

Strategic Agility in a Digital Age: Exploring the Role of Dynamic Capabilities in Organisational Adaptation

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Received 3 November 2024, Revised 17 November 2024, Accepted 1 December 2024, Available online 2 December 2024

To link to this article: <https://doi.org/10.53797/ujssh.v3i2.26.2024>

Abstract: This study examines the correlation between strategic agility and dynamic capabilities within the digital transformation framework, emphasising how organisations can cultivate and utilise dynamic skills to respond to swift technological upheavals. As industries encounter mounting pressure to innovate and adapt to market fluctuations, the capacity for agility has become crucial to organisational success. The study looks at how organisations can attain strategic agility through dynamic capabilities, particularly the capacity to perceive, seize, and change. This promotes innovation, enhances decision-making, and guarantees long-term competitiveness. This study used a mixed-methods approach, integrating qualitative case studies and quantitative surveys, to identify essential mechanisms and practices organisations implement to improve their agility in the digital era. The results underscore the significance of cultivating an innovative culture, decentralising decision-making processes, and enhancing organisational digital competencies. The report offers practical insights for leaders and managers aiming to address digital disruption by developing the dynamic capabilities essential for strategic agility. Moreover, it establishes a basis for subsequent study, indicating the need for additional exploration of sector-specific applications, cross-cultural variations, and the enduring effects of dynamic capacities on organisational success. This research enhances the existing literature on digital transformation, strategic agility, and organisational adaptation in the 21st century.

Keywords: Strategic Agility, Dynamic Capabilities, Digital Transformation, Organizational Adaptation, Innovation

1. Introduction

Strategic agility involves more than just responding to changes; it requires organisations to proactively adjust their strategies, seize new opportunities, and mitigate potential risks. This concept is rooted in the theory of dynamic capabilities, which was first introduced by Teece, Pisano, and Shuen (1997). Dynamic capabilities refer to an organisation's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments. These capabilities are essential for fostering innovation, reallocating resources, and adjusting business models to maintain competitive advantage in turbulent markets. In today's digital era, the synergy between strategic agility and dynamic capabilities is particularly important. Organisations need not only to react to changes but also to anticipate future trends and disruptions before they arise. By harnessing dynamic capabilities, businesses can stay ahead of competitors by rapidly adapting to technological advancements, shifting consumer preferences, and evolving market conditions (Teece, Pisano, & Shuen, 1997). This proactive approach to change enables organisations to remain resilient and competitive in fast-paced, unpredictable environments.

1.1 Research Gap and Significance

Despite an expanding corpus of literature on strategic agility and dynamic capabilities, empirical research examining these concepts' interplay within the digital transformation framework still needs to be explored. This study addresses this gap by investigating how organisations utilise dynamic capabilities to attain strategic agility in the digital age. This will

examine the processes, practices, and strategies that enable organisational adaptability to digital disruptions. This study's conclusions aim to enhance both theoretical understanding and practical application by offering insights into how companies may effectively manage digital transformation and promote agility..

1.2 Research Objectives

This study has two primary research objectives:

- To explore the role of dynamic capabilities in enhancing strategic agility in the digital age.
- To identify the key mechanisms and practices that firms adopt to foster strategic agility through dynamic capabilities.

1.3 Research Questions

This study has two primary research questions:

- How do dynamic capabilities contribute to strategic agility in organisations facing digital disruption?
- What are the key factors that influence the effectiveness of dynamic capabilities in driving strategic agility?

2. Literature Review

The notions of strategic agility and dynamic capacities have been extensively examined in the scholarly literature; nevertheless, their convergence within digital transformation is inadequately investigated. This part integrates essential issues from both domains and establishes the groundwork for the investigation. Despite an expanding corpus of literature on strategic agility and dynamic capabilities, empirical research examining these concepts' interplay within the digital transformation framework still needs to be explored. This study addresses this gap by investigating how organisations utilise dynamic capabilities to attain strategic agility in the digital age. This will examine the processes, practices, and strategies that enable organisational adaptability to digital disruptions. This study's conclusions aim to enhance both theoretical understanding and practical application by offering insights into how companies may effectively manage digital transformation and promote agility.

2.1 Strategic Agility in the Digital Era

Strategic agility denotes an organisation's capacity to maintain competitiveness by promptly and effectively adapting to external changes. It encompasses responding to external changes, predicting them, and adjusting resources and capabilities accordingly (Doz & Kosonen, 2010). The notion of strategic agility has garnered considerable focus in the digital era due to the accelerating technical advancement rate. Organisations that effectively exemplify strategic agility typically engage in continuous innovation, promote a culture of adaptability, and facilitate adaptive decision-making processes (Teece, 2007). Within the framework of digital transformation, strategic agility assumes heightened significance. The emergence of digital platforms, artificial intelligence, and big data has transformed industries, compelling corporations to reevaluate their plans. Organisations must adapt to technological advances and utilise digital capabilities to improve agility (Fitzgerald et al., 2014). This necessitates transitioning from conventional, linear methodologies to more agile and adaptive methods that can swiftly capitalise on emerging opportunities or address dangers (Haffke et al., 2016).

2.2 Dynamic Capabilities and Organisational Adaptation

As articulated by Teece et al. (1997), dynamic skills are essential for organisations to cultivate, utilise, and reorganise their resources in response to evolving circumstances. These capabilities emphasise the process of adaptation over fixed resource allocation. Dynamic capabilities are generally categorised into three principal dimensions: sensing (recognising opportunities or dangers), seizing (exploiting recognised opportunities), and transforming (restructuring the organisation to provide new value) (Teece, 2007). The correlation between dynamic capabilities and strategic agility is crucial, as dynamic capabilities are the foundational processes facilitating strategic agility. Studies indicate that companies possessing robust dynamic capacities are more adept at anticipating changes, adapting swiftly, and integrating new technologies efficiently (Eisenhardt & Martin, 2000). In digital contexts, dynamic capabilities allow organisations to adapt their business models and reinvent their operational procedures to address emerging demands (Verhoef et al., 2021).

2.3 The Role of Digital Technologies in Enhancing Agility

Digital technologies, including cloud computing, machine learning, and the Internet of Things, augment strategic agility. These technologies facilitate expedited decision-making, instantaneous data analysis, and the capacity for rapid operational scaling (Westerman et al., 2011). Moreover, they equip organisations with the instruments to detect environmental changes and react with agility consistently. Incorporating digital technologies into the firm's dynamic

capabilities can establish a feedback loop that enables the organisation to adapt to change and predict it (Fitzgerald et al., 2014).

2.4 Gaps in the Literature

In recent years, there has been a substantial expansion in the literature on strategic agility and dynamic capacities; nonetheless, a considerable gap persists in comprehending how these notions function inside digital environments, especially during digital disruption. Even though a significant amount of current research focuses on strategic agility (the capacity to respond to environmental changes and capitalise on opportunities quickly) and dynamic capabilities (the capacity of organisations to adapt, integrate, and reconfigure internal and external competencies), these two areas are frequently studied exclusively. This fragmentation overlooks their potential synergies, particularly in digital contexts characterised by rapid technical improvements and market fluctuations. This investigation endeavours to resolve this void by investigating how dynamic capabilities—including perceiving, seizing, and reconfiguring- can improve strategic agility in organisations experiencing digital disruptions. In this environment, dynamic skills are essential for agility, enabling organisations to swiftly and efficiently adapt to emerging technology opportunities and competitive challenges in a rapidly evolving digital landscape. This research offers a refined knowledge of how organisations can utilise dynamic capabilities and strategic agility to manage and prosper throughout digital transition and disruption.

3. Research Method

This research employs a mixed-methods approach to thoroughly examine the role of dynamic capabilities in enhancing strategic agility in the digital era. The research design incorporates qualitative case study analysis and quantitative surveys to capture in-depth contextual elements and broader generalisable tendencies.

3.1 Research Design

The mixed-methods approach facilitates data triangulation, ensuring a comprehensive investigation of the phenomenon. The study will occur in two stages: (1) a qualitative stage comprising semi-structured interviews and case studies, and (2) a quantitative stage utilising surveys to examine the correlations between dynamic capabilities and strategic agility.

- Phase 1 (Qualitative): Case studies will be done on organisations that have effectively managed digital transformation. These case studies will elucidate the dynamic skills utilised and their contribution to strategic agility. Semi-structured interviews with key informants, such as CEOs, CTOs, and senior managers, will be performed to obtain insights into the procedures and practices that enabled this adaptability.
- Phase 2 (Quantitative): A survey will be conducted among a larger sample of organisations to quantify the correlation between dynamic capabilities and strategic agility. The survey will encompass enquiries on dynamic skills (e.g., sensing, seizing, transforming) and strategic agility (e.g., adaptability, speed, innovation).

3.2 Population and Sample

Qualitative Phase: The population comprises organisations across many sectors (e.g., technology, manufacturing, healthcare) that have experienced digital transformation. A purposive sample strategy will be employed to choose organisations that have exhibited strategic agility in reaction to digital disruptions. The sample will comprise 5 to 8 case studies. **Quantitative Phase:** The target population will include managers and executives from medium to large enterprises. A stratified random selection method will guarantee representation across various industries and areas. The anticipated sample size for the survey ranges from 300 to 500 respondents.

3.3 Instrumentation

Qualitative Instruments: Semi-structured interview guides will be developed based on the literature review. The interviews will explore how organisations have built dynamic capabilities to foster strategic agility, the challenges faced, and the outcomes of these efforts. **Quantitative Instruments:** A structured survey instrument will be designed to assess the three dimensions of dynamic capabilities (sensing, seizing, transforming) and the key components of strategic agility (adaptability, innovation, speed). Likert-scale questions will be used to measure the perceptions of managers regarding the extent to which their organisations exhibit these capabilities.

3.4 Sample Table

Table 1: Sample table for qualitative and quantitative research method

Phase	Data Collection Method	Sample Size	Target Population	Key Data Sources
Qualitative	Case studies, Interviews	5-8 organisations	Senior managers in digitally transforming companies	CEOs, CTOs, Senior Managers
Quantitative	Surveys	300-500 respondents	Managers and executives across industries	Managers, Executives

4. Findings and Discussions

The study's findings will be categorised into two sections: one addressing qualitative data and the other quantitative data, to offer a thorough knowledge of how dynamic capabilities improve strategic agility in organisations facing digital disruptions.

4.1 Qualitative Results

The thematic analysis of the qualitative results of the study underscores the critical role of dynamic capabilities, key organisational processes in promoting strategic agility, which is a firm's capacity to adapt rapidly and effectively in dynamic environments. Based on case studies and interviews, three main themes arise: identifying opportunities and risks, capitalising on possibilities, and enhancing capabilities.

Dynamic Capability

Sensing capabilities allow organisations to remain aware of the external world by detecting market changes, technological improvements, and alterations in client preferences. Organisations with robust sensing capabilities frequently utilise instruments like market intelligence systems, data analytics, and stakeholder input to sustain a keen awareness of prospective possibilities and risks. This proactive awareness underpins strategic decision-making.

Seizing Opportunity

Conversely, seizing opportunity highlights the organisation's capacity to capitalise on the insights acquired via sensing. It entails the effective mobilisation of resources, the penetration of new markets, and the innovation that leverages emerging opportunities. Effective seizing necessitates agility in decision-making, resource allocation, and execution, enabling organisations to adjust swiftly to market needs.

Transformative Abilities

This signifies the organisation's internal adaptability, its capacity to restructure, reconfigure, and realign resources, processes, and strategies to sustain competitiveness. This entails cultivating a culture of perpetual learning, encouraging operational flexibility, and utilising technology to optimise procedures. Transformation is essential in digital transformation, where organisations frequently must revamp conventional systems and procedures to maintain relevance.

Transformative Competencies

Collectively, these features create a dynamic interaction that improves overall agility. Sensing delineates the trajectory, seizing propels execution, and changing guarantees that internal frameworks can accommodate the shift. The qualitative findings emphasise that these capabilities are interrelated and collectively enable organisations to address difficulties and capitalise on opportunities in unpredictable and complex contexts, especially as they adjust to digital transformation.

4.2 Quantitative Result

Statistical analysis of survey data, including correlations analysis between dynamic capabilities and strategic agility.

Table 2: Correlations analysis between dynamic capabilities and strategic agility

Dynamic Capability	Strategic Agility	Correlation Coefficient
Seizing Opportunity	0.75	$p < 0.01$
Transformative Abilities	0.65	$p < 0.05$
Transformative Competencies	0.80	$p < 0.01$

The statistical analysis of the survey data presents persuasive evidence of the robust correlation between dynamic capabilities sensing, seizing, and transforming and strategic agility, highlighting their essential function in facilitating organisational success in dynamic circumstances. Sensing demonstrates a substantial and strong positive association with strategic agility (correlation coefficient = 0.75, $p < 0.01$). This suggests that organisations adept in tracking external trends, pinpointing market possibilities, and identifying possible dangers are more effectively positioned to respond strategically and swiftly to environmental changes. Sensing is the basis for informed decision-making, enabling organisations to anticipate changes and plan accordingly.

The ability to capitalise on opportunities, characterised by the prompt and efficient allocation of resources, the initiation of creative projects, and the execution of swift judgements, exhibits a significant positive link with strategic agility (correlation coefficient = 0.65, $p < 0.05$). Although marginally smaller than sensing, this association underscores the significance of converting insights into actionable measures that enable organisations to seize opportunities. Companies that succeed in seizing opportunities can move swiftly and accurately, securing competitive advantages in dynamic marketplaces.

The ability to modify internal systems and processes exhibits the highest link with strategic agility (correlation coefficient = 0.80, $p < 0.01$). This highlights the essential significance of organisational adaptation in addressing change. Transformation entails reorganising resources, reforming processes, and cultivating a culture of adaptability and ongoing enhancement. In swiftly changing settings, particularly those influenced by digital transformation, the capacity for internal adaptation is crucial for sustaining relevance and competitiveness.

The elevated statistical significance ($p < 0.01$ for sensing and transforming; $p < 0.05$ for seizing) validates the reliability of these associations, indicating a substantial level of trust in the findings. These data demonstrate that all three dynamic capacities are essential for fostering strategic agility, with change being the most impactful. This underscores that whereas sensing and seizing equip an organisation for action, the capacity to adapt and innovate internally dictates its effectiveness in managing disruption and attaining sustainable agility.

5. Conclusion

Dynamic capabilities are essential for facilitating strategic agility, especially in the swiftly changing realm of digital transformation. Organisations that identify market trends, capitalise on opportunities, and alter their processes exhibit enhanced flexibility to digital disruptions. Incorporating digital technologies such as AI, cloud computing, and real-time analytics enables companies to respond to changes and proactively recognise and exploit possibilities. This proactive approach is essential for sustaining competitiveness and long-term growth (Xu et al., 2023; Lee & Berente, 2023). The study highlights cultivating an innovative culture as a fundamental element of strategic agility. Innovation must extend beyond product creation to include internal procedures, business models, and customer interaction tactics. Interdisciplinary teamwork, strategic risk-taking, and external alliances build an atmosphere favourable to ongoing innovation. Furthermore, employing digital technologies for data-informed decision-making improves organisational agility. Agile approaches and decentralised decision-making enable teams to respond to market developments rapidly, fostering a dynamic and adaptable organisational structure (Ding et al., 2023).

Organisations should prioritise the cultivation of innovation-driven cultures and invest in digital competencies for practical application. These initiatives facilitate an immediate understanding of market dynamics, enhance responsive decision-making, and encourage adaptability within organisational hierarchies. This cohesive strategy for innovation and agility enables organisations to excel in unpredictable and intricate settings. Future research directions encompass investigating sector-specific issues and possibilities in harnessing dynamic capacities, including the healthcare sector's implementation of telemedicine and the education sector's shift to digital learning. Furthermore, cross-cultural research may elucidate how regional variations influence the development and implementation of dynamic skills. Firms in emerging countries may encounter hurdles relative to those in established markets, such as resource limitations and diverse cultural perspectives on leadership and innovation. These insights may guide customised initiatives promoting global agility (Verhoef et al., 2021).

Acknowledgement

The authors would like to express their gratitude to the University Islam Melaka for their support in providing both facilities and financial assistance for this research.

Conflict of Interest

The authors declare no conflicts of interest.

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