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Resource integration and dynamic capability for firms' sustainable competitive advantages through digital transformation: An instrumental case study within the context of incumbent firms in the UK.

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Abstract

Business digital transformation is the significant transformational change in the dynamic changing business environment to create new business opportunity result in sustainable competitive advantages. However, the resource integration and dynamic capability for digital transformation are still received limited scholarly attention, particularly, a potential gap within the context of incumbent firms in the UK. The aim of this research was to assess the existing theories of dynamic capabilities for the digital transformation and strategic renewal and consequently, proposed a conceptual framework to achieve sustainable competitive advantages through dynamic capability for digital transformation which led to the development of a new emergent theory for use in the research context. The conceptual model encourages practitioners to understand how the incumbent firms involve in digital transformation process to gain sustainable competitive advantages. The research adopted an instrumental case study to explore research questions and guided by qualitative approach with sample of 40 higher leadership and managerial position in the incumbent firms. The study represented the strategic renewal of sustainable business model, organisational culture, management approach and organisational structure, and internal constraint facilitates and external fits, thereby shaping a more holistic approach. This study made a significant theoretical and practical contribution.

Keywords: Strategy, Resource integration, dynamic capability, digital transformation, strategic renewal, sustainable business model, sustainable competitive advantages

1. INTRODUCTION

The literature generally referred to digital transformation using digital technologies that provided potential for work performance improvement and to potentially effect business to enhance customer experiences, streamlining operation, strategy and design new business models (Li, 2022; Wengler, Hildmann and Vossebein, 2021; Warner and Wager, 2019; DaSilva and Trkman, 2014; Liu, Chen and Chou, 2011). Digital transformation is an organisational transformation that integrates digital technologies and business processes in a digital business economy (Hanelt et al., 2021).

Similarly, in the digital era, transformation ought to focus on organisation's digital transformation ought to be the holistic approach, considering the comprehensive approach which will take the maximum opportunities and avoid or minimise the threats using digital technologies (Kim, Choi and Lew, 2021). Apparently, Van Veldhoven and Vanthienen (2022) stated that digital transformation is not only a technology but also a strategy, therefore, senior leaders should identify technique to design digital transformation and to capitalise business model that would effectively meet customers' needs and experiences. Apparently, it was potentially challenges of incumbents' firm building of dynamic capabilities for digital transformation (Kraus et al., 2023; Kraus et al., 2021; Warner and Wager, 2019). Particularly, firms required to develop dynamic capabilities to quickly integrate, build and configure business models to sustain in the emergent digital economy (Teece, 2018; Ambrosini, Bowman and Collier, 2009). Digital transformation is considered as a strategic imperative on leadership agenda (Singh and Hess, 2017), but there is a limited literature that explored how an organisation is digitally transformed through resource integration and dynamic capability to achieve sustainable competitive advantages (SCA) (Hanelt et al., 2021; Teece, 2007), particularly there is no established theory within the context of incumbent firms in the UK, therefore it is an essential context for the study. Though senior leadership focus on, and motivate to support the digital transformation of business models, structures and processes, the incumbent firms are facing potential threats and challenges to design and implement it comprehensively (Warner and Wager, 2019; Singh and Hess, 2017).

It was clear from the exiting literature that effective dynamic capability represented a significant contributor to the success of a firm to be transformed digitally, therefore need to explore the extent to which it contributed to achieve SCA. A number of theories have been developed over the years, for example, framework focusing on using digital technologies, dynamic capabilities and big data from the resource-based view RBV (Kraus et al., 2022),

develop a digital transformation conceptual framework in building blocks (Gong and Ribiere, 2021), digital transformation is a process to build capabilities or modify business model and ecosystem (Warner and Wager, 2019), building blocks describing digital transformation as a process (Vial, 2019). The existing theories were problematic and produced inaccurate outcomes as a result of the incorporation of the invalid elements and assumptions within them. In addition to this, digital transformation is the cultural, organisational and operational change of an organisation through a smart integration of digital technologies, processes and competencies across all levels and functions, and innovate and acquire the capabilities to rapidly adapt to changing circumstances was ignored.

The aim of this research based on the identification of issues that had not previously been addressed within the research context. The aim is “to assess the existing theories of dynamic capabilities for the digital transformation and strategic renewal and subsequently, to propose a new conceptual framework for the digital transformation to achieve sustainable competitive advantages (SCA) based on the context of, and which led to the development of a new theory for use in the research context. The objectives emerged from aim, subsequently, the specific research questions were identified from the objectives to guide this study.

RQ1. How do incumbent firms integrate resources?

RQ2. How do incumbent firms develop dynamic capabilities for digital transformation?

RQ3. What are the factors influenced the dynamic capabilities for digital transformation and strategic renewal?

RQ4. Based on the answer to the RQs 1, 2, and 3, how do dynamic capabilities for digital transformation enable incumbent firms to prepare for the sustainable competitive advantages?

To answer these research questions, the study adopted a qualitative approach through an instrument case study (Simons, 2009). In overview, the research critically reviewed the existing literature and sought to address weaknesses in the existing models of dynamic capability for digital transformation and strategic renewal. That in turn underpinned and justified the development of a context specific model. Resource integration and dynamic capability for digital transformation within the context of incumbent firms’ in the UK poorly understood. Particular significance of the study lies in the development of a new theory to gain SCA through digital transformation process. No studies on new digital technologies as the core dynamic capability for the strategic renewal of sustainable business model and management approach to attain sustainability have been undertaken. This study addressed these issues and made significant contributions to the theory and practice. The findings deepen the current understanding about the effects of internal constraint, internal facilitates

and external fits on resource integration, dynamic capability for digital transformation and strategic renewal. The findings of this study enable identifying how incumbent firms integrate resources and how they develop dynamic capability for digital transformation, which are highly significant to change business competitive environment.

2. LITERATURE REVIEW

2.1 Digital transformation

Digital transformation defined in the form of different perspectives both in academic and practitioner communities (Van Veldhoven and Vanthienen 2022; Gong and Ribiere, 2021). Gong and Ribiere (2021) made an attempt to develop a unique definition for digital transformation bringing together digitalisation and digitisation, and they stated that a considerable confusion in the exiting theory failed to differentiate appropriately between the 3 similar concepts digitalisation, digitalise and digital transformation. The digitalisation refers to the use of digital technologies to change a business model, whereas, digital transformation is to anything from IT modernisation to digital optimisation, to the invention of digital business models (Gartner, 2022). Digital transformation is a process of using digital technologies to create capabilities that enable to build new or modified existing business models, ecosystems and industries (Kraus et al., 2023; Kraus et al., 2022; Warner and Wager, 2019). According to (Li, 2022; Wengler, Hildmann and Vossebein, 2021), it is highlighted the modification of processes, activities, business models using digital technologies to design organisational activities more effectively so that an organisation gain competitive edges.

Digital transformation conceptual framework proposed by (Van Veldhoven and Vanthienen, 2022) who covered 3 themes are: digital technology, society and business to understand the changes in the organisations. Building dynamic capability for digital transformation conceptual framework proposed by (Warner and Wager, 2019) who covered 7 themes are: external triggers, digital sensing, digital sizing, digital transforming, internal enablers, internal barriers, and strategic renewal. Vial (2019) developed a conceptual framework of digital transformation is a process consists of 8 building block are: using digital technologies, strategic responses, disruptions, change in value creation paths, structural changes, organisational barriers, positive impacts and negative impacts. Conversely, Gong and Ribiere (2021) developed a conceptual framework of digital transformation building blocks which is different from Vial's conceptual framework. The 4 elements are: technologies, resources, capabilities and specific desired outcomes. Apparently, Kraus et al. (2022) developed a framework using 5 areas are: structural changes and changes in value creation, digital technologies, dynamic capabilities, strategic response and consumer behaviours following

Vial's building block model. Conversely, Wengler, Hildmann and Vossebein (2021) developed a model of digital transformation in sales as an evolving process, put more considering on the market oriented transformation, using technologies in each steps of digitisation, process automation, system integration, data integration, self-learning systems support the evolving process. Again, Imran et al. (2021) developed a conceptual framework for digital transformations focused on 3 key elements are: leadership, structure and culture. It is clear from the above literature that the digital transformation conceptual framework developed from the different perspective within the different research contexts.

2.2 Resource integration and Dynamic capability

Resource integration refers to the continuous process of integrate, combine and apply resources for value creation (Bruce, 2019). Resource may be categorised in terms of operand and operant resources (Akaka and Vargo, 2014). According to Eletxigerra, Barrutia and Echebarria (2018), operand resources required activities to make them valuable, for example, physical natural resources, physical products, raw materials. Apparently, operant resources are often dynamic and intangible, for example, knowledge and skill. They suggested that technology could play both role as operand and operant resources. VRIO and VRIN tools are used in the resource based view RBV to assess whether resources can contribute to SCA (Hsiao, 2024; Barney, 2021; Barney, 1991), firms integrate all tangible and intangible resource to achieve competitive advantages. Barney, Ketchen and Wright (2021) argued that VRIN comprise of management skills, organisational processes, information and knowledge transfer those may differentiate from tangible non-VRIN resource for example; capital, equipment, office space and funding. In the RBV, IT counted as vital organisational resources which may increase organisational and dynamic capability which lead to firms' performance, outcomes and practices (Parida, Oghazi and Cedergren, 2016). Particularly, technology can be integrated to other non-technology resources affect performance and process (Liang, You and Liu, 2010).

Dynamic capability particularly plays a significant role to create, integrate and reconfigure internal and external resources to adapt the changing environment (Teece 2018; Teece, Pisano and Shuen, 1997). The significant challenges of incumbents' firm are to integrate resources and build dynamic capabilities for digital transformation (Kraus et al., 2023; Kraus et al., 2021; Warner and Wager, 2019) which has paid less attention and are still little research conducted, particularly, in the UK. On the contrary, in the strategic management literature, the dynamic capability framework has become active attention to explain the extent to which firms respond to rapid technological and market changes (Kraus et al., 2023; Helfat

and Winter, 2011). Similarly, dynamic capabilities are innovative base that are the firms' ability to integrate firms' resources, create, extend, adjust and modify firms' resources to shape rapidly changes business environment (Teece, 2007). According to Teece, Pisano and Shuen (1997), a fundamental meaning of dynamic capabilities is the capacity of firms to integrate, build, modify, and configure firms' strengths and weaknesses followed by opportunities and threats. Strategic capabilities could potentially be useful when the firms would create value for the customers to achieve goal. According to Teece (2007), 3 managerial operations that may create a dynamic capacity are: sensing (finding and assessing external opportunities), seizing (mobilising resources to create value from those opportunities) and transforming (transform organisation's business model and wider resource base). Dynamic capabilities are powerful strategic managerial operations for capitalising and formulating the digital transformation to sustain in the competitive era (Teece, 2018; Ambrosini, Bowman and Collier, 2009).

2.3 Sustainable competitive advantages

Sustainable competitive advantage (SCA) is the outcome of resource based view (RBV) theory (Barney, 2021; Barney, 1991). Barney (1991) in his work explained that the business resource enables to improve the efficiency and effectiveness of the firms' operations. The main proposition is that if a firm like to gain SCA, it necessary to obtain, control and integrate VRIN resources (Barney and Clark, 2007). SCA allow a firm to win higher profit margins or more market share when competing with other competitors in the same customer group or target group in the same market or different market (Ranjith, 2016). SCA defined the competitive advantage that existing rival or potential rival cannot copy (Yang, Wang and Zhang, 2021; Barney, 1991). Similarly, according to (Barney, 2021; Ranjith, 2016), SCA refers to a firm's unique position and superiority over competitors that enables to lead the position in the market which may arise from different ways including brand image, customer service, technology, AI, digital marketing, product design and process. Therefore, SCA should be run with a dynamic process leveraging strategic view, strategic renewal or generic strategy. Porter (1980) suggested using a generic strategy which includes a comprehensive cost advantages strategy, a focus strategy and a differentiation strategy is the basic approach to attain profitability compare to the other competitor and thereby reach sustainable competitive advantage. Conversely, firms' leverage their capabilities to achieve SCA. However, if any firm wants to bring long term competitive advantage should be able and manage a disruptive business environment result in SCA (Hitt, 2001). A number of theories have been introduced over the years to explore how firms attain SCA. For example, Porter's

5 forces approach (Porter, 1979), the VRIN and VRIO framework within RBV strategy to gain SCA (Hsiao, 2024; Barney, 2021; Barney, 1991), like RBV dynamic capability approach is a source of competitive advantages (Teece, 2007). The strategic conflict approach (Shapiro, 1989) focussed on firms' ability to manipulate business environment for improving competitive position. Again Barney (1991) suggested that assets, capabilities, organisational process, firm attribute, information may use in the firm to build a competitive advantage. Dynamic capability plays a vital role for a firm's competitive advantage (Teece, 2007). Conversely, dynamic capability has 2 dimensions including capability exploitation and capability upgrading which influences firm's competitive advantage, capability exploitation is linked to achieve competitive advantage and capability upgrading is essential for the growth (Liu and Hsu, 2011). Leveraging RBV and DC are considered as key activities in the process of value creation and convert them in significant new sources of competitive advantage (Liang, You and Liu, 2010). It is important to identify all the antecedents that leads to SCA. As digital transformation to gain SCA paid less attention by scholar (Schilke, 2014) and therefore, it is a significant area to conduct the research.

3. METHOD

3.1 Sampling method

An instrumental case study was applied to explore research questions and specifically to develop knowledge and understanding based on the qualitative research of inductive approach and identify the insight into the resource integration, dynamic capability for digital transformation (Mills et al., 2010; Simons, 2009). A pilot study was carried out, thereby confirming more robustness research method and focussed on identifying method as the most appropriate choice for the main research. During the pilot research, interview method was found to be an effective technique to effectively capture the respondent views (Begum, 2020). The purposive sampling was used for the single unique case as an example of all incumbent firms' senior leaders and higher managers position was participated. Participants were chosen considering their knowledge and experience relevant to the research questions, meaning that who was the best to provide meaningful insights into the given situations and who is willing to be interviewed (Corbin and Strauss, 2015). Theoretical sampling continued until theoretical saturation was achieved. A sample of 45 respondents was thought to be the approximate number required, but interviews stopped after 40 when theoretical saturation was achieved. The 40 participants interviewed were from the 20 different incumbent firms in the UK, each 2 participants were selected from each incumbent firms, aged between 35 and 65 at the time of research, 26 males and 14 females. Interviews started on 1st of June 2022 and

finished on 1st September 2022. The initial contact was made with the participants either by email or phone to arrange an appropriate time and date for the interview. The interview session typically lasted between 60 and 90 minutes. Incumbent firms name was replaced with code numbers, F1 to F40 and participant name was replaced with code numbers, C1 to C40.

3.2 Data collection

Different data collection methods were used to explore the multiple realities, provided evidence of the obtained data which facilitated a more in-depth insight and validated the research data (Easterby-Smith et al., 2018; Simons, 2009). Interview, documents and field notes were taken throughout the data collection period. The in-depth interview was chosen as a rigorous primary data source (Easterby-Smith et al., 2018) which comprised a mixture of open-ended and semi-structured questions obtaining detailed description of the participants' perspective (Simons, 2009) and it facilitated to explore meaningful insights related issues to be explored, answering to the questions about why and how relevant to the research issues (Charmaz, 2014). At the beginning, interviews questions were open-ended, but that moved from general topics to more specific and directive (semi-structured) as each interview progressed. Semi-structured interviews were used to collect data from the top leadership and top managerial perspective about resource integration and dynamic capability for firms' sustainable competitive advantages through business digital transformation. The starting question was how do you integrate resources? How do you perceive firms integrate resources for dynamic capability? Interviews then usually followed the response of the participants, however, questions also included for more detail to flow the discussion. Semi-structured interviews focused on qualitative textual data that uncovered rich and descriptive data (Charmaz, 2014; Simons, 2009). A question was to clarify to the participants if necessary so that participants could respond. The interview was recorded and then transcribed that allowed analysis data and interpretation, and increased the accuracy of the data capture process.

Document was used to better understand and validate the interview data. It supports and qualify primary data, which enriched data analysis (Simons, 2009), to add depth to the case by depicting and enriching the context and contributed to the development of meaningful conclusions (Corbin and Strauss, 2015). Appropriate company annual reports, database, management report, mission statement and other documents included performance reports were used and company plan, policies, procedures were also reviewed where available.

Field notes were used throughout the research as the comprehensive interview record for primary data capture and data were jotted down in note form. Field notes enabled to analysis data and identify themes throughout the research process (Saunders et al., 2015). These

continued in parallel with data collection, memo writing, patterns, connections, themes, and provided a starting point for early analysis and interpretation (Charmaz, 2014; Simons, 2009).

3.3 Data analysis

Thematic analysis was used to explore the patterns within the entire dataset and data analysis was guided by the first research question: How do incumbent firms integrate resources? To answer the research question, the study used instrumental case study on the digital transformation of 20 incumbent firms in the UK. The coding emerged from analysing data. Data were actively and repeatedly read and initial coding and theme reviewed. Theme and sub-theme were both descriptive and interpretive (Terry et al., 2017). During the data analysis process, theme was developed following coding, analytic memo, concept map was created and refined to act as a tool to visually organise initial themes, sub-theme and link to each other (Braun, Clarke and Rance, 2014; Simons, 2009). The findings were then re-analysed. The themes and sub-theme emerged related to resource integration, dynamic capability and digital transformation and subsequently, compare and contrast with the existing literature. The instrumental case study takes to contextualise orientation to the data (Terry et al., 2017). The focusing on the senior leadership perspective and senior managerial who were experienced in developing strategic activities and practices for digital transformation to attain sustainability (Li, 2022; Singh, Klarner and Hess, 2020).

4. RESULTS

The findings from fieldwork phase of the research, themes and sub-themes emerged through thematic data analysis process. This study found a total of 5 themes and 13 sub-themes in line with 47 dimensions from thematic data analysis in relation to resource integration, dynamic capabilities and strategic renewal for firms' sustainable competitive advantages through digital transformation. The themes and sub-themes were identified using field notes, analytic memos, coding process, the conditional relationship guide and the constant comparison. The theme emerged during coding process as 'descriptive code' but during subsequent data analysis process those were classified as theme. Documents were used to better understand all the themes related to research topic. Figure1 represented the conceptual framework through thematic data analysis process, identifying themes and sub-themes consists of dimensions and developed a link to each other.

The theme: The resource integration

The 3 sub-themes of the resource integration emerged from data analysis include VRIO resource-based view, Non-VRIO and technology emerged to integrate resource of incumbent firms.

Sub-theme 1: VRIO resource-based view: Participants stated that VRIO is a strategic theory that could be used to integrate resources that enables a deep understanding of a firm's unique resources and capabilities (Bruce et al., 2019). For example, participant C5 reported that: *We formulated VRIO to understand the tangible, intangible assets and to identify and assess the degree to which it is useful. Our company focus on the potential of our internal resources pool rather than considering the external environment. Our VRIO resources like, management processes and skills, organisational processes, the information and IT knowledge.* The VRIO consists of 4 dimensions and emerged from thematic analysis are value, rarity, imitability and organisational system.

Sub-theme 2: Non-VRIO resource: Participants viewed that the tangible non-VRIO resources for example, office space, capital, funding, product, machinery equipment, infrastructure that can be integrated with IT resources that affect the effectiveness of business processes and organisational performance (Liang, You and Liu, 2010). Participant C11 reported that: *We look into the potential of our technology internal resources pool which play dual role of operant and operand resources, to identify and assess the degree to which it is useful.*

Sub-theme 3: Technology: Participants stated that technology may play both role of operant and operand resources that is used to integrate resources that potentially enhance dynamic capabilities and lead to performance outcome of operation and management practice (Ellstrom et al., 2022; Parida, Oghazi and Cedergren, 2016). Technology may play a strategic and synergistic to formulate digital transformation (Van and Vanthienen, 2022). For example, participant C13 reported that: *We look into the potential of our technology internal resources pool, ICT that can be integrated with internal efficiency and collaboration may affect the dynamic capability of digital transformation.*

The theme: Dynamic capabilities

The 3 sub-themes of dynamic capabilities include digital sensing, digital seizing and digital transforming emerged from analysis to examine how incumbent firms develop dynamic capabilities for digital transformation.

Sub-theme 1: Digital sensing: The digital sensing consists of 5 dimensions include technology scouting, digital scenario planning, digital mindset crafting, research and development, technology and industry advancements. Participants viewed that digital sensing is a strategic managerial operation which build dynamic capacities for digital transformation in the incumbent firms. Participant C14 stated that: *We used technology scouting which is the process to identify and analyse necessary technology outside the firm.*

Sub-theme 2: Digital seizing: The digital seizing consists of 10 dimensions related to balancing digital portfolio, rapid prototyping, strategic agility, digital leadership, digital HR, digital marketing, digital operation, selection of the physical technology, design of the business model and data driven decision making. Participants stated that firms are mobilising resources to create value from the opportunities and examining with the entrepreneurial methods to create digital seizing capabilities for rapidly response to the external opportunities and threats to develop digital transformation. Participant C18 stated that: *we capitalise digital leadership as it is important to rapidly response to the external opportunity.*

Sub-theme 3: Digital transforming: The digital transforming consists of 8 dimensions related to improving digital maturity, redesign internal structure, navigating innovation ecosystem, redesign business model, innovation, knowledge management, business process optimisation, business process automation. Participants described that dynamic capabilities are powerful strategic managerial operations (Kraus et al., 2021; Teece, 2018). Participant C21 stated that: *we are transforming our business processes and functions to be digitalised, like, digital marketing, digital operation and digital HR to build better position in the market.*

The theme: Strategic renewal

In thematic analysis, the 4 sub-themes of the strategic renewal emerged which led to contribute to subsequent sustainable competitive advantages.

Sub-theme 1: Sustainable Business model: Participants viewed that building dynamic capacities for digital transformation in the incumbent firms is an ongoing process of strategic renewal of business model. To become a digitalised base tech firm, incumbent firms' reformulate business model by identifying digital scenario planning (Warner and Wager, 2019). Participant C36 stated that: *our senior executive shape a digital scenario planning for launching a digital business model. We redesigned our strategic approach, make digitalise.*

Sub-theme 2: Organisational culture: Participants viewed that is an ongoing process of strategic renewal of organisational culture which is more apparent at an advanced stage of digital transformation (Warner and Wager, 2019). Participant C36 stated that: *our senior executive refresh the roots of culture taking various digital initiatives. We refresh our corporate culture that was triggered to maintain sustainability. With our digital leadership initiative, we transformed our culture most progressive which attractive for follower.*

Sub-theme 3: Management approach: Participants viewed that redesign management approach would be holistic by reconfiguring the digital maturity of the workforce. Participant C36 stated that: *our senior executive reshape the digital maturity workforces for redesigning management approach. We become more agile and diversified.*

Sub-theme 4: Organisational structure: Participants viewed that incumbent firms shape its organisational structure by using digital scenario planning and mobilised balancing digital portfolio. Participant C39 stated that: *our strategic manager shapes a digital scenario planning for redesigning VLE culture and business model. We redesigned our strategic agile considering digitalisation each operation, functions and divisions.*

The theme: The contextual factors

The 3 sub-themes of contextual factors include internal constraints, internal facilitates and external forces emerged. The contextual factors influenced the dynamic capabilities for digital transformation and the strategic renewal to gain sustainable competitive advantages.

Sub-theme 1: Internal constraint: The internal constraint consists of 3 dimensions include rigid strategic planning, change resistance, high power distances are significantly influenced dynamic capability and strategic renewal of business model, culture, structure and management. Participant C6 reported that: *Our company focuses on the potential of our internal resources pool rather than considering competitive environment. High power distance shouts to consider while integrate and build dynamic capability.*

Sub-theme 2: Internal facilitates: The internal facilitates consists of 7 dimensions include cross functional team, executive support, prompt decision making, transformational leadership, employee commitment, leadership commitment, work climate and culture are potentially facilitated dynamic capability and subsequent business model, therefore the firm considered these factors when build dynamic capabilities(Li, 2022). Participant C27 reported that: *Leadership commitment has an impact on sustainable business in digital age. Executive support and employee commitment are beneficial to the sustainable business process.*

Sub-theme 3: External forces: The external forces consists of 7 dimensions include competitive intensity, new market entrance, disruptive digital technologies, disruptive digital competitors, changing consumer behaviour, economic downturn, Covid-19 pandemic are potentially impact on dynamic capability and strategic renewal (Wengler, Hildmann and Vossebein, 2021). For example, participant C34 stated that: *It's noted that changing consumer behaviour, economic downturn is pertained to external fits can influence the processes.*

The integration of the sub-themes to the theme to develop of the emergent theory

The thematic data analysis process was used to link themes and sub-theme in a set of relationships which described the digital transformation process for gaining sustainable competitive advantages. That set of relationships is reflected in figure 1. A coding paradigm also used to identify the connections and relationships between theme in terms of the conditions, processes and consequences. Finally, all the 5 themes, 13 sub-themes and 40 dimensions linked

in a set of relationships that described the digital transformation process to gain sustainable competitive advantages in terms of the RBV, dynamic capabilities, contextual factors, strategic renewal and consequence. The 3 contextual factors which influenced the dynamic capability and subsequently, facilitated or constrained the strategic renewal to attain sustainable competitive advantages. The consequence was the outcome of digital transformation processes. The key theme and sub-themes were linked through the contextual relationship guide and used to develop the emergent theory (Braun, Clarke and Rance, 2014; Braun and Clarke, 2006). The theme originally emerged through thematic data analysis process. The links between all the themes and sub-themes were confirmed through the contextual relationship guide.

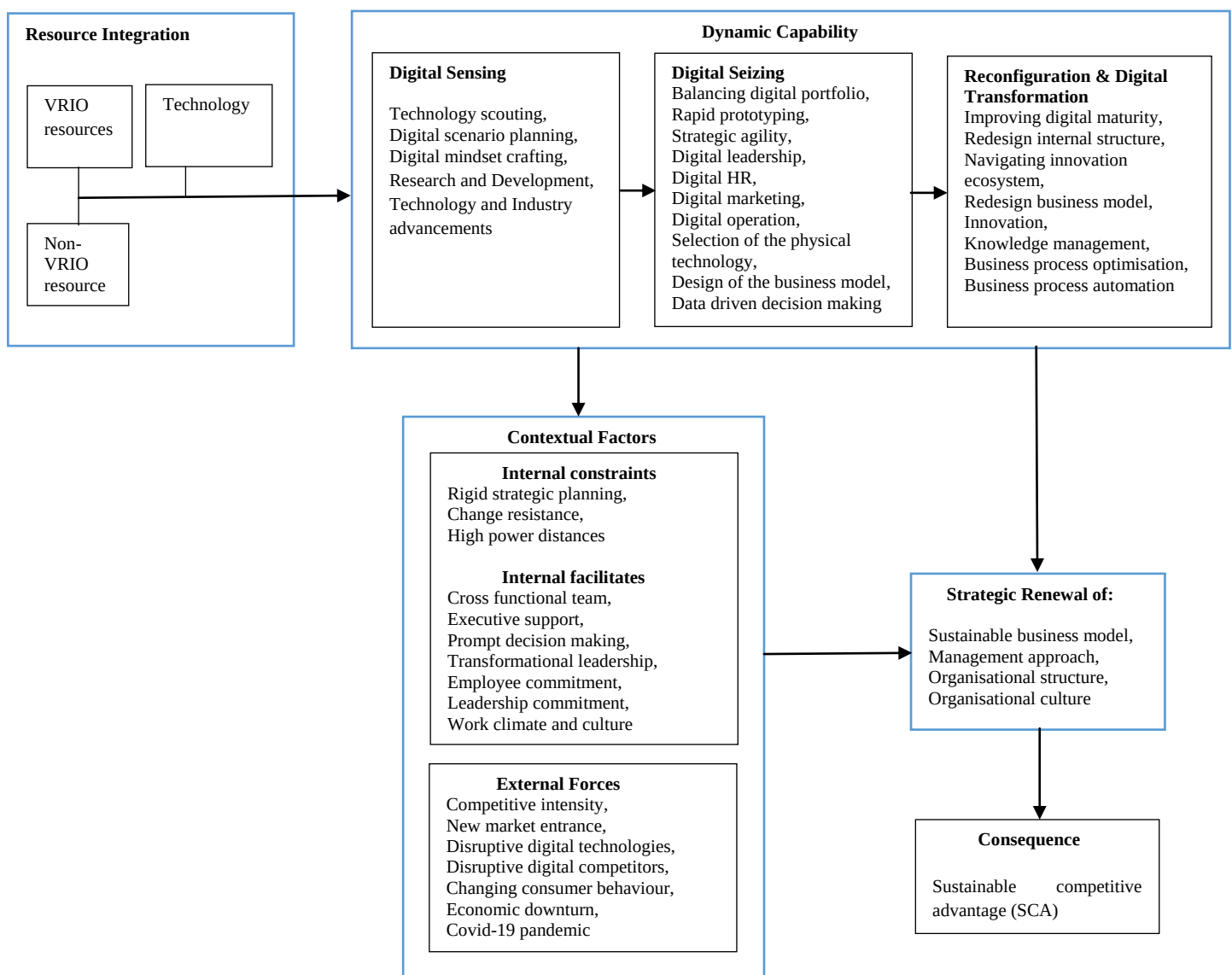


Figure 1. Building block of digital transformation as a process to gain sustainable competitive advantages

Source: Author's work

5. DISCUSSION

The discussion focused on the development of new conceptual framework (figure 1) and concerning research questions. The study found that the digital transformation is contingent on the strategic renewal of incumbent firms include sustainable business model (Verhoef et al., 2021), organisational culture, management approach and organisational structure. The study addressed the digital transformation through dynamic capability is an ongoing process of using digital technologies in incumbent firms to attain sustainable competitive advantages (SCA).

Focusing on the RQ1, the results indicated that the resource integration process undertaken by incumbent firms based on VRIO resource, Non-VRIO resource and technology (figure 1). The 2 prime resources include VRIO resource, Non-VRIO resource potentially impact on their dynamic capabilities based on RBV. Technology based resources play a role in moderating the effect of resource integration in combination with VRIO resource and Non-VRIO resource and dynamic capabilities will convert the resources (Akaka and Vargo, 2014; Barney, 1991). Technology influences to the Non-VRIO resources to convert them into VRIO resources in terms of value, rarity, imitability, organisational system, resources, the findings are similar to (Barney, 1991). The resources are only value in the incumbent firms, if that enable firms to formulate and implement strategic renewal of sustainable business model. The tangible and intangible resources are rare in the incumbent firms, if they are not available to the other competitors. The resources are imitable if they are not implemented by other companies. The incumbent firms' organisational system, management processes, business processes and systems, IT knowledge and skills designed in a unique way to impact on dynamic capability and subsequently, to create maximum productivity to exhibit SCA. This study slightly identified different results from RBV and SDL resource integration (Akaka and Vargo, 2014; Barney, 1991). This study found new digital technology, for example; artificial intelligence, social media, embedded devices, block chain, analytic, cloud and IoT platforms are integrating and building resources in terms of speed, cost effective and quality.

Focusing on the RQ2, the study identified how incumbent firms develop dynamic capability to pursue a digital transformation. The incumbent firms' build dynamic capabilities as a process of digital transformation which undertaken digitalised dynamic capabilities based on 3 clusters of activities are digital sensing, digital seizing and digital transforming to gain SCA(figure 1) and addressed threats and used opportunities, integrate and reconfigure

internal and external resources (Teece, 2018; Teece, 2007). The study found digital sensing involve technology scouting, digital scenario planning, digital mindset crafting (Warner and Wager, 2019), but findings identified research and development, technology and industry advancements were not reflected in the existing literature. The findings digital seizing involves balancing digital portfolio, rapid prototyping, strategic agility (Warner and Wager, 2019), also identified digital leadership, digital HR, digital marketing, digital operation, selection of the physical technology, design business model, data driven decision making but existing literature did not explore how these sub-themes use for mobilising resources. The findings digital transformation involves improving digital maturity, redesign internal structure, navigating innovation ecosystem (Warner and Wager, 2019), whereas, redesign business model, innovation, knowledge management, business process optimisation, business process automation identified in this study are different results from the literature of (Kraus et al., 2023; Warner and Wager, 2019; Teece, 2018).

Given the disruptive nature of digitalisation, the study identified that the incumbent firms are mobilising resources to create value from the opportunities and examining with the entrepreneurial methods to create digital seizing capabilities which rapidly response to the external opportunities and threats to develop digital transformation, the findings from this research were consistent with (Kraus et al., 2023; Kraus et al., 2021; Warner and Wager, 2019; Vial 2019) which argued that digital technologies building capabilities to build new or modify business model within firms. In consequence, new disruptive digital technologies are changing the very nature of seizing capabilities. Again, the study found that dynamic capabilities are powerful strategic managerial operations for the digital transforming of incumbent firms to configure business process, business ecosystem and sustainable business model (Kraus et al., 2021; Vial, 2019).

The findings on digital transforming capabilities focusing on using digital technologies which would rapidly response to the technology and market change (Teece, 2018; Teece, Pisano and Shuen, 1997). Particularly, firms required developing strong dynamic capabilities to quickly integrate, build and configure business models to sustain, respondents' views were supported by (Kraus et al., 2023; Vial, 2019; Warner and Wager, 2019; Teece, 2018; Karimi and Walter, 2015). The purpose and nature of dynamic capabilities is significantly changing due to the disruptive digital technologies. Due to the disruptive digital technology, the motive of building dynamic capabilities become most important to a wider business environment and

dynamic capabilities create competitive position in rapidly changing market, the findings were found in the dynamic capability literature of (Kraus et al., 2023; Teece, 2018).

The study found that the digital transformation is contingent on the strategic renewal of incumbent firms' sustainable business model, organisational culture (Warner and Wager, 2019; Teece, 2018; Agarwal and Helfat, 2009), organisational structure and management approach, they are considering to and providing time to develop digital sensing, digital seizing and digital transforming capabilities, however, the existing literature did not consider the organisational structure and management approach. In line with (Warner and Wager, 2019; Yoo, Henfridsson and Lyytinen, 2010) the study findings revealed that dynamic capabilities for digital transformation are ongoing process of using digital technology.

The RQ3 results indicated different contextual factors include internal constraints, internal facilitates and external forces influenced the process of digital transformation and strategic renewal. The study found that the contextual factors are potentially affected for preparing for future challenges (Parker et al., 2017). These factors can mitigate people resistant to change and provide them confident to work with the interaction with digital technology (Ghobakhloo and Iranmanesh, 2021; Golan et al., 2020). The internal constraints include rigid strategic planning, change resistance, high power distances are significantly influenced dynamic capability and subsequent digital transformation to gain sustainable competitive advantages. The internal facilitates include cross functional team, executive support, prompt decision making, transformational leadership, employee commitment, leadership commitment, work climate and culture are potentially facilitated dynamic capability and subsequent sustainable business model, organisational culture, organisational structure and management approach. The external forces, for example; competitive intensity, new market entrance, disruptive digital technologies, disruptive digital competitors, changing consumer behaviour, economic downturn and Covid-19 pandemic have accelerated an unprecedented level of changes for incumbent firms in the UK.

The RQ4 provided a development of the building block model for digital transformation for enable incumbent firms for sustainable competitive advantages (SCA). The proposed conceptual framework is the development of exiting models and the findings from respondents' views which compared and contrasted with the existing literature to validate the new developed model that led to develop a new emergent substantive theory in a specific research context. Figure 1 demonstrated the conceptual model which explained a new

approach to the digital transformation in terms of 5 key themes: the resource-based view, dynamic capabilities, contextual factors, strategic renewal and consequences. That in turn allowed the development of a systematic building block process of the context specific theory and model within the research context. The digital transformation for strategic renewal through resource integration and dynamic capabilities result in SCA. The VRIO resources, Non-VRIO resource and technology affect the process of dynamic capabilities. Technology enabled to moderate both VRIO resources and Non-VRIO resources. Incumbent firms need to build dynamic capabilities to facilitated ongoing process of digital transformation to attain SCA (Li, 2022; Vial, 2019). The contextual factors influenced dynamic capabilities, strategic renewal of and subsequently, facilitated or constrained the digital transformation process. The study conceptualised and developed the new emergent theory of building block of digital transformation highlighted the transformation of and modification of the business resources, activities, processes using technologies to develop sustainable business model, organisational culture(Warner and Wager, 2019), management approach and organisational structure to achieve sustainable competitive advantages (SCA).

5.1 Theoretical contributions and implications

The study defined and conceptualised the dynamic capabilities for digital transformation is a contingent approach of strategic renewal of sustainable business model, organisational culture, management approach and organisational structure to gain sustainable competitive advantages. Moreover, the identification and conceptual definition of additional constructs were added to the new conceptual framework that explained how digital transformation process could be done potentially in a different cultural and business context that was different to that of all existing literature. The study provided new insights into digital transformation, strategic renewal and SCA literature and developed a new context specific theory and model.

The study made another significant contribution to the dynamic capability theory and provided empirical insights into various kind of digitally based dynamic capabilities may require for the business digital transformation. The study developed a process of dynamic capability that identified 23 digitally based sub-capabilities that underpinned to build digital sensing, digital seizing and digital transforming to address the rapidly changing condition. The research incorporated internal constraints, facilitated and external forces as contextual factors into the digital transformation process and examined how influences the strategic

renewal of sustainable business model, organisational culture, organisational structure and management approach which added new addition to the existing theory and practice.

The proposed conceptual model provided guidelines to strategic operation manager, digital leader, digital HR and practitioner son how to integrate resources and how dynamic capabilities create digital transformation to gain sustainable competitive advantage and it provided companies and practitioners in that context with a unique model which offered practical benefits and the opportunity to focus on important areas of digital transformation. A very limited research had been conducted within the UK context. Thus, this research addressed the gap and made a significant theoretical and practical contribution.

5.2 Conclusion, limitation and future research

This study has addressed the issues of digital transformation where research-based knowledge is limited. The digital transformation of conceptual model is developed through this study and offered a new theory of digital transformation within the specific research context. The themes and sub-themes emerged through thematic data analysis. The main 5 themes are: resource integration, dynamic capability, contextual factors, strategic renewal and consequences are added to a new developed conceptual model. In consequence, the aim of the research and research questions are achieved.

The research followed the guidelines required of qualitative research approach. The study findings cannot claim the generalisability which needs to be empirically tested. The findings are not representative of all locations, cultures, industries or organisations; however, generalisability is not a requirement of qualitative research. The new conceptual framework for the digital transformation was developed in the particular research setting within the context of incumbent firms in the UK. Therefore, this theory will be applicable within the research context. Further research is needed with larger sample sizes to validate and generalise the theory. Though the study focuses on digital transformation through resource integration and dynamic capabilities, the researcher could explore the more explicit role of integrating resources in terms of organisational capabilities. The study is suggesting to further future research a deeper knowledge of digital technologies disruption within the context of digital transformation.

References

- Agarwal, R. and Helfat, C.E.(2009). Strategic renewal of organisations. *Organisation Science*. 20(2), pp.281- 293.
- Akaka, M. A. and Vargo, S. L. (2014). Technology as an operant resource in service (eco)systems. *Information Systems and e-Business Management*. 12(3), pp.367–384. doi: 10.1007/s10257-013-0220-5.
- Ambrosini, V., Bowman, C. and Collier, N. (2009). Dynamic capabilities: An exploration of how firms renew their resource base. *British Journal of Management*. 20(1), pp.9–24. doi: 10.1111/j.1467-8551.2008.00610.x.
- Barney, J., Ketchen, D. J. and Wright, M. (2021). Resource-based theory and the value creation framework. *Journal of Management*. 47(7), pp.1936–1955. doi: 10.1177/01492063211021655.
- Barney, J. and Clark, D. (2007). *Resource-based theory: Creating and sustaining competitive advantage*. OUP Oxford, New York.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*. 17(1), pp.99–120. doi: 10.1177/014920639101700108.
- Begum, M. (2020). Evaluating training programmes: A grounded theory exploration of training evaluation as experienced by managers working in the textile industry in Bangladesh and the development of a new approach for the evaluation of training within that context. *ejournal UWTSD: Repository URI*: [Online]. [Accessed 10 May 2024] Available from: <https://repository.uwtsd.ac.uk/id/eprint/1438/>
- Bruce, H. L., Wilson, H. N., Macdonald, E. K. and Clarke, B. (2019). Resource integration, value creation and value destruction in collective consumption contexts. *Journal of Business Research*. 103, pp.173–185. doi: 10.1016/j.jbusres.2019.05.007.
- Braun, V., Clarke, V. and Rance, N. (2014). How to use thematic analysis with interview data. In: Vossler A, Moller N, editors. *The counselling and psychotherapy research handbook*. London: Sage.
- Braun, V. and Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*. 3(2), pp. 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Charmaz, K. (2014). *Constructing grounded theory*. 2nd ed. Thousand Oaks, CA: Sage.
- Corbin, J.M. and Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. 4th ed. London: Sage.
- DaSilva, C. M. and Trkman, P. (2014). Business model: What it is and what it is not. *Long Range Planning*. 47(6), pp.379–389. doi: 10.1016/j.lrp.2013.08.004.

- Eletxigerra, A., Barrutia, J. M. and Echebarria, C. (2018). Place marketing examined through a servicedominant logic lens: A review. *Journal of Destination Marketing and Management*. 9, pp.72–84. doi: 10.1016/j.jdmm.2017.11.002.
- Ellstrom, D., Holtstrom, J., Berg, E. and Josefsson, C. (2022). Dynamic capabilities for digital transformation. *Journal of Strategy and Management*. 15(2), pp.272–286. doi: 10.1108/jsma-04-2021-0089.
- Easterby-Smith, M., Thorpe, R., Jackson, P. and Lowe, A. (2018). *Management and Business research*. 6th ed. London: Sage Publication.
- Gartner (2022). Gartner glossary: Information technology[Online]. [Accessed 16 August 2023]. Available from: <https://www.gartner.com/en/information-technology/glossary>.
- Gong, C. and Ribiere, V. (2021). Developing a unified definition of digital transformation. *Technovation*, 102, 102217. doi: 10.1016/j.technovation.2020.102217.
- Ghobakhloo, M. and Iranmanesh, M. (2021), “Digital transformation success under Industry 4.0: a strategic guideline for manufacturing SMEs”. *Journal of Manufacturing Technology Management*. (32)8, pp.1533-1556, doi: 10.1108/JMTM-11-2020-0455.
- Golan, M., Cohen, Y. and Singer, G. (2020). A framework for operator – workstation interaction in Industry 4.0. *International Journal of Production Research*. 58(8), pp. 2421-2432, doi: 10. 1080/00207543.2019.1639842.
- Hanelt, A., Bohnsack, R., Marz, D. and Marante, C. A. (2021). A systematic review of the literature on digital transformation: Insights and implications for strategy and organisational change. *Journal of Management Studies*. 58(5), pp.1159–1197. doi: 10.1111/joms.12639.
- Helfat, C. E. and Winter, S. G. (2011). Untangling dynamic and operational capabilities: Strategy for the (n)ever-changing world. *Strategic Management Journal*. 32(11), pp.1243–1250. doi: 10.1002/smj.955.
- Hitt, M.A., Bierman, L., Shimizu, K. and Kochhar, R.(2001). Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective. *Academy of Management journal*. 44(1), pp.13–28.
- Imran, F., Shahzad, K., Butt, A. and Kantola, J. (2021). Digital transformation of industrial organisations: Toward an integrated framework. *Journal of Change Management*. 21(4), pp.451–479. doi: 10.1080/ 14697017.2021.1929406.
- Karimi, J. and Walter, Z. (2015). The role of dynamic capabilities in responding to digital disruption: a factor-based study of the newspaper industry. *Journal of Management Information Systems*. (32)1, pp. 39-81.

- Kim, S., Choi, B. and Lew, Y. K. (2021). Where is the age of digitalisation heading? The meaning, characteristics, and implications of contemporary digital transformation. *Sustainability*. 13(16), 8909. doi: 10.3390/su13168909.
- Kraus, S., Vonmetz, K., Orlandi, L. B., Zardini, A. and Rossignoli, C. (2023). Digital entrepreneurship: The role of entrepreneurial orientation and digitalisation for disruptive innovation. *Technological Forecasting and Social Change*. doi: 10.1016/j.techfore.2023.122638.
- Kraus, S., Durst, S., Ferreira, J. J., Veiga, P., Kailer, N. and Weinmann, A. (2022). Digital transformation in business and management research: An overview of the current status quo. *International Journal of Information Management*. 63(1), pp.102-466. doi: 10.1016/j.ijinfomgt.2021.102466.
- Kraus, S., Jones, P., Kailer, N., Weinmann, A., Chaparro-Banegas, N. and Roig-Tierno, N. (2021). Digital transformation: An overview of the current state of the art of research. *Sage Open*. 11(3), pp.1–15. doi: 10.1177/21582440211047576.
- Li, L. (2022). Digital transformation and sustainable performance: The moderating role of market turbulence. *Industrial Marketing Management*. 104, pp.28–37. doi: 10.1016/j.indmarman.2022.04.007.
- Liu, H.I. and Hsu, C.W. (2011). Antecedents and consequences of corporate diversification: A dynamic capabilities perspective. *Management Decision*. 49(9), pp.1510 – 1534.
- Liang, T., You, J. and Liu, C. (2010). A resource-based perspective on information technology and firm performance: A meta-analysis. *Industrial Management and Data Systems*. 110(8), 1138–1158. doi: 10.1108/02635571011077807.
- Liu, D.Y., Chen, S.W. and Chou, T.C., (2011). Resource fit in digital transformation. *Management Decision*. 49(10), 1728-1742.
- Mills, A. J., Durepos, G. and Wiebe, E. (2010). *Encyclopedia of case study research*. (Vols. 1-0). SAGE Publication. Inc. <https://doi.org/10.4135/9781412957397>.
- Ming-Hsiung Hsiao (2024). Resource integration and firm performance through organisational capabilities for digital transformation. *Digital Transformation and Society*. 3(1), doi: <https://doi.org/10.1108/DTS-07-2023-0050>. ISSN: 2755-0761
- Parida, V., Oghazi, P. and Cedergren, S. (2016). A study of how ICT capabilities can influence dynamic capabilities. *Journal of Enterprise Information Management*. 29(2), pp.179–201. doi: 10.1108/jeim07-2012-0039.

- Parker, S. K., Van den Broeck, A. and Holman, D. (2017). Work design influences: A synthesis of multilevel factors that affect the design of jobs. *Academy of Management Annals*. (11), pp.267-308.
- Porter, M.E. (1980). Industry structure and competitive strategy: Keys to profitability. *Financial analysts journal*. 36(4), pp.30–41.
- Porter, M.E. (1979). How competitive forces shape strategy. *Harvard Business Review*. 57(1), pp.137–145.
- Ranjith, V.K. (2016). Business models and competitive advantage. *Procedia Economics and Finance*. 37(1), pp.203–207.
- Saunders, et al. (2015). *Research methods for business students*. 7th ed. Harlow, England: Pearson Education.
- Schilke, O. (2014). Second-order dynamic capabilities: How do they matter? *The Academy of Management Perspectives*. 28(4), pp.368–380. doi: [10.5465/amp.2013.0093](https://doi.org/10.5465/amp.2013.0093).
- Shapiro, C. (1989). The theory of business strategy. *The Rand Journal of Economics*. 20(1), pp.125-137.
- Simons, H. (2009). *Case study research in practice*. 1st ed. SAGE Publication.
- Singh, A. and Hess, T., (2017). How Chief Digital Officers Promote the Digital Transformation of their Companies. *MIS Quarterly Executive*. pp.31–44.
- Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*. 51(1), pp 40–49. doi: 10.1016/j.lrp.2017.06.007.
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and micro foundations of (sustainable) enterprise performance. *Strategic Management Journal*. 28(13), pp.1319–1350. doi: 10.1002/smj.640.
- Teece, D. J., Pisano, G. and Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*. 18(7), pp.509–533. doi: 10.1002/(sici)1097-0266(199708)18:73.0.co;2-z.
- Terry, G., Hayfield, N., Clarke, V. and Braun, V. (2017). Thematic analysis. In: Willig C, Stainton Rogers W, editors. *The sage handbook of qualitative research in psychology*. 2nd ed. London: Sage; 2017. pp. 17–37.
- Van Veldhoven, Z. and Vanthienen, J. (2022). Digital transformation as an interaction-driven perspective between business, society, and technology. *Electronic Markets*. 32(2), pp.629–644. doi: 10.1007/s12525-021-00464-5.

Verhoef, P.C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J.Q., Fabian, N. and Haenlein, M. (2021). Digital transformation: a multidisciplinary reflection and research agenda. *Journal of Business Research*. Vol. 122, pp. 889-901.

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems*. 28(2), pp.118–144. doi: 10.1016/j.jsis.2019.01.003.

Warner, K. S. R. and Wager, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Planning*. 52(3), pp.326–349. doi: 10.1016/j.lrp. 2018.12.001.

Wengler, S., Hildmann, G. and Vossebein, U. (2021). Digital transformation in sales as an evolving process. *Journal of Business and Industrial Marketing*. 36(4), pp.599–614. doi: 10.1108/jbim-03-2020-0124.

Yang M., Wang J., Zhang X. (2021). Boundary-spanning search and sustainable competitive advantage: The mediating roles of exploratory and exploitative innovations. *J. Bus. Res.* 127, pp.290–299. doi: 10.1016/j.jbusres.2021.01.032.

Yoo, Y., Henfridsson, O. and Lyytinen, K. (2010). Research commentary—the new organizing logic of digital innovation: an agenda for information systems research. *Information Systems Research*. 21(4), pp.724-735.