kristen Indonesia Paulus, Makassar, Indonesia^{1,3}

Universitas Hasanuddin, Makassar, Indonesia²

wendytikupadang@gmail.com^{1*}, carolus@ukipaulus.ac.id³



Article History

Received on 30 December 2025

1st Revision on 16 January 2026

2nd Revision on 20 February 2026

3rd Revision on 24 March 2026

Accepted on 25 March 2026

Abstract

Purpose: This study examines how strategic digital orientation affects firm performance and whether business agility mediates that relationship among firms operating in Makassar, Indonesia, a regional economic hub in Eastern Indonesia.

Research Methodology: A quantitative, explanatory cross-sectional survey was conducted with 218 managers of service, trade, and manufacturing firms in Makassar selected through purposive sampling. Constructs were measured with five-point Likert scales, and the mediation model was estimated using PLS-SEM in SmartPLS 4.0 with 5,000 bootstrap resamples.

Results: Strategic digital orientation positively affects firm performance ($\beta = 0.214$; $p = 0.001$) and business agility ($\beta = 0.580$; $p < 0.001$), and business agility positively affects firm performance ($\beta = 0.528$; $p < 0.001$). Business agility partially mediates the relationship, with the indirect effect ($\beta = 0.306$) accounting for 58.8% of the total effect, explaining 51.2% of the variance in firm performance.

Conclusions: Strategic digital orientation improves performance directly and, more substantially, indirectly through business agility, indicating that the benefits of a firm's strategic digital orientation are realised largely through agile capabilities rather than through digital commitment alone.

Limitations: The cross-sectional design limits causal inference, the use of self-reported perceptual measures may introduce common method bias, and the single-city sample constrains generalisability to other regions and sectors.

Contributions: The study empirically tests business agility as a mechanism linking strategic digital orientation to firm performance and provides firm-level evidence from a secondary metropolitan area in an emerging economy.

Keywords: *Business Agility, Dynamic Capabilities, Emerging Markets, Firm Performance, Strategic Digital Orientation*

How to Cite: Tikupadang, W. K., Payangan, O. R., & Pala'langan, C. A. (2026). Strategic Digital Orientation and Firm Performance: the Mediating Role of Business Agility in Makassar, Indonesia. *Reviu Akuntansi, Manajemen, dan Bisnis*, 6(1), 243-258.

1. Introduction

The rapid diffusion of digital technologies has fundamentally altered how firms compete, create value, and sustain performance in turbulent and technology-intensive environments ([Barba-Sánchez et al., 2024](#); [Nguyen et al., 2025](#)). Digital transformation compels organizations to rethink strategic priorities, business models, and internal processes as they respond to accelerated innovation cycles,

shifting customer expectations, and intensified global competition ([Barba-Sánchez et al., 2024](#); [Xu et al., 2024](#)). Within this context, strategic digital orientation understood as a firm's proactive, long-term, and organization-wide commitment to embedding digital technologies into its strategic logic has emerged as a crucial determinant of competitive advantage and performance ([Alshourah et al., 2023](#); [Fan et al., 2023](#)). Rather than treating digital technologies as operational tools, firms with a strong strategic digital orientation integrate digital thinking into strategic decision-making, resource allocation, and value proposition design ([Alshourah et al., 2023](#); [Brahmana & Kontesa, 2024](#)). In this study, strategic digital orientation denotes a strategic posture the firm's intent and commitment regarding digital technologies and is therefore distinct from digital transformation, which refers to the broader process of organizational change that may follow from that posture ([Kindermann et al., 2021](#)).

Despite growing investments in digital initiatives, many firms struggle to convert digital efforts into tangible performance improvements, creating a digital–performance paradox ([Barba-Sánchez et al., 2024](#); [Brahmana & Kontesa, 2024](#)). Evidence increasingly suggests that digital technologies and orientations improve performance only when complemented by appropriate organizational capabilities and structures ([Fan et al., 2023](#); [Nguyen et al., 2025](#)). Drawing on the dynamic capabilities perspective, recent studies argue that a firm's strategic digital orientation must be coupled with a firm's capacity to sense opportunities and threats, seize them through timely decisions, and reconfigure resources accordingly ([Nguyen et al., 2025](#); [Wang, 2022](#)). Business agility, often conceptualized as a dynamic capability, is central to this process because it enables organizations to rapidly adjust strategies, processes, and structures in response to environmental and technological turbulence ([Fachridian et al., 2024](#); [Nguyen et al., 2025](#)).

Empirical research indicates that digital or strategic digital orientation can enhance performance, but its effects are frequently mediated by intermediate capabilities such as digital knowledge, innovation capability, and agility ([Kö et al., 2022](#); [Nurcahyo et al., 2025](#); [Wang, 2022](#)). Studies show that digital transformation and digital orientation improve financial and non-financial outcomes when they are aligned with organizational agility and internal capabilities ([Barba-Sánchez et al., 2024](#); [Nguyen et al., 2025](#); [Xu et al., 2024](#)). However, previous studies have not directly explained how a firm's strategic digital orientation as distinct from its digital transformation activities is converted into performance through business agility: most treat digital transformation, digital capability, or digital leadership as the antecedent, position agility as one of several parallel capabilities rather than as the conversion mechanism, and rarely quantify how much of the orientation–performance relationship actually runs through agility, particularly in emerging-market contexts ([Alshourah et al., 2023](#); [Nguyen et al., 2025](#); [Yildiz & Aykanat, 2021](#)).

In emerging economies such as Indonesia, the opportunities and challenges of digital transformation are particularly salient. Indonesia has experienced rapid digital growth, driven by widespread smartphone adoption, the expansion of e-commerce and fintech, and government initiatives to strengthen digital infrastructure and promote Industry 4.0 ([Anatan & Nur, 2023](#)). Nevertheless, empirical evidence points to substantial disparities in digital readiness and capability across regions and sectors, with firms outside core metropolitan areas facing more pronounced infrastructure and skills constraints ([Akbar et al., 2025](#); [Anatan & Nur, 2023](#)). Makassar, as a major economic hub in Eastern Indonesia, exemplifies a regional context where firms confront increasing digitalization pressures and competitive intensity while operating under resource and institutional limitations that differ from those in cities such as Jakarta ([Akbar et al., 2025](#); [Anatan & Nur, 2023](#)).

Existing studies in Indonesia have largely focused on national-level surveys, sector-specific digital transformation, and constructs such as digital leadership and digital capability, rather than explicitly integrating strategic digital orientation, business agility, and firm performance in regional firm-level analyses ([Akbar et al., 2025](#); [Anatan & Nur, 2023](#); [Nurcahyo et al., 2025](#)). Consequently, there is limited understanding of how firms in regional hubs like Makassar configure strategic digital orientation and agile capabilities to enhance performance under conditions of resource and institutional constraint.

This study addresses these gaps by investigating the effect of strategic digital orientation on firm performance and examining the mediating role of business agility among firms operating in Makassar, Indonesia. Grounded in the resource-based view and the dynamic capabilities perspective, the study proposes that strategic digital orientation functions as a strategic resource that shapes the development of business agility, which in turn improves performance outcomes in digitalized environments ([Nguyen et al., 2025](#); [Wang, 2022](#); [Yildiz & Aykanat, 2021](#)). Specifically, the research aims to analyze the direct effect of strategic digital orientation on firm performance; examine its effect on business agility; assess the direct effect of business agility on firm performance; and test the mediating role of business agility in the relationship between strategic digital orientation and firm performance.

The novelty of this study lies in three areas. Theoretically, it distinguishes strategic digital orientation, conceptualized as a strategic resource in the resource-based view, from business agility, conceptualized as a dynamic capability, and tests whether the performance effects of the former operate through the latter rather than treating digital orientation solely as a direct performance driver. Methodologically, it quantifies the relative weight of the direct and mediated pathways through variance accounted for analysis, thereby specifying how much of the digital–performance relationship actually runs through agility. Contextually, it provides firm-level evidence from Makassar, a secondary metropolitan area in an emerging economy that remains substantially underrepresented in the international digital strategy literature relative to capital-city and developed-economy samples ([Akbar et al., 2025](#); [Anatan & Nur, 2023](#)).

2. Literature Review and Hypotheses Development

2.1 Strategic Digital Orientation

Strategic digital orientation refers to a firm's proactive and long-term commitment to leveraging digital technologies as a core basis for value creation, competitive positioning, and organizational renewal ([Alshourah et al., 2023](#); [Fan et al., 2023](#); [Kindermann et al., 2021](#)). It goes beyond the mere adoption of individual digital tools and encompasses the integration of digital considerations into the firm's vision, strategic planning, culture, and resource allocation ([Alshourah et al., 2023](#); [Brahmana & Kontesa, 2024](#)). Firms with a strong strategic digital orientation systematically scan for digital opportunities, invest in digital capabilities, and redesign their business models to exploit data-driven insights, platform-based logics, and technology-enabled customer engagement ([Fan et al., 2023](#); [Wang, 2022](#)). Evidence from small businesses in emerging markets shows that this reorientation extends to the marketing function, where artificial intelligence and digital channels are increasingly used as strategic drivers of customer engagement and revenue rather than as peripheral promotional tools ([Okigbo et al., 2025](#); [Syahputra & Nugroho, 2025](#)). Throughout this study, the term strategic digital orientation is used consistently to denote this strategic posture; where prior studies use related labels such as digital orientation or digital strategic orientation, they are cited as conceptually adjacent evidence, whereas digital transformation is treated as the broader process of change rather than as the construct under investigation. Consistent with this definition, strategic digital orientation is treated as a single, reflectively measured construct rather than as a higher-order (second-order) construct with separate first-order dimensions. Its five indicators are expected to covary because they are manifestations of one underlying strategic posture: the extent to which digital technologies are embedded in the firm's vision, strategic plans, investment priorities, and business model innovation ([Alshourah et al., 2023](#); [Kindermann et al., 2021](#)).

Prior empirical studies consistently indicate that digital orientation can enhance various dimensions of organizational performance. Research in emerging and developed economies shows that firms with stronger digital orientation tend to achieve better financial, environmental, and innovative performance, especially under conditions of high environmental dynamism ([Barba-Sánchez et al., 2024](#); [Brahmana & Kontesa, 2024](#); [Fan et al., 2023](#)). Digital orientation has been linked to cost efficiencies, improved monitoring and coordination, and strengthened competitive advantage by enabling better use of information, automation, and customer analytics ([Alshourah et al., 2023](#); [Barba-Sánchez et al., 2024](#); [Yang & Yee, 2022](#)). Parallel evidence in the accounting and reporting domain shows that digital and artificial-intelligence technologies reshape institutional processes and reporting

quality, further widening the range of functions through which digital orientation can influence outcomes ([Munyeppwa et al., 2025](#)). At the same time, some studies highlight that the direct performance impact of digital orientation may be contingent on industry characteristics, environmental turbulence, and the availability of complementary capabilities ([Brahmana & Kontesa, 2024](#); [Nguyen et al., 2025](#)).

2.2 Business Agility

Business agility is commonly conceptualized as a dynamic capability that enables firms to rapidly sense changes in the environment, seize emerging opportunities, and reconfigure resources, processes, and structures in a timely manner ([Mueller-Saegebrecht & Walter, 2025](#); [Nguyen et al., 2025](#); [Yildiz & Aykanat, 2021](#)). Agility captures attributes such as responsiveness, flexibility, speed, and competence, allowing organizations to quickly adjust their strategic and operational activities in the face of technological disruptions, shifting customer preferences, and competitive pressures ([Fachridian et al., 2024](#); [Nguyen et al., 2025](#)). In the digital era, business agility is increasingly viewed as essential for translating technological possibilities into sustained performance improvements because it determines how effectively the firm adapts routines and business models to exploit new digital options ([Xu et al., 2024](#); [Yildiz & Aykanat, 2021](#)). In this study, business agility is approached through three complementary components: sensing agility, the speed with which the firm detects relevant changes in customers, competitors, and technologies; decision-making agility, the speed with which it evaluates options and commits to a response; and operational agility, the speed with which it reconfigures processes and resources to implement that response ([Nguyen et al., 2025](#); [Yildiz & Aykanat, 2021](#)). These components are treated as facets of a single capability rather than as separate sub-constructs and are operationalized accordingly, as described in Section 3.

Empirical studies show that business or organizational agility is positively associated with a range of performance outcomes. Research in emerging markets and service sectors indicates that organizational agility significantly improves financial and non-financial performance and helps firms navigate digital transformation more effectively ([Arsawan et al., 2022](#); [Nguyen et al., 2025](#); [Yildiz & Aykanat, 2021](#)). Studies also find that agility can mediate the relationship between digital leadership and firm performance, as well as between digital transformation and performance, reinforcing its role as a conduit through which digital initiatives are converted into competitive advantage ([Fachridian et al., 2024](#); [Xu et al., 2024](#)). Related work on data analytics resources reaches a convergent conclusion from a resource-based standpoint: it is the intangible, capability-side resources rather than the tangible technological assets alone that most consistently drive market competitiveness ([Chike et al., 2023](#)).

2.3 Firm Performance

Firm performance has been conceptualized in multiple ways, ranging from narrowly defined financial indicators such as profitability and sales growth to broader operational and non-financial measures including customer satisfaction, innovation outcomes, market share, and competitive position ([Barba-Sánchez et al., 2024](#); [Nurcahyo et al., 2025](#)). In the context of digital transformation, many studies adopt a multidimensional view of performance in order to capture both efficiency gains and strategic benefits derived from digital initiatives ([Barba-Sánchez et al., 2024](#); [Nguyen et al., 2025](#)). For firms operating in emerging markets, performance outcomes linked to digital strategies often include improved operational efficiency, enhanced customer experience, increased market reach, and strengthened competitive position alongside traditional financial metrics ([Akbar et al., 2025](#); [Anatan & Nur, 2023](#)). Evidence from Indonesian MSMEs shows that performance is shaped by an interplay of financial behaviour, technology adoption, and satisfaction-based mechanisms, underlining the multidimensional character of the construct, while service-sector studies demonstrate that customer-facing outcomes such as satisfaction and loyalty operate as intermediate performance mechanisms in their own right ([Mahendri & Astuti, 2025](#); [Syahputra & Nugroho, 2025](#)).

Recent research highlights that the performance implications of digital orientation and transformation depend on how well digital initiatives are aligned with organizational capabilities and environmental conditions. Digital transformation has been found to exert a stronger impact on performance when supported by adequate IT capabilities, digital skills, and agile structures ([Barba-Sánchez et al., 2024](#);

[Clemente-Almendros et al., 2024](#); [Nguyen et al., 2025](#)). Misaligned or poorly implemented digital investments may yield limited or even negative performance effects, reinforcing the need to consider intermediate mechanisms such as agility and innovation ([Brahmana & Kontesa, 2024](#); [Nurcahyo et al., 2025](#)). Because objective financial data are rarely available for privately held firms in emerging markets, performance in this study is assessed through managers' comparative evaluations relative to key competitors, an approach whose validity is discussed in Section 3 ([Dess & Robinson, 1984](#); [Wall et al., 2004](#)).

2.4 Hypotheses Development

The theoretical logic of the proposed model rests on a distinction between resources and dynamic capabilities. In the Resource-Based View (RBV), a resource is an asset or attribute that the firm possesses or controls, a strategic commitment that directs managerial attention and investment toward digital opportunities and its value depends on how it is deployed ([Alshourah et al., 2023](#); [Fan et al., 2023](#)). A dynamic capability, by contrast, is an organizational routine through which the firm senses opportunities and threats, seizes them, and reconfigures its resource base ([Mueller-Saegebrecht & Walter, 2025](#); [Nguyen et al., 2025](#)). Strategic digital orientation therefore describes what the firm is committed to doing with digital technologies, whereas business agility describes how quickly and effectively the firm can act on that commitment. Because a resource creates value only when it is mobilized, and because mobilization in turbulent digital environments requires sensing, decision-making, and reconfiguration, the model positions strategic digital orientation as the antecedent resource and business agility as the capability that translates it into performance. This distinction underpins the hypotheses developed below.

The relationship between strategic digital orientation and firm performance can be grounded theoretically in the Resource-Based View (RBV) and the dynamic capabilities perspective. From an RBV standpoint, strategic digital orientation can be seen as a valuable, rare, and difficult-to-imitate strategic resource reflecting the firm's ability to systematically identify, prioritize, and exploit digital opportunities ([Alshourah et al., 2023](#); [Fan et al., 2023](#)). Firms with a strong strategic digital orientation are more likely to allocate resources toward value-creating digital initiatives such as data analytics, platform participation, and digitally enabled service innovation, which can improve operational efficiency and differentiation ([Barba-Sánchez et al., 2024](#); [Behl et al., 2022](#); [Brahmana & Kontesa, 2024](#); [Chike et al., 2023](#)). Empirical evidence supports a positive relationship between digital orientation and financial, environmental, and innovative performance, particularly in dynamic environments, although some research indicates that the direct impact can be modest and context-dependent ([Fan et al., 2023](#); [Nguyen et al., 2025](#)). In line with these insights, the present study posits:

H₁: Strategic digital orientation has a positive effect on firm performance

Strategic digital orientation is also expected to play a pivotal role in shaping business agility. Firms strategically oriented toward digitalization are more likely to invest in flexible information systems, data analytics, and modular processes that support rapid reconfiguration of activities and structures ([Kö et al., 2022](#); [Wang, 2022](#)). A clear strategic digital orientation can foster a culture that values experimentation, rapid learning, and cross-functional collaboration, all of which are core elements of business agility ([Nguyen et al., 2025](#); [Yildiz & Aykanat, 2021](#)). Empirical research offers indirect support: strategic digital orientation and related constructs have been linked to the development of digital knowledge and innovation capabilities that facilitate agile responses to technological and market shifts ([Fan et al., 2023](#); [Wang, 2022](#)), and studies on digital transformation capabilities indicate that customer- and technology-centric orientations strengthen transformation capabilities which in turn improve operational performance ([Kö et al., 2022](#); [Nurcahyo et al., 2025](#)). Public-sector evidence points in the same direction, showing that digital systems function as the operative channel through which institutional determinants shape performance ([Nasution et al., 2025](#)). Accordingly:

H₂: Strategic digital orientation has a positive effect on business agility

The positive association between business agility and firm performance is well documented. Agile organizations detect changes in customer needs, competitor moves, and technological developments more quickly and adjust their strategies and operations in a timely manner ([Nguyen et al., 2025](#); [Yildiz & Aykanat, 2021](#)). This responsiveness enables firms to mitigate risks, seize emerging opportunities, and innovate faster than less agile competitors, leading to improved financial and non-financial outcomes ([Fachridian et al., 2024](#); [Yildiz & Aykanat, 2021](#)). Organizational agility has been shown to significantly improve firm performance and to mediate the effect of digital leadership on performance, and agile firms appear more likely to realize performance benefits from digital transformation initiatives ([Fachridian et al., 2024](#); [Xu et al., 2024](#); [Nguyen et al., 2025](#); [Nurcahyo et al., 2025](#)). Therefore:

H₃: Business agility has a positive effect on firm performance

Building on the preceding arguments, business agility is expected to mediate the relationship between strategic digital orientation and firm performance. Strategic digital orientation provides the overarching vision and commitment that guide digital investments, but its performance implications depend on the organization's ability to deploy these digital resources flexibly and rapidly ([Nguyen et al., 2025](#); [Wang, 2022](#)). The mechanism can be stated explicitly. Strategic digital orientation operates at the level of strategic intent: it directs managerial attention toward digital opportunities and commits resources to them, but it does not by itself change how the firm operates. Business agility operates at the level of action: it is the capability that identifies which digital opportunities matter, accelerates decisions about them, and reconfigures processes and resources so that digital initiatives are actually implemented. A strong strategic digital orientation is therefore expected to build agility, because a firm committed to digitalization invests in the data, systems, and decision routines that make rapid response possible (*H₂*), and agility is expected to improve performance, because it allows the firm to exploit opportunities and respond to threats ahead of competitors (*H₃*). Combining these two links, at least part of the effect of strategic digital orientation on performance should be transmitted through business agility. Without sufficient agility, digital initiatives may remain fragmented, underutilized, or misaligned with evolving market needs, thereby limiting their impact on performance ([Barba-Sánchez et al., 2024](#); [Brahmana & Kontesa, 2024](#)). Existing research offers partial support for such mediated mechanisms: digital capabilities and digital transformation have been found to influence performance through mediating constructs such as innovation capability, value creation innovation, and organizational agility, and capability-based mediation has likewise been documented in Indonesian organizational research on leadership, culture, and performance ([Kö et al., 2022](#); [Nurcahyo et al., 2025](#); [Xu et al., 2024](#); [Jumawan et al., 2025](#); [Larasandi & Satrya, 2025](#)). Extending these insights, the present study posits:

H₄: Business agility mediates the relationship between strategic digital orientation and firm performance

The hypothesized direct and mediated relationships among strategic digital orientation, business agility, and firm performance are summarized in the conceptual framework shown in Figure 1.

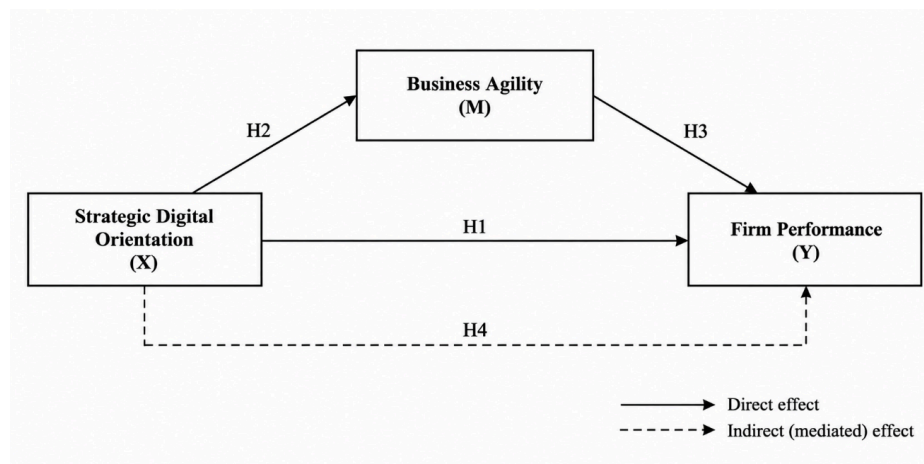


Figure 1. Conceptual Framework

3. Research Methodology

This study adopts a quantitative, explanatory research design to examine the relationships among strategic digital orientation, business agility, and firm performance. A cross-sectional survey approach was employed in which data were collected once from managers of firms operating in Makassar, Indonesia. PLS-SEM was selected as the analytical technique because it allows simultaneous assessment of the measurement and structural models and is well suited to prediction-oriented models of moderate complexity estimated on medium-sized samples.

The population consists of firms operating in Makassar across the service, trade, and manufacturing sectors. The unit of analysis is the firm, while the unit of observation is managers knowledgeable about their firms' strategic and digital initiatives, including directors, general managers, and heads of department responsible for or familiar with digital strategy, operations, or business development. A purposive non-probability sampling technique was used with explicit inclusion criteria at both the firm and respondent levels. Firms were eligible if they were legally registered and operating in Makassar, belonged to the service, trade, or manufacturing sector, employed at least ten people, and had implemented at least one digital initiative in their operations, marketing, or management systems. Respondents were eligible if they held a managerial position with strategic responsibility (director or owner, general manager, head of department, or an equivalent managerial role), had worked in the firm for at least one year, and were directly involved in or familiar with the firm's strategic planning and digital initiatives. One respondent was surveyed per firm. A total of 416 questionnaires were distributed and 228 were returned, a gross return rate of 54.8%. Ten returned questionnaires were excluded during screening because they were incomplete or showed inconsistent response patterns, leaving 218 usable responses. The reported response rate of 52.4% therefore refers to the usable (effective) response rate (218/416). The adequacy of the sample size was evaluated using two established procedures. First, following the inverse square root method by [Kock and Hadaya \(2018\)](#), the minimum sample required to detect a path coefficient of 0.20a conservative assumption for the smallest expected effect at a 5% significance level with 80% statistical power is $(2.486/0.20)^2 \approx 155$. Second, an a priori power analysis in G*Power 3 of [Faul, Erdfelder, Lang, and Buchner \(2007\)](#) for a multiple regression with two predictors (the maximum number of structural paths pointing at any endogenous construct, namely firm performance), a medium effect size ($f^2 = 0.15$), $\alpha = 0.05$, and power of 0.95 indicated a minimum of 107 observations. The final sample of 218 exceeds both thresholds.

Data were collected using a structured questionnaire distributed in both online and paper form. Initial contact with firms was made through professional networks, business associations, chambers of commerce, and university–industry collaboration channels. A cover letter explained the study's purpose, assured confidentiality and anonymity, and emphasized the voluntary nature of participation. Respondents were informed that their answers would be used only for academic purposes and reported in aggregate form. To reduce common method bias, several procedural remedies were

applied, including guaranteeing anonymity, using neutral wording, and separating the sections containing predictor and outcome variables. Data collection was conducted over approximately three months, with follow-up reminders sent to improve the response rate.

All constructs were measured using multi-item scales adapted from prior validated instruments, with wording adjusted to the context of firms in Makassar. Items were rated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). Strategic digital orientation was measured as a single reflective construct with five items capturing the extent to which digital technologies are embedded in the firm's vision, long-term plans, investments, and business model innovation, adapted from prior work on digital strategic orientation ([Alshourah et al., 2023](#); [Fan et al., 2023](#); [Wang, 2022](#)). Business agility was measured as the firm's capability to rapidly sense, decide, and respond to environmental changes, encompassing sensing agility, decision-making agility, and operational agility, adapted from studies on organizational agility and dynamic capabilities ([Nguyen et al., 2025](#); [Yildiz, & Aykanat, 2021](#)). Consistent with this conceptualization, the four items cover the three components: BA1 captures sensing agility, BA2 captures decision-making agility, and BA3 and BA4 capture operational agility in terms of reconfiguring processes and reallocating resources, respectively. The components were modelled as one reflective construct because they are expected to covary as manifestations of a single agility capability. Firm performance was measured using subjective indicators of financial and non-financial performance relative to key competitors over the preceding three years, capturing sales growth, profitability, market share, customer satisfaction, and overall competitive position, adapted from previous performance scales ([Barba-Sánchez et al., 2024](#); [Nurcahyo et al., 2025](#)). The five items correspond to sales growth (FP1), profitability (FP2), market share (FP3), customer satisfaction (FP4), and overall competitive position (FP5), and each item asked respondents to compare their firm with its main competitors over the preceding three years. Perceptual measures were used because most firms in the sample are privately held and do not publish audited financial statements, and because managers of such firms are often reluctant to disclose absolute financial figures. Competitor-referenced items also reduce distortions arising from differences in firm size and sector, and subjective performance assessments by senior managers have been shown to correlate strongly with objective financial indicators ([Dess, & Robinson, 1984](#); [Wall, Michie, Patterson, Wood, Sheehan, Clegg, & West, 2004](#)). Respondents therefore assessed financial indicators such as profitability and sales growth in relative rather than absolute terms. A pilot test with a small group of managers was conducted to ensure clarity, relevance, and cultural appropriateness of the items, and minor wording adjustments were made based on the feedback received. The operationalization of the constructs is summarized in Table 1.

Table 1. Operationalization of constructs

Variable	Code	Definition	Items	Source
Strategic Digital Orientation	SDO	Firm proactive, long-term commitment to embedding digital technologies in vision, strategic plans, investments, and business model innovation	5	(Alshourah et al., 2023 ; Fan et al., 2023 ; Kindermann et al., 2021)
Business Agility	BA	Firm capability to sense environmental change, decide rapidly, and reconfigure processes and resources	4	(Nguyen et al., 2025 ; Yildiz & Aykanat, 2021)
Firm Performance	FP	Subjective financial and non-financial performance relative to key competitors over the past three years	5	(Barba-Sánchez et al., 2024 ; Nurcahyo et al., 2025)

Data analysis followed several steps using SPSS for preliminary analysis and SmartPLS 4.0 for PLS-SEM. Preliminary analysis involved screening for missing data and outliers and examining descriptive statistics including means, standard deviations, skewness, and kurtosis. The measurement model was then evaluated by assessing reliability through Cronbach's alpha and composite reliability, convergent validity through factor loadings and average variance extracted, and discriminant validity through the Fornell–Larcker criterion and Heterotrait–Monotrait (HTMT) ratios. The structural model was subsequently evaluated by estimating path coefficients, t-values, and p-values via bootstrapping with

5,000 resamples, assessing R^2 values for the endogenous constructs, and evaluating predictive relevance through Q^2 . Mediation was tested by examining the significance of the indirect effect of strategic digital orientation on firm performance through business agility and by calculating the Variance Accounted For (VAF).

The study adheres to ethical standards for research involving human participants. Participation was voluntary and respondents provided informed consent. Confidentiality and anonymity were ensured, and no personally identifiable information was reported. Ethical clearance was obtained from the relevant institutional review board of the authors' institution.

4. Results and Discussions

Of the 218 usable responses, 48.2% of firms operate in the service sector, 31.7% in trade, and 20.1% in manufacturing. This distribution broadly reflects the structure of Makassar economy, in which trade and service activities predominate over manufacturing, and each sector is represented by a sufficiently large subsample ($n = 44$ to 105). Because the sample was not proportionally stratified by sector, sector composition could still influence the pooled estimates; this possibility is acknowledged as a limitation in Section 5.2. Based on the number of employees, 38.5% are small enterprises, 42.7% are medium enterprises, and 18.8% are large enterprises. Most firms have been established for more than ten years (61.9%), while 25.2% have operated for five to ten years and 12.8% for less than five years. Respondents are mainly general managers (42.7%), directors or owners (30.7%), and heads of department (21.1%), with an average tenure of 6.8 years ($SD = 3.2$), indicating adequate familiarity with their firms' strategic and digital initiatives. The full profile is presented in Table 2.

Table 2. Firm and respondent profile (N = 218)

Characteristic	Category	Frequency	Percentage (%)
Sector	Service	105	48.2
	Trade	69	31.7
	Manufacturing	44	20.1
Firm Size	Small (10–49 employees)	84	38.5
	Medium (50–249 employees)	93	42.7
	Large (≥ 250 employees)	41	18.8
Firm Age	< 5 years	28	12.8
	5–10 years	55	25.2
	> 10 years	135	61.9
Respondent Position	Director / Owner	67	30.7
	General Manager	93	42.7
	Head of Department	46	21.1
	Other	12	5.5
Average Tenure	Mean = 6.8 years ($SD = 3.2$)		

Descriptive statistics indicate a moderately high level of strategic digital orientation ($M = 3.78$, $SD = 0.73$), business agility ($M = 3.82$, $SD = 0.68$), and firm performance ($M = 3.91$, $SD = 0.71$). Correlations among the constructs are positive and significant, as reported in Table 3.

Table 3. Means, standard deviations, and correlations

Variables	M	SD	1	2	3
Strategic Digital Orientation	3.78	0.73	1		
Business Agility	3.82	0.68	0.58**	1	
Firm Performance	3.91	0.71	0.52**	0.61**	1

Note: ** $p < 0.01$ (two-tailed). Scale: 1 = Strongly Disagree to 5 = Strongly Agree.

4.1 Measurement Model Evaluation

All items load strongly on their respective constructs, with loadings ranging from 0.742 to 0.891 ($p < 0.001$). Cronbach's alpha values range from 0.837 to 0.893 and composite reliability values from 0.841 to 0.896, exceeding the recommended threshold of 0.70. Average variance extracted values for strategic digital orientation (0.627), business agility (0.614), and firm performance (0.639) all exceed 0.50, confirming convergent validity. Results are presented in Table 4.

Table 4. Measurement model

Construct	Item	Factor Loading	Cronbach α	CR	AVE
Strategic Digital Orientation	SDO1	0.812	0.887	0.891	0.627
	SDO2	0.789			
	SDO3	0.823			
	SDO4	0.771			
	SDO5	0.742			
Business Agility	BA1	0.801	0.837	0.841	0.614
	BA2	0.768			
	BA3	0.785			
	BA4	0.778			
Firm Performance	FP1	0.826	0.893	0.896	0.639
	FP2	0.805			
	FP3	0.784			
	FP4	0.781			
	FP5	0.891			

Note: All loadings significant at $p < 0.001$.

Discriminant validity was assessed using both the Fornell–Larcker criterion and HTMT ratios. Under the Fornell–Larcker criterion, the square roots of AVE (SDO = 0.792; BA = 0.784; FP = 0.799) exceed all inter-construct correlations (0.520 to 0.610). The HTMT ratios are 0.682 for SDO–BA, 0.625 for SDO–FP, and 0.751 for BA–FP; all are below the conservative threshold of 0.85 recommended for conceptually distinct constructs (Henseler et al., 2015). Both criteria therefore confirm that the three constructs are empirically distinct. Results are reported in Table 5.

Table 5. Discriminant validity

Construct	SDO	BA	FP	HTMT (SDO–BA)	HTMT (SDO–FP)	HTMT (BA–FP)
Strategic Digital Orientation (SDO)	0.792					
Business Agility (BA)	0.580	0.784		0.682		
Firm Performance (FP)	0.520	0.610	0.799		0.625	0.751

Note: Diagonal values in bold are the square roots of AVE.

4.2 Structural Model Results

The structural model explains 33.6% of the variance in business agility ($R^2 = 0.336$) and 51.2% of the variance in firm performance ($R^2 = 0.512$), indicating substantial explanatory power. Q^2 values for business agility (0.198) and firm performance (0.315) are positive, confirming predictive relevance. All three direct hypotheses are supported, as reported in Table 6.

Table 6. Structural model results

Hypotheses	Path	β	SE	t-value	p-value	95% CI	Decision
H_1	SDO $\rightarrow$ FP	0.214	0.067	3.185	0.001**	[0.082; 0.346]	Supported
H_2	SDO $\rightarrow$ BA	0.580	0.056	10.274	< 0.001***	[0.469; 0.691]	Supported
H_3	BA $\rightarrow$ FP	0.528	0.059	8.962	< 0.001***	[0.412; 0.644]	Supported

Note: $**p < 0.01$; $***p < 0.001$ (two-tailed). Bootstrap samples = 5,000. SDO = Strategic Digital Orientation; BA = Business Agility; FP = Firm Performance.

The indirect effect of strategic digital orientation on firm performance via business agility is positive and significant ($\beta = 0.306$; $t = 6.375$; $p < 0.001$; 95% CI [0.215, 0.405]). The total effect is $\beta = 0.520$, and the VAF is 58.8%, indicating partial mediation and supporting H4. Within the tested model, the indirect path via business agility thus accounts for the larger share of the total effect. Because only one mediator was examined, however, this result shows that business agility is a substantial mechanism linking strategic digital orientation to firm performance; it does not establish that agility is more important than other mechanisms that were not modelled. Results are presented in Table 7.

Table 7. Mediation analysis

Effect	Path	β	SE	t-value	p-value	95% CI	VAF	Mediation Type
Direct	SDO $\rightarrow$ FP	0.214	0.067	3.185	0.001**	[0.082; 0.346]		
Indirect	SDO $\rightarrow$ BA $\rightarrow$ FP	0.306	0.048	6.375	< 0.001***	[0.215; 0.405]	58.8%	Partial
Total	SDO $\rightarrow$ FP	0.520	0.071	7.324	< 0.001***	[0.381; 0.659]		

Note: $**p < 0.01$; $***p < 0.001$ (two-tailed). Bootstrap samples = 5,000.

4.3 Discussion

The positive and significant effect of strategic digital orientation on firm performance is consistent with prior studies indicating that strategic digital orientation enhances operational and financial outcomes in dynamic environments ([Alshourah et al., 2023](#); [Barba-Sánchez et al., 2024](#); [Brahmana & Kontesa, 2024](#)). However, the moderate effect size ($\beta = 0.214$) suggests that digital orientation alone is insufficient and that its performance impact depends on complementary capabilities and contextual conditions, as noted in previous research ([Fan et al., 2023](#); [Nguyen et al., 2025](#)). This is consistent with resource-based evidence showing that the possession of technological resources does not automatically translate into market competitiveness unless accompanied by the intangible capabilities needed to exploit them ([Chike et al., 2023](#)).

The strong positive effect of strategic digital orientation on business agility ($\beta = 0.580$) supports the view that strategic digital orientation is a key driver of dynamic capabilities ([Nguyen et al., 2025](#); [Wang, 2022](#)). When firms embed digital considerations in their strategies, they are more likely to invest in flexible IT architectures, data analytics platforms, and modular processes that support rapid reconfiguration, thereby strengthening agility ([Kő et al., 2022](#); [Yildiz & Aykanat, 2021](#)). This pattern mirrors findings in the public sector, where digital systems serve as the operative conduit through which institutional determinants translate into financial performance ([Nasution et al., 2025](#)), and in small-business settings, where the adoption of digital and artificial-intelligence tools reshapes marketing and customer-engagement capabilities rather than merely automating existing routines ([Okigbo et al., 2025](#)).

The effect of strategic digital orientation on business agility ($\beta = 0.580$) is considerably larger than its direct effect on firm performance ($\beta = 0.214$), and this difference is theoretically meaningful. Business agility is a proximal outcome of strategic digital orientation: a commitment to digitalization directly shapes what the firm invests in data, flexible systems, and faster decision routines and these investments are reflected in agility relatively quickly. Firm performance, by contrast, is a distal outcome that depends on many additional factors, including market demand, competitive intensity, pricing, and cost structures, which dilute the direct influence of any single strategic orientation. The financial returns of digital commitments also tend to materialize with a time lag, whereas their capability-building effects are more immediate. This pattern is consistent with the resource–capability logic of the model: strategic digital orientation primarily builds capability, and a large part of its performance effect is realized as that capability is put to use. It also helps explain why some studies

report weak or non-significant direct effects of digital orientation on performance ([Brahmana & Kontesa, 2024](#); [Nguyen et al., 2025](#); [Wang, 2022](#)).

The substantial positive effect of business agility on firm performance ($\beta = 0.528$) confirms previous findings that agile organizations are better equipped to cope with environmental turbulence, exploit digital initiatives, and deliver superior outcomes ([Fachridian et al., 2024](#); [Nguyen et al., 2025](#); [Yildiz & Aykanat, 2021](#)). In Makassar, where firms face both opportunities and constraints in digital transformation, agility appears especially important for converting digital initiatives into performance gains ([Akbar et al., 2025](#); [Anatan & Nur, 2023](#)). This is congruent with evidence that customer-facing responsiveness mechanisms mediate the relationship between firm strategy and performance outcomes in Indonesian service markets ([Mahendri & Astuti, 2025](#); [Syahputra & Nugroho, 2025](#)).

The confirmation of business agility as a partial mediator supports earlier studies that identified capability-based mediation mechanisms in the digital–performance relationship, and it parallels Indonesian evidence in which organizational capabilities and attitudinal states transmit the influence of leadership and culture on performance ([Jumawan et al., 2025](#); [Larasandi & Satrya, 2025](#); [Nurcahyo et al., 2025](#); [Wang, 2022](#); [Yildiz & Aykanat, 2021](#)). The relatively high VAF of 58.8% suggests that within the tested model more than half of the effect of strategic digital orientation on performance is transmitted through business agility; because no alternative mediators were included, this should not be read as evidence that agility is the dominant mechanism relative to other possible channels, although the significant direct effect that remains indicates that other mechanisms such as direct cost efficiencies and market positioning may also be at work. From a contextual perspective, the findings highlight that firms in Makassar cannot rely solely on adopting digital technologies or declaring a digital vision; they must also translate that vision into agile structures, processes, and decision-making routines ([Akbar et al., 2025](#); [Anatan & Nur, 2023](#)).

4.4 Managerial Implications

Managers should move beyond treating digital technologies as operational tools and cultivate a coherent strategic digital orientation by articulating a clear digital vision, integrating digital considerations into strategic planning, and aligning digital investments with long-term value creation. Firms in Makassar that systematically embed digital priorities into corporate strategy are better positioned to exploit digital opportunities and mitigate disruption. Given that nearly three-fifths of the total effect operates through agility, managers must also deliberately develop business agility as a complementary capability. Practical steps include establishing cross-functional teams, shortening decision cycles, implementing modular processes, and fostering a culture of experimentation and rapid learning. Investments in digital infrastructure, flexible IT architectures and real-time analytics in particular should be designed to enable agility rather than merely to automate existing routines. Managers should further monitor the impact of digital and agile initiatives using indicators that capture responsiveness directly, such as time-to-market, response speed, and process cycle times, alongside conventional financial metrics.

4.5 Policy Implications

For policymakers and local government, the findings highlight the importance of supporting not only digital adoption but also strategic and agile capability development among firms in Makassar and Eastern Indonesia more broadly. Public programs should extend beyond infrastructure provision to include training and mentoring on digital strategy and agile management, together with support for digital innovation hubs that facilitate experimentation and collaboration. This aligns with evidence that regulatory facilitation, financing access, and managerial capability jointly condition the development of Indonesian small and medium enterprises by [Lim and Teoh \(2021\)](#), and that financial-management capability and technology adoption interact in shaping MSME sustainability ([Eton, Mwosi, Ogwel, & Olupot, 2025](#)). Collaboration between universities, business associations, and government agencies can play a central role in designing and delivering such capacity-building initiatives, and the continued expansion of digital financial infrastructure offers a complementary lever for regional firms ([Chatterjee, 2025](#); [Haripin, Indraprakoso, Wibisono, & Utomo, 2025](#); [Putra, & Millanyani, 2026](#)).

5. Conclusions

5.1 Conclusion

This study examined the effect of strategic digital orientation on firm performance and the mediating role of business agility among 218 firms in Makassar, Indonesia. The findings show that strategic digital orientation positively and significantly influences firm performance ($\beta = 0.214$), indicating that firms embedding digital technologies into their strategic vision and business models tend to perform better relative to competitors. Strategic digital orientation also significantly enhances business agility ($\beta = 0.580$), and business agility in turn positively affects firm performance ($\beta = 0.528$).

Mediation analysis reveals that business agility partially mediates the relationship between strategic digital orientation and firm performance, with 58.8% of the total effect transmitted through agility. Strategic digital orientation therefore improves performance both directly and indirectly, with the indirect pathway via business agility accounting for the larger share of the total effect in the tested model. Theoretically, the findings support the distinction between strategic digital orientation as a strategic resource and business agility as a dynamic capability, showing that, in an emerging-market regional context, a substantial part of the performance effect of the former is realized through the latter. The practical implication is direct: digital investment without agile capability is unlikely to yield the performance returns firms expect.

5.2 Research Limitations

This study has several limitations. First, its cross-sectional design limits causal inference and does not capture the dynamic co-evolution of strategic digital orientation, business agility, and performance over time. Second, the reliance on self-reported perceptual measures for all three constructs may introduce common method bias despite the procedural remedies applied, and future work would benefit from objective or multi-source performance indicators. Third, the focus on firms in a single city may limit the generalizability of the findings to other Indonesian regions and to sectors not represented in the sample; moreover, the sample was not proportionally stratified by sector, with manufacturing firms forming the smallest group (20.1%), so the pooled estimates may partly reflect the predominance of service and trade firms. Fourth, the study models a single mediating mechanism and includes no moderating variables, although environmental turbulence, firm size, and sector are plausible boundary conditions.

5.3 Suggestions and Directions for Future Research

Several avenues for future research follow from these limitations. First, longitudinal designs would clarify how digital orientation, agility, and performance co-evolve across the phases of a digital transformation programme. Second, comparative studies across Indonesian cities, or across countries at differing levels of digital maturity, would help isolate the role of institutional and regional factors in conditioning the digital–performance relationship. Third, future research could incorporate additional mediators and moderators such as digital leadership, organizational culture, environmental turbulence, or digital ecosystem support to provide a more comprehensive account of the digital strategy–agility–performance nexus. Fourth, developing and validating a multidimensional, higher-order measure of strategic digital orientation would allow researchers to identify which of its specific elements carry the greatest weight, offering more actionable guidance to managers operating under budget constraints. Sector-specific multigroup analyses would also clarify whether the mechanism differs between service, trade, and manufacturing firms. Finally, extending the model to specific sectors such as MSMEs, tourism, or financial services would test the robustness of the mechanism across differing competitive and regulatory conditions.

Acknowledgement

The authors would like to express their sincere gratitude to the managers and firms in Makassar who generously contributed their time and insights to this study. The authors also thank colleagues and academic peers whose constructive feedback during the development of the research instrument and the manuscript significantly improved the clarity and rigour of the study. No specific grant from any funding agency in the public, commercial, or not-for-profit sectors was received for this research.

Author Contributions

WKT conceptualized the study, designed the survey instrument, collected and analyzed the data, and drafted the manuscript. ORP supervised the research design, contributed to the theoretical framing, and critically revised the manuscript for important intellectual content. CAP contributed to data collection, validated the analysis, and assisted in revising the manuscript. All authors read and approved the final version of the manuscript.

References

- Akbar, R. S., Abdurahman, A., Nursanto, G. A., & Hartati, B. (2025). Digitalization, organizational change, and human resource management at the Immigration Polytechnic. *Annals of Human Resource Management Research*, 5(3), 559-570.
- Alshourah, S., Altawalbeh, M., Mansour, M., Al Haraisa, Y., & Al-Kharabsheh, A. (2023). Digital strategic orientation and firm's performance: The moderating effect of environmental uncertainty. *Polish Journal of Management Studies*, 28(2).
- Anatan, L., & Nur. (2023). Micro, Small, and Medium Enterprises' Readiness for Digital Transformation in Indonesia. *Economies*, 11(6), 156. <https://doi.org/10.3390/economies11060156>
- Arsawan, I. W. E., De Hariyanti, N. K. s., Atmaja, I. M. A. D. S., Suhartanto, D., & Koval, V. (2022). Developing Organizational Agility in SMEs: An Investigation of Innovation's Roles and Strategic Flexibility. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(3), 149. <https://doi.org/10.3390/joitmc8030149>
- Barba-Sánchez, V., Meseguer-Martínez, A., Gouveia-Rodrigues, R., & Raposo, M. L. (2024). Effects of digital transformation on firm performance: The role of IT capabilities and digital orientation. *Heliyon*, 10(6). <https://doi.org/10.1016/j.heliyon.2024.e27725>
- Behl, A., Gaur, J., Pereira, V., Yadav, R., & Laker, B. (2022). Role of big data analytics capabilities to improve sustainable competitive advantage of MSME service firms during COVID-19 – A multi-theoretical approach. *Journal of Business Research*, 148, 378–389. <https://doi.org/10.1016/j.jbusres.2022.05.009>
- Brahmana, R. K., & Kontesa, M. (2024). Does Digital Orientation Enhance Firm Performance? Vision: The Journal of Business Perspective. *Advance online publication*. <https://doi.org/10.1177/09722629241257300>
- Chatterjee, P. (2025). Innovative disruption in financial technology and payment systems. *International Journal of Financial, Accounting, and Management*, 7(2), 289-301. <https://doi.org/10.35912/ijfam.v7i2.3133>
- Chike, N. K., Mbamalu, E. I., Oguanobi, C. A., & Egbunike, C. F. (2023). Big Data Analytics and market competitiveness of selected firms in Lagos State, Nigeria. *Annals of Management and Organization Research*, 4(4), 251-269. <https://doi.org/10.35912/amor.v4i4.1713>
- Clemente-Almendros, J. A., Nicoara-Popescu, D., & Pastor-Sanz, I. (2024). Digital transformation in SMEs: Understanding its determinants and size heterogeneity. *Technology in Society*, 77, 102483. <https://doi.org/10.1016/j.techsoc.2024.102483>
- Dess, G. G., & Robinson, R. B., Jr. (1984). Measuring organizational performance in the absence of objective measures: The case of the privately-held firm and conglomerate business unit. *Strategic Management Journal*, 5(3), 265-273. <https://doi.org/10.1002/smj.4250050306>
- Eton, M., Mwosi, F., Ogwel, B. P., & Olupot, S. P. (2025). Working capital management, accounts receivable, and performance of Small and Medium Enterprises (SMEs). *International Journal of Financial, Accounting, and Management*, 7(3), 453-471. <https://doi.org/10.35912/ijfam.v7i3.3371>
- Fachridian, A., Ramli, A. H., & De Araujo, L. M. (2024). Implementation of Organizational Agility Strategies to Meet The Challenges of Digital Transformation in Government Organizations. *Media Ekonomi dan Manajemen*, 39(2), 215-215. <https://doi.org/10.56444/mem.v39i2.4575>
- Fan, X., Zhao, S., Zhang, B., Wang, S., & Shao, D. (2023). The impact of corporate digital strategic orientation on innovation output. *Heliyon*, 9(5). <https://doi.org/10.1016/j.heliyon.2023.e16371>

- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175-191. <https://doi.org/10.3758/BF03193146>
- Haripin, H., Indraprakoso, D., Wibisono, G., & Utomo, H. (2025). Understanding fintech excellence: A scholarly review of the diploma fintech model for effective global implementation. *International Journal of Financial, Accounting, and Management*, 7(3), 387-406. <https://doi.org/10.35912/ijfam.v7i3.2825>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Jumawan, J., Ali, H., Sawitri, N. N., & Rony, Z. T. (2025). Analysis of leadership, capabilities, and organizational culture on employee performance through motivation. *Annals of Human Resource Management Research*, 5(2), 1-20. <https://doi.org/10.35912/ahrmr.v5i2.2909>
- Kindermann, B., Beutel, S., Garcia de Lomana, G., Strese, S., Bendig, D., & Brettel, M. (2021). Digital orientation: Conceptualization and operationalization of a new strategic orientation. *European Management Journal*, 39(5), 645-657. <https://doi.org/10.1016/j.emj.2020.10.009>
- Kock, N., & Hadaya, P. (2018). Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods. *Information Systems Journal*, 28(1), 227-261. <https://doi.org/10.1111/isj.12131>
- Kő, A., Mitev, A., Kovács, T., Fehér, P., & Szabó, Z. (2022). Digital Agility, Digital Competitiveness, and Innovative Performance of SMEs. *Journal of Competitiveness*, 14(4), 78-96. <https://doi.org/10.7441/joc.2022.04.05>
- Larasandi, D. S., & Satrya, A. (2025). High-performance Work Systems and Psychosocial Safety Climate Influence Work Engagement Through Job Satisfaction Pathways. *Annals of Human Resource Management Research*, 5(3), 817-830. <https://doi.org/10.35912/ahrmr.v5i3.2913>
- Lim, C. H., & Teoh, K. B. (2021). Factors influencing the SME business success in Malaysia. *Annals of Human Resource Management Research*, 1(1), 41-54. <https://doi.org/10.35912/ahrmr.v1i1.380>
- Mahendri, N. M. K., & Astuti, W. T. (2025). Event and relationship marketing strategies in the post-COVID Bali tourism industry: Exploring the mediating effect of satisfaction on loyalty. *International Journal of Financial, Accounting, and Management*, 7(3), 371-385. <https://doi.org/10.35912/ijfam.v7i3.2776>
- Mueller-Saegebrecht, S., & Walter, A. T. (2025). Strategic Agility An Urgent Capability for Successful Business Model Innovation? A Conceptual Process Model and Theoretical Framework. *Strategic Change*, 34(3), 407-428. <https://doi.org/10.1002/jsc.2645>
- Munyepwa, K., Ranganayi, C., Mudzengerere, L., Mutongereni, N., & Gwesu, N. C. (2025). Transforming financial reporting and auditing through artificial intelligence: A Zimbabwean institutional perspective. *International Journal of Financial, Accounting, and Management*, 7(3), 503-517. <https://doi.org/10.35912/ijfam.v7i3.3207>
- Nasution, I. A., Yudianto, I., & Mulyani, S. (2025). Determinants of local government financial performance: The mediating role of e-government. *International Journal of Financial, Accounting, and Management*, 7(3), 353-370. <https://doi.org/10.35912/ijfam.v7i3.2570>
- Nguyen, K. C., Nguyen, N. L., Ho, T. D., & Than, V. H. (2025). Digital transformation, organizational agility, and firm performance in emerging markets: Evidence from Vietnam's machinery sector. *Problems and Perspectives in Management*, 23(3), 342-357. [https://doi.org/10.21511/ppm.23\(3\).2025.25](https://doi.org/10.21511/ppm.23(3).2025.25)
- Nurchahyo, M. A., Hermawan, A., & Anggiani, S. (2025). The Role of Value Creation Innovation in Mediating the Relationship Between Digital Transformation, Strategic Agility, and Organizational Performance. *International Journal of Business, Economics, and Social Development*, 6(2), 182-191. <https://doi.org/10.46336/ijbesd.v6i2.885>

- Okigbo, F. C., Mbamalu, S., & Iruogu, K. (2025). Digital marketing transformation through artificial intelligence: A study of Nigerian small businesses. *International Journal of Financial, Accounting, and Management*, 7(3), 419-433. <https://doi.org/10.35912/ijfam.v7i3.3383>
- Putra, M. R. D., & Millanyani, H. (2026). What Motivates Indonesian Customers to Transact with Specific Merchants? Investigating Preferences in the Brimo Application Using the UTAUT Model. *International Journal of Accounting and Management Information Systems*, 4(1), 1-21. <https://doi.org/10.35912/ijamis.v3i2.3691>
- Syahputra, I., & Nugroho, A. (2025). Analysis of the impact of Customer Value Management (CVM) on increasing Cellular Packet Telkomsel (Study case: PT Telkomsel). *International Journal of Financial, Accounting, and Management*, 7(3), 519-537. <https://doi.org/10.35912/ijfam.v7i3.3720>
- Wall, T. D., Michie, J., Patterson, M., Wood, S. J., Sheehan, M., Clegg, C. W., & West, M. (2004). On the validity of subjective measures of company performance. *Personnel Psychology*, 57(1), 95-118. <https://doi.org/10.1111/j.1744-6570.2004.tb02485.x>
- Wang, Y. (2022). Analyzing the mechanism of strategic orientation towards digitization and organizational performance settings enduring employee resistance to innovation and performance capabilities. *Frontiers in Psychology*, 13, 1006310. <https://doi.org/10.3389/fpsyg.2022.1006310>
- Xu, M., Zhang, Y., Sun, H., Tang, Y., & Li, J. (2024). How digital transformation enhances corporate innovation performance: The mediating roles of big data capabilities and organizational agility. *Heliyon*, 10(14). <https://doi.org/10.1016/j.heliyon.2024.e34905>
- Yang, Y., & Yee, R. W. Y. (2022). The effect of process digitalization initiative on firm performance: A dynamic capability development perspective. *International Journal of Production Economics*, 254, 108654. <https://doi.org/10.1016/j.ijpe.2022.108654>
- Yildiz, T., & Aykanat, Z. (2021). The mediating role of organizational innovation on the impact of strategic agility on firm performance. *World Journal of Entrepreneurship, Management and Sustainable Development*, 17(4), 765-786. <https://doi.org/10.1108/WJEMSD-06-2020-0070>