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Knowledge Management and Organizational Resilience: Exploring Dynamic Capability Pathways

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ABSTRACT

Purpose – This study examines the effect of knowledge management on organizational resilience by investigating the mediating role of dynamic capability in increasingly dynamic and uncertain business environments.
Design/methodology/approach – This study adopts a quantitative research design using a cross-sectional survey approach. Data are analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine both the direct effect of knowledge management on organizational resilience and the mediating role of dynamic capability.
Finding/Results – The findings show that knowledge management (KM) positively and significantly influences organizational resilience (OR) and sensing capability and transforming capability. Sensing capability significantly influences seizing capability, while seizing capability significantly influences *t*ransforming capability. However, the sequential mediation KM → Sensing → Seizing → Transforming → OR are not significant. These findings indicate that KM contributes more directly to organizational resilience, while the conversion of knowledge into resilience through dynamic capabilities may require time for knowledge internalization and capability development.
Originality/Value – This study integrates the Knowledge-Based View (KBV) and Dynamic Capability View (DCV) by demonstrating that KM directly strengthens organizational resilience while supporting the development of specific dynamic capabilities. The findings provide a more nuanced understanding of how knowledge and adaptive capabilities contribute to resilience in dynamic business environments.

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1. Introduction

The advancement of globalization, digital transformation, and information technology has created a business environment that is increasingly dynamic, complex, and fraught with uncertainty. These conditions require organizations not only to possess resources and knowledge but also to be able to transform them into adaptive strategic responses to anticipate change, cope with disruptions, and ensure organizational sustainability. This capability is reflected in organizational resilience—that is, an organization's capacity to anticipate, respond to, adapt to, and leverage change and disruptions in a sustainable manner (Linnenluecke, 2017; Duchek, 2020).

One of the key foundations of organizational resilience is knowledge management. The Knowledge-Based View (KBV) perspective positions knowledge as a valuable and hard-to-imitate strategic resource that serves as the foundation for organizational learning, innovation, decision-making, and adaptation (Grant, 1996; Alavi & Leidner, 2001). Although knowledge management has been shown to contribute to innovation, performance, and competitive advantage (Gold et al., 2001; Darroch, 2005), knowledge does not automatically lead to organizational resilience. Knowledge must be converted into action and strategic change through an organization's ability to adapt to its environment (Easterby-Smith & Prieto, 2008). This mechanism can be explained through the Dynamic Capability View (DCV)**.** Dynamic capability refers to an organization's ability to integrate, build, and reconfigure resources and competencies in response to environmental changes (Teece, 2007). Operationally, dynamic capability encompasses interrelated processes, namely sensing— the ability to identify opportunities and threats; seizing— the ability to make decisions and mobilize resources; and transforming— the ability to reconfigure resources, processes, and organizational structures (Teece, 2007; Kump et al., 2019). Thus, knowledge management can be viewed as a strategic input, while dynamic capability is the mechanism that transforms knowledge into the organization's adaptive capabilities (Easterby-Smith & Prieto, 2008; Wilden et al., 2013).

This relationship is also relevant to organizational resilience. The ability to sense enables organizations to detect changes and disruptions; seizing enables organizations to respond through decision-making and the mobilization of resources; and transforming enables the reconfiguration of resources and processes so that organizations can adapt continuously. This sequence ultimately strengthens an organization's ability to cope with disruptions and ensure its sustainability (Teece, 2007; Linnenluecke, 2017; Duchek, 2020). Empirically, You et al. (2023) also found that dynamic capabilities act as mediators in the relationship between organizational resources and organizational resilience.

In the literature on dynamic capabilities, there is a debate over whether dynamic capabilities should be viewed as an aggregate construct representing an organization's overall adaptive capacity or as a set of interrelated capabilities. The aggregate approach effectively explains the overall influence of dynamic capabilities on organizational outcomes but fails to reveal the internal mechanisms of the adaptation process (Wilden et al., 2013; You et al., 2023). Conversely, a multidimensional approach allows researchers to explain how sensing, seizing, and transforming are interrelated and develop sequentially (Teece, 2007; Kump et al., 2019). Empirical support is provided by Zabel and O'Brien (2024), who found that sensing capability influences seizing capability, while seizing capability also influences transforming capability. These findings are reinforced by Kahkonen et al. (2025), who demonstrate that sensing is an antecedent to seizing, and seizing is in turn an antecedent to transforming. Thus, dynamic

capability is sequential and interdependent in nature, rather than merely a collection of standalone capabilities.

This debate is crucial in explaining the research gap addressed by this study. Previous research has shown a positive relationship between knowledge management and organizational resilience (Fani & Danaee Fard, 2015; Saha et al., 2022); indeed, Fani et al. (2017) tested organizational learning as a mediator. However, these studies have not specifically elucidated the internal mechanisms of dynamic capabilities as a series of adaptive processes. Similarly, You et al. (2023) demonstrated the role of dynamic capabilities as mediators toward organizational resilience, but treated them as an aggregate construct; thus, the interrelationships among the sensing, seizing, and transforming capabilities have not been fully elucidated. Meanwhile, Zabel and O'Brien (2024) and Kahkonen et al. (2025) provide evidence that these three capabilities have a sequential relationship; however, their research does not explain the mechanism of sequential mediation from knowledge management to organizational resilience.

This gap highlights the importance of testing dynamic capability as a sequential mediator. Conceptually, knowledge management provides the knowledge base for sensing to identify changes, opportunities, and threats; the results of the sensing process form the basis for the seizing process to select opportunities, make decisions, and mobilize resources; while the transforming process enables organizations to reconfigure resources and processes so that strategic responses can occur sustainably (Teece, 2007; Zabel & O'Brien, 2024; Kahkonen et al., 2025). This sequence provides the foundation for organizations to adapt to disruptions and build organizational resilience.

Therefore, this study positions dynamic capability as a sequential mediator in the relationship between knowledge management and organizational resilience, through the sequence of sensing capability, seizing capability, and transforming capability. This model not only tests whether knowledge management influences organizational resilience, but also explains how and through which stages of capability knowledge is converted into organizational resilience. The integration of the Knowledge-Based View and the Dynamic Capability View is expected to broaden our understanding of the mechanisms by which knowledge is transformed into adaptive capabilities and, subsequently, into organizational resilience, while also providing practical implications for organizations in building knowledge management systems capable of sequentially strengthening sensing, seizing, and transforming capabilities.

2. Literature Review & Hypothesis Development

2.1 Knowledge Management

Knowledge is one of the strategic resources that determines an organization's success because it is intangible, develops through the learning process, and accumulates from both individual and organizational experiences. From the perspective of theKnowledge-Based View (KBV), knowledge is viewed as a strategic asset capable of creating value, driving innovation, and generating sustainable competitive advantage (Grant, 1996). Therefore, organizations not only need to possess knowledge but also require knowledge management (KM) to systematically manage that knowledge so it can be utilized in decision-making, problem-solving, and the creation of organizational value.

Conceptually, knowledge management is a series of processes for acquiring, creating, storing, sharing, and applying knowledge to enhance organizational effectiveness and support the achievement of strategic goals (Alavi and Leidner, 2001). In other words, knowledge

management can be understood as an organization's ability to create, acquire, share, and apply knowledge to support learning, innovation, and organizational performance improvement. In this context, in line with Achmad and Wiratmadja (2025), effective knowledge management not only plays a role in improving organizational performance and competitive advantage but also serves as the foundation for the development of innovation and sustainable organizational capabilities.

In practice, knowledge management encompasses the management of explicit knowledge and tacit knowledge.Explicit knowledge is documented knowledge that is easy to store and transfer, whereas tacit knowledge is embedded in individual experience, intuition, and competence, making it more difficult to document (Nonaka and Takeuchi, 1995). These two types of knowledge complement each other, with explicit knowledge supporting process standardization, while tacit knowledge serves as a source of creativity, innovation, and problem-solving (Nonaka and Takeuchi, 1995). Therefore, organizations need to integrate both to utilize them optimally.

In this study, in line with Achmad and Wiratmadja (2025), knowledge management is operationalized through four main dimensions: knowledge creation, knowledge acquisition, knowledge sharing, and knowledge application. Knowledge creation refers to an organization's ability to generate new knowledge through learning, collaboration, experience, and innovation, thereby creating valuable ideas, solutions, and work practices (Achmad and Wiratmadja, 2025). Knowledge acquisition is an organization's ability to obtain knowledge from various sources—both internal and external—enabling it to understand environmental changes, identify opportunities, and update the organization's knowledge base (Achmad and Wiratmadja, 2025; Alavi and Leidner, 2001). Knowledge sharing is the process of disseminating knowledge among individuals and between organizational units to foster learning, collaboration, and competency development, the success of which is influenced by organizational culture, trust, leadership, and information technology support (Achmad and Wiratmadja, 2025; Nonaka and Takeuchi, 1995; Alavi and Leidner, 2001). Meanwhile, knowledge application is the ability to apply knowledge in decision-making, efficiency improvement, innovation, and problem-solving so that knowledge can be converted into tangible value for the organization (Achmad and Wiratmadja, 2025).

Various studies indicate that knowledge management contributes positively to innovation, organizational capabilities, business effectiveness, and competitiveness. Darroch (2005) found that knowledge management practices enhance innovation and organizational performance, while Gold et al. (2001) and Andreeva and Kianto (2012) demonstrated that knowledge management strengthens organizational capabilities, improves business processes, and enhances competitiveness through continuous learning. However, these benefits do not occur automatically. Knowledge only provides value when it is integrated into organizational processes, used in decision-making, and translated into strategic actions that support organizational change (Easterby-Smith and Prieto, 2008). Based on this discussion, this study positions knowledge management as an antecedent of dynamic capability. Knowledge that is successfully acquired, shared, and applied serves as the foundation for organizations to recognize environmental changes, make strategic decisions, and implement organizational renewal. Thus, knowledge management functions not only as a mechanism for managing knowledge but also as the foundation for learning that shapes dynamic capabilities and ultimately enhances organizational resilience.

2.2 Dynamic Capability

The increasingly dynamic business environment—driven by technological advancements, globalization, digitalization, and uncertainty—requires organizations not only to rely on their existing resources but also to continuously update, integrate, and reconfigure those resources. This capability is known as dynamic capability, which refers to an organization's ability to build, integrate, and reconfigure both internal and external competencies in order to respond to environmental changes (Teece, 2007).

Within the Dynamic Capability View (DCV) framework, dynamic capability is an extension of the Resource-Based View (RBV), which emphasizes that strategic resources must be continuously updated to remain relevant in a changing environment (Barney, 1991; Teece, 2007). Teece (2007) describes dynamic capability through three main processes: sensing, seizing, andtransforming. Sensing is the ability to identify opportunities and threats; seizing is the ability to make decisions and mobilize resources to respond to opportunities and threats; whereas transforming is the ability to reconfigure resources, processes, and organizational structures to adapt to change (Teece, 2007; Yoshikuni et al., 2023).

In the literature, dynamic capability can be treated as an aggregate construct that describes an organization's overall adaptive capacity. However, this approach tends to provide insufficient explanation of the internal mechanisms through which adaptive capabilities are formed. A multidimensional approach views sensing, seizing, and transforming as distinct yet interrelated capabilities. Zabel and O'Brien (2024) found that sensing influences seizing and transforming, while seizing influences transforming. These findings are supported by Kahkonen et al. (2025), who demonstrated that sensing is an antecedent of seizing, and seizing is, in turn, an antecedent of transforming. These findings support the sequential and interdependent nature of dynamic capability.

Based on this perspective, this study does not operationalize dynamic capability as a single aggregate variable, but rather breaks it down into three research variables, namely sensing capability, seizing capability, and transforming capability. These three variables are positioned as mediators that are sequentially related. Knowledge managementprovides the knowledge that forms the basis of sensing capability; sensing capability subsequently serves as the foundation for seizing capability in decision-making and resource mobilization; and seizing capability serves as the foundation for transforming capability in reconfiguring organizational resources and processes (Teece, 2007; Zabel & O'Brien, 2024; Kahkonen et al., 2025). Thus, in this study, dynamic capability functions as a conceptual framework encompassing the three mediating variables, while the mediation mechanism is tested sequentially through the pathways of knowledge management, sensing capability, seizing capability, transforming capability, and organizational resilience. This approach allows the study to explain not only whether knowledge managementcontributes to organizational resilience but also how knowledge is gradually converted into adaptive capabilities, ultimately resulting in organizational resilience.

2.3 Organizational Resilience

Conceptually, organizational resilience is an organization's ability to anticipate, prepare for, respond to, adapt to, and recover from disruptions without losing its core functions (Linnenluecke, 2017). This concept is rooted in the theory of resilience in ecology and psychology (Holling, 1973), and was later adopted in organizational science to explain the ability to cope with uncertainty through continuous learning and adaptation. Unlike risk management, which focuses on prevention, organizational resilience emphasizes an

organization's ability to learn from crises and undergo transformation so that it is not only able to bounce back but also to bounce forward (Duchek, 2020).

The importance of organizational resilience is growing in business environments characterized by VUCA (volatile, uncertain, complex, ambiguous) and BANI (brittle, anxious, non-linear, incomprehensible). Under such conditions, organizations must be able to anticipate change, make decisions quickly, adjust strategies, and update resources to remain competitive (Teece, Peteraf, and Leih, 2016). Therefore, resilience is viewed as a capability built through organizational learning, flexibility, and competency development, rather than as a characteristic that emerges spontaneously (Lengnick-Hall, Beck, and Lengnick-Hall, 2011).

Duchek (2020) explains that organizational resilience is built through the processes of anticipation, coping, and adaptation, which heavily depend on the organization's ability to adapt dynamically. In line with this, Linnenluecke (2017) also emphasizes that resilience is built through a combination of the ability to anticipate change, maintain operations during a crisis, and undergo transformation once the crisis ends. From the perspective of the Dynamic Capability View (DCV), organizational resilience is the result of an organization's ability to integrate, update, and reconfigure resources in response to environmental changes (Teece, 2007). Meanwhile, the Knowledge-Based View (KBV) explains that this capability is built through the process of acquiring, sharing, and applying knowledge as the foundation of organizational learning (Grant, 1996). Thus, organizational resilience is viewed as the result of synergy between knowledge management and dynamic capability, which enables organizations to anticipate, respond to, adapt to, and recover from various disruptions, thereby ensuring the organization's long-term sustainability. In this study, organizational resilience is operationalized based on the concept developed by Maslani et al. (2024), who view resilience as an organization's ability to maintain operational continuity while effectively adapting to changes and various environmental disruptions.

In line with this concept, organizational resilience is represented by four indicators: anticipation, response, adaptation, and recovery (Maslani et al., 2024). Anticipation reflects an organization's ability to identify potential risks, interpret environmental changes, and prepare anticipatory measures before disruptions occur (Maslani et al., 2024). Response indicates an organization's ability to provide a swift, appropriate, and coordinated response when facing changes or crises (Maslani et al., 2024). Adaptation describes an organization's ability to adjust its strategies, business processes, and resource utilization to remain aligned with environmental dynamics (Maslani et al., 2024). Meanwhile, recovery reflects an organization's ability to restore operational activities, learn from the crisis, and strengthen its capacity to cope with future disruptions. These four indicators comprehensively represent organizational resilience as a capability that enables organizations not only to survive but also to thrive in an increasingly dynamic and uncertain business environment (Maslani et al., 2024).

2.4 Hypothesis Development

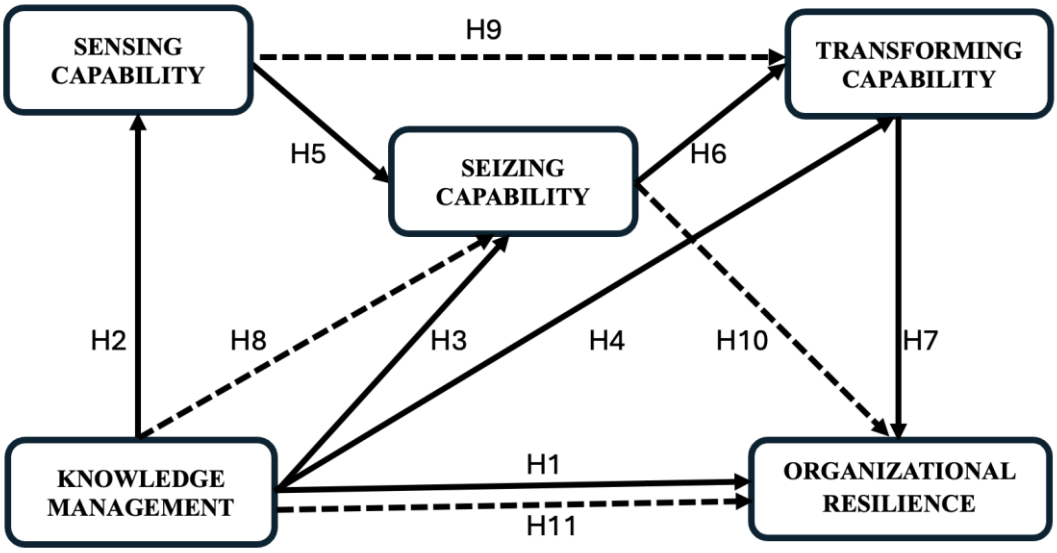
This study integrates the Knowledge-Based View (KBV) and the Dynamic Capability View (DCV) to explain the mechanisms by which organizational resilience is formed through knowledge management and the development of organizational capabilities. From the KBV perspective, knowledge is a strategic resource that forms the basis for value creation, learning, and organizational adaptability (Grant, 1996). However, possessing knowledge does not automatically result in organizational resilience. Knowledge must be managed and converted into action and organizational change in order to enable an effective response to environmental dynamics (Alavi & Leidner, 2001; Teece, 2007).

Based on this perspective, knowledge management (KM) is positioned as an independent variable that provides and manages organizational knowledge, while organizational resilience (OR) is positioned as a dependent variable representing an organization's ability to anticipate, respond to, adapt to, and maintain its sustainability when facing disruptions (Linnenluecke, 2017; Duchek, 2020). Among these two variables, this study does not treat dynamic capability as a single aggregate mediating construct but breaks it down into three mediating variables, namely sensing capability (SS), seizing capability (SZ), and transforming capability (TF).

These three capabilities are positioned as sequential multimediators, as the process of converting knowledge into organizational resilience is viewed as occurring through interdependent stages. Knowledge management provides the knowledge that enables an organization to engage in sensing, which involves recognizing environmental changes, opportunities, and threats. The results of sensing then form the basis for seizing, which involves decision-making and the mobilization of resources to respond to these opportunities and threats. Furthermore, the decisions and resource mobilization through seizing drive transforming, which involves the reconfiguration of the organization's resources, processes, structures, and competencies to enable continuous adaptation (Teece, 2007; Yoshikuni et al., 2023).

This sequential logic is supported empirically by Zabel and O'Brien (2024), who demonstrate the interrelationship between sensing, seizing, and transforming, as well as by Kahkonen et al. (2025), who show that sensing capabilityserves as an antecedent to seizing capability, while seizing capability in turn serves as an antecedent to transforming capability. These findings reinforce the view that dynamic capability is not merely a collection of standalone capabilities, but rather a sequential and interdependent capability process.

Figure 1. Conceptual Model



Thus, the research model presented in Figure 1 elucidates the primary mechanisms through which organizational resilience is fostered by knowledge management via the processes of sensing, seizing, and transforming. This sequential multimediator approach enables the study to explain not only whether knowledge management influences organizational resilience, but also how knowledge is progressively converted through sensing, seizing, and transforming to

produce organizational resilience. Therefore, the research hypotheses were subsequently developed to test each direct relationship between constructs as well as the indirect influence of knowledge management on organizational resilience through this sequence of three mediators.

This research model proposes a structural sequence that theoretically links knowledge management (KM) with sensing capability (SS), seizing capability (SZ), and transforming capability (TF), as well as organizational resilience (OR). This sequence represents the interrelationships among the constructs consistent with the dynamic capabilitiesperspective, rather than temporal developmental stages that could be demonstrated through a cross-sectional design.

2.4.1 The Direct Relationship Between Knowledge Management and Organizational Resilience

From the perspective of the Knowledge-Based View (KBV), knowledge is a strategic resource that enables organizations to understand their environment, enhance learning, improve decision-making, and develop responses to change (Grant, 1996; Alavi & Leidner, 2001). Through knowledge management (KM), organizations systematically acquire, create, store, share, and apply knowledge so that it is available when the organization faces change or disruption. Thus, knowledge management (KM) functions not only as a mechanism for managing information but also as a foundation that enables organizations to maintain their adaptive capacity.

This relationship is relevant to the concept of organizational resilience (OR), which describes an organization's ability to anticipate change, cope with disruptions, adapt, and maintain or restore organizational functions after facing environmental pressures (Linnenluecke, 2017). Knowledge that is available and accessible in a timely manner enables organizations to learn from past experiences, recognize patterns of change, reduce uncertainty, and make more responsive decisions when facing disruptions (Linnenluecke, 2017; Duchek, 2020). Therefore, the more effectively an organization manages knowledge, the greater its capacity to develop responses and adaptations that support organizational resilience.

Empirically, the relationship between knowledge management (KM) and organizational resilience (OR) has been supported by various studies. Fani and Danaee Fard (2015), through a study of 28 public organizations in Iran involving 270 middle and senior managers, found that knowledge management is positively and significantly associated with organizational resilience. These findings are reinforced by Mafabi and Kabagambe (2021), who demonstrated—through a qualitative study of public organizations—that the practices of knowledge acquisition, knowledge creation, knowledge sharing, and knowledge storage and retrieval can be used to build mechanisms of organizational resilience in the face of various environmental challenges. More recent quantitative evidence is also provided by Zheng, Shen, and Liu (2022), who found that knowledge management capability has a positive and significant effect on the development of organizational resilience among SMEs in China. Based on this theoretical foundation and empirical evidence, the more effectively an organization acquires, stores, shares, and applies knowledge, the greater its ability to anticipate change, respond to disruptions, and adapt to changing environmental conditions. Therefore, the research hypothesis can be formulated as follows:

H1: Knowledge Management (KM) has a positive and significant effect on Organizational Resilience (OR).

2.4.2 The Relationship Between Knowledge Management and Dynamic Capability

From the perspective of the Knowledge-Based View (KBV), knowledge is a strategic resource that forms the basis for the development of organizational capabilities because it evolves through learning, experience, and interactions among organizational members (Grant, 1996). Through knowledge management (KM), organizations acquire, create, share, store, and apply knowledge to enhance learning, the quality of decision-making, and the ability to respond to environmental changes (Alavi & Leidner, 2001). Thus, the effectiveness of KM is determined not only by an organization's ability to manage knowledge but also by its ability to convert that knowledge into capabilities that can be used to address change.

From the Dynamic Capability View (DCV) perspective, dynamic capability refers to an organization's ability to integrate, build, and reconfigure resources and competencies in response to environmental changes (Teece, 2007). Knowledge serves as a critical foundation in this process because it enables organizations to understand changes, identify opportunities and threats, make decisions, and update their resources. Easterby-Smith and Prieto (2008) identify KM as a key antecedent in the development of dynamic capability, while Yoshikuni et al. (2023) demonstrate the link between knowledge management and the development of an organization's dynamic capabilities. More recent evidence is provided by Kowshik et al. (2025), through a meta-analysis of 129 studies, which demonstrates the importance of KM processes—particularly knowledge transfer—as a preconditioned capability for the development of dynamic capabilities and organizational outcomes.

In this study, dynamic capability is not treated as a single aggregate construct but is operationalized through three distinct variables: sensing capability, seizing capability, and transforming capability. Sensing capability represents an organization's ability to use knowledge to recognize changes, opportunities, and threats; seizing capability represents the ability to transform that knowledge and information into decisions and the mobilization of resources; while transforming capability represents the ability to use knowledge to reconfigure an organization's resources, processes, and competencies (Teece, 2007; Yoshikuni et al., 2023). Thus, KM is theoretically linked to each dimension of dynamic capability, as explained below.

First, organizations with effective KM have access to internal and external knowledge, enabling them to better monitor changes in technology, markets, customers, and competitors. The processes of knowledge creation, knowledge acquisition, knowledge sharing, and knowledge application enrich the information organizations use to identify opportunities and threats, thereby strengthening sensing capability (Alavi & Leidner, 2001; Easterby-Smith & Prieto, 2008). Pascucci et al. (2024) also demonstrate that the integration of knowledge with dynamic capabilities enables organizations to develop the ability to adapt to change and manage the complexity of innovation. Based on these arguments, the following hypothesis can be formulated:

H2: Knowledge Management (KM) has a positive and significant effect on Sensing Capability (SC).

Second, the knowledge made available through KM is not only used to understand the environment but also serves as the basis for organizations to determine strategic actions. Knowledge regarding opportunities, threats, customer needs, and market conditions enables organizations to evaluate alternatives, set priorities, and allocate resources more effectively. Consequently, the more effective KM is, the greater an organization's capacity to engage in the seizingprocess to capitalize on opportunities and respond to threats through decision-

making and resource mobilization (Teece, 2007; Yoshikuni et al., 2023; Kowshik et al., 2025). Therefore, the following can be formulated:

H3: Knowledge Management (KM) has a positive and significant effect on Seizing Capability (SZ).

Third, KM also provides the knowledge organizations need to update and reconfigure resources, processes, and competencies. Knowledge that is effectively acquired and shared enables organizations to learn from experience, identify the need for change, and develop new ways of combining resources. Consequently, KM can strengthen transforming capability, which is an organization's ability to undergo change and reconfiguration to remain aligned with environmental demands (Teece, 2007; Pascucci et al., 2024; Kowshik et al., 2025). Based on this argument, the following can be formulated: ::

H4: Knowledge Management (KM) has a positive and significant effect on Transforming Capability (TF).

In addition to the direct relationship between KM and these three variables, this study views dynamic capability as a process that issequential and interdependent. Zabel and O'Brien (2024) empirically demonstrate that dynamic capabilities develop through the sequence of sensing, seizing, and transforming, while Kahkonen et al. (2025) show that sensing capability serves as an antecedent to seizing capability, and seizing capability subsequently serves as an antecedent to transforming capability. These findings provide a basis for the understanding that sensing, seizing, and transforming capabilities are not merely independent of one another but form a gradual adaptation mechanism.

In this mechanism, an organization's ability to recognize changes through sensing provides the informational basis for seizing. Organizations that are better able to identify opportunities and threats will have a stronger foundation for setting priorities, making decisions, and mobilizing resources appropriately (Teece, 2007; Zabel & O'Brien, 2024; Kahkonen et al., 2025). Thus, sensing capability is expected to enhance seizing capability, leading to the formulation of:

H5: Sensing Capability (SC) has a positive and significant effect on Seizing Capability (SZ).

Furthermore, seizing results in decisions and the mobilization of resources that must be translated into organizational change. Strategic decisions without the ability to reconfigure resources and processes will not lead to sustainable adaptation. Consequently, seizing capability serves as the foundation for the development of transforming capability, as decisions and the mobilization of resources create the conditions for an organization to undertake reconfiguration and renewal (Teece, 2007; Zabel & O'Brien, 2024; Kahkönen et al., 2025).

Based on this argument, the following can be formulated:

H6: Seizing Capability (SZ) has a positive and significant effect on Transforming Capability (TF).

2.4.3 The Effect of Dynamic Capabilities on Organizational Resilience

In a dynamic and uncertain business environment, organizational resilience is determined not only by an organization's ability to maintain operations in the face of disruptions, but also by its ability to adapt and implement changes after a disruption occurs. From the perspective of the Dynamic Capability View (DCV), this ability depends on the organization's capacity to continuously integrate, build, and reconfigure resources and competencies (Teece, 2007). Thus, dynamic capability provides a mechanism that enables organizations to transform their responses to change into adaptive capabilities that support organizational resilience.

Conceptually, organizational resilience encompasses an organization's ability to anticipate change, cope with disruptions, and adapt after a disruption occurs (Linnenluecke, 2017; Duchek, 2020). These three processes are interrelated with dynamic capability. Sensing capability enables an organization to recognize changes, opportunities, and threats; seizing capability enables an organization to make decisions and mobilize resources; while transforming capability enables an organization to reconfigure resources, processes, structures, and competencies to align with environmental demands (Teece, 2007; Yoshikuni et al., 2023). Therefore, the better an organization's ability to carry out these three processes, the greater its capacity to cope with and adapt to disruptions.

Among these three capabilities, transforming capability plays a crucial role in building organizational resiliencebecause this capability represents the stage at which decisions and mobilized resources are translated into organizational change. Organizations capable of rapidly reconfiguring their resources, business processes, structures, and competencies will be better able to adapt to changing environmental conditions and maintain operational sustainability (Teece, 2007; Teece et al., 2016). Thus, transforming capability enables organizations not only to respond to disruptions temporarily but also to implement the necessary updates to address subsequent changes.

This argument is supported empirically by research demonstrating the relationship between dynamic capabilities and organizational adaptability. You et al. (2023) found that dynamic capabilities serve as a key mechanism in building organizational resilience. Meanwhile, Zabel and O'Brien (2024) demonstrate that transforming capability is a critical stage in the sequence of dynamic capabilities following the sensing and seizing processes. Kahkonen et al. (2025) also show that seizing capability serves as an antecedent to transforming capability, indicating that the ability to transform represents an advanced stage in the organizational adaptation process. Based on these arguments, the stronger an organization's ability to reconfigure its resources and processes, the greater its capacity to adapt and ensure sustainability when facing disruptions. Therefore, the following hypothesis can be formulated:

H7: Transforming Capability (TF) has a positive and significant effect on Organizational Resilience (OR).

2.4.4 The Role of Dynamic Capability as a Mediator in the Relationship Between Knowledge Management and Organizational Resilience

In previous studies, the relationship between knowledge management (KM) and organizational resilience (OR) has also been examined through a mediation mechanism. Fani, Danaee Fard, and Yakhkeshi (2017) specifically tested organizational learning as a mediator in the relationship between knowledge management (KM) and organizational resilience (OR) in public organizations in Iran. The findings of Fani, Danaee Fard, and Yakhkeshi (2017) indicate that knowledge management (KM) and organizational learning both contribute to enhancing organizational resilience, but the role of organizational learning as a mediator was not found to be effective in enhancing organizational resilience (OR). This finding is significant because it suggests that the presence of knowledge and learning processes does not fully explain how knowledge is converted into organizational capabilities that foster resilience. The limitations of this mediating mechanism open the door to identifying mechanisms of alternative capabilities that are better able to explain the process of converting knowledge management (KM) into organizational resilience (OR).

From the Dynamic Capability View, knowledge must not only be acquired but also utilized to recognize change (sensing), take strategic action (seizing), and reconfigure organizational resources and processes (transforming) (Teece, 2007). Therefore, this study develops dynamic capability as a multimediator sequential, by testing whether the conversion of knowledge management (KM) into organizational resilience (OR) occurs through a sequence of sensing capability, seizing capability, and transforming capability. This approach is expected to explain mechanisms not yet revealed in previous research, namely how knowledge managed by an organization is gradually converted into adaptive capabilities and subsequently into organizational resilience.

Conceptually, this sequential mediation is supported by Zabel and O'Brien (2024), who highlight the sequential nature of sensing, seizing, and transforming, as well as by Kahkonen et al. (2025), who found that sensing capability serves as an antecedent to seizing capability, and seizing capability in turn serves as an antecedent to transforming capability. These findings reinforce the argument that these three capabilities constitute a series of interdependent processes. Since this sequential sequence of dynamic capabilities culminates in transforming capability, which strengthens organizational resilience, knowledge management can conceptually exert an indirect influence on organizational resilience through the mechanisms of sensing, seizing, and transforming.

Thus, this study conceptualizes dynamic capability as a multimediator sequential, rather than as a single aggregate mediator construct. Structurally, sensing capability (SS) is positioned as the mechanism linking knowledge management (KM) to seizing capability (SZ), and seizing capability (SZ) is positioned as the mechanism linking sensing capability (SS) to transforming capability (TF), in accordance with the theoretical sequence outlined in the Dynamic Capability View by Teece (2007). Finally, transforming capability (TF) connects sensing capability (SS) with organizational resilience (OR). Based on these structural relationships, this study examines whether sensing capability (SS), seizing capability (SZ), and transforming capability (TF)—in that sequential order within the structural model—mediate the relationship between knowledge management (KM) and organizational resilience (OR). This approach allows for the examination of the internal mechanisms through which organizational knowledge is converted into organizational resilience via sequential capability stages. Based on this argument, the mediation hypotheses are formulated as follows:

H8: Sensing Capability positively and significantly mediates the relationship between Knowledge Management and Seizing Capability.

H9: Seizing Capability positively and significantly mediates the relationship between Sensing Capability and Transforming Capability.

H10: Transforming Capability positively and significantly mediates the relationship between Seizing Capability and Organizational Resilience.

H11: Sensing Capability, Seizing Capability, and Transforming Capability sequentially, positively, and significantly mediate the relationship between Knowledge Management and Organizational Resilience.

3. Methodology

This study employs a quantitative approach with an explanatory research design to examine the causal relationship between knowledge management, dynamic capability, and organizational resilience. The study utilizes a cross-sectional design, in which data collection is conducted at a single point in time to describe the state of the research variables (Sekaran

and Bougie, 2016). This study uses a cross-sectional design, so all research constructs are measured during a single data collection period. Thus, PLS-SEM analysis is used to test the hypothesized structural relationships, but it is not intended to establish a temporal sequence or causal progression among the constructs. Consequently, the relationships among knowledge management (KM), sensing capability (SS), seizing capability (SZ), transforming capability (TF), and organizational resilience (OR) are interpreted based on their consistency with the proposed theoretical model.

Table 1. Sample Size Based on Cohen

Max. Number of Arrows Pointing at a Construct	Significance Level											
	10%				5%				1%			
	Minimum R^2				Minimum R^2				Minimum R^2			
	0.10	0.25	0.50	0.75	0.10	0.25	0.50	0.75	0.10	0.25	0.50	0.75
2	72	26	11	7	90	33	14	8	130	47	19	10
3	83	30	13	8	103	37	16	9	145	53	22	12
4	92	34	15	9	113	41	18	11	158	58	24	14
5	99	37	17	10	122	45	20	12	169	62	26	15
6	106	40	18	12	130	48	21	13	179	66	28	16
7	112	42	20	13	137	51	23	14	188	69	30	18
8	118	45	21	14	144	54	24	15	196	73	32	19
9	124	47	22	15	150	56	26	16	204	76	34	20
10	129	49	24	16	156	59	27	18	212	79	35	21

Source: Hair et al., 2017

The study population consists of managers that have implemented knowledge management practices. At least one respondent was selected from each company using purposive sampling based on the following criteria: (1) holding the position of manager, senior manager, or director; (2) having at least two years of work experience; and (3) being involved in organizational decision-making and playing a role in the development of knowledge management within the organization. The sample size was determined in accordance with the recommendations of Partial Least Squares Structural Equation Modeling (PLS-SEM), taking into account the model's complexity and the number of indicators (Hair et al., 2022). Before model estimation was performed using PLS-SEM, the adequacy of the sample size was determined by considering the principle of statistical power. Based on Table 1from Hair et al. (2017), which refers to Cohen's power analysis approach, a model with a maximum of two predictors, a minimum $R^2 = 0.10$, and a 5% significance level requires at least 90 observations. The units of observation are managerial respondents, while the respondents' perceptions are used to represent the organizational conditions that form the context of the study

Primary data were collected via an online questionnaire using Google Forms with a six-point Likert scale (1 = strongly disagree to 6 = strongly agree) to reduce the tendency of respondents to choose neutral answers (Puspitasari et al., 2023). The study involved three main constructs: knowledge management, dynamic capability, and organizational resilience, which were adapted from previous research instruments that had been tested for validity and reliability. Knowledge management was measured through the dimensions of knowledge creation, knowledge acquisition, knowledge sharing, and knowledge application (Achmad and Wiratmadja, 2025). Sensing capability, seizing capability, and transforming capability were measured using indicators previously employed in the study by Yoshikuni et al. (2023).

Meanwhile, organizational resilience was measured through four indicators: anticipation, response, adaptation, and recovery—which were previously used in the study by Maslani et al. (2024).

Furthermore, in this study, the potential for common method bias was considered from the research design stage because all main constructs—namely, knowledge management (KM), dynamic capability (DC), and organizational resilience (OR)—were measured based on the perceptions of managerial respondents using the same questionnaire. To minimize the possibility of common method variance, several procedures were implemented prior to data collection. First, respondents were informed that participation was voluntary and that their responses would be treated anonymously and confidentially. The questionnaire also did not request information that could directly identify either the respondents or their organizations, thereby reducing the tendency to provide socially desirable answers. Second, items for the predictor, mediator, and criterion constructs were placed in separate sections of the questionnaire, and the hypothesized relationships between variables were not explained to respondents. This created a psychological separation between the constructs being measured and reduced the tendency for respondents to provide answers consistently based on perceived relationships. Third, the instructions for completing the questionnaire were formulated neutrally, asking respondents to provide assessments based on the organization's actual conditions, and there were no correct or incorrect answers. These procedures were implemented as preventive measures to reduce the likelihood of bias stemming from the measurement method itself. Nevertheless, since all constructs were derived from the same source and collected during the same data collection period, these procedures were not intended to eliminate common method bias entirely, but rather to minimize potential bias from the research design stage onward.

Data analysis was conducted using SmartPLS with the PLS-SEM method, which is suitable for analyzing relationships among latent variables, mediation models, and research oriented toward prediction and theory development (Hair et al., 2022). The analysis consisted of two stages: evaluation of the measurement model (outer model) and the structural model (inner model). The evaluation of the outer model included indicator reliability(outer loadings > 0.70), internal consistency reliability (Cronbach's Alpha and Composite Reliability > 0.70), convergent validity (AVE > 0.50), and discriminant validity using the Heterotrait–Monotrait Ratio (HTMT) and Fornell-Larcker.

Furthermore, the structural model (inner model) was evaluated using the coefficient of determination R^2, effect size (f^2), multicollinearity VIF, predictive relevance Q^2, and hypothesis testing via the SmartPLS bootstrapping process, while the mediating effect was assessed based on the significance of the indirect effect between knowledge management and organizational resilience through dynamic capability. In addition to evaluating the model's explanatory power via R^2 and predictive relevance Q^2, this study used PLSpredict to assess out-of-sample predictive performance by comparing the RMSE and MAE values between PLS-SEM and the linear model (LM) as a comparison model. A positive Q^2 value indicates the presence of predictive relevance, while the predictive superiority of PLS-SEM is evaluated based on prediction errors relative to the LM. The PLSpredict procedure in this study uses 10 folds and 10 repetitions with a fixed seed in the random number generator to produce more stable and replicable prediction estimates, as each observation has the opportunity to be used in the training and testing processes, and the data split is repeated across several configurations.

Thus, the model's predictive performance is not determined solely based on Q^2, but also based on the patterns of RMSE and MAE for PLS-SEM compared to LM.

4. Result and Discussion

4.1 Respondent Profile

A total of 115 respondent records were successfully collected through an online survey at the managerial level from 61 companies. A total of 54 companies provided two respondents—one from the holding company and one from the operating company—while the remaining 7 companies provided one respondent each. This structure indicates that some respondents came from organizations that are part of the same holding corporate structure.

Thus, the number of respondents does not fully represent the number of organizational units at the holding company level. However, as previously mentioned, the unit of observation is managerial respondents, while the respondents' perceptions are used to represent the organizational conditions that serve as the context for the study. This circumstance must be taken into account when interpreting the results, as respondents from the same organization or within a related corporate structure may provide responses that are not entirely independent.

Table 2. Profile of Respondents

Respondent	Amount of Data	Percentage
Owner		
State_Owned Company	40	35%
Private	75	65%
Postion		
Director	2	2%
Senior Manager	46	40%
Manager	67	58%
Gender		
Male	80	70%
Female	35	30%
Age Range		
25-35 Years old	63	55%
>35 Years old	52	45%

Source: Compiled by Researcher

All of these data met the criteria for analysis in this study, and were subsequently used as the basis for empirical analysis to test the research model that had been developed. The respondent profiles, which include demographic and organizational characteristics, are presented in detail in Table 2, thereby providing an overview of the composition of the sample that was the subject of this study.

As shown in Table 2, the respondents participating in this study were predominantly male (70%), while female accounted for 30%. Meanwhile, in terms of organizational affiliation, 65% of respondents worked at non-state-owned enterprises and 35% at state-owned enterprises. Based on age, the majority of respondents were in the 25–35 year age range (55%), while 45% were over 35 years old, indicating that most respondents were of working age and had sufficient experience in managerial activities. In terms of job titles, 58% of respondents were managers, 40% senior managers, and 2% directors. Thus, this

composition of respondents indicates that the majority hold managerial positions involved in organizational decision-making and are therefore considered to have a sufficient understanding of knowledge management practices, the development of dynamic capabilities, and organizational resilience within their respective organizations.

4.2 Results of the Measurement Model Evaluation (Outer Model)

An evaluation of the measurement model (outer model) was conducted to ensure that all constructs in the study met the requirements for validity and reliability before testing the structural model (inner model). The construct measurement model in this study follows previous research by Achmad and Wiratmadja (2025), which used a reflective-reflective model to measure the knowledge management construct and its dimensions. Meanwhile, other constructs—such as sensing capability, seizing capability, transforming capability, and organizational resilience—and their indicators are the same as in previous studies by Yoshikuni et al. (2023) and Maslani et al. (2024), which also used a reflective model. Referring to the guidelines by Hair et al. (2022), the evaluation of the outer model for reflective constructs includes testing indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. This stage aims to ensure that each indicator is able to consistently reflect the construct being measured and possesses adequate discriminant validity relative to other constructs.

Table 3. Test Results of Indicators Reliability, Internal Consistency Reliability, Convergent Validity

Variable	Dimension	Indikator	Outer Loading	CA	CR	AVE
KM	Knowledge Creation (KC)			0,828	0,879	0,594
		KC1	0,825			
		KC2	0,780			
		KC3	0,746			
		KC4	0,793			
		KC5	0,704			
	Knowledge Acqusition (KA)			0,846	0,890	0,620
		KA1	0,722			
		KA2	0,769			
		KA3	0,871			
		KA4	0,746			
		KA5	0,820			
	Knowledge Sharing (KS)			0,851	0,894	0,630
		KS1	0,774			
		KS2	0,844			
		KS3	0,784			
		KS4	0,857			
		KS5	0,700			
	Knowledge Application (KAP)			0,896	0,924	0,708
		KAP1	0,848			
		KAP2	0,885			
		KAP3	0,816			

	KAP4	0,794			
	KAP5	0,860			
SS			0,908	0,929	0,686
	SS1	0,814			
	SS2	0,853			
	SS3	0,810			
	SS4	0,750			
	SS5	0,871			
	SS6	0,867			
SZ			0,912	0,932	0,697
	SZ1	0,773			
	SZ2	0,858			
	SZ3	0,864			
	SZ4	0,798			
	SZ5	0,855			
	SZ6	0,856			
TF			0,896	0,921	0,660
	TF1	0,708			
	TF2	0,863			
	TF3	0,860			
	TF4	0,837			
	TF5	0,792			
	TF6	0,802			
OR			0,847	0,897	0,686
	OR1	0,771			
	OR2	0,802			
	OR3	0,855			
	OR4	0,881			

Source: Compiled by researcher by SmartPLS-SEM

Based on the results of the initial evaluation, the reliability and validity test results shown in Table 3 indicate that all indicators met the test criteria. However, when the discriminant validity test was conducted, as shown in Tables 4 and 5, several indicators were found not to meet the recommended criteria and therefore needed to be eliminated from the measurement model. The indicators that were eliminated include KC5, KA1, KS5, KAP1, KAP2, SS4, SZ1, and TF1. The removal of these indicators was not done solely to obtain a model with better statistics, but was rather based on a simultaneous evaluation of outer loadings, construct reliability, convergent validity, discriminant validity, and the substantive relevance of the indicators to the conceptual definition of the construct. Thus, an indicator is not automatically removed simply because it has a relatively low loading value, as long as it retains theoretical relevance and is necessary to maintain the conceptual scope and completeness of representation of the construct being measured (Hair et al., 2022).

Table 4. HTMT and Fornell-Larcker

	KC	**KA**	**KS**	**KAP**	**SS**	**SZ**	**TF**	**OR**
KC	0,771	0,936	0,935	0,882	0,868	0,834	0,885	0,911
KA	0,794	0,787	0,958	0,974	0,850	0,881	0,877	0,941

KS	0,785	0,823	0,794	1,028	0,832	0,771	0,885	0,936
KAP	0,763	0,857	0,898	0,841	0,799	0,779	0,849	0,878
SS	0,753	0,752	0,734	0,722	0,828	0,961	0,864	0,787
SZ	0,724	0,775	0,680	0,704	0,876	0,835	0,878	0,770
TF	0,763	0,771	0,778	0,763	0,781	0,795	0,812	0,876
OR	0,762	0,806	0,796	0,770	0,694	0,679	0,769	0,828

Notes: Fornell-Larcker Criterion: below the diagonal; HTMT: above the diagonal
Source: Compiled by researcher by SmartPLS-SEM

Table 5. Cross Loading

	KC	**KA**	**KS**	**KAP**	**SS**	**SZ**	**TF**	**OR**
KC1	**0,825**	0,662	0,627	0,657	0,599	0,546	0,622	0,584
KC2	**0,780**	0,592	0,591	0,558	0,506	0,500	0,607	0,598
KC3	**0,746**	0,584	0,589	0,579	0,516	0,456	0,451	0,620
KC4	**0,793**	0,594	0,615	0,576	0,618	0,590	0,666	0,679
KC5	**0,704**	0,625	0,601	0,562	0,661	0,696	0,588	0,455
KA1	0,579	**0,722**	0,597	0,604	0,729	0,778	0,642	0,552
KA2	0,524	**0,769**	0,633	0,657	0,466	0,490	0,497	0,578
KA3	0,763	**0,871**	0,726	0,788	0,670	0,659	0,723	0,749
KA4	0,494	**0,746**	0,490	0,539	0,409	0,484	0,511	0,541
KA5	0,720	**0,820**	0,756	0,750	0,655	0,631	0,638	0,717
KS1	0,647	0,699	**0,774**	0,655	0,535	0,521	0,583	0,693
KS2	0,645	0,643	**0,844**	0,732	0,573	0,528	0,662	0,640
KS3	0,539	0,601	**0,784**	0,701	0,582	0,514	0,592	0,603
KS4	0,683	0,742	**0,857**	0,782	0,700	0,617	0,728	0,681
KS5	0,591	0,570	**0,700**	0,689	0,507	0,511	0,506	0,531
KAP1	0,668	0,749	0,784	**0,848**	0,605	0,586	0,584	0,685
KAP2	0,732	0,762	0,807	**0,885**	0,671	0,631	0,700	0,716
KAP3	0,582	0,649	0,708	**0,816**	0,580	0,541	0,545	0,566
KAP4	0,583	0,697	0,700	**0,794**	0,554	0,579	0,685	0,581
KAP5	0,632	0,743	0,773	**0,860**	0,621	0,621	0,692	0,679
SS1	0,536	0,558	0,497	0,500	**0,814**	0,722	0,572	0,496
SS2	0,659	0,640	0,615	0,606	**0,853**	0,794	0,699	0,655
SS3	0,614	0,600	0,621	0,554	**0,810**	0,720	0,652	0,575
SS4	0,662	0,674	0,680	0,741	**0,750**	0,600	0,617	0,611
SS5	0,661	0,662	0,644	0,634	**0,871**	0,779	0,683	0,587
SS6	0,603	0,598	0,581	0,548	**0,867**	0,729	0,650	0,516
SZ1	0,605	0,713	0,609	0,640	0,700	**0,773**	0,645	0,717
SZ2	0,581	0,673	0,555	0,572	0,713	**0,858**	0,666	0,539
SZ3	0,641	0,649	0,544	0,569	0,761	**0,864**	0,648	0,607
SZ4	0,579	0,573	0,530	0,575	0,694	**0,798**	0,640	0,439
SZ5	0,597	0,637	0,609	0,575	0,734	**0,855**	0,707	0,578
SZ6	0,620	0,635	0,556	0,596	0,781	**0,856**	0,675	0,519
TF1	0,555	0,565	0,468	0,475	0,614	0,666	**0,708**	0,550
TF2	0,695	0,716	0,711	0,684	0,661	0,647	**0,863**	0,698
TF3	0,637	0,708	0,674	0,658	0,753	0,782	**0,860**	0,641

TF4	0,626	0,603	0,630	0,627	0,597	0,582	**0,837**	0,649
TF5	0,593	0,558	0,661	0,647	0,593	0,555	**0,792**	0,623
TF6	0,603	0,590	0,631	0,613	0,577	0,584	**0,802**	0,578
OR1	0,612	0,615	0,613	0,535	0,495	0,492	0,497	**0,771**
OR2	0,587	0,630	0,644	0,657	0,554	0,523	0,617	**0,802**
OR3	0,663	0,726	0,694	0,679	0,641	0,613	0,703	**0,855**
OR4	0,664	0,694	0,683	0,671	0,599	0,610	0,711	**0,881**

Source: Compiled by researcher by SmartPLS-SEM

After the indicator elimination process was completed, the measurement model was re-evaluated to ensure that the discriminant validity criteria were met for all constructs. As shown in Table 6 and Table 7, the retained indicators met the criteria for discriminant validity based on Cross Loading and the Fornell–Larcker Criterion. However, several pairs of constructs showed HTMT values exceeding the 0.90 threshold. This indicates a relatively high degree of empirical closeness between constructs based on the HTMT heuristic criterion. Therefore, to obtain a more robust assessment, discriminant validity was further evaluated through HTMT inference using the bootstrapping procedure in SmartPLS with a 95% confidence interval. According to Henseler et al. (2015), discriminant validity can be maintained if the HTMT confidence interval does not include the value 1.00.

Table 6. Cross Loading after eliminating the indicators

	KC	**KA**	**KS**	**KAP**	**SS**	**SZ**	**TF**	**OR**
KC1	**0,845**	0,668	0,595	0,604	0,563	0,535	0,634	0,584
KC2	**0,820**	0,591	0,568	0,537	0,501	0,481	0,585	0,598
KC3	**0,763**	0,608	0,538	0,505	0,481	0,424	0,450	0,621
KC4	**0,791**	0,572	0,638	0,512	0,586	0,574	0,672	0,678
KA2	0,520	**0,805**	0,624	0,618	0,440	0,437	0,505	0,578
KA3	0,749	**0,879**	0,743	0,743	0,630	0,631	0,709	0,749
KA4	0,479	**0,776**	0,486	0,520	0,376	0,465	0,479	0,541
KA5	0,694	**0,815**	0,702	0,676	0,611	0,609	0,652	0,718
KS1	0,648	0,701	**0,770**	0,580	0,513	0,485	0,580	0,694
KS2	0,616	0,619	**0,860**	0,697	0,557	0,502	0,684	0,640
KS3	0,487	0,566	**0,811**	0,695	0,543	0,508	0,579	0,604
KS4	0,655	0,733	**0,880**	0,728	0,661	0,602	0,750	0,681
KAP3	0,563	0,650	0,654	**0,829**	0,529	0,522	0,533	0,566
KAP4	0,564	0,667	0,687	**0,861**	0,523	0,565	0,692	0,581
KAP5	0,608	0,720	0,756	**0,894**	0,584	0,592	0,690	0,679
SS1	0,471	0,499	0,502	0,484	**0,818**	0,717	0,557	0,496
SS2	0,621	0,579	0,623	0,562	**0,874**	0,775	0,678	0,655
SS3	0,558	0,513	0,590	0,550	**0,832**	0,710	0,615	0,575
SS5	0,602	0,604	0,618	0,566	**0,856**	0,761	0,653	0,586
SS6	0,563	0,529	0,586	0,536	**0,883**	0,716	0,632	0,516
SZ2	0,520	0,614	0,542	0,572	0,726	**0,853**	0,637	0,539
SZ3	0,564	0,585	0,546	0,525	0,764	**0,861**	0,607	0,607
SZ4	0,518	0,520	0,495	0,559	0,684	**0,818**	0,624	0,439
SZ5	0,537	0,556	0,592	0,595	0,745	**0,872**	0,677	0,578
SZ6	0,542	0,555	0,528	0,531	0,771	**0,872**	0,651	0,519
TF2	0,696	0,694	0,721	0,647	0,636	0,625	**0,868**	0,697

TF3	0,576	0,640	0,666	0,622	0,757	0,802	**0,855**	0,641
TF4	0,624	0,598	0,635	0,583	0,563	0,580	**0,855**	0,648
TF5	0,596	0,558	0,646	0,657	0,576	0,543	**0,809**	0,622
TF6	0,571	0,553	0,622	0,619	0,555	0,557	**0,817**	0,577
OR1	0,622	0,619	0,610	0,497	0,477	0,456	0,485	**0,774**
OR2	0,602	0,634	0,635	0,600	0,525	0,502	0,626	**0,803**
OR3	0,649	0,714	0,698	0,649	0,616	0,549	0,685	**0,854**
OR4	0,676	0,673	0,665	0,593	0,578	0,566	0,703	**0,879**

Source: Compiled by researcher by SmartPLS-SEM

The test results in Table 8 show that several construct pairs have HTMT values above 0,90, indicating a relatively high degree of empirical closeness between the constructs. The highest value was found for the KS–KAP pair at 0,969, followed by SZ–SS at 0,951. Nevertheless, the HTMT inference results in Table 9 show that all 95% confidence intervalsare below 1,00, with the highest upper limit of 0,998 for the KS–KAP pair. Thus, the test results do not provide evidence that the relationships between the construct pairs statistically reach a value of one. However, the relatively high HTMT values still indicate a degree of empirical closeness that must be carefully considered when interpreting discriminant validity (Henseler et al., 2015).

Based on these findings, the results of the HTMT inference support the distinctiveness of the constructs based on inferential criteria, but cannot be interpreted as evidence that the constructs are entirely distinct empirically. Several pairs of constructs exhibit relatively high empirical overlap; therefore, the discriminant validity results must be understood contextually alongside evidence from Cross Loading and the Fornell–Larcker Criterion. With this approach, this study avoids overly definitive conclusions regarding discriminant validity and acknowledges the existence of empirical closeness among several constructs.

Overall, the results of the measurement model evaluation show that the retained indicators and constructs meet the criteria for indicator reliability, internal consistency, and convergent validity. The evaluation of discriminant validity via HTMT inference indicates that the constructs remain statistically distinguishable since all confidence intervals are below 1.00, although some construct pairs exhibit high HTMT values, suggesting empirical closeness. This condition does not indicate a failure of discriminant validity, but it also cannot be interpreted as evidence that the constructs are fully empirically distinct. Thus, the results of HTMT inference provide inferential support for the distinctiveness of the constructs, with the caveat that there is empirical overlap in some pairs that must be carefully considered. Based on these overall results, the measurement model is deemed adequate to proceed to structural equation modeling, with a conservative interpretation of discriminant validity.

Table 7. HTMT and Fornell-Larcker Criterion after eliminating the indicators

	KC	**KA**	**KS**	**KAP**	**SS**	**SZ**	**TF**	**OR**
KC	0,805	0,899	0,868	0,815	0,766	0,726	0,848	0,926
KA	0,758	0,819	0,922	0,938	0,719	0,750	0,823	0,936
KS	0,727	0,791	0,831	0,969	0,778	0,718	0,893	0,928
KAP	0,672	0,789	0,813	0,862	0,731	0,751	0,862	0,842
SS	0,662	0,641	0,686	0,634	0,853	0,951	0,813	0,755
SZ	0,627	0,662	0,633	0,650	0,837	0,855	0,824	0,713
TF	0,730	0,726	0,784	0,743	0,737	0,747	0,841	0,864
OR	0,769	0,798	0,788	0,708	0,666	0,628	0,759	0,829

Notes: Fornell-Larcker Criterion: below the diagonal; HTMT: above the diagonal
Source: Compiled by researcher by SmartPLS-SEM

Table 8. CI Values of HTMT

	Original sample (O)	Sample mean (M)	CONFIDENCE INTERVAL (CI) 2.5%	97.5%
KAP <-> KA	0,938	0,940	0,844	0,991
KS <-> KA	0,922	0,922	0,820	0,974
KS <-> KAP	0,969	0,972	0,880	0,998
OR <-> KA	0,936	0,934	0,823	0,985
OR <-> KC	0,926	0,928	0,811	0,978
OR <-> KS	0,928	0,928	0,794	0,981
SZ <-> SS	0,951	0,950	0,889	0,996

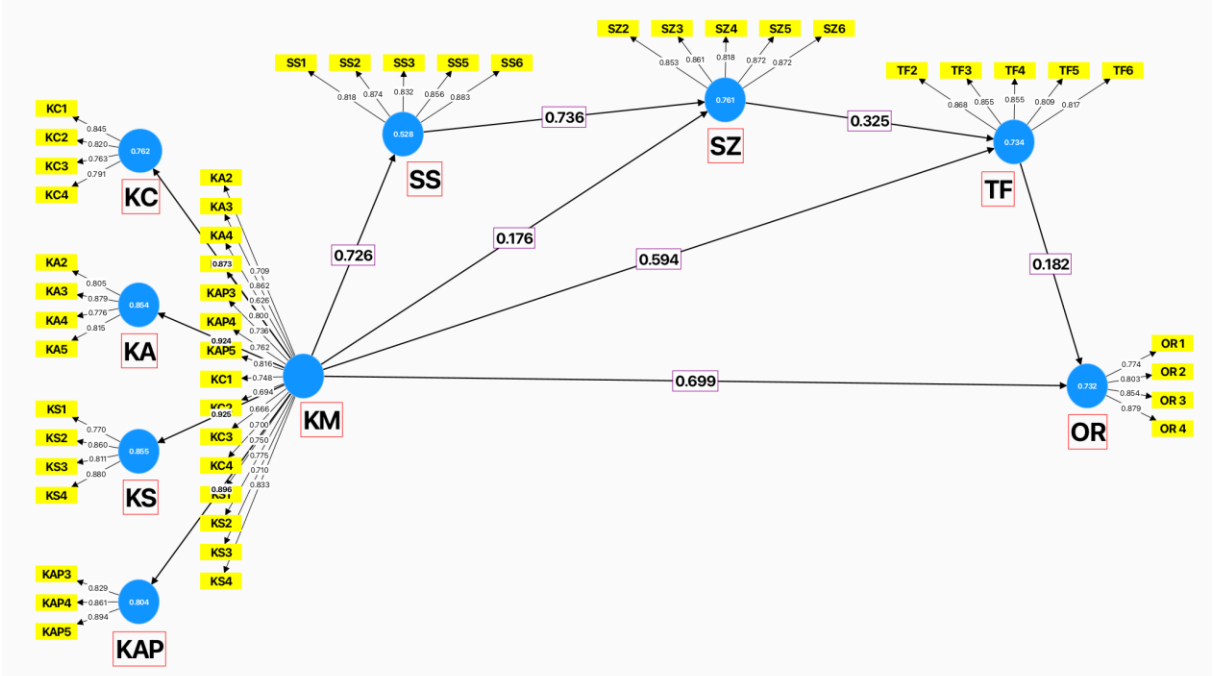
Source: Compiled by researcher by SmartPLS-SEM

4.3 Results of the Structural Model Evaluation (Inner Model)

In this study, because the knowledge management (KM) variable consists of four dimensions and is a reflective-reflective high-order construct as shown in Figure 2, a two-stage analysis approach was used by calculating the latent variable scores for each dimension of knowledge management (KM) at the first order. Next, at the second order, each latent variable score from all dimensions of knowledge management (KM) was used as an indicator of knowledge management (KM). The research model used for the structural model evaluation at the second order is shown in Figure 3.

Based on the research model in Figure 3, this study evaluated the structural model (inner model) to test the relationships among latent constructs and research hypotheses using the PLS-SEM bootstrapping procedure, taking into account path coefficients, t-statistics, and p-values. The results of the structural model estimation using the bootstrapping procedure in SmartPLS are presented in Figure 4.

Figure 2. Research models in first-order



Furthermore, following Hair et al. (2022), the evaluation of the inner model also included a multicollinearity check to ensure there was no excessive correlation among the predictor constructs. Based on Table 9, all VIF values were below 5, indicating no multicollinearity that could interfere with the structural model estimation. The same VIF values were also used as an additional diagnostic check for potential common method variance (CMV). Although VIF values below the threshold indicate no excessive collinearity related to potential CMV, these results are not considered definitive evidence that common method bias (CMB) does not occur, as VIF can reflect both substantive variance and method variance. Thus, in this study, the VIF test is positioned as supplementary diagnostic evidence that complements preventive procedures aimed at minimizing potential CMB during the research design and data collection phases.

Figure 3. Research models in second-order

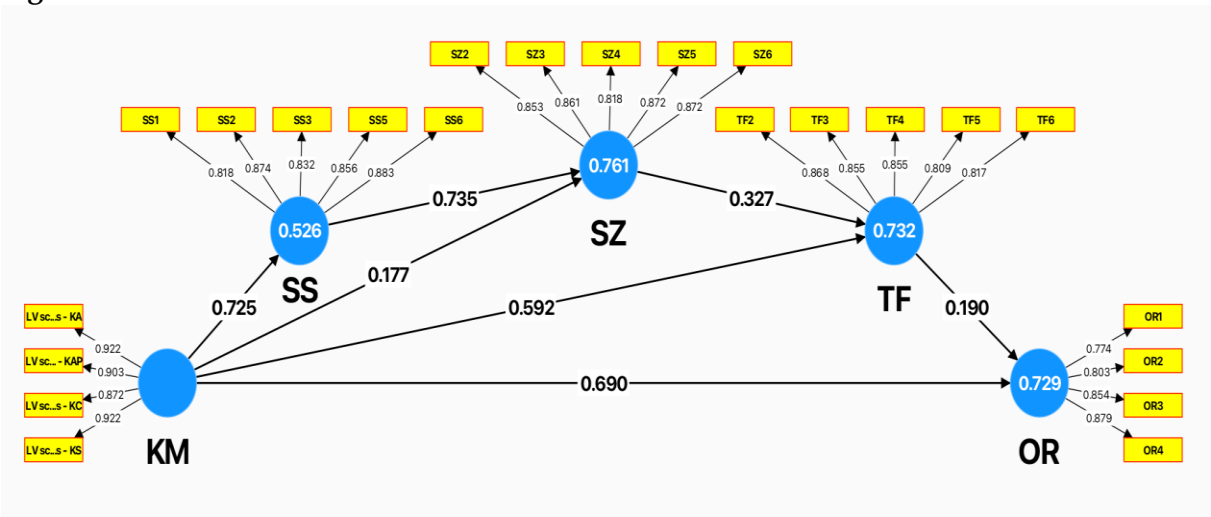
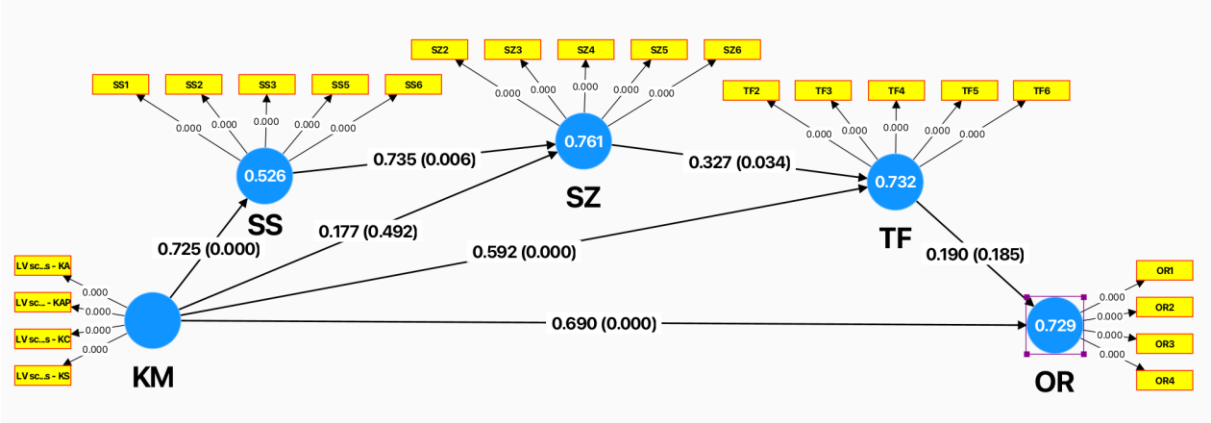


Table 9. VIF of Structural Model

	SS	SZ	TF	OR
KM	1,000	2,108	2,019	3,121
SS		2,108		
SZ			2,019	
TF				3,121

Source: Compiled by researcher by SmartPLS-SEM

Figure 4. Test Results of SmartPLS-Bootstrapping



Meanwhile, the explanatory power of the structural model (inner model) was assessed through an analysis of the coefficient of determination (R^2) and effect size (f^2) to evaluate the model's ability to explain the relationships among variables. The results of the SmartPLS analysis, as shown in Table 10, indicate that sensing capability has an R^2 value of 0.526, meaning that knowledge management explains 52.6% of the variation in sensing capability. Furthermore, seizing capability has an R^2 value of 0.761, indicating that 76.1% of the variation in seizing capability can be explained by sensing capability and knowledge management. Additionally, the R^2 value of 0.732 for transforming capability indicates that 73.2% of the variation in transforming capability can be explained by knowledge management and seizing capability. For organizational resilience, the R^2 value is 0.729, indicating that 72.9% of the variation in organizational resilience can be explained by transforming capability and knowledge management. According to Hair et al. (2022), these values indicate that the model has moderate explanatory power.

The results of the effect size (f^2) test show that knowledge management makes a significant contribution to sensing capability, with an effect size (f^2) value of 1.108. This high value indicates that knowledge management provides a strong, substantive contribution to the organization's ability to identify, interpret, and understand changes, opportunities, and threats in the external environment. This finding underscores the importance of knowledge management as a foundation for developing an organization's ability to sense effectively. In the next relationship, the effect size (f^2) for the relationship between knowledge management and seizing capability was 0.062, which falls into the small effect category, whereas the effect size (f^2) for the relationship between sensing capability and seizing capability was 1.072, which falls into the large effect category. These results indicate that the direct contribution of knowledge management to seizing capability is relatively limited, while sensing makes a strong, substantive contribution. Thus, an organization's ability to identify and capitalize on opportunities and respond to changes is largely determined by its ability to identify and understand changes that have already occurred through the sensing process.

Table 10. R-Square and f-square

Endogen Variables	Pathways	R-Square	f-Square
SS		0,526	
	KM→SS		1,108
SZ		0,761	
	KM→SZ		0,062
	SS→SZ		1,072
TF		0,732	
	KM→TF		0,649
	SZ→TF		0,198
OR		0,729	
	KM→OR		0,563
	TF→OR		0,043

Source: Compiled by researcher by SmartPLS-SEM

Furthermore, the relationship between knowledge management and transforming capability shows an effect size f^2 of 0.649, which falls into the large-effect category, while the relationship between seizing and transforming has an effect size f^2 of 0.198, which falls into the moderate-effect category. These findings indicate that knowledge management makes a

strong, substantive contribution to an organization's ability to undergo transformation, while seizing also makes a significant contribution to driving the reconfiguration of organizational resources, processes, and routines. These results demonstrate that the transformation process does not solely depend on an organization's ability to seize opportunities but is also supported by the availability and utilization of knowledge as the foundation for organizational change. Regarding the relationship with organizational resilience, the test results show that the relationship between transforming capability and organizational resilience has an f^2 effect size of 0.043, which falls into the small effect category, whereas the relationship between knowledge management and organizational resilience has an f^2 effect size of 0.563, which falls into the large effect category. These findings indicate that knowledge management makes a very strong substantive contribution to organizational resilience, while the direct contribution of transforming capability is relatively small. Overall, these f^2 effect size patterns demonstrate that knowledge management plays a crucial role in building various stages of dynamic capabilities, while also making a strong direct contribution to organizational resilience.

Based on the results of PLSpredict using 10 folds and 10 repetitions with a fixed seed in the random number generator, as presented in Table 11, all endogenous constructs in the research model had Q^2predict values ranging from 0.272 to 0.568, all of which were above zero (Q^2predict > 0), indicating the model's predictive relevance for the evaluated endogenous indicators. A comparison of the RMSE and MAE values shows that, for most indicators, the PLS-SEM prediction error is lower than that of the linear model (LM). This suggests that the PLS-SEM performs relatively better in terms of predictive ability for most indicators. However, TF5 is an exception, as the PLS-SEM_RMSE value (0.646) is slightly higher than the LM_RMSE (0.645), and the PLS-SEM_MAE (0.514) is also higher than the LM_MAE (0.492). Thus, the PLSpredict results provide support for the overall out-of-sample predictive ability of the model, but the superiority of PLS-SEM over the linear model is not consistent across all indicators. These findings suggest that the model has adequate relevance and predictive performance, with variations in performance at the indicator level.

Table 11. Results of PLSpredict

EndogenVariables	Indicators	Q^2predict	PLS-SEM RMSE	PLS-SEM MAE	LM RMSE	LM MAE
SS	SS1	**0,272**	**0,786**	**0,564**	**0,820**	**0,597**
	SS2	**0,416**	**0,742**	**0,507**	**0,751**	**0,515**
	SS3	**0,361**	**0,824**	**0,557**	**0,838**	**0,569**
	SS5	**0,420**	**0,766**	**0,531**	**0,779**	**0,533**
	SS6	**0,363**	**0,723**	**0,494**	**0,729**	**0,505**
SZ	SZ2	**0,372**	**0,761**	**0,518**	**0,778**	**0,526**
	SZ3	**0,358**	**0,768**	**0,508**	**0,791**	**0,525**
	SZ4	**0,321**	**0,891**	**0,597**	**0,916**	**0,609**
	SZ5	**0,381**	**0,729**	**0,506**	**0,750**	**0,515**
	SZ6	**0,336**	**0,778**	**0,513**	**0,802**	**0,534**
TF	TF2	**0,568**	**0,614**	**0,476**	**0,629**	**0,483**
	TF3	**0,466**	**0,756**	**0,514**	**0,775**	**0,533**
	TF4	**0,443**	**0,756**	**0,557**	**0,776**	**0,586**
	TF5	**0,449**	**0,646**	**0,514**	**0,645**	**0,492**
	TF6	**0,410**	**0,718**	**0,534**	**0,733**	**0,546**

OR	OR1	**0,406**	**0,702**	**0,521**	**0,716**	**0,549**
	OR2	**0,452**	**0,675**	**0,472**	**0,723**	**0,496**
	OR3	**0,552**	**0,590**	**0,424**	**0,616**	**0,438**
	OR4	**0,513**	**0,651**	**0,477**	**0,677**	**0,502**

Source: Compiled by researcher by SmartPLS-SEM

Meanwhile, based on the results of the PLS-SEM bootstrapping test at a 5% significance level, the relationships between constructs were assessed based on the path_coefficient, t_statistics, and p_value. A hypothesis was considered supported if the p_value was < 0.05 or the t_statistics was > 1.96. The test results showed that some direct relationships received empirical support, while others were not significant.

The hypothesis test results presented in Table 12 indicate that knowledge management (KM) has a positive and significant relationship with organizational resilience (OR) ($\beta = 0.690$; $t = 5.473$; $p < 0.000$), thus supporting hypothesis H1. The magnitude of the path coefficient indicates that knowledge management (KM) is a key factor related to an organization's ability to sustain its operations, respond to disruptions, and adapt to environmental changes. This finding is consistent with Fani and Danaee Fard (2015), who identified a positive and significant relationship between knowledge management (KM) and organizational resilience (OR) in public organizations in Iran. The study demonstrates that activities involving the acquisition, storage, sharing, and utilization of knowledge contribute to enhancing organizational resilience (OR). These findings also support the research by Zheng, Shen, and Liu (2022), which identifies knowledge management capability as a factor contributing to organizational resilience (OR). Thus, the research results reinforce the KBV perspective that knowledge is not merely information held by an organization but is a strategic resource that can be used to strengthen an organization's capacity to cope with change and disruptions.

In addition to having a direct effect on organizational resilience (OR), knowledge management (KM) was also found to have a positive and significant effect on sensing capability (SS) ($\beta = 0.725$; $t = 5.263$; $p < 0.000$), thus supporting Hypothesis H2. This finding indicates that an organization's ability to create, acquire, share, and apply knowledge is related to its ability to recognize changes, understand environmental developments, and identify opportunities and threats. Conceptually, this finding supports the argument that knowledge provides an information and learning foundation that enables organizations to interpret environmental changes. These findings align with Teece's (2007) perspective on sensing capability (SS) as an organization's ability to identify and assess opportunities and threats, and are reinforced by research on dynamic sensing capabilities, which highlights the importance of knowledge creation and management processes in building sensing capability (SS) in rapidly changing environments (Zabel and O'Brien, 2024).

Table 12. Results of Hypothesis Testing

Hipotesis	Path	Path Coefficient	t-statistics	*p*-values	Remarks
H1	KM→OR	0,690	5,473	0,000	H1 Accepted
H2	KM→SS	0,725	5,263	0,000	H2 Accepted
H3	KM→SZ	0,177	0,687	0,492	H3 Rejected
H4	KM→TF	0,592	3,511	0,000	H4 Accepted
H5	SS→SZ	0,735	2,746	0,006	H5 Accepted
H6	SZ→TF	0,327	2,120	0,034	H6 Accepted

H7	TF→OR	0,190	1,327	0,185	H7 Rejected
H8	KM→SS→SZ	0,533	3,419	0,001	H8 Accepted
H9	SS→SZ→TF	0,240	3,167	0,002	H9 Accepted
H10	SZ→TF→OR	0,062	0,958	0,338	H10 Rejected
H11	KM→SS→SZ→TF→ OR	0,033	1,415	0,157	H11 Rejected

Source: Compiled by researcher by SmartPLS-SEM

In contrast to the relationship between knowledge management (KM) and sensing capability (SS), the direct effect of knowledge management (KM) on seizing capability (SZ) is positive but not significant ($\beta = 0.177$; $t = 0.687$; $p = 0.492$), so Hypothesis H3 is rejected. This result is an important finding because it indicates that the existence and management of knowledge do not automatically enhance an organization's ability to seize or capitalize on opportunities. Knowledge must first be interpreted and converted into an understanding of environmental changes before it can be used as the basis for strategic decision-making. Thus, the research results suggest that sensing capability (SS) is more closely aligned with the knowledge management process than seizing capability (SZ). This finding reinforces the understanding that the dynamic capability process is not solely determined by the availability of knowledge, but also by an organization's ability to interpret that knowledge and use it to determine actions.

This argument is further supported by the results of H5, which show that sensing capability (SS) has a positive and significant effect on seizing capability (SZ) ($\beta = 0.735$; $t = 2.746$; $p = 0.006$), thus accepting Hypothesis H5. This finding indicates that an organization's ability to recognize and understand changes forms the foundation for its ability to seize and capitalize on opportunities. In other words, organizations that are better able to identify environmental developments have a stronger foundation for determining strategic responses and actions. These results are consistent with the research by Zabel and O'Brien (2024), who empirically tested the sequential nature of sensing capability (SS), seizing capability (SZ), and transforming capability (TF) in the context of an evolving technology market, as well as the research by Kahkonen et al. (2025), which found that sensing capability (SS) is an antecedent of seizing capability (SZ), and seizing capability (SZ) is an antecedent of transforming capability (TF).

Furthermore, the results of the H4 hypothesis test show that knowledge management (KM) has a positive and significant effect on transforming capability (TF) ($\beta = 0.592$; $t = 3.511$; $p < 0.000$), thus H4 is accepted. These results indicate that knowledge management is not only related to an organization's ability to understand change but is also linked to its ability to adapt and reconfigure organizational resources and processes. These findings align with the KBV perspective, which views knowledge as the foundation for organizational learning and capability development (Grant, 1996), as well as the DCV perspective, which positions the ability to reconfigure as a critical component in maintaining an organization's alignment with a changing environment (Teece, 2007). These results are also consistent with research demonstrating the relationship between knowledge management (KM) and the development of dynamic capabilities (Yoshikuni et al., 2023). That study indicates that knowledge management practices and information system strategies can contribute to the development of an organization's dynamic capabilities.

The relationship between seizing capability (SZ) and transforming capability (TF) also received empirical support. The results of the H6 hypothesis test showed that seizing capability (SZ) has a positive and significant effect on transforming capability (TF) ($\beta = 0.327$;

t = 2.120; p = 0.034), thus H6 is accepted. These findings indicate that an organization's ability to identify and capitalize on opportunities is linked to its capacity to effect change and reconfigure organizational resources and processes. Thus, the research results provide empirical support for the relationship pattern among the dimensions of dynamic capability, particularly the Sensing → Seizing → Transforming sequence. This pattern is also consistent with the research by Zabel and O'Brien (2024) and Kahkonen et al. (2025), which highlights the importance of the sensing and seizing processes in supporting organizational transformation and innovation activities.

Nevertheless, the relationship between transforming capability (TF) and organizational resilience (OR) did not receive empirical support. The results of the hypothesis test for H7 indicate that the effect of transforming capability (TF) on organizational resilience (OR) is positive but not significant (β = 0.190; t = 1.327; p = 0.185), leading to the rejection of H7. This finding suggests that the transforming capability measured in this study has not been proven to be directly related to an increase in organizational resilience (OR). This result is significant because it indicates that the presence of transforming capability (TF) does not always directly result in organizational resilience (OR). In the context of this study, knowledge management (KM) demonstrates a stronger and more significant influence on organizational resilience (OR), meaning that the direct contribution, of knowledge management (KM) to organizational resilience (OR) is more dominant than the role of transforming capability (TF) as a standalone capability.

This difference also suggests that the mechanisms linking dynamic capabilities to organizational resilience may depend on the organizational context and the characteristics of the environment in which the organization operates. The results of the indirect effect tests in this study also reveal a more specific pattern. The results of the H8 hypothesis test show that knowledge management (KM) has an indirect effect on seizing capability (SZ) through sensing capability (SS) (β = 0.533; t = 3.419; p = 0.001), so H8 is accepted. This finding demonstrates that the direct effect of knowledge management (KM) on seizing capability (SZ)—which was not statistically significant—becomes significant when sensing capability (SS) is introduced as an intermediary mechanism. Thus, this study suggests that knowledge must first be converted into the ability to recognize and understand change before it can contribute to an organization's ability to seize and capitalize on opportunities. This pattern provides stronger empirical support for the KM → Sensing → Seizing mechanism than for the direct KM→Seizing relationship.

The results of the test for Hypothesis H9 also indicate that sensing capability (SS) has an indirect effect on transforming capability (TF) through seizing capability (SZ) (β = 0.240; t = 3.167; p = 0.002), thus Hypothesis H9 is accepted. These results further reinforce the structural pattern that sensing capability (SS) is related to transforming capability (TF) through seizing capability (SZ). Conceptually, organizations must first recognize and understand change, then determine how to capitalize on these opportunities, before adjusting and reconfiguring their resources. These findings are consistent with the research by Zabel and O'Brien (2024) on the sequential nature of the sensing, seizing, and transforming processes, as well as the research by Kahkonen et al. (2025), which provides empirical evidence regarding the role of sensing capability (SS) as an antecedent to seizing capability (SZ) and seizing capability (SZ) as an antecedent to transforming capability (TF).

Conversely, the results of the test of Hypothesis H10—which examined the indirect effect of seizing capability (SZ) on organizational resilience (OR) through transforming capability

(TF)—did not receive empirical support (β = 0.062; t = 0.958; p = 0.338). Similarly, the results of the test of hypothesis H11, which examined the overall indirect effect through the KM→Sensing→Seizing→Transforming→OR sequence, also failed to receive empirical support (β = 0.033; t = 1.415; p = 0.157). Therefore, this study does not provide sufficient empirical evidence to establish the existence of sequential mediation from KM to OR through the three dimensions of dynamic capability, as this sequential indirect effect is not significant at the 5% significance level. Conversely, the direct relationship KM → OR was found to be strong and significant (β = 0.690; t = 5.473; p < 0.000). Thus, KM's primary contribution to OR in this study's model is more strongly demonstrated through the direct path than through the sequential mediation mechanism.

Overall, the pattern of research findings indicates that knowledge management (KM) plays two important roles: as a direct predictor of organizational resilience (OR) and as an antecedent for the development of several dimensions of dynamic capability. Knowledge management (KM) has been shown to enhance sensing capability (SS) and transforming capability (TF), while sensing capability (SS) is significantly associated with seizing capability (SZ), and seizing capability (SZ) is further associated with transforming capability (TF). Thus, there is empirical support for part of the proposed relationship structure within the DCV perspective, but not for the entire pathway leading to organizational resilience (OR). These findings are important because they indicate that the dynamic capabilitymechanism in this study is better understood as a partially supported set of capability relationships, rather than as a complete mediation process that empirically explains how knowledge management (KM) translates into organizational resilience (OR).

From the Knowledge-Based View (KBV) perspective, these results reinforce the argument that knowledge is a strategic resource capable of shaping an organization's ability to respond to change (Grant, 1996). However, from the Dynamic Capability View (DCV) perspective, the research findings indicate that the mere presence of knowledge does not, by itself, guarantee that all stages of the sensing, seizing, and transforming processes will result in organizational resilience (OR).

Knowledge can support the sensing and transforming processes, while the sensing, seizing, and transforming processes demonstrate a sequential relationship; however, the final relationship between transforming capability (TF) and organizational resilience (OR) has not been shown to be significant in this study. Thus, the integration of the KBV and DCV in this study provides a more nuanced understanding: while knowledge serves as a critical foundation for capability development, the effectiveness of these capabilities in generating organizational resilience (OR) likely depends on the organizational context and other mechanisms not yet accounted for in this study's model.

Empirical findings regarding the direct influence of knowledge management (KM) on organizational resilience (OR) are also consistent with the study by Fani and Danaee Fard (2015), which demonstrated that various knowledge management activities—including knowledge creation, knowledge acquisition, knowledge sharing, and knowledge application—are positively associated with organizational resilience (OR). These findings provide support for the results of this study, which suggest that knowledge management (KM) can serve as a direct foundation for organizational resilience. At the same time, research on dynamic capabilities indicates that sensing, seizing, and transforming are interrelated in navigating a dynamic environment, as demonstrated by Zabel and O'Brien (2024) and Kahkonen et al. (2025). Thus, this study expands the literature by demonstrating that while

the relationships among the dimensions of dynamic capabilities receive empirical support, these mechanisms have not yet been proven to constitute a complete mediating pathway linking knowledge management (KM) to organizational resilience (OR). Practically, the research findings suggest that organizations need to position knowledge management (KM) not merely as an information storage system, but as part of the organizational capability development process. The practices of knowledge creation, acquisition, sharing, and application need to be integrated into organizational decision-making and learning processes so that knowledge can be used to recognize changes, determine responses to opportunities and threats, and support the adjustment of resources and processes. However, given that the influence of transformingcapability (TF) on organizational resilience (OR) is not significant and the overall sequential mediation effect is also not supported, organizations cannot rely on transformation as the sole pathway to building organizational resilience (OR). The research findings, in fact, highlight the importance of strengthening knowledge management (KM) as a direct pathway to building organizational resilience (OR). This strategy can be reinforced through a culture of knowledge sharing, organizational learning, the use of information technology, and the integration of knowledge into strategic decision-making processes.

5. Conclusion and Suggestion

This research model was developed based on the Knowledge-Based View (KBV) and Dynamic Capability View (DCV) to explain how knowledge management (KM) relates to organizational resilience (OR) through sensing capability (SS), seizing capability (SZ), and transforming capability (TF). Theoretically, this framework represents the logic that knowledge can serve as the foundation for organizations to recognize environmental changes (sensing), identify and capitalize on opportunities (seizing), and adjust and reconfigure resources (transforming) (Grant, 1996; Teece, 2007). However, because this study employs a cross-sectional design, these relationship patterns cannot be interpreted as evidence of a temporal sequence or a causal process unfolding gradually over time. The research findings are more appropriately understood as empirical evidence of structural relationships consistent with the proposed theoretical sequence. Reciprocal relationships, simultaneous development, or the possibility of alternative relationship directions cannot be entirely ruled out because all constructs were measured during the same period. Therefore, the findings regarding the relationships between sensing capability (SS), seizing capability (SZ), and transforming capability (TF) are interpreted as support for the model's theoretical structure, not as evidence that these capabilities necessarily develop sequentially over time.

The test results show that knowledge management (KM) has a positive and significant effect on organizational resilience (OR) ($\beta = 0.690$; $t = 5.473$; $p < 0.000$), as well as a positive and significant effect on sensing capability (SS)($\beta = 0.725$; $t = 5.263$; $p < 0.000$) and transforming capability (TF) ($\beta = 0.592$; $t = 3.511$; $p < 0.000$). Furthermore, sensing capability (SS) has a positive and significant effect on seizing capability (SZ) ($\beta = 0.735$; $t = 2.746$; $p = 0.006$), while seizing capability (SZ) has a positive and significant effect on transforming capability (TF) ($\beta = 0.327$; $t = 2.120$; $p = 0.034$). Conversely, the direct effect of KM on seizing capability (SZ) was not significant ($\beta = 0.177$; $t = 0.687$; $p = 0.492$). Similarly, the effect of transforming capability (TF) on organizational resilience (OR) was not significant ($\beta = 0.190$; $t = 1.327$; $p = 0.185$). These findings indicate that knowledge management (KM) has a strong direct relationship with organizational resilience (OR), while the inter-dimensional relationships among the dynamic capabilities revealed in this study support the sequential pattern

Sensing→Seizing→Transforming in accordance with the Dynamic Capability View (DCV) proposed by Teece (2007).

The results of the indirect effect tests in this study reinforce this pattern. The effect of knowledge management (KM) on seizing capability (SZ) via sensing capability (SS) was found to be positive and significant (β = 0.533; t = 3.419; p = 0.001), as was the effect of sensing capability (SS) on transforming capability (TF) via seizing capability *(SZ)* (β = 0.240; t = 3.167; p = 0.002). However, the indirect effect of seizing capability (SZ) on organizational resilience (OR) through transforming capability (TF) was not significant (β = 0.062; t= 0.958; p = 0.338). Furthermore, the sequential indirect effect on the KM→SS→SZ→TF→OR relationship was also not significant at the 5% level (β = 0.033; t = 1.415; p = 0.157). Thus, this study does not provide sufficient evidence to establish the existence of sequential mediation from knowledge management (KM) to organizational resilience (OR) through sensing capability (SS), seizing capability (SZ), and transforming capability (TF).

Theoretically, the study's findings reinforce the integration of the Knowledge-Based View (KBV) and the Dynamic Capability View (DCV) by demonstrating that knowledge management (KM) serves as a crucial foundation for the development of organizational capabilities while also maintaining a strong direct relationship with organizational resilience (OR). However, the research results also indicate that the process of converting knowledge into organizational resilience (OR) does not occur automatically and cannot be fully explained through the sequence of sensing, seizing, and transforming. Significant relationships between knowledge management (KM) and sensing capability (SS), sensing capability (SS) and seizing capability (SZ), as well as seizing capability (SZ) and transforming capability (TF), indicate structural interconnections among the dimensions of dynamic capability; however, these pathways have not been shown to continue significantly enough to produce organizational resilience (OR). These findings suggest that the processes of knowledge internalization and conversion take time to develop into routines, organizational learning, changes in decision-making, and resource reconfiguration—which ultimately shape organizational resilience (OR). Thus, the cross-sectional design of this study may not fully capture these developmental processes over time.

In this context, the relatively strong direct relationship between knowledge management (KM) and organizational resilience (OR) suggests that the knowledge already available and managed by the organization can contribute directly to its readiness to face disruptions and changes. Meanwhile, the development of dynamic capabilities is a process that potentially requires the accumulation of experience, learning, experimentation, and organizational adjustments before its impact on organizational resilience (OR) becomes more apparent. Therefore, the research findings do not negate the role of dynamic capabilities, but rather indicate that the mechanism through which they influence organizational resilience (OR) may be gradual and require a longer time horizon.

Longitudinal or multi-wave testing is essential to determine whether the influence of knowledge management (KM) on sensing capability (SS), seizing capability (SZ), and transforming capability (TF) ultimately leads to an increase in organizational resilience (OR) following the processes of knowledge internalization and transformation. In practical terms, the research findings suggest that organizations need to build an effective knowledge management system through knowledge creation, knowledge acquisition, knowledge sharing, and knowledge application. However, the development of such a system must be viewed as a medium- and long-term process, as knowledge does not immediately translate

into organizational resilience. Organizations need to create space for the internalization of knowledge through organizational learning, experience-sharing, competency development, decision evaluation, and the integration of knowledge into routines and business processes. At the same time, the development of sensing capability, seizing capability, and transforming capability must be carried out continuously so that available knowledge can gradually be converted into the ability to recognize change, make strategic decisions, capitalize on opportunities, and reconfigure resources. Thus,strengthening knowledge management as the foundation of knowledge and developing dynamic capability as an adaptive process must be carried out continuously to build organizational resilience in the long term.

6. Limitations and Future Research

This study has several limitations that should be taken into account when interpreting the findings. First, the use of a cross-sectional design limits the study's ability to explain the temporal evolution of the relationships between knowledge management (KM), dynamic capabilities—comprising sensing capability (SS), seizing capability (SZ), and transforming capability (TF)—, and organizational resilience (OR). Although the empirical results indicate significant relationships between knowledge management (KM) and sensing capability (SS), sensing capability (SS) and seizing capability (SZ), also seizing capability (SZ) and transforming capability (TF), these findings cannot yet be interpreted as evidence that these capabilities develop sequentially over time. Similarly, the lack of a significant relationship between transforming capability (TF) and organizational resilience (OR), as well as the absence of a sequential mediation pathway KM → Sensing → Seizing → Transforming → OR, suggests that the process of converting knowledge into organizational resilience has not been fully accounted for in this study's design. Because the processes of knowledge internalization and the formation of organizational capabilities inherently take time, measurements taken at a single point in time may not fully capture the cumulative impact of these processes on organizational resilience (OR). Meanwhilem, the sequential indirect effect KM → SS → SZ → TF → OR was not significant. Thus, this study does not provide sufficient empirical evidence to establish the existence of sequential mediation. Theoretically, one possible explanation is that the conversion of knowledge into organizational capabilities and resilience may require a process of internalization and development that takes place over time. However, this explanation cannot be verified in this study because the design used is cross-sectional and should therefore be viewed as a proposition that can be further tested through longitudinal research.

Second, this research model focuses on the dynamic capability mechanism through the structural relationship Sensing→Seizing→Transforming. The research results support the relationships among these dimensions but do not provide sufficient evidence to establish sequential mediation leading to organizational resilience (OR). Therefore, the model used does not yet account for other possible mechanisms that could explain how knowledge management (KM) contributes to organizational resilience (OR). The finding that knowledge management (KM) has a strong direct effect on organizational resilience (OR) ($\beta = 0.690$; $t = 5.473$; $p < 0.000$), while the sequential mediation path is not significant ($\beta = 0.033$; $t = 1.415$; $p = 0.157$), suggests that the relationship between knowledge management (KM) and organizational resilience (OR) likely does not depend solely on the hypothesized dynamic capability mechanism. Other factors such as organizational learning, organizational agility, digital capability, strategic flexibility, strategic leadership, and organizational culture have the

potential to act as mediators, moderators, or complementary mechanisms in explaining the development of organizational resilience.

Third, another limitation relates to the possibility of clustering in the responses, as some companies provided more than one respondent. Although respondents were selected based on their managerial positions and relevant experience, responses from individuals within the same organization may potentially be similar; therefore, the assumption of independence of observations must be taken into account.

Fourth, this study was conducted within the context of a specific organization and business environment; therefore, generalizing the findings to different industrial sectors, organizational sizes, or institutional and national contexts should be done with caution. Characteristics of the business environment, the level of market dynamics, organizational structure, digital maturity, and knowledge management practices can influence how organizations develop and utilize dynamic capabilities. Consequently, the relationships identified in this study may not necessarily exhibit the same strength or patterns in other organizational contexts.

Given these limitations, future research is recommended to employ a longitudinal or multi-wave design to obtain stronger evidence regarding the development of the relationships between knowledge management (KM), sensing capability (SS), seizing capability (SZ), transforming capability (TF), and organizational resilience (OR). Such a design would allow researchers to observe whether the knowledge created, acquired, shared, and applied during a given period requires time to be internalized into learning, routines, and organizational capabilities before contributing to organizational resilience (OR) in the subsequent period.

This approach can also help test whether the KM→Sensing→Seizing→Transforming→OR pattern actually evolves over time, while identifying possible reciprocal relationships—for example, whether more resilient organizations subsequently strengthen their knowledge management (KM) practices.

Future research could also expand the model by testing alternative mediation and moderation mechanisms to explain the relationship between knowledge management (KM) and organizational resilience (OR) more comprehensively. Variables such as organizational learning, organizational agility, digital capability, strategic flexibility, strategic leadership, and organizational culture could be considered as mechanisms that complement dynamic capability. This approach is particularly important because the results of this study indicate that knowledge management (KM) has a strong direct effect on OR, whereas the proposed sequential mediation mechanism has not yet received empirical support. Future research could also examine whether KM's effect on organizational resilience (OR) is direct in the short term but develops through dynamic capability over a longer period. In addition, future research is recommended to use one key informant per organization or to gather multiple informants and conduct within-organization agreement tests as well as analyses at the organizational level.

Furthermore, future research should conduct tests across various industry sectors, organizational sizes, and cross-national contexts to assess the consistency of results and enhance the generalizability of the findings. Cross-industry or cross-national comparisons could also provide insights into the contextual conditions that strengthen or weaken the relationship between knowledge management (KM), dynamic capability, and organizational resilience (OR). Thus, future research is expected to expand the contributions of the Knowledge-Based View and the Dynamic Capability View by explaining not only whether knowledge contributes to organizational resilience, but also when, through what mechanisms,

and under what conditions the processes of knowledge internalization and conversion develop into organizational resilience.

Declaration of AI and AI-assisted technologies in the writing process (if author[s] utilize AI)

During the preparation of this work, the author(s) used SmartPLS in order to data analysis, and DeepL in order to language translation. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

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