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Original Research

The Strategic Role of Digital Capabilities in Organizational Performance: A Systematic Literature Review

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Abstract

Recognizing the complexity of digital capabilities (DC) is critical in the evolving digital environment. This study explores the conceptualization, dimensions, and strategic impact of DC on organizations by adopting a systematic literature review (SLR) methodology. The study identifies key components of DC, including digital culture, infrastructure, and skills, as important drivers of organizational innovation, competitiveness, and performance. Through an integrative approach, the study analyzes articles published in high-impact journals between 2014 and 2022, focusing on the role of digital maturity, transformation, and innovation. The findings reveal that although DC contributes to organizational performance, other factors often mediate its effects. Practical insights emphasize that organizations can enhance their resilience and competitive advantage by strategically developing DC. The study offers a comprehensive framework for understanding DC and highlights future research directions to expand the field further.

Keywords: Digital Capabilities, Organizational Performance, Dynamic Capabilities, Systematic Literature Review.

Introduction

Today's enterprises face various difficulties and opportunities as we enter the fast-paced digital era, including adjusting to the effects of the coronavirus pandemic. From healthcare to e-commerce, the pandemic has pushed digital transformation across numerous industries.

Demand for digital services increased drastically during the pandemic, prompting businesses to immediately adapt or risk falling behind (Mason, Narcum & Mason, 2021). This has highlighted the importance of strong digital capabilities (DCs) to adapt quickly to changing surroundings. It also highlights the difficulties businesses encounter when developing and using their DCs. These difficulties have compelled firms to fortify their DCs, essential tools for sustaining operations and successfully competing. DC has emerged as a crucial component for business growth and survival in a volatile and often shifting environment (Zhen, Yousaf, Radulescu & Yasir, 2021).

The evolution of digital technology has radically transformed how organizations conduct their operations and business strategies. DC, which refers to an organization's ability to leverage digital technology in its operations, products, and services, has become a crucial factor in achieving and maintaining a competitive edge in this digital era (Bharadwaj, El Sawy, Pavlou & Venkatraman, 2013). However, in this highly dynamic and uncertain context (Ghobadian, Talavera, Bhattacharya, Kumar, Garza-Reyes, & O'Regan, 2020; Hoisl, Gruber & Conti, 2017), achieving and maintaining a competitive edge through DCs remain a significant challenge such as organizing in a global context, ambidextrous leadership and enabling stability in change (Lindskov, Sund & Dreyer, 2020; Mahto, Ahluwalia & Walsh, 2018). Therefore, there is an urgent need for a deeper understanding of how organizations can embrace and leverage DCs to attain sustainable competitive excellence.

Further, firms that are not inherently digital or global (Hennart, 2014; Wamba & Queiroz, 2020) face greater challenges in leveraging the digital revolution and expanding their market reach. This underscores the importance of further research on effective strategies for digital transformation, such as digital exports through e-commerce (Pergelova, Manolova, Simeonova-Ganeva & Yordanova, 2019). However, transforming into a digitally-based organization is not a simple task. Many organizations still struggle with this transformation. They are often hindered by internal resistance, resource constraints, and a lack of technical knowledge or expertise (Berman, 2012). Moreover, organizations are confronted with escalating security and privacy challenges as they transition their operations to digital platforms. The scarcity of workforce competent and knowledgeable in digital technology also presents challenges (Klos Spieth, Clauss & Klusmann, 2023). This is exacerbated by difficulties in implementing new technologies and measuring a company's DCs (Galliers, Leidner & Simeonova, 2020; Kane, Palmer, Phillips, Kiron & Buckley, 2015).

Using the resource-based view (RBV) theory (Barney, 1991; Barney, 2001; Grant, 1991), existing studies have established that both tangible and intangible resources and capabilities can bestow firms with competitive advantages (Amit & Schoemaker, 1993). Although the literature on the role of digital technologies in organizational performance has grown significantly, there remains a gap in understanding how various elements of digital capabilities strategically influence overall organizational performance. Previous studies have often focused on technical or operational aspects of technology adoption (Cham, Edwards, Kruesi, Celeste & Hennessey, 2021) without linking them directly to broader strategic performance outcomes such as innovation, competitive advantage, and organizational adaptability in dynamic environments (Graham & Moore, 2021). Additionally, most research has been limited to specific sectors like grocery retail (Čirjevskis, 2022), leaving the role of digital capabilities in a broader, cross-sectoral context underexplored. This study aims to fill this gap by systematically reviewing the existing literature to provide a comprehensive understanding of

how digital capabilities impact various dimensions of organizational performance and the mediating factors in this relationship.

This research is guided by the following questions, which aim to explore the direct impact of DCs on organizational performance, the mediating factors that shape this relationship, and strategies to enhance these capabilities:

RQ1: How do digital capabilities directly influence organizational performance?

RQ2: What future research directions are suggested by existing studies on the relationship between digital capabilities and performance?

Research Purpose

This study offers several key contributions to the literature. First, as Jones & Gatrell (2014) posited, literature reviews are instrumental in understanding extant knowledge and pinpointing directions for future research. This study seeks to stimulate further inquiry among scholars interested in DCs by discerning gaps in the DC literature. Second, this study critically assesses prevailing studies to ascertain how organizations might achieve competitive advantage through the strategic utilization of DCs.

Literature Review

Use of technology forces firms to have a well-developed online infrastructure, which enhances the firms' overall digital ecosystem (Zheng, Gou, Camarinha-Matos, Zhang & Zhang, 2023). Failure of firms to digitalize, especially in today's more competitive marketplace, where inability to leverage digitization capabilities would lead firms not to the targeted level share (Torres de Oliveira, Indulska, Steen& Verreynne, 2020). For the above reasons, companies need to use digitalization capabilities in their activities and strategies related to customer satisfaction, business models, digital transformation, innovation, sustainability, and corporate competitive strategy as an integral part (Surahman, Shee, Fitrian, Adi & Yudaruddin, 2023). The capacity to harness digital technology is a core layer of the technology architecture, enabling companies to optimize their efficiency, innovation, and performance (Robertson, Botha, Walker, Wordsworth & Balzarova, 2022; Westerlund, 2020). This can be seen from the measurement of customer experience transformation, business optimization, and change in business model by corporations using digital technology (Nasution, Arnita, Rusnandi, Qodariah, Rudito & Sinaga, 2020).

The digital capability definition is a newly constructed organization that encompasses capacities that fall into human, collaboration, technical, and innovation (Luu, 2023), all to help companies move up to digitalization. The digital capability results in a digital system where new outcomes and structures emerge independently, without being determined by the plans devised by the creator (Heredia et al., 2022). At the organizational level, digital capability is the capacity of an organisation to use digital technology to plan and establish new goods or services as well as business processes; Digital capability in this broader context refers to a company's skills, abilities and knowledge to harness digital technology in product development (Afrianty, Artatanaya & Burgess, 2022). The importance of DC for organizational performance is becoming more critical, as it is in the context of technology exploitation that it takes on salience (Elia, Giuffrida, Mariani & Bresciani, 2021). Similarly, the meaning of digital capability defined by Nasution et al. (2020) also includes the ability to make sound decisions regarding when and where to apply digital transformation.

Materials and Methods

Given DCs' salience and the inherent challenges associated with them, there is an imperative need for a more comprehensive exploration of this domain. Adopting a systematic literature review (SLR) methodology allows for a structured synthesis, analysis, and interpretation of extant research on DCs. Such an approach facilitates a more nuanced understanding of DCs, providing insights into how organizations might navigate the complexities of developing and leveraging these capabilities.

In this study, we employ the SLR methodology delineated by Tranfield, Denyer & Smart (2003). This method goes beyond merely perusing existing literature, offering a structured framework for conducting the review. The review adheres to specific guiding principles set to ensure the quality of the literature assessment, particularly within management and business research. Through this approach, we aim to produce a systematic, transparent, and replicable literature review that bolsters the rigor and credibility of the research findings and facilitates future scholarly endeavors. The principles integrated into this process are strategically chosen to mitigate research bias and augment the validity of the results. In essence, this SLR serves as a literature exploration and a tool for quality assurance.

Becheikh, Landry, and Amara (2006) posited that the SLR methodology is pivotal in uncovering and identifying seminal scholarly contributions to specific research areas or queries. We perceive this method as a conduit to delve into and unearth diverse perspectives and insights that have been previously explored and deliberated upon within the realm of DCs. By meticulously applying this methodology to a curated collection of pertinent academic publications, we are positioned to pinpoint and thoroughly examine primary focal points in DC-related research. Furthermore, this method facilitates our discovery and articulation of various potential avenues proposed by preceding scholars to propel research in this domain.

SLR procedure

Tranfield et al. (2003) articulated that in conducting an SLR within the management domain, there are three primary phases—planning, execution, and documentation of the review findings. The first stage is the study planning stage, which includes identifying the need for the study, proposing the study, and writing a protocol outlining the inclusion and exclusion criteria. The second part is the implementation, where the researcher searches the literature comprehensively and systematically, screens the literature to make decisions about the studies' relevance, assesses the included studies' methodological quality, and extracts and analyzes data to conclude. The final stage is the documentation of the study findings, which provides for preparing a final report with key findings and recommendations and implementing the study results into practice to influence policy and managerial decision-making. We will use these three stages to ensure that the SLR is conducted formally and explicitly so that the evidence for management decision-making is reliable. Each of these phases encompasses several steps. However, to cater to the specific needs of this study, we have tailored these steps to better align with our review process. This approach has been employed and validated in other management studies, as evidenced by Khan, Hassan, Harrison, and Tarbert (2020). Initially, the research questions were identified, as presented in the background.

Keyword identification and search approach

Articles related to the topic of DCs were identified using the Scopus database. Scopus was chosen as it is a comprehensive electronic database (Kane et al., 2015). The search strategy was designed to maximize the number of relevant studies from the selected database. This strategy included three main criteria: scope, search method, and search string. The study focused on articles published between 2014 and 2022, during which research on DC consistently grew in academic literature.

Articles were accessed through the university's learning resource center, using the keywords "digital capability" and "digital capabilities" in the article titles. As a result, 699 articles were identified from the initial search in Scopus. The search was intended to include peer-reviewed journal articles. At the same time, conference papers were excluded, as suggested by Bergman and Holden (2010) González-Albo & Bordons (2011), because conference papers are generally less comprehensive and often republished in journal formats.

Selection and evaluation of primary studies

Following the guidelines of Tranfield et al. (2003) and consistent with previous literature review studies across various management disciplines, articles were selected based on the following criteria: published in peer-reviewed journals, addressing key topics related to digital capabilities, and written in English. Of the 699 articles identified, 442 were excluded for falling outside the specified publication range (2014–2022) or not being journal articles. This resulted in 257 articles eligible for initial review. Subsequently, articles unrelated to the selected subject areas- Business, Management, and Accounting; Social Sciences; and Economics, Econometrics, and Finance (n = 175)-were removed, leaving 82 articles. Further, articles not published in English (n = 11) were excluded, leaving 71 articles. Finally, after further eligibility assessment based on inclusion criteria, 30 articles were excluded, resulting in a final set of 41 articles for review. The subsequent article searches and screening processes are illustrated in Figure 1.

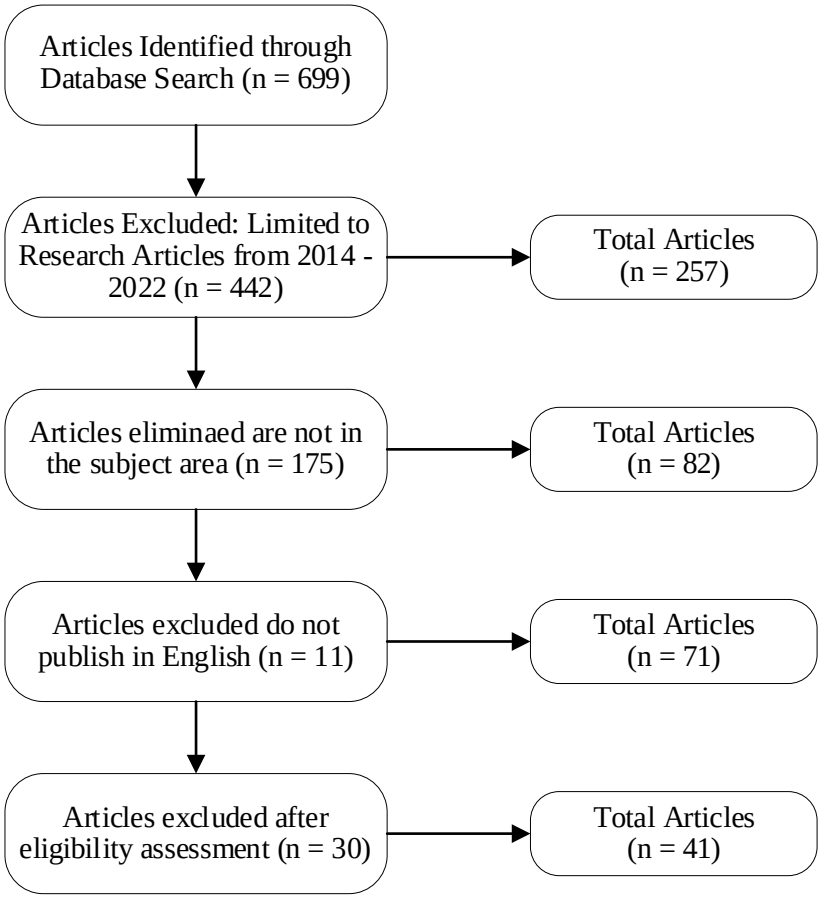

Figure 1: Flow diagram of searching and screening the articles

Assessment of study quality

The quality assessment aimed to evaluate the validity of the selected studies, provide proper justification, and offer readers the necessary information to determine whether this review strategy could be applied to their research (Christofi, Leonidou & Vrontis, 2017). The quality assessment involved 13 key questions that evaluated critical aspects of the research, including the clarity of research aims, the appropriateness of study design, the justification and description of estimation techniques, and the adequacy of data collection and measurement methods. Additionally, the framework assessed whether negative results were presented, the validity and reliability of the findings were discussed, and whether the links between data, interpretation, and conclusions were explicitly stated. The authors used this quality checklist and shared it with two academic researchers in the research group focusing on DCs to verify the robustness and clarity of the quality criteria applied (Christofi et al., 2017). The results of the two independent assessments were cross-checked, and consensus was reached based on the established quality criteria, reducing the total number of reviewed articles to 41.

Data collection and organization

After the quality assessment, data were extracted from the selected studies to minimize human error and bias (Tranfield et al., 2003). The extracted data were transferred to an Excel spreadsheet, recording information about the authors, year of publication, research objectives, study design, data, theories used, and a summary of the study results. This process ensured transparency and facilitated the analysis of review findings.

Results

We delineate the findings derived from the extensive literature review addressing our primary research question (RQ1). The findings encapsulate a variety of facets, including the trajectory of academic publications related to DC, a comprehensive definition of DC, the theoretical frameworks employed, the methodologies adopted in past research, and the multifaceted dimensions and impacts associated with DC as discerned from the literature.

We systematically examined scholarly articles within this domain from 2014 to 2020 for data collection. The articles reviewed start from 2014, during which the focus on the DC topic was relatively nascent. The subsequent years witnessed a consistent upsurge in the volume of related publications. Notably, 2022 registered the most pronounced increase in publication counts, as depicted in Figure 2.

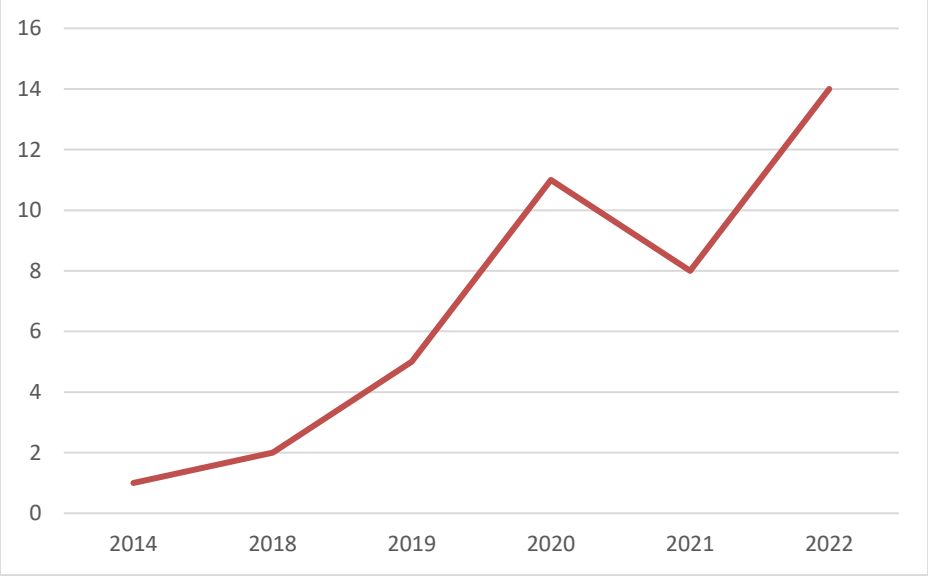

Figure 2: Number of articles

Table 1 provides a detailed breakdown of the distribution of articles published in scientific journals related to DC, classified based on Scopus quartiles Q1, Q2, Q3, and Q4. These quartiles indicate journal quality and reputation, with Q1 representing journals of the highest quality and esteem. Within this context, 26 articles were published by Q1-ranked journals, followed by eight articles published by Q2- and Q3-ranked journals each, and a single article from a Q4-ranked journal. Most DC-related articles appeared in journals focusing on marketing management (e.g., Industrial Marketing Management; Journal of Open Innovation: Technology, Market, and Complexity; and Journal of Retailing and Consumer Services) and strategic fields (e.g., Journal of Business Research, Strategic Change, and Journal of Management Development).

Table 1
List of Journals

Scopus Index	Journal name	Total	
Q1	Asia Pacific Management Review	1	25
	Australasian Journal of Educational Technology	1	
	Benchmarking	1	
	Economic and Political Studies	1	
	Industrial Marketing Management	3	
	Information Communication and Society	1	
	International Journal of Productivity and Performance Management	1	
	International Journal of Retail and Distribution Management	1	
	International Marketing Review	1	
	Journal of Business Economics	1	
	Journal of Business Research	3	
	Journal of Innovation and Knowledge	1	
	Journal of Management Development	1	
	Journal of Open Innovation: Technology, Market, and Complexity	2	
	Journal of Retailing and Consumer Services	1	
	Journal of the Australian Library and Information Association	1	
	Jurnal Pengurusan	1	
	MIS Quarterly Executive	1	
	Project Management Journal	1	
	Supply Chain Management	1	
Q2	Asian Journal of Business Research	1	8
	Competitiveness Review	1	
	Journal of Business Research	1	
	Journal of the Knowledge Economy	1	
	Local Economy	1	
	Social Sciences	1	
	Strategic Change	2	
Q3	International Journal of Economics and Business Research	1	8
	Journal of Business Strategy	1	
	Journal of Risk and Financial Management	1	
	Journal of the Knowledge Economy	1	
	Journal of Women’s Entrepreneurship and Education	1	
	Management (Croatia)	1	
	Revista de Administracao Mackenzie	1	
	South African Journal of Business Management	1	
	Grand Total		41

Priyono, Moin, and Putri (2020) authored the most frequently cited article, amassing 183 citations. The 41 reviewed articles have accumulated 1,165 citations, as recorded in the Scopus database. Nevertheless, it remains imperative to acknowledge that the count of citations does not consistently represent the quality or relevance of an article within the specific context of

DC. Table 1 also highlights that research on DC tends to be published in journals with a managerial and strategic focus, underscoring the significance of this topic in the milieu of contemporary business. The involvement of top-tier journals in this domain indicates the relevance and importance of DC research in facilitating digital transformation across various organizations and industries. In this regard, DC-related research holds substantial relevance and impact in management and strategy.

Figure 3 shows the distribution of theories in DC studies (2014–2022). The theory most used is Digital Transformation (11 studies), which focuses on how organizations adapt, innovate, and realign strategically because of technology (Matt, Hess, T., Benlian, A., & Wiesboc,k 2016; Vial, 2019). Other vital perspectives are Resource-Based View (RBV) (6 studies) (Barney, 1991; Wernerfelt, 1984) that emphasizes the significance of internal resources in realizing competitive advantage, Dynamic Capabilities (British) which focus on organizational responsiveness in fast-changing contexts (5 studies) (Eisenhardt & Martin, 2000; Teece, 2014) and Digital Capability (5 studies) (Bharadwaj, 2013; Kane et al., 2015) which focuses on how organizations develop and deploy their DC (in terms of processes, IT systems, etc.) to research and maximize value, as well as achieve and sustain competitive advantage. Other important frameworks include Ambidexterity (March, 1991), Innovation Theory (Schumpeter, 1934), Strategic Management (Porter, 1985), Leadership Theory (Yukl, 2013), and Strategic Decision Theory (Simon, 1977). These integrate a deeper understanding of DCs across various organizational ecosystems.

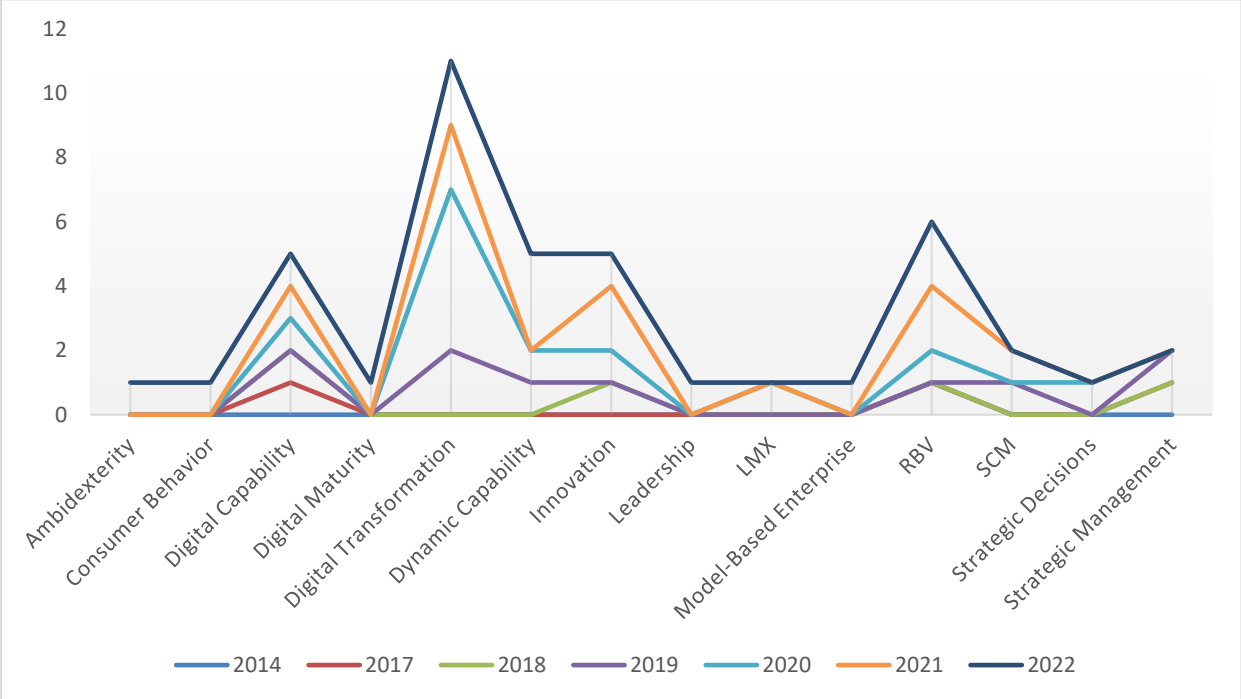

Figure 3: Theory trend

The research methods used in the studies featured in the SLR varied. Quantitative methodologies, encompassing statistical analyses, were employed in 37% of the studies. In contrast, qualitative approaches were used in 35% of them. Conceptual methods, which focus on theory or idea development, were present in 16% of the studies. Mixed methods, integrating both qualitative and quantitative approaches, were adopted in 12% of the studies. This

distribution indicates a preference among researchers for objective and structured methodologies when investigating DC, as demonstrated by the predominant use of quantitative and qualitative approaches.

Different authors define the concept of DCs in various ways, reflecting its multidimensional nature. Wolski et al. (2020) refer to an organization's capability to utilize digital technology to achieve its objectives and goals, emphasizing the integration of digital tools into operational and strategic frameworks. Expanding on this, Reynolds, Henderson, Xu, and Norris (2021) highlight DCs as a business's capacity to leverage digital tools and infrastructure to enhance operations and processes, focusing on improving efficiency and driving performance in core and non-core activities. Wolski, Krah,e and (2020) further define DCs as being grounded in crucial elements identified through research and tailored to address specific organizational needs. This perspective underscores the adaptability of DCs in fostering collaboration and customizing services to meet unique requirements. Meanwhile, Manresa, Prester, and Bikfalvi (2021) describe DCs within the manufacturing sector as the ability to utilize digital technology to enhance operations and services, emphasizing the role of emerging tools such as augmented reality. These definitions present DCs as a critical capability for organizations, enabling them to adopt, integrate, and leverage digital technologies for operational improvement, strategic advantage, and innovation.

Various authors characterize the term DCs differently, reflecting their multi-faceted nature. In the view of Teguh, Noermijati, Moko, and Rofiaty (2022), DCs pertain to an organization's capacity to employ digital technology in achieving its objectives and goals, with a focus on integrating digital tools into both operational and strategic frameworks. Building upon this, Reynolds et al. (2021) emphasize DCs as a company's ability to harness digital tools and infrastructure to optimize operations and processes, specifically enhancing efficiency and driving performance across core and non-core activities. Wolski, Krahe, and Richardson (2020) further elucidate DCs as rooted in essential elements identified through research and customized to address the distinct needs of organizations, highlighting the flexibility of DCs in promoting collaboration and tailoring services to meet specific requirements. Contrastingly, Manresa, Prester, and Bikfalvi (2021) define DCs in the manufacturing industry as the capacity to leverage digital technology to improve operations and services, particularly underscoring the significance of emerging tools like augmented reality. Collectively, these interpretations position DCs as a vital organizational capability that facilitates adopting, integrating, and utilizing digital technologies to enhance operations, gain strategic advantages, and drive innovation.

Dimensions of digital capabilities

Figure 4 depicts the structured advancement of Digital Capabilities (DCs) across three fundamental dimensions: Digital Skills, Digital Infrastructure, and Digital Culture, highlighting the shift from individual-level adoption to organizational-level assimilation. Initially, Digital Skills encompass technical expertise, leadership proficiencies, and ethical application of digital tools, empowering employees and leaders to adapt to technological progressions (Dodel & Mesch, 2018; Gurbaxani & Dunkle, 2019). These proficiencies enable individuals to effectively utilize digital tools, laying the groundwork for broader organizational digital capabilities (Bhattarai, Kwong & Tasavori, 2019; Khlystova, Kalyuzhnova & Belitski, 2022; Kwon, 2022).

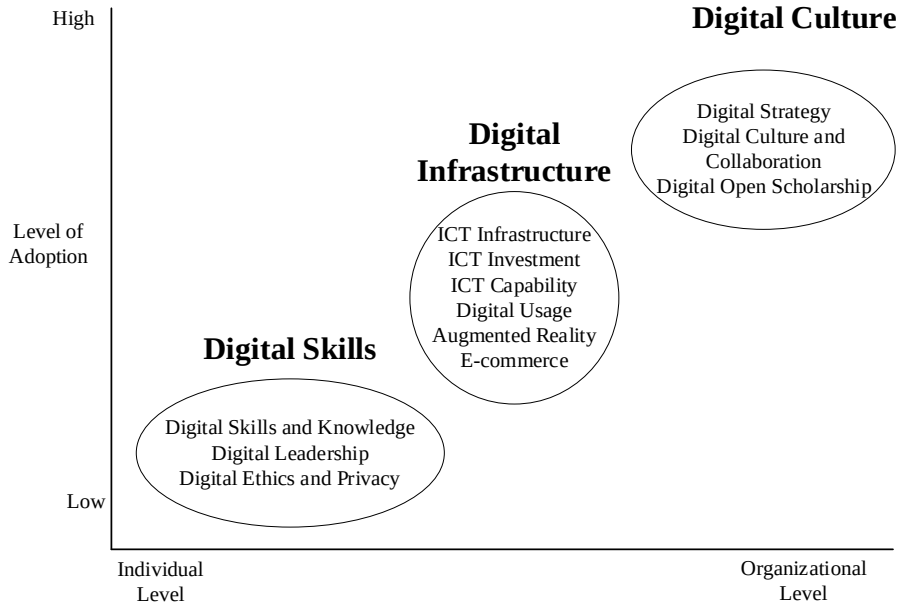

Figure 4: Dimension of DCs

The focal point shifts to Digital Infrastructure as organizations advance, which denotes the technological frameworks linking individual skills to organizational operations. This dimension encompasses ICT infrastructure, ICT investment, digital usage, augmented reality, and e-commerce (Reynolds et al., 2021). These components ensure scalability, operational adaptability, and real-time data integration, fostering productivity and flexibility (Braun & Sydow, 2019; Gaffley & Pelser, 2021). A robust infrastructure not only underpins internal functions but also facilitates external engagements with customers and stakeholders, enabling smooth digital transformation (Galera-Zarco, Opazo-Basáez, Marić & García-Feijoo, 2020; Torres de Oliveira et al., 2020).

At the organizational level, Digital Culture integrates shared norms, values, and behaviors that shape the adoption and utilization of digital technologies (Wolski et al., 2020). This dimension emphasizes collaboration, strategic alignment, and innovation, fostering an environment for employees to engage with emerging technologies and contribute to process enhancements (Cham et al., 2021; Sjachriatin, Riyadi & Mujanah, 2023). A solid digital culture ensures that investments in skills and infrastructure are leveraged effectively to align with organizational objectives, minimizing inefficiencies and optimizing resource allocation (Čirjevskis, 2022; Siahaan & Tan, 2022). These dimensions constitute a comprehensive framework for cultivating resilient digital capabilities. By addressing Digital Skills, Infrastructure, and Culture interconnectedly, organizations can improve operational efficiency, stimulate innovation, and attain sustained competitiveness in the digital age. The diagram accentuates this progression, illustrating how the interplay among these dimensions fosters successful digital transformation and elevates organizational performance.

Core implementation

Figure 5 provides a comprehensive framework illustrating the effects of DCs on organizational performance. DC extends beyond organizational systems and processes, emphasizing individual and collective competencies crucial to success. At the personal level,

DC provides employees with the necessary skills to proficiently utilize various digital tools and platforms, ranging from data analytics to collaboration software (Reynolds et al., 2021). These capabilities empower employees to operate efficiently and creatively while enabling them to adapt to emerging technological advancements. Similarly, consumers' digital competencies, as their adeptness in utilizing digital platforms and online payment systems, directly shape how businesses design their digital offerings and interfaces (Mihardjo, Sasmoko, Alamsjah & Elidjen, 2019). By cultivating digital proficiency at both the individual and organizational levels, enterprises enhance operational effectiveness and elevate customer engagement and satisfaction.

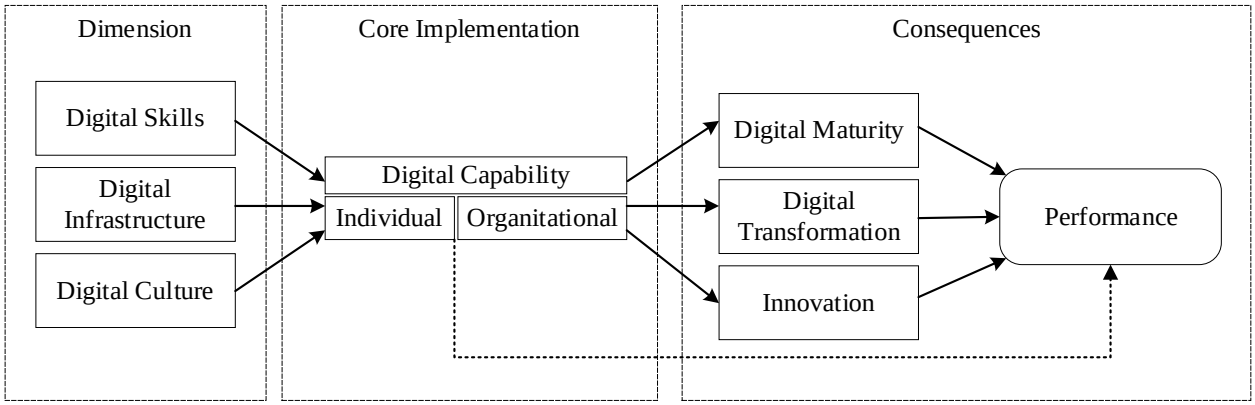

Figure 5: Effects of DCs

At the organizational level, bolstered DCs are the cornerstone for cultivating broader capacities, encompassing digital maturity, digital transformation, and innovation (Manresa et al., 2021; Wolski et al., 2020). Digital maturity reflects an organization's capacity to methodically integrate digital tools into its operations, ensuring seamless workflows and optimized decision-making processes. This maturity sets the stage for digital transformation, wherein businesses harness technology to reimagine their business models and strategies in response to competitive pressures and market dynamics. As a critical outcome of digital capabilities, innovation propels the development of novel products, services, and operational workflows, positioning organizations as frontrunners in their respective sectors. While digital maturity, transformation, and innovation act as intermediaries between DC and performance outcomes, the fundamental capability of imparting digital skills to individuals and organizations remains essential in fostering sustainable growth and adaptability.

Consequences

DC indirectly impacts organizations' performance by providing the necessary skills and resources to achieve digital maturity, digital transformation, and innovation. These intermediate elements connect to tangible outcomes, while the direct enhancement of digital competencies plays an equally significant role (Davis & Shelby, 2021). Organizations possessing strong DC can harmonize their workforce, infrastructure, and culture with strategic goals, facilitating swift adaptation to changes and maintaining competitiveness. For example, a company with a robust DC can optimize its supply chain (Queiroz, Pereira, Telles & Machado, 2021) by integrating the Internet of Things (IoT) and promoting a collaborative culture to boost team productivity (Salume, Barbosa, Pinto & Sousa, 2021). Organizations can ensure a natural evolution of digital

maturity, transformation, and innovation through strategic investment in digital capabilities, bridging the gap between capability development and performance enhancement. This holistic approach underscores the criticality of fostering a digitally proficient workforce and sustaining adaptable systems and culture, which are imperative for navigating the challenges and opportunities presented by the digital age. Ultimately, DC not only drive operational efficiency but also acts as a catalytic force for sustainable organizational success.

Discussion

DC has become pivotal in understanding an organization's readiness and efficiency in deploying digital technology (Reynolds et al., 2021). The research aims to identify the intricate relationship between DCs and organizational performance. It also emphasizes the mediating roles of digital maturity, transformation, and innovation (Dodel & Mesch, 2018; Gaudenzi, Mola & Rossignoli, 2021; Nasution et al., 2020). This study presents theoretical and practical insights, indicating that organizations can enhance their DCs to survive in the digital age as they face issues related to digital transformation. Our SLR underscores the multidimensional nature of DCs, encompassing digital skills, infrastructure, and culture. The significance attributed to digital skills underscores the imperative for organizations to prioritize continual upskilling and training initiatives (Teguh et al., 2022; Wolski et al., 2020). In the ever-evolving digital landscape, where technological advancements are constant, fostering and enhancing digital skills among organizational members becomes a strategic necessity. This involves acquiring new skills and adapting and updating existing ones to align with the latest technological developments (Manresa et al., 2021). In this context, infrastructure is pivotal as the foundational backbone supporting the cultivation of digital skills within an organization (Priyono et al., 2020; Queiroz et al., 2021). A robust technological infrastructure provides employees the tools, platforms, and resources to engage in practical learning and development activities (Čirjevskis, 2022; Park, Straubhaar & Strover, 2019). This includes access to cutting-edge technologies, software, and collaborative platforms that facilitate hands-on learning experiences, enabling individuals to stay abreast of industry trends and emerging digital capabilities.

Furthermore, our research delves into the indirect correlation between DCs and organizational performance, specifically focusing on the mediating influences of digital maturity, transformation, and innovation. Digital maturity reflects the integration of digital technologies into organizational workflows and strategies. By optimizing processes and fostering a data-driven culture, digital maturity empowers organizations to adapt to market shifts effectively. Digital transformation entails rethinking business models and methods to leverage digital technologies, enhancing efficiency, improving customer experiences, and unlocking new revenue streams. Innovation signifies the capacity to develop new products, services, or processes using digital tools, positioning organizations to remain competitive and agile in response to market changes. Collectively, these intermediary factors translate DCs into tangible organizational results, bridging the gap between capability development and performance enhancement. This study enhances the theoretical comprehension of DCs through a holistic viewpoint that recognizes their multidimensional character. Rather than viewing DCs as a singular concept, the research underscores the interconnectedness of digital skills, infrastructure, and culture. This inclusive approach enables a more profound examination of how these dimensions collectively impact organizational outcomes, presenting practical

avenues for firms seeking to harness their digital potential.

Conclusion

The contribution of this study lies in its support for the further development of the DC concept in organizations. This study offers a deeper understanding of the factors influencing the evolution of DCs, laying out a pertinent framework. It establishes a robust theoretical foundation, paving the way for subsequent investigations in this domain. Beyond its academic value, this study has practical implications. It identifies the impact of DCs on organizational performance, innovation, and competitive advantage. Additionally, it furnishes organizations with actionable insights on enhancing their DCs, equipping them to adapt and thrive in an increasingly digital business landscape.

The results of this study suggest that proficiency in digital skills, digital infrastructure, and digital culture are not only interconnected element but also fundamental for the advancement of DCs. Together, they contribute to attaining digital maturity, initiating change, and promoting innovation. The study points out that although the relationship between DC and organizational performance is intricate, digital maturity, transformation, and innovation are crucial in translating DC into tangible results. This underscores the importance of organizations prioritizing the comprehensive integration of these aspects into their strategic planning to optimize the benefits of their digital capabilities. In contrast to previous research, the study offers a more structured approach by outlining the roles of DC at both the individual and organizational levels. This framework provides a detailed understanding of how the digital skills of employees and leaders enhance organizational adaptability and innovation, while a solid infrastructure and supportive digital culture foster collective transformation. These findings underscore the multi-faceted nature of DCs and their practical relevance in steering digital transformation.

This research is subject to certain limitations. Firstly, pertinent literature from alternative sources like Web of Science, IEEE Xplore, or others, with the potential to offer additional perspectives and enrich the outcomes, might have been overlooked by exclusively relying on the Scopus database. For future investigations, it is recommended to encompass a wider array of databases to augment the comprehensiveness and robustness of the findings. Secondly, although the study identifies crucial mediating variables, it fails to thoroughly examine potential moderators, such as organizational size, industry sector, or regional attributes, which could impact the correlation between DC and organizational performance. Delving into these aspects may furnish valuable insights into the nuanced contextual specifics of DC implementation.

Subsequent research must concentrate on a more comprehensive examination of each facet of DC, delving into the specific elements and dynamics within digital skills, infrastructure, and culture. Context-specific studies are vital for customizing strategies to various sectors' distinctive challenges and prospects. Moreover, global comparative analyses can supply comprehensive insights into the effectiveness of DC in varied cultural, economic, and regulatory settings, revealing universal principles and region-specific adaptations. By addressing these aspects, future studies can expand upon the groundwork laid by this research, progressing both theoretical comprehension and practical utilization of digital capabilities within the organizational domain.

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