



Dynamic Managerial Sensing Capabilities, Emotional Sensitivity, and Impacts on Organizational Agility: A Conceptual Model

Huong Thi Xuan Phung¹ and Kodo Yokozawa²

¹Graduate School of International Social Sciences, Yokohama National University, Yokohama, Japan

²Department of Business Administration, Yokohama National University, Yokohama, Japan

*Corresponding author: phung-huong-xp@ynu.jp

Abstract

Research purpose:

Firms employ various strategies to maintain competitiveness and thrive in a constantly evolving environment. Organizational agility (OA) is often considered a key factor in achieving this. This research aims to explore the impact of dynamic managerial sensing capabilities (DMC sensing) and its extension, namely emotional sensitivity, on organizational agility. Moderating effects of sense of urgency and goal commitment are also considered.

Research motivation:

Current literature on dynamic capabilities (DC) and organizational agility tends to concentrate on organizational level factors. This study emphasizes the vital role of individual managers by examining managerial-level capabilities. Furthermore, the scope of sensing in this study encompasses both internal and external environments, including the emotional aspects of organizational members.

Research design, approach, and method:

This conceptual paper establishes the relationship between DMC sensing, emotional sensitivity, organizational agility, sense of urgency, and goal commitment based on evidence from existing literature.

Main findings:

DMC sensing and emotional sensitivity are proposed to positively influence agility, while sense of urgency and goal commitment are suggested to positively moderate these relationships. At the end, a conceptual model to be tested in future research is presented.

Practical/managerial implications:

This research offers valuable insights for managers, recommending that they develop dynamic managerial sensing capabilities and emotional sensitivity to sense the internal environment, particularly the emotions of individuals, and their interaction with each other and with external environment. These capabilities enable managers to proactively enhance organizational agility.

Keywords: dynamic managerial sensing capabilities, emotional sensitivity, organizational agility, sense of urgency, goal commitment.

1. INTRODUCTION

Organizations are consistently under pressure to confront sophisticated and critical changes that directly influence their service and product delivery, requiring the introduction of efficient solutions and creative thinking (Ameen et al., 2022, p. 1323). To do so, organizations employ numerous approaches, among which dynamic capabilities (DC) and organizational agility are often found to be effective in volatile environments. Sharing such a similar strategic roles, little is known how dynamic capabilities and organizational agility is connected. Teece et al. (2016) pioneered in studying the impact of dynamic capabilities and organizational agility. Recent empirical research started to elaborate on finding how dynamic capabilities impact organizational agility in a certain context such as government digitalization (Zhang et al., 2023) or organizational crisis preparedness during COVID-19 pandemic (El Idrissi et al., 2023). However, there remains a need for research in a broader context. From a new perspective emphasizing managerial role, this study aims to explore the relationship between dynamic managerial sensing capabilities (DMC sensing) and organizational agility. Dynamic managerial capabilities (DMC) is an analogy of DC and are often classified into three clusters: sensing (identification and evaluation of opportunities, seizing (carrying out the identified opportunity to create value) and transforming capabilities

(continuous innovation) (Buil-Fabregà et al., 2017; Kurtmollaiev et al., 2018; Åberg and Shen, 2019; Haapanen et al., 2020). Among three clusters of DMC, researchers have emphasized the significance of sensing, as it is believed to be particularly important since it often precedes and influences seizing and transforming (Kurtmollaiev et al., 2018; Zabel et al., 2023). Sensing capabilities can provide actionable insights for managers to enhance organizational agility. With the aim of emphasizing the managerial role in promoting agility through DC, this study focuses solely on studying the impacts of DMC sensing on organizational agility.

In addition, although dynamic managerial capabilities literature often mentions that sensing should cover both the internal and external environment, the current research stream seems to focus exclusively on external factors: such as evolution of technologies, customer needs, and market responses (Teece, 2007). To fill this gap, this study expands the scope of DMC sensing to two-way sensing and explores the interaction between internal and external environment. Sensing in the internal organization environment might encompass the monitoring of factors like updated employee information, processes, machinery, and more.

Among internal factors that need to be sensed, emotions and status of employees are critically important. Sensing emotions, employee status, and the relationship among them allows managers to better aid, support, encourage, and motivate employees against resistance to change (Ivancevich et al., 2008). As a result, managers could create positive emotions among their teams which are often associated with proactive change behaviors and favorable interpretations of the change process (Bartunek et al., 2011). Therefore, this study aims to enrich DMC literature by including emotional sensitivity (Carney and Harrigan, 2003) as an extension of DMC sensing and explores their impacts on organizational agility.

The research question, therefore, is: *What is the impact of dynamic managerial sensing capabilities (DMC sensing) and emotional sensitivity on organizational agility?*

By addressing the research question mentioned above, this study contributes to the expansion of the dynamic capabilities theory and DMC literature. It places a strong emphasis on the role of individual managers, focusing specifically on their sensing capabilities and investigating emotional sensitivity as extension of DMC sensing. The expected results offer practical implications for managers, highlighting the effective use of DMC sensing and emotional sensitivity as enablers for organizational agility. Additionally, this study involves two other factors, namely sense of urgency and goal commitment, which serve as moderators to strengthen the interaction between DMC sensing and emotional sensitivity in relation to organizational agility.

2. LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

In this section, we discuss various concepts including organizational agility, dynamic managerial sensing capabilities, emotional sensitivity, sense of urgency, goal commitment, and the proposed relationship among these variables.

2.1 Organizational agility

Recent business environment has focused on how to deal with changes in turbulent environments. Being agile is crucial to either gain a competitive advantage over competitors or to simply survive in a difficult environment (Giacosa et al., 2022, p. 268). Initially referred to as corporate agility, organizational agility was defined as "the capacity to react quickly to rapidly changing circumstances" (Brown and Agnew, 1982, p. 29). Walter (2020) has captured the proliferation of organizational agility concept. Notable authors have further developed the concept to match with the changing business environment. "Organizational agility is a firm-wide capability to deal with changes that often arise unexpectedly in business environments via rapid and innovative responses that exploit changes as opportunities to grow and prosper" (Lu and Ramamurthy, 2011, p. 933). The common thing in those studies is that they often focus on manufacturing industry – the context from which OA concept arises. This study adopts the definition of organizational agility by Teece et al. (2016, p. 17), who described it as "the capacity of an organization to efficiently and effectively redeploy/redirect its resources to value creating and value protecting (and capturing) higher-yield activities as internal and external circumstances warrant". We choose this definition because it aligns OA with the perspective of dynamic capabilities theory and extends its scope beyond a single industry, encompassing various business contexts.

Regardless of the numerous ways researchers understand and define OA, recent literature universally agrees upon its strategic significance, which is to help firms not only survive but also thrive in a constantly changing business environment. Empirical evidence consistently supports the strategic importance of OA, with findings indicating increases in business performance (Vickery et al., 2010; Inman et al., 2011) and higher revenues and profit (Glenn and Stahl, 2009; Wang et al., 2014).

Goals of OA can be categorized into three primary groups: (1) maintaining or increasing competitiveness (Cho et al., 1996; Gunasekaran and Yusuf, 2002), (2) coping with change (Van Oosterhout et al., 2006), and (3) prospering (Feng and Zhang, 1998; Zhang and Sharifi, 2007; Lu and Ramamurthy, 2011), or sometimes combination of two among them (Gunasekaran, 1998; Sharifi and Zhang, 1999; Teece et al., 2016; Sindhwani and Malhotra, 2017; Nejatian et al., 2018). From a strategic viewpoint, this study explores the connection between DMC sensing and organizational agility.

2.2 Dynamic managerial capabilities

Dynamic capabilities (DC) are defined as “the firm’s capacity to innovate, adapt to change, and create change that is favorable to customers and unfavorable to competitors” (Teece et al., 2016, p. 18). As an analogy of dynamic capabilities, dynamic managerial capabilities (DMC) is first introduced as dynamic capability of managers which is defined as “the capabilities with which managers build, integrate and reconfigure organizational resources and competences” (Adner and Helfat, 2003, p. 1012). DC is underpinned by organizational and managerial competencies for effectively “reading” and shaping the environment and consequently forming business model to deal with new threats and opportunities (Teece et al., 2016).

While DC are typically seen as organizational-level capabilities, DMC is referred to as individual-level capabilities emphasizing the role of managers because strategic decisions in organizations are not made by a disembodied process, decisions are made by managers. DMC concept emphasizes managerial impact on strategic change (Adner and Helfat, 2003). It is argued that DMC has influence on all decisions of managers whether they are operational or strategic (Mostafiz et al., 2019b). Dynamic managerial capabilities are capacity of “senior managers to ensure learning, integration, and, when required, reconfiguration and transformation – all aimed at sensing and seizing opportunities as markets evolve” (O’Reilly and Tushman, 2008, p. 189). In the context of dynamic capability theory, Teece disaggregate DC into three distinct groups of capacities: (1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise’s intangible and tangible assets” (Teece, 2007, p. 1319).

Recent research on DMC utilizes the above three-group categorization but adopts different approaches: board DMC (Åberg and Shen, 2019); entrepreneurship DMC (Mostafiz et al., 2019b); Top Management Team DMC (Haapanen et al., 2020); and DMC in the context of design thinking and training (Kurtmollaiev et al., 2018). Because DMC investigates individual-level capabilities, it is also referred to as “individual dynamic managerial capabilities” or “managerial individual dynamic capabilities” (Buil-Fabregà et al., 2017).

Among the three groups of individual capabilities - sensing, seizing, and transforming - sensing is particularly essential as it significantly influences the other two, seizing and transforming. This study specifically focuses on DMC sensing capabilities. Originally, DMC sensing focused on the identification and evaluation of opportunities and threats (Buil-Fabregà et al., 2017). However, recent literature on DMC and DMC sensing tends to place emphasis on the external factors, despite the consideration of both internal and external factors by Teece (2007) and Adner and Helfat (2003).

This study redirects the attention of managers to the internal environment and examines emotional sensitivity as the extension of DMC sensing. Sensing is important among three groups of capabilities, and it has been found to affect other capabilities group seizing and transforming. Previous research has considered simultaneously sensing, seizing, and transforming. To date, no study has investigated DMC sensing individually at individual-level dynamic capabilities. Considering its significance, this study is the pioneer to investigate DMC sensing specifically.

2.3 Dynamic managerial sensing capabilities (DMC sensing)

In dynamic capabilities theory, dynamic capabilities sensing refers to the process of interpreting accessible information in various manifestations, such as visual representations, including charts or pictures, verbal exchanges encountered at trade shows, noteworthy developments in the realms of science and technology, or even the expressed discontent of a dissatisfied customer (Teece, 2007). The accumulation and subsequent filtration of information from both professional and social contacts are imperative in formulating informed conjectures or hypotheses regarding the probable trajectory of technologies, customer demands, and marketplace reactions. This undertaking necessitates diligent scanning and monitoring of both internal and external technological advancements, as well as an astute awareness of evolving market trends (Teece, 2007). Recently Zabel et al. (2023) pioneered the study of dynamic sensing capabilities in the context of emerging-technology systems. They found that dynamic sensing capabilities are particularly important because sensing describes the outward-looking activities of a business to harness new technological, market-oriented, or research-related knowledge and thus identify emerging market opportunities. Combining ideas from previous research, they also conclude that dynamic sensing capabilities are of particular importance in the case of early-state businesses and emerging and rapidly changing technology (p.3).

Different from above-mentioned organizational-level dynamic sensing capabilities, DMC sensing relates to individual level capabilities. DMC sensing refers to a manager’s regular action of “recognizing opportunities and identifying customers’ latent needs, which is often based on interpreting information from various sources” (Kurtmollaiev et al., 2018). Similarly, Mostafiz et al. (2019a) also described DMC sensing capabilities as “managerial actions of interpreting information from multiple sources to recognize opportunities and understand customers’ latent needs”. In addition, Åberg and Shen (2019, p. 661) studied board dynamic managerial capabilities and defines that sensing capabilities as the alertness and discovery process leading to the identification of opportunities and threats or “board member utilize environmental scanning to identify new opportunities”. Adapt from Teece (2007), Haapanen et al. (2020, p. 286) defined sensing in the international business context as “involves monitoring and identifying expressed or latent needs of foreign

customers, supplier and competitor information and scanning for collaborators, scientific and technological opportunities”. This research found that sensing is needed for having foreign customers and internationalization strategies in the first place. Table 1 provides an overview of DMC and DMC sensing definition in different contexts and approaches.

There is also connection among sensing, seizing and reconfiguring capabilities and sensing seems to possess the essential role dominating the other two. Kurtmollaiev et al. (2018) reasoned that because addressing an opportunity presupposes prior identification of that opportunities, sensing capabilities is fundamental for seizing capabilities. Zabel et al. (2023) has classified sensing capabilities microfoundations into four groups: opportunity screening: (1) scanning markets and (2) evaluating technology, partnership scouting, (3) identifying complementary within digital business ecosystems, and (4) exploring alternative digital business ecosystems.

Impediments often faced by an organizations trying to be an agile, innovative enterprise include the lack of “sufficient knowledge about itself to know where and when changes is needed” (Teece et al., 2016, p. 21). Therefore, sensing plays the key role here. Regardless of sensing or scanning direction, the outcome of DMC sensing are opportunities or threats or any significant abnormalities in both internal and external environment. However, firms must decide to seize only opportunities that they have appropriate resources to invest in. This is when internal and external sensing needed to be combined. Additionally, sensing provides data for early detection of change clues, allows organization to better prepare for change. In other cases where changes are unpredictable, sensing allows managers to grab the latest update of internal situation, so that firms can efficiently redeploy or redirect their resources to cope with change. Then, it suggests that sensing promotes organizational agility both reactively and proactively.

Hypothesis 1: Dynamic managerial sensing capabilities positively relate to organizational agility.

Table 1. Definitions of DMC and DMC Sensing

Study	Definitions of DMC & Sensing	Method & Sample	Related findings
Haapanen et al. (2020)	<p>“DMC refer to the individual executive capabilities to manipulate firm resource and competence bases in order to sustain competitiveness as the business environment changes” (p.288)</p> <p>“In the international business context, sensing involves monitoring and identifying expressed or latent needs of foreign customers, supplier and competitor information and scanning for collaborators, scientific and technological opportunities.” (p.290)</p>	261 Top management team executives in 63 firms of various industries	“While sensing is needed, in particular, for having foreign customers and internationalization strategies in the first place, seizing and reconfiguration became relevant for continuity in the international market” (p.285)
Åberg and Shen (2019)	<p>“Adner and Helfat (2003) introduced the concept of DMC as the micro foundations of firms ’dynamic capabilities, which denotes attention to managers’ capabilities in sensing and seizing opportunities and reconfiguring assets to adapt to changing environmental conditions” (p.174).</p> <p>Board Sensing Capability: “Sensing capabilities refers to the alertness and discovery process leading to the identification of opportunity and threats” (Teece, 2007, p.175)</p> <p>“Sensing represents the board’s ability to identify opportunities and threats through scanning, anticipating and interpretative activity” (p.181).</p>	410 Norwegian firms, multivariate regression analysis	Board chair human capital is positively related to the board’s sensing, seizing, and reconfiguring capabilities, with the moderator: environmental dynamism

Study	Definitions of DMC & Sensing	Method & Sample	Related findings
Åberg and Torchia (2019)	<p>“Dynamic managerial capabilities are particular types of capabilities that direct attention to the abilities and use of resources of managers.”</p> <p>DMC as “the capabilities with which managers build, integrate, and reconfigure organizational resources and competencies” from (Adner and Helfat, 2003, p. 1012)</p> <p>Sensing: “board members utilize environmental scanning to identify new opportunities” (p.661)</p>	606 Norwegian firms, moderated regression analysis	While managerial human capital positively impacts strategic change, boards’ sensing, and seizing abilities (not reconfiguring) positively mediate the relationship between human capital and strategic change
Kurtmollaiev et al. (2018)	<p>DMC includes managerial sensing, seizing, and transforming capabilities.</p> <p>Managerial sensing capability is defined as “regular action of recognizing opportunities and identifying customers’ latent needs, which is often based on interpreting information from various sources” of a manager.</p>	Quasi-experimental field study with a control group and 4-month time lag, 423 pretest and posttest responses from participating team leaders	The training had a positive effect on the participants’ sensing and seizing capabilities, which had a positive effect on their transforming capability, team innovation output, and team operational capability.

2.4 Emotional sensitivity as an extension of DMC sensing

Sensing emotions in organization is important for strategic management. For top managers, sensing patterns of group-focus emotions among their subordinates - middle managers may equip them with early important feedbacks on whether implementation is progressing smoothly and whether corrections are needed (Huy, 2011). This process was originally applicable for organizational social identities, but the logic could be true for normal operations. In addition, it is not only true for top-middle managers but also relatable for managers at any levels and their immediate subordinates. By considering emotions of the surrounding people, managers foster the freedom of organization members (managers and employees) to experience and express their emotions to maximize the positive outcomes while at the same time minimize any potential negative impacts (Seo and Barrett, 2007; Huy, 2011). The ability that helps managers to do so is called emotional sensitivity.

Emotional sensitivity is “the ability to accurately assess nonverbal cues (such as those conveyed by face and/or body) associated with emotion” (Carney and Harrigan, 2003, p. 194). Originally, emotional sensitivity is one of the two dimensions of interpersonal sensitivity concept. The ability to make correct judgments about the abilities, traits, and states of others from nonverbal cues is an important social skill regarded as interpersonal sensitivity. The other dimension is social sensitivity which indicates a more global social information including (but not limited to) emotion, personality, and social role (Carney and Harrigan, 2003).

From the definition itself, emotional sensitivity may allow managers in a business context to “read” people from nonverbal cues. When managers sense the surrounding environment, it involves “interpreting available information in whatever form it appears” (Teece, 2007, p. 1323). The available information should also include nonverbal cues from people inside and outside organization such as employees, customers, suppliers, for example. These cues, for example, facial expressions or body postures, could provide valuable suggestions about the status of the observed person. In the case of employees, the manager’s emotional sensitivity allows him to detect the status of team members such as level of motivation or anxiety. Based on that, managers could decide whether to take actions to provide support or just leave them alone. By constantly sensing emotions and status of people, managers tend to have a better understanding of people and their skills, strengths, and weaknesses. This data could be of immense importance when a new opportunity is sensed, and the next step is to decide whether it has strategic fit with the human and non-human resources of the firm. Therefore, emotional sensitivity is proposed to positively relate to organizational agility.

Hypothesis 2: Emotional sensitivity positively relates to organizational agility.

2.5 Moderating effects of sense of urgency

Sense of urgency is crucial for successful organizational change (Kotter, 2008). Accordingly, Kotter has put creating and sustaining sense of urgency as the first step in the organizational change process. According to Kotter (2008) the significance of a genuine sense of urgency has evolved in tandem with the transition from sporadic to continuous changes. Urgency has now transformed into a potent asset, applicable consistently, rather than being constrained to addressing

significant changes every few years. Sense of urgency is initially an opposite term for complacency – “a feeling of contentment or self satisfaction, especially when coupled with an unawareness of danger or trouble” (Kotter, 2008, p. 19). In the turbulent business context where changes are indispensable, sense of urgency interrelates with DMC sensing and emotional sensitivity to promote agility. To be more specific, a true sense of urgency make people think “Great opportunities and hazards are everywhere” (Kotter, 2008, p. 10). Combining this perspective with DMC sensing, there would be more chances that opportunities and hazards are detected among the collected hints. In this mechanism, a sense of urgency plays the role of guidelines for a large amount of information detected through DMC sensing to be classified into two main groups of outcomes: either potential opportunities or untouched hazards. Organizational agility does not simply refer to ability to cope with changes but more specifically cope with changes in a timely manner (Van Oosterhout et al., 2006; Nejatian et al., 2018). Sense of urgency, which is associated with the urge for taking action now, promotes the timeliness of any early detection of opportunities or threats from sensing activities and therefore enhances organizational agility.

Meanwhile, in the change process, it is suggested that leaders should connect emotionally to the heart of others and awaken emotions from experiences individuals can relate to (Kautt, 2009). In addition, Fredberg and Pregmark (2021) gives warnings about the negative impacts of sense of urgency if not managed effectively. Therefore, a close interaction between emotional sensitivity and sense of urgency is needed to maintain a balance level of urgency and managers could take actions to assist their employees emotionally. Therefore, the interaction between emotional sensitivity and sense of urgency impacts organizational agility. Hence, the following propositions are presented:

Hypothesis 3a: Sense of urgency positively moderates the relationship between dynamic managerial sensing capabilities and organizational agility.

Hypothesis 3b: Sense of urgency positively moderates the relationship between emotional sensitivity and organizational agility.

2.6 Moderating effects of goal commitment

Although DMC sensing and emotional sensitivity positively impacts agility by generating more data for decision making, the the lump sum of data and information from scanning and sensing activities could negatively confuse managers in decision making process. In that case, goal commitment could play a moderating role to assist managers in sorting and selecting the related information to aid decision making.

Goal commitment is initially defined as “an unwillingness to subsequently reduce goals to a lower level when confronted with error signals” (Campion and Lord, 1982, p. 268). Locke et al. (1988, p. 24) refers to goal commitment as “one’s attachment to or determination to reach a goal, regardless of the goal’s origin”. In a similar pattern, goal commitment is defined as the resolve to strive for a goal and the unwavering dedication to its pursuit over an extended period (Hollenbeck et al., 1989). Emotional sensitivity provides managers with constant updates of employee’s status but when it comes to details, managers may find themselves micro-managing their teams. A micro-managed team discourages employees from expressing their true feelings because they feel they are being watched. Moreover, it could become worse if managers are myopic about all the details and overlook the big picture. Managers with goal commitment could avoid this undesired situation by using their commitment to the goal as a filter. They only process information that aligns with their personal, department and organizational goals. Therefore, the following two propositions are presented:

Hypothesis 4a: Goal commitment positively moderates the relationship between dynamic managerial sensing capabilities and organizational agility.

Hypothesis 4b: Goal commitment positively moderates the relationship between emotional sensitivity and organizational agility.

Figure 1 below illustrates the proposed research model.

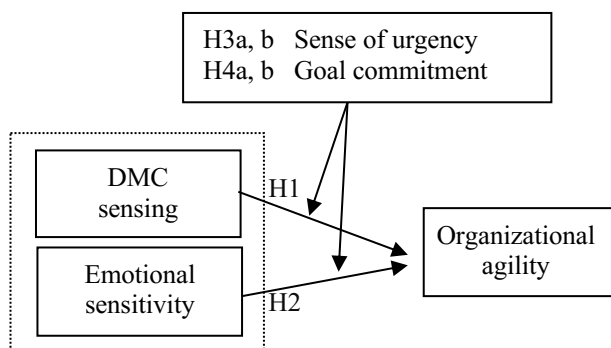


Fig. 1. Proposed research model

3. CONCLUSION

In summary, this conceptual paper has established a research model to be tested in future study. The proposed model illustrates the relationship between DMC sensing, emotional sensitivity, and organizational agility with moderating effects of sense of urgency and goal commitment.

3.1 Implications for theory

Our study contributes to the theory in three ways. First, several prior studies have examined the positive impact of dynamic capabilities on organizational agility. Our research further contributes to the current research threads in two aspects: (1) shift the attention from organizational-level DC to individual-level DMC to highlight the important role of individual managers and (2) include sense of urgency and goal commitment as moderators of the relationship to illustrate how to boost the impact of DMC sensing on agility. Secondly, DC sensing and DMC sensing have not received much attention from researchers regardless of their outstanding significance among three capability clusters. This study emphasizes DMC sensing to better understand the mechanisms within which DMC interact with agility. Third, in current DC and DMC sensing literature, it seems that insufficient effort has been made to connect sensing of the internal and external environment. The emotional factors have been absent. Therefore, this study involves emotional sensitivity as an extension of DMC sensing and an effective contributor to organizational agility.

3.2 Implications for practice

Managers have always been looking for ways to help their organizations to stay competitive and to prosper in today's turbulent environment. This study implies the significance of agility in helping them to do so. To promote organizational agility, DMC sensing and emotional sensitivity are introduced as positive influencing factors. However, the sensing activities generate a huge amount of information and data and might confuse managers sometimes. Therefore, sense of urgency and goal commitment are introduced as moderating factors to help managers put the effort into the right areas and avoid undesired outcomes such as micromanagement. By focusing on DMC sensing – an individual-level capability, the role of individual managers is stressed. This is important because managers can start changing their organization by changing and/or improving themselves.

3.3 Limitations and directions for future research

This study is conceptual, future empirical study is recommended to test the proposed model. Reasoning that sensing capabilities are of dominant significance; this study put a particular focus on DMC sensing capabilities and its extension – emotional sensitivity. Future studies are recommended to expand the research scope to see how sensing, seizing, and transforming/reconfiguring interact and how they altogether influence organizational agility. Additional study should also be conducted to explore antecedents of DMC sensing and its emotional sensitivity extension.

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