

DIGITAL CAPABILITY AND DATA-DRIVEN DECISION MAKING IN MSMEs: A CONCEPTUAL FRAMEWORK FOR ADAPTIVE PERFORMANCE

Nia Riana¹, Ucu Supriatna²

¹Universitas Widyatama, Bandung, Indonesia

²Universitas Wanita Internasional, Bandung, Indonesia

Abstract

This conceptual article examines digital capability as a capability for strengthening MSME adaptation and sustainable performance. It integrates established perspectives on resources, dynamic capabilities, organizational learning, networks, and entrepreneurial ecosystems. The manuscript does not claim primary survey, interview, experimental, or statistical data. The synthesis develops a staged framework that connects diagnosis, capability building, implementation, evaluation, and learning. It argues that MSMEs create stronger outcomes when managerial routines convert information and relationships into repeatable decisions rather than treating individual programs or technologies as isolated solutions. The framework identifies practical governance requirements, risks, and propositions for future empirical testing.

Keywords: Digital Capability; MSMEs; Data-Driven Decision Making; Organizational Learning; Adaptive Performance

INTRODUCTION

Digital capability in a small enterprise is best understood as an organizational ability rather than ownership of particular applications. The capability emerges when people, routines, information, and technologies are connected to recurring business decisions. A firm can use inexpensive tools effectively if records are reliable and responsibilities are clear, while a more technologically equipped firm can remain digitally weak when information is fragmented.

Data-driven decision making begins with disciplined capture of operational signals. Sales transactions, inventory movement, receivables, customer inquiries, delivery problems, and supplier performance can become managerial evidence when definitions are consistent. The objective is not to collect every possible data point, but to maintain a limited set of information that directly supports important decisions.

Digital tools create value when they shorten feedback cycles. Managers can compare expected and actual outcomes, identify deviations, and adjust prices, purchasing, promotions, staffing, or fulfillment. This learning loop is particularly important for MSMEs because scarce resources make prolonged mistakes costly.

THEORETICAL FOUNDATION

In the context of digital capability and data-driven decision making, this dimension clarifies the construct and separates capability from simple adoption. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension connects the construct with the resource-based view and dynamic capabilities. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit

business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension explains the role of absorptive capacity and organizational learning. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension identifies why resource constraints change capability formation in MSMEs. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension defines the expected pathway from capability to adaptive performance. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

CAPABILITY DEVELOPMENT

In the context of digital capability and data-driven decision making, this dimension starts with a diagnosis of existing routines and decision bottlenecks. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension requires explicit responsibility for learning and implementation. The relevant managerial object is reliable

operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension develops cumulatively through repeated practice rather than one-time training. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension benefits from simple documentation that preserves organizational memory. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension should progress in stages that match managerial and financial capacity. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

IMPLEMENTATION MECHANISMS

In the context of digital capability and data-driven decision making, this dimension translates strategic intent into small, testable operating changes. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality

of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension uses baseline information so that managers can compare before-and-after conditions. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension assigns an owner, resource limit, review date, and decision criterion to each initiative. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension uses pilots to reduce uncertainty before committing scarce resources. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension ends with an explicit scale, redesign, pause, or discontinue decision. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

A useful implementation sequence is to define the problem, establish a baseline, select a limited intervention, assign responsibility, test at manageable scale, review evidence, and decide whether to scale, redesign, or discontinue. This sequence protects scarce resources while preserving learning.

ECOSYSTEM AND COLLABORATION

In the context of digital capability and data-driven decision making, this dimension depends partly on access to complementary knowledge and resources outside the firm. The relevant

managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension can be strengthened through customers, suppliers, universities, associations, and communities. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension requires the enterprise to evaluate external advice rather than adopt it automatically. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension benefits from reciprocal relationships in which firms also contribute experience and feedback. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension becomes more resilient when relationships are diverse enough to provide alternative pathways. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is

therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

GOVERNANCE AND RISK

In the context of digital capability and data-driven decision making, this dimension requires proportional controls that protect continuity without creating unnecessary bureaucracy. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension should identify information ownership, decision authority, financial limits, and partner obligations. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension must distinguish acceptable experimentation from unmanaged exposure. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension needs periodic review because risks change as an initiative moves from pilot to scale. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension should include transparent records so that decisions can be explained and improved. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is

understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

Governance should specify ownership of information, decision authority, financial limits, partner responsibilities, and review dates. Simple documentation is sufficient when it is consistently used and understood by the people responsible for implementation.

PERFORMANCE AND RESILIENCE

In the context of digital capability and data-driven decision making, this dimension should be evaluated through outcomes as well as adoption or participation indicators. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension links short feedback cycles with faster correction of operational mistakes. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension supports resilience by expanding the range of feasible responses available to the enterprise. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension requires managers to distinguish temporary improvement from repeatable organizational capability. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The

capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension creates stronger long-term value when learning is retained and reused in later decisions. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

MANAGERIAL AND POLICY IMPLICATIONS

In the context of digital capability and data-driven decision making, this dimension implies that owner-managers should focus on routines that improve recurring decisions. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension suggests that support programs should diagnose enterprise needs before prescribing solutions. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension encourages universities and associations to provide applied problem-solving rather than generic exposure. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension requires financial and public institutions to align support with the stage and uncertainty of the initiative. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish

a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

In the context of digital capability and data-driven decision making, this dimension supports evaluation systems that measure capability development, implementation quality, and business outcomes. The relevant managerial object is reliable operational information, and practical attention can be directed to sales, inventory, receivables, customer, supplier, and fulfillment records. For a resource-constrained enterprise, the purpose is not to imitate the systems of a large corporation but to establish a routine that is understandable, affordable, and consistently used. When the routine is connected with an explicit business problem, it can contribute to faster and better-grounded managerial decisions. However, managers should actively guard against fragmented systems, poor data definitions, cybersecurity exposure, and technology adoption without process discipline. The capability is therefore observable in the quality of decisions, follow-up, and learning, not merely in the presence of a tool, partnership, policy, or formal procedure.

CONCEPTUAL FRAMEWORK AND RESEARCH PROPOSITIONS

P1. Stronger digital capability routines are expected to improve the quality of MSME adaptation when they are supported by reliable information, managerial discipline, and access to complementary ecosystem resources.

P2. Stronger digital capability routines are expected to improve the quality of MSME adaptation when they are supported by reliable information, managerial discipline, and access to complementary ecosystem resources.

P3. Stronger digital capability routines are expected to improve the quality of MSME adaptation when they are supported by reliable information, managerial discipline, and access to complementary ecosystem resources.

P4. Stronger digital capability routines are expected to improve the quality of MSME adaptation when they are supported by reliable information, managerial discipline, and access to complementary ecosystem resources.

P5. Stronger digital capability routines are expected to improve the quality of MSME adaptation when they are supported by reliable information, managerial discipline, and access to complementary ecosystem resources.

P6. Stronger digital capability routines are expected to improve the quality of MSME adaptation when they are supported by reliable information, managerial discipline, and access to complementary ecosystem resources.

P7. Stronger digital capability routines are expected to improve the quality of MSME adaptation when they are supported by reliable information, managerial discipline, and access to complementary ecosystem resources.

Future research can test these propositions using longitudinal case studies, surveys, comparative designs, network analysis, or mixed methods. Researchers should distinguish capability inputs, implementation processes, intermediate learning outcomes, and final business outcomes. This distinction can reduce the risk of attributing performance to adoption indicators alone.

LIMITATIONS

This manuscript is conceptual. It does not estimate causal effects, report respondent data, or claim that the proposed relationships apply uniformly across sectors and regions. Firm age, owner capability, market structure, regulation, infrastructure, and local institutions can change the relevance of particular mechanisms.

CONCLUSION

The central argument is that digital capability should be developed as a repeatable organizational capability. For MSMEs, sustainable adaptation depends on connecting knowledge, routines,

resources, relationships, and evaluation. The proposed framework provides a disciplined basis for managerial action and future empirical research without assuming that one technology, program, or partnership is sufficient in every context.

REFERENCES

- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120. <https://doi.org/10.1177/014920639101700108>
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128-152. <https://doi.org/10.2307/2393553>
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91(3), 481-510. <https://doi.org/10.1086/228311>
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71-87. <https://doi.org/10.1287/orsc.2.1.71>
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of sustainable enterprise performance. *Strategic Management Journal*, 28(13), 1319-1350. <https://doi.org/10.1002/smj.640>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 27(2), 185-203. <https://doi.org/10.5465/amr.2002.6587995>
- Stam, E. (2015). Entrepreneurial ecosystems and regional policy: A sympathetic critique. *European Planning Studies*, 23(9), 1759-1769. <https://doi.org/10.1080/09654313.2015.1061484>
- Spigel, B. (2017). The relational organization of entrepreneurial ecosystems. *Entrepreneurship Theory and Practice*, 41(1), 49-72. <https://doi.org/10.1111/etap.12167>
- Roundy, P. T., Bradshaw, M., & Brockman, B. K. (2018). The emergence of entrepreneurial ecosystems: A complex adaptive systems approach. *Journal of Business Research*, 86, 1-10. <https://doi.org/10.1016/j.jbusres.2018.01.032>
- Duchek, S. (2020). Organizational resilience: A capability-based conceptualization. *Business Research*, 13, 215-246. <https://doi.org/10.1007/s40685-019-0085-7>
- Chesbrough, H. W. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Harvard Business School Press.
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems*, 28(2), 118-144. <https://doi.org/10.1016/j.jsis.2019.01.003>
- Verhoef, P. C., et al. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889-901. <https://doi.org/10.1016/j.jbusres.2019.09.022>
- Warner, K. S. R., & Wäger, M. (2019). Building dynamic capabilities for digital transformation. *Long Range Planning*, 52(3), 326-349. <https://doi.org/10.1016/j.lrp.2018.12.001>
- Nambisan, S., Wright, M., & Feldman, M. (2019). The digital transformation of innovation and entrepreneurship. *Research Policy*, 48(8), 103773. <https://doi.org/10.1016/j.respol.2019.03.018>
- Editorial note: authorship, affiliations, acknowledgments, funding, conflicts of interest, and the final manuscript must be confirmed by the actual contributors before submission or publication.