Exploring the Dynamic Capabilities of a UK SME for Digital Innovation

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1. Introduction

Digital innovation (DI) presents substantial opportunities for small and medium-sized enterprises (SMEs) to secure a competitive advantage (Glaser 2015; Reina et al., 2015; Li et al., 2025). This is because DI operates most effectively in environments characterised by decentralised decision-making and distributed innovation agency, conditions typically found in SMEs. However, SMEs also face heightened business risks, uncertainty, and resource constraints, which necessitate the development of specific capabilities to orchestrate resources and leverage acquired knowledge to sustain competitive advantage. In this context, the concept of dynamic capabilities (Dosi, Nelson, Winter, 2001; Teece, 2007; Teece, Pisano, Shuen, 1997) is frequently applied to examine the role of digital innovation in a firm's performance and its potential for sustainable competitive advantage. The key question here is whether resource constraints and SMEs' flexible organisational structures enhance their ability to sustain such advantages. While the importance of a principal decision-maker in SMEs' resource orchestration and knowledge acquisition is often implicit, it becomes crucial for predicting the future competitiveness of these firms (Adner and Helfat, 2003; Baishya et al., 2025; Heubeck, 2022). To better understand how SMEs can achieve success through digital innovation, it is essential to investigate the various influences on interdependent decision-making and the capabilities that drive innovation and performance. This is particularly relevant since DI thrives in decentralised, distributed, and coordinated settings (Harvey, 2022; Heubeck, 2022). Building on this understanding, an in-depth single-case study of a digitally innovative SME has been designed to explore a relational and distributed perspective of dynamic capabilities, as well as the range of influences exerted by dynamic managerial capabilities in the context of digital innovation. The review's findings indicate that individuals within the firm play a crucial role in shaping its dynamic capabilities. Moreover, the collective expertise resulting from the coordination of these capabilities may be more closely linked to performance outcomes than the traditionally centralised notion of dynamic capabilities (Appiah, 2024; Baishya et al., 2025; Harvey, 2022; Heubeck, 2022).

2. Aim and Research Questions

This study aims to explore the influence mechanisms underlying dynamic capabilities across multiple organisational levels through an in-depth case study.
The proposed research questions of this study are:

- ***(i)*** *How do dynamic capabilities influence decision-making processes across multiple organisational levels (from CEO to middle management and team members) in a digitally innovative SME?*
- ***(ii)*** *How does the coordination of these capabilities across these levels shape the development of dynamic capabilities?*

3. Methods

A single case study was designed to enable an in-depth examination of how task-related dynamic capabilities spanning decision-making levels from the CEO to middle management and team members shape and influence decision-making processes. This approach allows for a detailed analysis of the interconnected and multilevel array of influences through which dynamic capabilities operate within the organisation. A qualitative research approach, involving interviews with SME owners/CEOs, middle managers/team leads, and team members, is employed to explore the inherently process-oriented and socially embedded nature of the central research questions involving at least 30 participants, with qualitative data drawn from the participants' accounts to provide "thick descriptions" (Geertz, 1973) that illuminate subtle yet critical organisational dynamics. These include implicit knowledge exchange

and the development of emergent routines within digitally innovative environments (Gioia et al., 2013). Fieldwork methods, including in-depth interviews and observations, allow direct engagement with participants and enable exploration of their subjective rationales for coordinating and sharing knowledge across hierarchical and team boundaries **(Fig 1).** These nuanced aspects are difficult to uncover through standardised surveys, making the chosen qualitative methods particularly well-suited to this research. To ensure clarity and conceptual rigour, dynamic capabilities will be operationalised using Teece's (2007) framework, which focuses on three core elements: sensing, seizing, and reconfiguring capabilities (Teece et al., 2007; Peteraf et al., 2013; Ambrosini et al., 2009). These elements will be explored in the context of Dynamic Managerial Capabilities (DMC) (managerial cognition, social capital, human capital) for decision-making processes and digital innovation within the SME setting. The study will identify and measure dynamic capabilities by examining organisational activities such as knowledge exchange, resource allocation, and adaptability in response to technological shifts (Teece et al., 2007; Peteraf et al., 2013; Ambrosini et al., 2009). This operationalisation will help maintain conceptual consistency throughout the research. Participants will be selected through purposive sampling to ensure diverse perspectives across organisational levels (Palinkas et al., 2015; Patton, 2015). To mitigate potential biases, the study will incorporate strategies such as triangulating data sources (e.g., interviews, direct observations, and document analysis) and involving multiple researchers to cross-check findings (Denzin, 1978; Patton, 1999). Measures will also be taken to address role-related and social desirability biases, such as ensuring anonymity and conducting interviews in a neutral, non-threatening manner (Bergen and Labonté, 2020; Bispo Júnior, 2022). Qualitative data will be analysed using thematic analysis, with coding procedures that follow a structured yet flexible approach to identifying themes related to dynamic capabilities and decision-making (Braun and Clarke, 2006). NVivo software will be used to assist with data management and facilitate rigorous coding (e.g., as widely applied in contemporary qualitative studies; see e.g., Zamawe, 2015). The analysis will also involve a cross-level synthesis of findings, integrating insights from the CEO, middle management, and team members to ensure a comprehensive understanding of how dynamic capabilities operate across organisational hierarchies (Schilke, Helfat, 2025; Helfat, Martin, 2015).

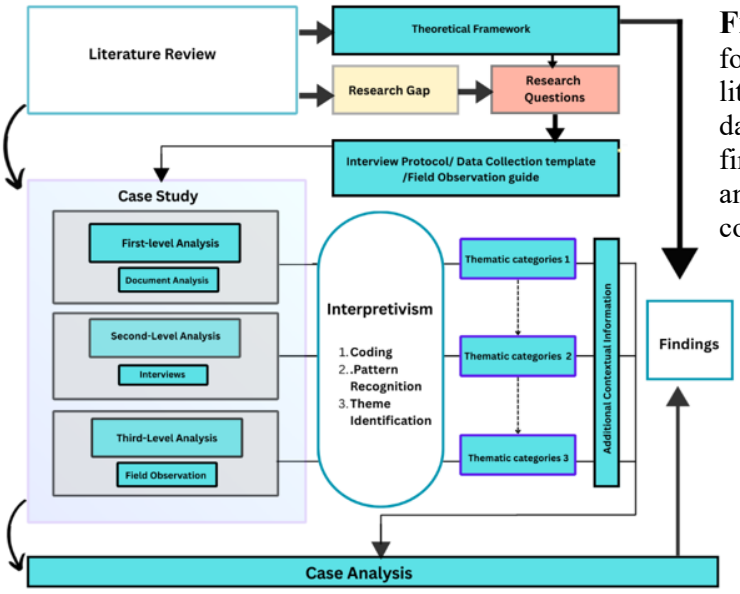

Figure 1: The proposed research design for the study, illustrating how the literature review informs fieldwork and data collection, and how the data and findings from the case study will be analysed through thematic emergence to contribute to theory development.

4. Results and Discussion

The integration of multi-level perspectives in dynamic capabilities (DC) research represents a pivotal advancement in understanding how firms adapt to turbulent environments, moving beyond traditional firm-level analyses to encompass individual, team, and organisational interactions. As highlighted in the literature review, there is indeed an emerging scholarly consensus advocating for such multi-level integration, which underscores the interconnected nature of capabilities within organisations (Teece, 2012; Schilke et al., 2018). This shift is not merely theoretical but empirically grounded, as evidenced

by studies such as Harvey (2022), which elucidates how managerial cognition, specifically managers' construal level, directly shapes team-level sensing behaviours. In this framework, high-construal managers, characterised by broader mental horizons and a propensity for abstract thinking, engage in heightened environmental scanning. This individual-level cognitive process then cascades to the team through behavioural modelling, where team members emulate the manager's scanning practices over time. Critically, this influence is moderated by the degree of task-related interdependence among peer managers; under conditions of low interdependence, the relationship may invert, potentially leading to diminished collective sensing efficacy. Such findings reinforce the notion that DCs are emergent phenomena arising from the interplay of microfoundations rather than isolated attributes.

This interactive conceptualisation of DCs has profound implications for strategic management theory. Traditionally, DCs have been framed as higher-order routines enabling resource reconfiguration (Eisenhardt and Martin, 2000), yet the multi-level lens reveals them as a cumulative outcome of diverse influences, including cognitive, relational, and structural elements across organisational hierarchies. For instance, a firm's sensing capability, essential for identifying opportunities and threats, does not reside solely in executive decision-making but is co-constructed through the aggregation of individual capabilities, such as perceptual acuity and knowledge integration at the team level (Helfat and Peteraf, 2015). This cumulation process implies that DCs are path-dependent and socially embedded, in which the "array of influences from other capabilities of members within a firm" (as noted in the reviewed literature) fosters resilience or, conversely, inertia when misaligned. Empirically, this aligns with broader research on microfoundations, which posits that individual heterogeneity in cognition and behaviour underpins macro-level outcomes (Felin et al., 2015). By extension, firms that cultivate cognitive diversity and interdependent structures may enhance their adaptive capacity, particularly in knowledge-intensive industries where rapid environmental shifts demand agile responses.

From a practical standpoint, these insights urge organisational leaders to prioritise interventions at multiple levels. For example, training programs targeting managerial construal levels could amplify sensing capabilities, while fostering cross-managerial networks might mitigate the moderating effects of low interdependence. However, this multi-level integration also highlights potential challenges: over-reliance on individual cognition risks amplifying biases, such as confirmation bias in environmental scanning, which could distort team behaviours and ultimately impair firm-level DCs (Lovallo and Sibony, 2010). Moreover, the interactive nature of DCs suggests that isolated capability-building efforts, e.g., focusing solely on technological resources, may yield suboptimal results if they do not address underlying human and relational dynamics.

5. Conclusions

Despite these contributions, limitations in the extant literature warrant caution. Much of the evidence, including Harvey's (2022) propositions, remains conceptual or grounded on limited empirical contexts, often drawing on large-scale data and simulations, rather than in-depth exploration. Future research should employ mixed-methods approaches, such as multi-level modelling or agent-based simulations, to empirically test the cumulative effects of capability interactions. Additionally, exploring boundary conditions, e.g., how external factors like regulatory pressures or digital disruptions moderate these multi-level dynamics, could further refine DC theory. In sum, recognising DCs as an interactive, cumulative construct not only enriches scholarly discourse but also equips practitioners with a more nuanced toolkit for navigating complexity in contemporary business landscapes.

6. Acknowledgments

Given the qualitative nature of the research, the researcher's reflexivity will be addressed through a reflective journal and peer debriefing to ensure that personal biases and subjectivities do not influence data collection or analysis. The researchers will also employ member-checking to validate interpretations and enhance the trustworthiness of the findings. Finally, the study aims to contribute both to theory and practice. The findings will be linked to existing theoretical frameworks on dynamic capabilities and decision-making processes, particularly those relevant to digitally innovative SMEs. The research seeks to extend current theoretical understandings by examining how capability coordination across different levels impacts the development of dynamic capabilities. Practical implications will be drawn, offering recommendations for SMEs on leveraging dynamic capabilities to enhance decision-making and innovation in a rapidly evolving digital landscape.

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