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DIGITAL TRANSFORMATION, COOPERATION AND GLOBAL INTEGRATION IN THE NEW NORMAL

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DIGITAL ORIENTATION, INNOVATION CAPABILITY AND FIRM PERFORMANCE: A PROPOSAL RESEARCH MODEL

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Abstract

In today's dynamic business landscape, each firm possesses its unique set of resources and capabilities, granting them a competitive edge to achieve superior business performance. The crucial factor is their ability in making the most out of these particular resources and abilities, which empowers them to quickly adjust to the constantly shifting business landscape.This means that successful individuals or organizations are adept at using their unique strengths and resources in a way that allows them to easily and efficiently adapt to changes in the business world. For instance, a tech company with a highly skilled and flexible workforce, advanced technology, and a strong innovation culture will be better equipped to navigate through various market challenges and stay competitive in the face of industry trends. A crucial aspect that drives success is a firm's strategic direction, which has demonstrated positive effects on both innovation and overall performance. Additionally, innovation capability itself has been found to positively impact firm performance. Nevertheless, with the increasing prevalence of digital technologies, the once formidable competitive advantage offered by traditional strategic directions is gradually diminishing. As a response to this shifting paradigm, this study seeks to present a comprehensive research model that incorporates three pivotal research concepts. These concepts include digital orientation, which refers to a firm's strategic direction in the context of digital technology adoption. It encompasses four dimensions: digital technology scope, digital capabilities, digital ecosystem coordination, and digital architecture configuration. Alongside digital orientation, the study will explore innovation capability and its influence on firm performance. By investigating the interplay between these three key factors, we aim to shed light on how firms can thrive in the digital era and achieve sustainable competitive advantages. This study provides an analytical framework for further research that will collect data and use quantitative research methods to test the research model.

Keywords: *Digital Orientation, Innovation Capability, Firm Performance, Digital Capability, Financial Performance*

1. Introduction

Firms exhibit diverse sets of resources and capabilities (Barney, 1991). A competitive advantage emerges when a firm effectively harnesses its unique resources and capabilities to timely and adeptly respond to a rapidly changing environment (Zhou, Yim, & Tse, 2005; Feng, Morgan, & Rego, 2017; Helfat & Martin, 2015). The capabilities of a firm constitute a sophisticated combination of knowledge and skills,

empowering the organization to convert its available resources into achieving superior performance (Feng et al., 2017; Day, 1994). One crucial capability is innovation, wherein a firm excels at conceiving and developing novel ideas, products, or processes and successfully executing them to enhance its competitive advantage (Damanpour, 1991; Hult, Hurley, & Knight, 2004). In recent years, researchers have diligently explored firm capabilities and their impact on performance (e.g., Sirmon, Hitt, & Ireland, 2007; Song, Di Benedetto, & Nason, 2007; Camisón & Villar-López, 2014; Feng et al., 2017; Orlandi, 2016). Their efforts have shed valuable light on how these capabilities influence a firm's ability to achieve and sustain success in the ever-changing business landscape.

Strategic orientations adopted by firms to foster behaviors leading to superior performance (Gatignon & Xuereb, 1997) are among the key determinants influencing firm innovativeness and performance (Tho, 2019). Emphasized by the resource-based theory, the exploitation of internal and external firm-specific competences, along with strategic consistency, plays a vital role in addressing the dynamic business environment (Teece, Pisano, & Shuen, 1997). Notably, strategic orientation stands out as one of the most crucial firm capabilities (Zhou, Yim, & Tse, 2005). It represents a culturally influenced focus and embodies the firm's strategic directions through a set of beliefs and values, guiding the pursuit of competitive advantage (Zhou et al., 2005; Gatignon & Xuereb, 1997).

The disruption caused by emerging technologies such as Big Data, Cloud technology, Artificial Intelligence and Machine Learning (AI/ML), enhanced robotics, Data Analytics, 3D Printing, Cryptocurrency, and Blockchain is reshaping industrial businesses on a massive scale (Lee, Suh, Roy, & Baucus, 2019) and fundamentally changing how businesses generate value. Extensive research suggests that relying solely on technology is insufficient for achieving successful digital transformation and gaining a competitive advantage (Kindermann et al., 2021). Instead, it is the strategic approach that plays a pivotal role in driving effective digital transformation and yielding sustainable benefits. The rapid evolution of digital technologies has revolutionized traditional competition logic, compelling the need for innovative forms of managerial and organizational alignment that were not previously explored within established strategic orientations or their combinations (Quinton, Canhoto, Molinillo, Pera, & Budhathoki, 2018). Combining different strategic orientations can be beneficial in dynamic environments, but the widespread adoption of digital technologies has slowly eroded the competitive advantage that these traditional strategies once offered. As a result, there is an urgent call for a fresh and innovative strategic orientation that explicitly incorporates firms' digital readiness and orientation. In summary, the widespread influence of emerging technologies calls for a strategic paradigm shift, where businesses focus on their digital orientation to thrive and maintain a sustainable competitive edge in today's ever-evolving business landscape.

This study aims to explore the interrelationship between three essential research concepts: digital orientation (comprising four dimensions - digital technology scope, digital capabilities, digital ecosystem coordination, and digital architecture configuration), innovation capacity, and firm performance. This study will be the ground for the next quantitative research to test the hypotheses in the model in the context of research in Vietnam and compare with previous studies in the world.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

2.1 Firm performance

Prior research suggests that when evaluating performance, it is essential to consider both growth and financial aspects (Wiklund, 1999) since innovativeness can lead to various organizational outcomes (e.g., new products, services, manufacturing, or service delivery processes), resulting in different impacts on firm performance (e.g., new revenue streams, increased margins, lower costs) (Terziovski, 2010). Hence, relying

solely on pure financial performance metrics may not always be suitable for studying innovation (Salter & Torbett, 2003), necessitating the development of composite measures of firm performance using multiple key indicators.

In cases where most sample firms are not publicly traded, objective measures of firm performance based on secondary financial data are often unavailable (Dibrell, Craig, & Neubaum, 2014). Consequently, subjective measures of firm performance have been employed in studies (e.g., Rudd, Greenley, Beatson, & Lings, 2008; Titus, Covin, & Slevin, 2011), where managers use a four-item Likert-type scale to assess their firms' financial performance (e.g., return on assets, return on sales, market share growth, and sales growth) relative to that of their closest competitors, ranging from 1= "bottom 20%" to 5 = "Top 20%" (Dibrell et al., 2014). Utilizing this type of performance information helps address concerns about how industry membership might influence the study results, providing a more comprehensive view of firm performance.

2.2 Innovativeness Capability

According to the enterprise's resource-based theory (Barney, 1991), it is posited that firms possess diverse resources and capabilities, and a company can attain a competitive advantage when it effectively exploits its unique set of resources and capabilities to promptly respond to the rapidly changing business environment (e.g., Zhou, Yim, & Tse, 2005; Helfat & Martin, 2015; Feng, Morgan, & Rego, 2017).

Innovativeness represents a firm's ability to conceive and develop novel ideas, products, or processes and successfully implement them to gain a competitive advantage (Damanpour, 1991; Hult, Hurley, & Knight, 2004; Cassell, Symon, Božic, & Ozretic-Došen, 2015). This capability holds paramount importance for firms worldwide (Barasa, Knoben, Vermeulen, Kimuyu, & Kinyanjui, 2017), particularly for those in emerging economies, where the ability to innovate becomes crucial for staying competitive in a globalized business environment (Nguyen & Nguyen, 2011). A firm's innovativeness capability reflects both its willingness and ability to utilize its resources and capabilities to adopt new ideas suited for changing competitive conditions while shedding outdated business practices (Hult et al., 2004). Such adaptability becomes essential when the business environment undergoes transformations, internal or external to the firm, as it enables the firm to establish a competitive position in the market (Damanpour, 1991; Hult et al., 2004). As a result, innovativeness capability becomes a prerequisite for firm performance (Tho, 2018), leading researchers in recent years to increasingly focus on studying firm innovativeness (Tho, 2019). The outcomes of numerous research studies have consistently revealed positive effects of innovativeness on business performance (e.g., Medina & Rufín, 2009; Hult et al., 2004; Terziovski, 2010; Nguyen & Nguyen, 2011; Rubera & Kirca, 2012; Tho, 2018). These findings underscore the pivotal role of innovation in driving firm success and overall performance.

Existing studies on firm innovativeness have predominantly focused on the developed world, while relatively little attention has been given to firms in emerging economies (Barasa, Knoben, Vermeulen, Kimuyu, & Kinyanjui, 2017; Heredia Pérez, Geldes, Kunc, & Flores, 2019). As a result, it becomes crucial to investigate the connection between innovation capacity and firm performance in Vietnam. Building upon the theoretical foundation of innovation capacity and drawing insights from previous research, this study proposes the following hypothesis:

H1: Innovation capacity has a positive impact on firm performance

2.3 Digital Orientation

A firm's strategic orientation signifies the strategic directions implemented by the organization to cultivate behaviors conducive to continuous superior business performance (Gatignon & Xuereb, 1997;

Slater, Olson, & Hult, 2006). The marketing literature has significantly contributed to identifying various strategic orientations that firms can adopt in their pursuit of superior performance (Deshpandé, Grinstein, Kim, & Ofek, 2013). Prior research often focuses on specific strategic orientations and their impact on firm performance (Gnizy, William, & Grinstein, 2014). Over the past decades, a consistent body of research in management and related disciplines has shown that strategic orientations have a favorable impact on firm performance. Different fields have defined strategic orientations in various ways, including entrepreneurial orientation (Covin & Slevin, 1989), market orientation (Narves & Slater, 1990), learning orientation (Sinkula, Baker, & Noordewier, 1997) and technology orientation (Gatignon & Xuereb, 1997).

Digital orientation represents a strategic orientation tailored to address changes driven by digital technology (Kindermann et al., 2021). Distinguishing between digitization and digitalization is crucial. Digitization pertains to the technical process of converting analog signals into a digital format. On the contrary, digitalization encompasses the broader sociotechnical application of digitizing techniques to diverse social and institutional contexts, effectively establishing digital technologies as fundamental infrastructure (Tilson, Lyytinen, & Sørensen, 2010; Kindermann et al., 2021). In this study, the concept of digitalization is used to highlight the sociotechnical process that drives transformations at the individual, social, and institutional levels (Nambisan, 2017). This process involves the interaction of digital technologies, people, and organizations, and it can lead to significant changes in how we work, live, and interact with the world around us.

Strategic orientation comprises a collection of intangible capabilities that are challenging to replicate, granting firms a competitive advantage and enhancing overall performance (Schweiger, Stettler, Baldauf, & Zamudio, 2019). According Barney (1991), these capabilities can include digital orientation, which is predictive of higher firm performance (Kindermann et al., 2021). On the contrary, entrepreneurial orientation fosters innovations that leverage advanced technology and cater to both mainstream customers (i.e., technology-based innovations) and emerging market segments (i.e., market-based innovations) (Zhou et al., 2005). Kindermann et al. (2021) found that digital and entrepreneurial orientation are positively related, suggesting that digital orientation fosters innovative capabilities in firms.

As digital technology possesses unique and novel characteristics, it raises pertinent questions regarding the effectiveness of conventional strategic orientations in driving and supporting present-day digitalization initiatives. Quinton, Canhoto, Molinillo, Pera, and Budhathoki (2018) put forward a strategic orientation called digital orientation, which combines entrepreneurial orientation, market orientation and learning orientation. Nevertheless, Schweiger et al. (2019) contend that the potential benefits arising from synergies among strategic orientations extend beyond digitalization contexts or technology-induced changes. While combining strategic orientations can be advantageous in dynamic environments, the growing adoption of digital technologies is gradually diminishing the competitive advantage that these strategic orientations once provided. Consequently, there is an imperative to develop a fresh strategic orientation that explicitly accounts for firms' digital orientation (Kindermann et al., 2021). The digital orientation concept comprises four constructs: digital technology scope, digital capabilities, digital ecosystem coordination, and digital architecture configuration (Henderson & Venkatraman, 1999; Nambisan, Wright, & Feldman, 2019).

2.3.1 Digital technology scope

The first dimension of digital orientation, known as "digital technology scope," refers to the specific technologies that each company uses. This includes both hardware and software, and it can range from basic to cutting-edge. The range of technologies that a firm uses determines its ability to create value for its customers through digital means. This dimension focuses on the technological aspects of the affordances

perspective, as opposed to the human aspects. The concept emphasizes that the use and impact of digital technology are affected by both the people and organizations using it, as well as the inherent capabilities of the technology itself. (Kindermann et al., 2021).

In essence, digital technology scope represents the array of digital technologies that enable the firm to achieve strategic growth (Kindermann et al., 2021). According to Nambisan, Lyytinen, Majchrzak, and Song (2017), this set may include technologies such as sensors, blockchain, and internet-of-things solutions, which play crucial roles in the process of digitalization. Firms that excel in this dimension deliberately apply digital technologies to their product or service offerings, leading to increased value creation, better fulfillment of customer needs, and enhanced cash flows (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013; Drnevich & Croson, 2013; Ross, Sebastian, Beath, & Jha, 2017).

Digital technology scope refers to the range of digital technologies that a firm uses to achieve strategic growth (Kindermann et al., 2021). According to Nambisan, Lyytinen, Majchrzak, and Song (2017), this includes technologies such as sensors, blockchain, and internet-of-things solutions, which are all essential for digitalization. Firms that excel in this dimension deliberately apply digital technologies to their products and services, which leads to increased value creation, better customer satisfaction, and higher profits. As an illustration, if a company strategically chooses to embrace 5G technology and implement it in innovative business endeavors, it can gain a competitive advantage in fields such as autonomous driving, cloud gaming services, and telematics (Henderson & Venkatraman, 1999). The key element of the digital orientation construct underscores how technologically adept firms utilize digital innovations to provide an expanded range of digital or digitally enhanced products and services, tailored precisely to meet their customers' requirements (Kindermann et al., 2021).

H2: Digital technology scope positively affects firm performance

H3: Digital technology scope positively affects innovation capability

2.3.2 Digital Capability

The second aspect of digital orientation is referred to as "digital capability," encompassing both the human and organizational facets of the affordances perspective. This dimension centers on the efforts made by organizations to develop and sustain routines that leverage human capital and knowledge assets, enabling them to effectively engage with a specific set of digital technologies (Kindermann et al., 2021). It encapsulates the essential competencies required for both system-use and internal management, which are critical for the successful execution of a given strategy (Henderson & Venkatraman, 1999).

Digital capabilities consist of a wide range of organizational skills, such as expertise in big data analytics, machine and deep learning engineering, high-performance computing, user experience, and artificial intelligence (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013; Kindermann et al., 2021). Companies that excel in digital capabilities are always on the lookout for talented individuals and invest in their training and development. They understand that the digital landscape is constantly changing, and they need to ensure that their employees have the skills and knowledge they need to stay ahead of the curve. This proactive approach empowers them to digitize their value creation processes and outcomes effectively (Kindermann et al., 2021). Based on the analysis above, it becomes evident that digital capability significantly impacts both innovation capacity and firm performance, leading to the formulation of the following research hypotheses:

H4: Digital capability positively affects firm performance

H5: Digital capability positively affects innovation capability

2.3.3 Digital ecosystem coordination

The third facet of digital orientation is termed "digital ecosystem coordination." When making strategic decisions, organizations need to consider the interdependencies that shape the structure of the digital ecosystem in which they function (Adner & Kapoor, 2010). Companies have the ability to combine different digital devices in order to create digital platforms (Kindermann et al., 2021), facilitating value-generating interactions between external producers and consumers (Constantinides, Henfridsson, & Parker, 2018, p. 381). Within these platforms, a wide variety of actors come together, forming diverse ecosystems that collaborate in innovation efforts (Yoo, Boland Jr, Lyytinen, & Majchrzak, 2012).

Regardless of their position within the ecosystem, firms can seek to coordinate the interdependencies by shaping governance structures that regulate membership, value creation, and value capture. This means that firms can work together to create rules and systems that govern how the ecosystem operates. This can help to ensure that the ecosystem is efficient and that everyone involved is able to benefit. In addition, they cultivate unique capabilities to promote effective collaboration, such as the sharing of knowledge (Kindermann et al., 2021). To ensure that ecosystem partners can fully benefit from a focal value proposition, firms must coordinate their efforts efficiently and address any bottlenecks that may hinder value creation (Kapoor, 2018). This can be done by providing and using application programming interfaces (APIs) and open-source technology platforms, which allow multiple devices, such as tablets and smartphones, to access the same data and services. These coordination endeavors are crucial for achieving successful digitalization and, in the end, gaining a competitive edge (Kindermann et al., 2021).

The research hypothesis proposed for this research concept concerning innovation capacity and firm performance is as follows:

H6: Digital ecosystem coordination positively affects firm performance

H7: Digital ecosystem coordination positively affects innovation capability

2.3.4 Digital architecture configuration

The last dimension of digital orientation is labeled "digital architecture configuration," encompassing the concept of generativity. Generativity entails the ability of digital technology to initiate unguided change mechanisms through numerous dispersed and uncoordinated units (Zittrain, 2006). This generativity carries substantial implications for the technological architectures and organizational workflows of firms (Kindermann et al., 2021). Digital technology plays a crucial part in facilitating creative processes by providing environments for controlled serendipity (Austin, Devin, & Sullivan, 2012). For example, the implementation of 3D visualization technology in construction projects sparked subsequent waves of innovation, with fresh ideas emerging within an innovation space and disseminating throughout it (Boland Jr, Lyytinen, & Yoo, 2007).

Companies that excel in this dimension strategically devise their systems and technological infrastructures to be agile and adaptable, enabling them to respond effectively to changes in demand. By doing so, they empower their chief information officer to serve as a continuous agent of change (El Sawy, Kræmmergaard, Amsinck, & Vinther, 2020). These technology-focused companies adopt flexible administrative structures and work processes that allow them to utilize new digital assets generated through generative actions by external stakeholders (Nambisan, Lyytinen, Majchrzak, & Song, 2017). Companies that focus on digital architecture configuration design their organizations in a way that makes it easy to digitize analog processes. This can lead to increased value generation, such as through data generation, and value capture, such as through automation (Kohli & Grover, 2008). This approach ensures that they are well-positioned to capitalize on the potential of digital technology, driving their success in the ever-evolving digital landscape. The research hypothesis posed for this dimension in relation to innovation capacity and firm performance is as follows:

H8: Digital architecture configuration positively affects firm performance

H9: Digital architecture configuration positively affects innovation capability

3. PROPOSED MODEL MODEL

The research model "Digital orientation, innovation capacity, and firm performance" is structured based on the underlying theory and hypotheses.

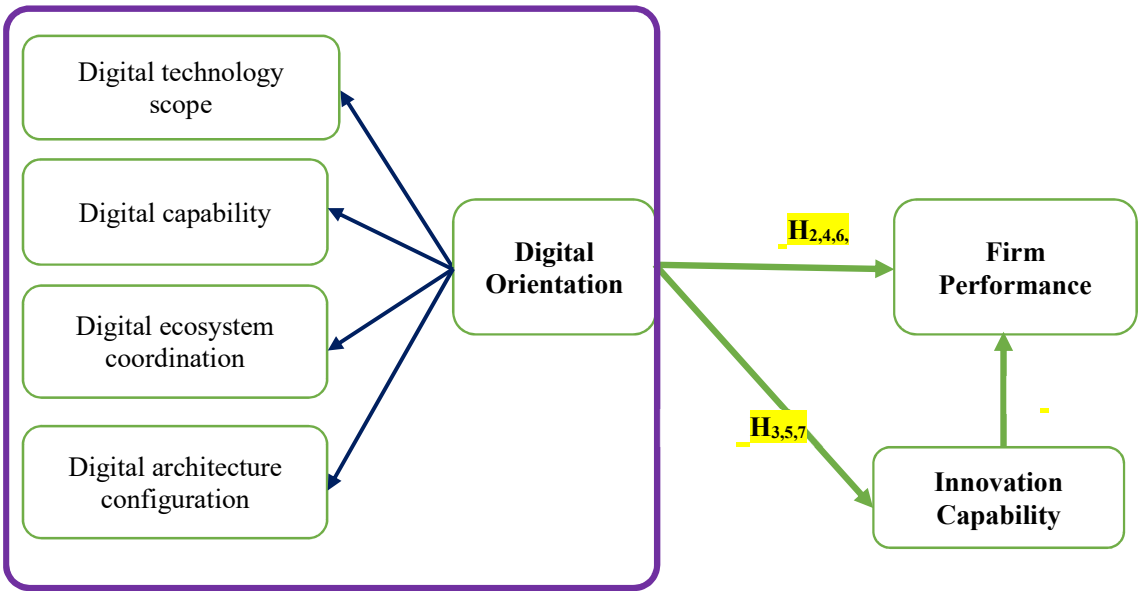

Figure 1: Proposed theoretical research model

4. CONCLUSIONS AND RESEARCH IMPLICATIONS

In this study, a comprehensive research model is proposed, consisting of three main constructs: digital orientation, innovation capability, and firm performance. Digital orientation encompasses four distinct dimensions, namely digital technology scope, digital capabilities, digital ecosystem coordination, and digital architecture configuration. On the other hand, innovation capability and firm performance are single-dimensional constructs.The research model comprises a total of nine hypotheses, all suggesting positive effects. These hypotheses explore the relationships between the different constructs and how they contribute to driving positive outcomes in terms of innovation capacity and overall firm performance.

Research on strategic orientation, firm capacity, including innovation capacity and firm performance is not new, especially in developed countries. However, the increasing prevalence of digital technology is profoundly reshaping the manner in which businesses create value (Kindermann et al., 2021). The transformative capacity of digital technologies is prompting the emergence of novel and innovative approaches to managerial and organizational alignment, which were not previously addressed by established strategic orientations or their combinations (Quinton, Canhoto, Molinillo, Pera, & Budhathoki, 2018). These technological advancements are driving a fundamental shift in traditional competition logic, leading to new paradigms in the business landscape. So, with conceptualization of digital orientation in research model will bring new results.

Besides some contributions, the study does have certain limitations. Firstly, it remains at the proposition and hypothesis stage, lacking detailed data to empirically examine the relationships between the concepts. Secondly, there are still many concepts of resources and capabilities, especially intangible resources, which have not been mentioned in the model. Thirdly, the current research on digital orientation mostly uses primary data while the primary data collection scale is still limited.

The concept of digital orientation helps us understand strategic orientations better by highlighting the unique features and strategic consequences of widespread digital technology adoption. In simpler terms, the concept of digital orientation helps us grasp different ways that companies or organizations approach their strategies, particularly in the context of integrating digital technology. It sheds light on the specific traits and outcomes that emerge when businesses embrace digital tools and solutions. For example, a company that fully embraces digital orientation might focus on data-driven decision-making and online customer engagement as key components of their strategy, resulting in improved efficiency and a stronger online presence. A research model combining digital orientation, innovation capacity and business performance can be analyzed with listed companies or small and medium enterprises to get different perspectives.

This research offers valuable insights for practitioners seeking to implement digital technologies in their organizations. It presents a thorough explanation of the digital orientation concept and its four dimensions, providing managers with valuable guidance on how to successfully transform and align specific organizational domains to harness the advantages of a digital orientation.Moreover, the interconnectedness of these dimensions serves as a vital reminder of the risks associated with fragmented or incomplete digital transformation endeavors. Instead, the study emphasizes the significance of considering the organization's overall strategic direction to ensure a cohesive and comprehensive transformation. The concept of digital orientation as a strategic orientation emphasizes the need for major changes in organizational thinking when transitioning from analog to more digitally-focused value propositions. This means that transformational processes require a significant amount of time and effort, so practitioners should engage in thoughtful and strategic planning to achieve success. In summary, this research provides practitioners with essential guidance for effectively navigating digital transformation journeys and underscores the importance of holistic and well-planned approaches to fully capitalize on the potential of digital technologies.

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