BALTICA JOURNAL

Title; Corporate Dynamic Capabilities and Sustainable Performance: Moderating Effects of Organizational Culture And Structure

Maulid Hussein Bwabo, Zhiqiang Ma, & Mingxing Li

Affiliation

Maulid Hussein Bwabo, School of Management, Jiangsu University, Zhenjiang, Jiangsu 212013, P.R. China, Moshi Cooperative University (MoCU), Kilimanjaro, 474, Sokoine Road, Tanzania; Email: bwabomaulid@gmail.com ORCID: https://orcid.org/0000-0001-7118-268X

Mingxing Li, School of Management, Jiangsu University, Zhenjiang, Jiangsu 212013, P.R. China; Research Centre for Green Development and Environmental Governance, Jiangsu University, Zhenjiang, 212013, P.R. China; E-mail: mingxingli6@ujs.edu.cn ORCID: https://orcid.org/0000-0002-4039-5997

Zhiqiang Ma, School of Management, Jiangsu University, Zhenjiang 212013, P.R. China; E-mail: mzq@ujs.edu.cn ORCID： https://orcid.org/0000-0002-6492-0733

ISSN: 0067-3064

Abstract

Effective organizational structure and culture play a crucial role in shaping corporate dynamic capabilities, enabling microfirms to adapt and thrive in dynamic environments. Interestingly, previous studies have diverged in conceptualizing the strategic role of organizational culture and structure in the relationship between corporate dynamic capabilities and sustainable performance. This study advances the empirical understanding of structurization and culturalization within the context of microfirms. The study has two main objectives: first, to examine the direct effects of knowledge sharing and sensing capability on sustainable performance; and second, to explore the moderating effects of organizational culture and structure on the relationship between sensing capability, knowledge sharing, and sustainable performance. The research draws on data from 602 employees in the Tanzanian dairy industry and tests the conceptual research model based on the Knowledge-Based View (KBV). Unpacking conditional process analysis, the study's hypotheses were tested. The findings confirm that sensing capability and knowledge sharing have significant positive effects on sustainable performance, contingent upon specific levels of organizational culture and structure. Additionally, the moderation analysis reveals that organizational culture and structure weaken the relationship between knowledge sharing, sensing capability, and sustainable performance. This study provides new insights into the importance of structurization and culturalization among employees in microfirms in emerging economies such as Tanzania.

Keywords: Corporate Dynamic Capabilities, Sustainable Performance, Organizational Structure, Organizational Culture.

1. Introduction

Sustainable performance in the context of microfirms refers to the ability of these small enterprises, typically with fewer than 10 employees and limited resources, to achieve long-term financial success while simultaneously minimizing negative social and environmental impacts (Bwabo et al., 2022; Okoumba et al., 2020). Unlike larger companies, microfirms often operate with tighter budgets and fewer resources, making it challenging for them to balance economic viability with the demands of social and environmental responsibility. The literature suggests that achieving this requires integrating economic, social, and environmental considerations into business operations and strategies (Lin, 2007). For instance, economically, microfirms must ensure financial stability, efficient resource utilization, and adaptability to market changes (Nuhu et al., 2019). On one hand, social sustainability involves creating a supportive work environment, engaging with local communities, and fostering stronger relationships. Environmentally, microfirms need to manage resources responsibly, implement eco-friendly practices, comply with regulations, and reduce carbon footprint (Fiedler et al., 1996). On the other hand, microfirms in developing economies face challenges such as limited resources, lack of expertise, and market pressures, which compromise their corporate dynamic capabilities as well as sustainable performance (Bocken et al., 2014). To address this, scholars have argued that microfirm employees should adopt lean practices, leverage technology, collaborate with stakeholders, understand organization culture and structure development, and emphasize transparency (Carnahan et al., 2010; Denison, 2010). By balancing these aspects, microfirms can achieve long-term success while contributing positively to social and economic sustainable performance.

Following the sustainable performance backdrop gives rise to an important question about the extent to which microfirms can utilize corporate dynamic capability to improve sustainable performance (Wilhelm et al., 2022). Arguably, corporate dynamic capability in microfirms refers to the ability of these small firms to integrate, build, and reconfigure internal and external competencies to navigate rapidly changing economic and social environments, ensuring they remain competitive and innovative (Pitelis et al., 2023). This capability involves continuously monitoring market trends, customer preferences, and technological advancements to identify new opportunities and threats, making agile decisions, and optimizing resource utilization

(Nuhu et al., 2019; Bwabo et al., 2024). Furthermore, corporate dynamic capability promotes cross-functional collaboration, fosters a culture of continuous improvement and learning, and supports experimentation, all of which are crucial for innovation (Teece, 1996; Kurtmollaiev, 2020). It also emphasizes maintaining strategic flexibility and scalability while building strong external relationships through partnerships and networking, enhancing the firm's adaptability. Despite challenges like limited resources and knowledge gaps, microfirms can strengthen its corporate dynamic capabilities by investing in employee development, leveraging technology, promoting a learning culture, encouraging collaboration, and implementing flexible strategic planning (Dencker & Gruber, 2015). In doing so, it enables microfirms to effectively sense and seize opportunities, efficiently integrate resources, innovate continuously, and sustain long-term success in dynamic environments.

Building on the previous discussion, it is evident that sustainable performance and corporate dynamic capabilities are closely intertwined (Teece, 2019). Corporate dynamic capabilities enable microfirms to achieve and maintain sustainable performance in rapidly changing environments by integrating, building, and reconfiguring both internal and external competencies. These capabilities provide the necessary flexibility and adaptability required for long-term sustainable performance (Pitesa & Pillutla, 2019). Specifically, corporate dynamic capabilities allow firms to swiftly adapt to evolving environmental regulations, market trends, and technological advancements, ensuring compliance with sustainability standards and enabling them to capitalize on new opportunities. This adaptability enhances continuous improvement and innovation, which are crucial for developing sustainable products and processes while optimizing resource use to minimize waste and maximize efficiency (Salvador et al., 2021). Additionally, corporate dynamic capabilities promote routine processes of learning and knowledge sharing among microfirm employees, enhancing sustainable practices and overall sustainable performance (Bwabo et al., 2023). By leveraging this interdependence significantly, employees at microfirms can achieve long-term sustainability and maintain competitiveness in an ever-changing business environment.

However, achieving sustainable performance following effective corporate dynamic capabilities in the context of microfirms presents significant challenges, particularly within the broader culture and structure context (Vaara et al., 2016; Singh et al., 2019). For example,

limited financial resources and constrained access to specialized knowledge among employees following the structure of microfirms often hinder the ability to invest in sustainable practices as well as resource reconfiguration (Elkington, 1998). Additionally, competitive pressures frequently prioritize short-term financial gains over long-term sustainability goals, creating structure tension in strategic decision-making among employees if industrial culture is ignored (Bocken et al., 2014). This tension limits microfirms' capacity for large-scale innovation and adaptation, while the need to navigate complex and evolving environmental and social regulations requires continuous vigilance and compliance (Bansal & Song, 2017). To overcome these challenges, empirical studies have highlighted the necessity of strategic investments in employee development regarding the pivotal role of culture and structure toward dynamic capability and sustainable performance (Eccles & Serafeim, 2013; Denison et al., 2014; Fainshmidt & Frazier, 2017). Unfortunately, previous studies have primarily focused on the direct relationship between corporate dynamic capability and the sustainable performance of microfirms, often overlooking the role of organizational culture and structure. This balloons an empirical puzzle, particularly regarding how organizational culture and structure might shape the relationship between knowledge sharing, sensing capability, and sustainable performance, specifically, dairy microfirms. Consequently, in this study we attempted to fill this knowledge gap by pursuing two key objectives: first, to examine the direct effects of sensing capability and knowledge sharing on sustainable performance, and second, to explore how organizational culture and structure moderate these relationships. The study collected field data from 602 employees of dairy microfirms in Tanzania. Thus, we present a novel conceptualization that integrates organizational structure and culture with corporate dynamic capabilities by abductively developing a comprehensive research model. Through a two-way interaction analysis using the Process Macro approach, we validate both the direct conditional effects and the moderating effects.

The study begins with an exploration of relevant theories and a review of the literature. Following this, the research methodology is presented, detailing the approach and methods used. The study then moves on to the analysis and presentation of findings. Finally, the study concludes with a discussion of the results and managerial implications.

2. Theories, Literature Review, and Hypotheses Development

2.0 Knowledge-Based View (KBV)

The study employed the Knowledge-Based View (KBV) to examine how organizational culture and structure interact with corporate dynamic capability and sustainable performance. KBV significantly influences both organizational culture and structure (Zollo & Winter, 2002). Understanding the principles behind KBV is crucial for linking it to key dimensions for dynamic capabilities and sustainable performance. KBV suggests that knowledge among managers and employees is socially constructed and rooted in the human resources of the firm (Cummings,2004). Therefore, organizing principles such as creation, replication, and imitation are essential for navigating the firm's capabilities and understanding their interaction with organizational structure and culture (Barney,1986). This relationship is closely linked with tacit knowledge, which KBV emphasizes. The literature suggests that KBV promotes a culture that values continuous learning, collaboration, and innovation while emphasizing the retention and effective utilization of knowledge (Teece et al., 1996). Structurally, KBV encourages decentralization, cross-functional teams, informal networks, and flexible hierarchies to facilitate knowledge flow and application among managers and employees (Singh et al., 2019). These cultural and structural attributes are essential for leveraging knowledge as a strategic resource, enabling firms to achieve and sustain a competitive advantage.

Moreover, KBV is designed to support the effective management and utilization of knowledge, bolstering it as a strategic resource within microfirms (Felin & Hesterly, 2007). A key characteristic is decentralization, which allows for greater flexibility and quicker decision-making, facilitating the flow and application of knowledge across different levels of the firm. For example, Mudalige et al. (2019) highlighted the importance of individual contributions at the firm level to enhance cross-functional activities, revealing that formal and informal networks are pivotal in knowledge sharing and integration. These networks bring together diverse expertise and perspectives, fostering innovation and comprehensive problem-solving among managers and employees. Similarly, KBV posits that informal networks between firms play a crucial role in knowledge transfer, encouraging spontaneous collaboration among employees to enhance the exchange of knowledge (Tsai, 2002). KBV also asserts that firms learn new capabilities by combining existing ones (Kogut & Zander, 1992). Thus, firms must

understand the mechanisms and strategies for combining flexible hierarchies to adapt to changing knowledge needs. This adaptability allows firms to reconfigure their structures quickly in response to new information or shifts in the competitive environment (Vaara et al., 2016). In summary, KBV serves as the lens through which this study examines how structural attributes collectively ensure that dynamic capabilities are effectively integrated to sustain the competitive advantage of microfirms.

2.1 Knowledge sharing and sustainable performance

Knowledge sharing is vital for achieving sustainable performance in organizations. It drives innovation by facilitating the flow of ideas and information, leading to the development of new solutions and improvements (Nonaka, 1994; Davenport & Prusak, 1998). This continuous innovation in knowledge sharing among employees is crucial for maintaining a competitive advantage and ensuring sustainability. Moreover, effective knowledge sharing enhances decision-making and operational efficiency, optimizing resource use and minimizing waste—key components of sustainable performance (Grant, 1996; Cummings, 2004). Therefore, a culture of continuous knowledge sharing helps collaboration and trust among employees, which enhances engagement and reduces misinformation within microfirms, further supporting sustainable performance (Nahapiet & Ghoshal, 1998; Senge, 1990; Bwabo et al., 2024). Knowledge sharing is vital for achieving sustainable performance in organizations. It drives innovation by facilitating the flow of ideas and information, leading to the development of new solutions and improvements (Nonaka, 1994; Davenport & Prusak, 1998). This continuous innovation is crucial for maintaining a competitive advantage and ensuring sustainability. Moreover, effective knowledge sharing enhances decision-making and operational efficiency, optimizing resource use and minimizing waste—key components of sustainable performance (Grant, 1996; Cummings, 2004). A culture of continuous knowledge sharing fosters collaboration and trust among employees, which enhances engagement and reduces misinformation within microfirms, further supporting sustainable performance (Nahapiet & Ghoshal, 1998; Senge, 1990). It's fair to argue that knowledge sharing facilitates continuous learning and development, helping microfirms maintain their competitive edge and adapt to market changes (Argote & Ingram, 2000; Garvin, 1993). Empirical studies validate these claims, showing that knowledge sharing significantly improves innovation capabilities and

overall sustainable performance in microfirms (Lin, 2007; Wang & Noe, 2010). Overall, prioritizing knowledge sharing enables organizations to achieve long-term sustainability by fostering innovation, efficiency, collaboration, and continuous learning. This insight leads to exploring the relationships between knowledge sharing and sustainable performance. However, the current understanding of knowledge sharing among employees and its potential to explain sustainable performance in the context of dairy microfirms is incomplete and lacks depth investigations. Therefore, the study hypothesizes that:

H1: Knowledge sharing has a direct positive significant effect on sustainable performance.

2.2 Sensing capability and sustainable performance

Current business dynamics and cutting-edge competitive environment (Teece, 2019; Wilhelm et al., 2022), for the significant benefits of microfirms to transform resources into tangible outcomes, it is pivotal to understand the ramifications of sensing capability on sustainable performance (Nonaka, 1994). For example, Pitelis et al. (2023) posited that sensing capabilities enable real-time data collection from various sources, empowering organizations to make informed decisions that optimize resource efficiency, reduce waste, and enhance operational reliability. Sensing capability is crucial for firms to avoid rigidity in developing resource capabilities and to deeply understand sustainable performance (Mudalige et al., 2019). The Knowledge-Based View (KBV) provides evidence that a firm's human resources can explore numerous opportunities to create and replicate strong sensing capabilities (Kogut & Zander, 1992). In doing so, it facilitates the analysis and appraisal of collected information both within and outside the microfirms, shedding light on the relationship between exploration efforts and resource exploitations to help microfirms with vital sustainable performance.

For instance, by integrating sensing capability to monitor environmental metrics, operational processes, and supply chain activities, organizations can align with regulatory standards. This alignment helps mitigate risks and fosters innovation toward sustainable practices (Teece, 2019). But in addition to that, sensing capability integration not only supports environmental stewardship but also enhances economic efficiency and resilience in a competitive market driven by sustainability goals. Scholarly debate empirically and theoretically highlights that sensing capability forms a missing link in understanding how employees' sensing capabilities

within dairy microfirms can be explained by sustainable performance conditionally. Recognizing this connection is crucial for microfirms aiming for long-term viability and positive societal impact through proactive environmental scanning management and sustainable business practices. Given this context, a key question arises regarding the influence of sensing capability on sustainable performance, a topic that has been underexplored in existing research (Bwabo et al., 2023). Therefore, the study hypothesizes that:

H2: Sensing capability has a direct positive significant effect on sustainable performance.

2.3 Knowledge sharing and agility

Building on the conceptualization of the relationship between sensing capability and sustainable performance (Carnahan, 2010), it is essential to theoretically and empirically discuss the link between knowledge sharing and agility to explain the dynamism of microfirms (Argote & Ingram, 2000). Given the fact that both knowledge sharing and agility are intricately connected pillars to bolster dynamic capabilities and microfirms competitiveness. Arguably, knowledge sharing facilitates the seamless exchange of information, expertise, and insights among employees and managers, thus, it is fostering a collaborative environment where learning and innovation thrive between the microfirms in emerging economies (Bwabo et al., 2022). This shared knowledge not only enhances decision-making capabilities but also accelerates problem-solving and promotes continuous improvement across the organization (Hernández-Linares et al., 2021). In parallel, agility enables microfirms to respond swiftly and effectively to changing market dynamics, customer needs, and competitive pressures (Pitelis et al., 2023). By embracing flexibility, empowering teams, and promoting iterative approaches to decision-making, agile microfirms leverage shared knowledge to adapt strategies and operations quickly. This synergy between knowledge sharing and agility not only enhances organizational resilience but also fosters a culture of innovation and responsiveness, which is critical for sustained success in today's dynamic business landscape. The study hypothesized that;

H4: Sensing capability has a direct positive significant effect on agility.

2.4 Agility and sustainable performance

Vaara et al. (2016) suggested that agility and sustainability are intertwined imperatives in contemporary microfirm strategies, essential for fostering resilience and responsible growth. Agility enables organizations to respond swiftly to dynamic market shifts, technological advancements, and regulatory changes (Nidumolu et al., 2009). This capability allows them to capitalize on emerging opportunities and navigate uncertainties effectively. Conversely, sustainable performance initiatives ensure ethical operations and long-term viability by minimizing environmental impact, optimizing resource use, and meeting stakeholder expectations (Eccles & Serafeim, 2013). By integrating agile practices with sustainable performance principles, organizations can innovate eco-friendly products, implement efficient supply chain management, and adapt quickly to evolving consumer preferences for sustainable solutions (Wagner & Hollenbeck, 2010). Although empirical and theoretical foundations suggest a strong bond between agility and sustainable performance, navigating condition direct and indirect linkage has been overlooked by numerous scholars. Certainly, aligning agility with sustainable performance not only enhances operational efficiency and competitive advantage but also strengthens brand reputation and investor confidence, contributing to sustained success in a dynamic and conscientious business landscape. Given the limited exploration of this perspective, this study hypothesizes that;

H5: Agility has a direct positive significant effect on sustainable performance.

2.5 Moderating effects (organizational culture and structure)

According to Denison et al. (2014), the relationship between organizational culture and structure in explaining knowledge sharing is deeply interconnected, playing a pivotal role in shaping the attitudes, behaviors, and practices surrounding knowledge exchange within an organization. Organizational culture, which comprises shared beliefs, values, norms, and behaviors, serves as the foundation for knowledge-sharing practices and exerts a profound influence on various aspects of organizational dynamics (Tadesse Bogale & Debela, 2024). For instance, one key dimension through which culture impacts knowledge sharing is communication patterns. A strong organizational culture among managers and employees that fosters transparency and inclusive communication channels facilitates the free flow of information and ideas. This creates an environment where individuals feel empowered to share

their knowledge without fear of judgment or reprisal (Barney, 1986). Conversely, organizational cultures characterized by hierarchy, bureaucracy, or siloed communication may impede knowledge sharing by restricting information flow and inhibiting collaboration across organizational boundaries (Weare et al., 2014). Although there is ongoing scholarly debate about the relationship between organizational culture and knowledge sharing, there is arguably a need to re-examine this relationship, particularly in the context of microfirms in developing countries (Denison, 2010). This re-examination is crucial, as organizational culture not only shapes reward systems but also reinforces desired behaviors among employees, including knowledge sharing.

Moreover, KBV theory provides a robust framework for organizations aiming to enhance their knowledge-sharing practices among employees by cultivating a supportive organizational culture as well as structure (Dencker & Gruber, 2015). Recognizing knowledge as a strategic resource, as mentioned earlier, KBV emphasizes the need to align organizational values and behaviours with the organization's strategic objectives. Organizations that embrace KBV principles prioritize values such as openness, transparency, collaboration, and innovation, which are crucial for improving both structure and culture that encourages and rewards knowledge sharing among employees (Vaara et al., 2016). In that case, KBV promotes a learning orientation within organizations, focusing on continuous learning, experimentation, and knowledge creation (Schilke & Goerzen, 2010). Building on that idea, empowering employees to actively engage in knowledge-sharing initiatives, and integrating technology and systems that facilitate information exchange, organizations can develop a culture and structure that fosters collaboration, innovation, and continuous learning. This, in turn, leads to enhanced knowledge-sharing practices and improved organizational performance.

Furthermore, the intriguing relationship between organizational culture and knowledge sharing extends to sensing capability as well (Koçak & Warglien, 2020). Theoretical and empirical studies suggest that dynamic capability, defined as a microfirm's ability to sense and exploit opportunities in a highly dynamic environment (Teece,2019), is significantly influenced by a strong organizational culture. In a rapidly changing environment, a robust organizational culture enables employees to effectively explore and exploit limited resources, thereby enhancing sustainable performance. Therefore, aligning internal resources with organizational

culture is crucial for equipping microfirm employees with the skills necessary to adapt to external changes in the business environment (Singh et al., 2019). Despite the evident theoretical and empirical linkages between organizational culture and sensing capability, particularly in the context of dairy microfirms, there remains a gap in empirical analysis and theoretical conceptualization. Thus, the study hypothesizes that:

H6a: Organizational culture moderates the relationship between knowledge sharing and sustainable performance.

H6b: Organizational culture moderates the relationship between sensing capability and sustainable performance.

Having conceptualized a relationship between organization culture implicitly to knowledge sharing and sensing capability, it is important to build a theoretical argument about organization structure. In fact, organizational structures that prioritize transparency, trust, and openness tend to facilitate strong knowledge-sharing practices, while those characterized by hierarchy and bureaucracy may inhibit information exchange due to concerns about power dynamics or job security (Albert, 2024). Additionally, a stable organizational structure within microfirms plays a crucial role in the adoption of technology and tools for knowledge sharing (Puranam et al., 2017). Networked microfirms, for example, can leverage digital platforms, social media, and collaboration tools to enable virtual collaboration and knowledge exchange among geographically dispersed employees (Tsai, 2002). However, successful knowledge-sharing initiatives require more than just technological infrastructure; they also demand a supportive organizational structure, strong leadership commitment, and incentives that recognize and reward knowledge-sharing behaviours (Sabuhari et al., 2020). Ultimately, aligning organizational structure with knowledge-sharing strategies is essential for organizations seeking to foster innovation, agility, and competitiveness through effective knowledge management practices.

Building on the previous discussions, Koçak and Warglien (2020) highlighted the relationship between organizational structure and sensing capability, illustrating how formal arrangements and hierarchical configurations within an organization impact its ability to perceive and interpret external signals, changes, and opportunities. Organizational structure—whether hierarchical, flat, matrix, or networked—determines the flow of information, decision-making

processes, and communication channels within the organization (Soderstrom & Weber, 2020). For instance, in hierarchical structures where communication is typically top-down and decision-making is centralized, sensing capabilities may be constrained because information can be filtered or distorted as it moves up the chain of command (Sabuhari et al., 2020). Conversely, flatter structures or networked organizations often encourage decentralized decision-making and open communication channels, facilitating faster and more accurate sensing of environmental changes (Clement & Puranam, 2018). Aligning organizational structure with sensing capability is essential for enhancing organizational agility, adaptability, and responsiveness to emerging trends and competitive dynamics. Thus, fostering a structure that supports information flow, collaboration, and cross-functional coordination, organizations can improve their sensing capabilities, better anticipate and seize market opportunities, and mitigate risks (Denison, 2010; Denison et al., 2014).

Additionally, KBV elucidates how organizational structure influences sensing capability by outlining how knowledge acquisition, integration, interpretation, and utilization processes are shaped within different organizational frameworks (Denison et al., 2014). For instance, hierarchical structures typically depend on formalized processes and vertical channels for information acquisition, which can limit the breadth and speed of knowledge acquisition (Sabuhari et al., 2020). In contrast, flatter structures or networked organizations foster collaboration and boundary-spanning activities, which enhance comprehensive knowledge acquisition and sensing capabilities (Fainshmidt & Frazier, 2017; Bwabo et al., 2023). Consequently, organizational structure affects knowledge integration, interpretation, and utilization by shaping decision-making processes and cognitive frameworks (Suifan, 2021). Flatter structures, in particular, support more inclusive sensemaking processes, enabling timely interpretation of external signals and changes. It is reasonable to argue that aligning microfirms' structures with their sensing capabilities allows for more effective use of knowledge assets, leading to improved agility, adaptability, and competitive advantage in dynamic environments. Therefore, this study hypothesizes that:

H7a: Organizational structure moderates the relationship between knowledge sharing and sustainable performance.

H7b: Organizational structure moderates the relationship between knowledge sharing an sustainable performance.

3. Research Methodology

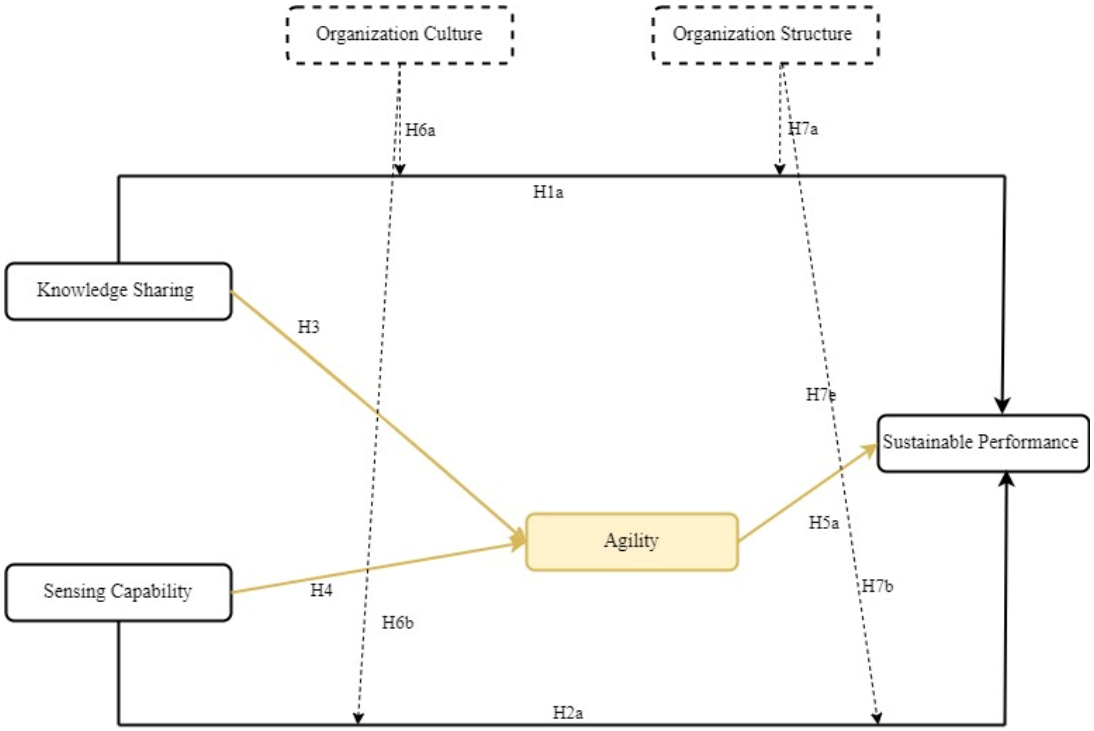

Figure 1 Proposed research model and hypotheses

Figure 1 showcases the proposed research model and hypotheses in the relationships between the three dimensions of corporate dynamic capabilities and microfirms sustainable performance, including the moderating effect of organizational structure and culture following the empirical and theoretical review.

3.1 Measurements

Nonetheless, the study has conducted the Exploratory Factor Analysis (EFA) and visualized the pattern of the various investigated factors (see Figure 1), for instance, the study has confirmed the authenticity of the factors with the residuals of the six-factor model. Residual refers to the discrepancy between the observed values of the variables and their values predicted by the model. In the context of a six-factor model, residuals represent the differences between the observed data and the values estimated by the model based on the specified factor

structure (Zhiqiang et al., 2020). The study conducted EFA with a six-factor model. This study typically aims to minimize the residuals, showing a good fit between the model and the observed data. Large residuals may suggest that the model does not adequately capture the underlying structure of the data or that there are unexplained variations that the model does not account for (Henseler & Schuberth, 2020). In this study, residuals in a six-factor model involve examining the pattern and size of discrepancies across the observed variables. Figure 2 is a histogram that shows patterns of standardized residuals. Overall, assessing residuals in a three-factor model helps the study to evaluate the goodness of fit of the model and identify areas where adjustments may be needed to better represent the underlying structure of the data.

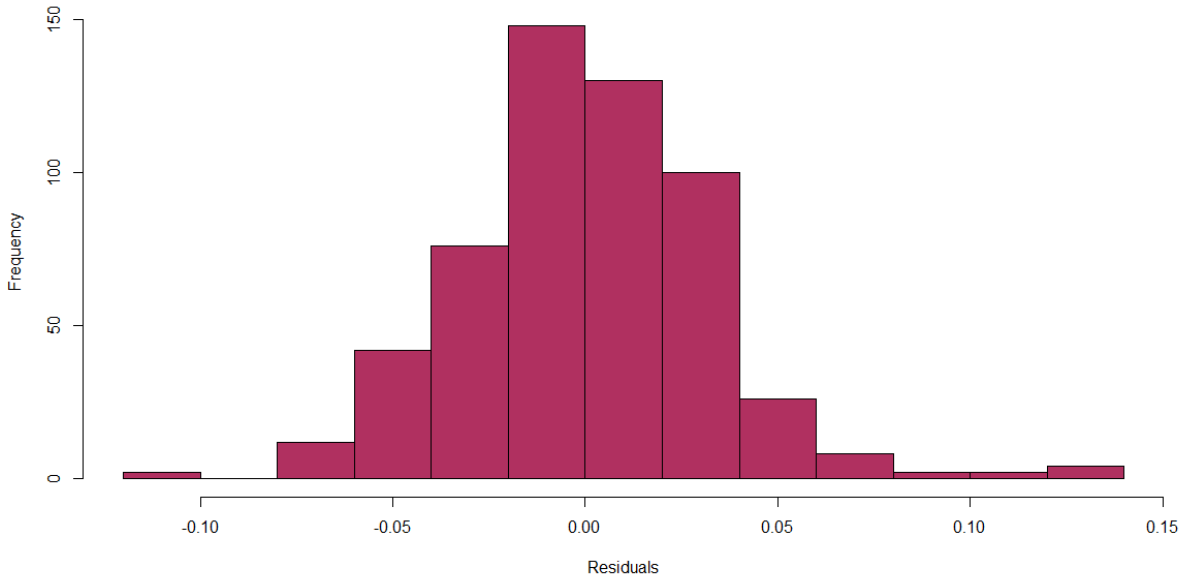

Figure 2 Histogram of the residuals for six-factor models

The figure shows that more than 7% of the residual exceeded the absolute value of .10 in the above six-factor model and suggested that the examined pattern of the six-factor model was plausible and highlighted the significance of the data set before conducting downstream analysis of direct and moderations effects analysis using the Process Macro built in smartPLS4.

Moreover, the study tested the hypotheses through the 602 employees of the dairy microfirms in the Tanzanian northern region. The study has designed the seven-point Likert scale and collected discrete data; in so doing, the study has tested the proposed research model (See

Figure 1). Certainly, figure 1 has numerous hypotheses that have been built after conducting a rigorous literature review. For that case, the study tested the conceptual relationships among the independent (knowledge sharing & sensing capability), dependent variables (agility & sustainable performance), and moderator variables (organizational culture and structure). The study used the smartPLS4 to test the proposed research model and deeply evaluated the conceptual relationships among the independent, dependent, and moderating variables.

Thus, the study tested H1, H2, H3, H4, H5, H6a, H6b, H7a, and H7b with the Process Macro that has built under the smartPLS4. The Process Macro, originally developed by Hayes and Rockwood (2020), is a computational tool designed for advanced statistical analysis, particularly for mediation, moderation, and conditional process modelling. While commonly used with SPSS and SAS, this study has used the SmartPLS for Partial Least Squares Structural Equation Modelling (PLS-SEM) and made a moderation analysis (Trinchera et al., 2018: Sarstedt et al., 2020). Given the fact that the macro facilitates mediation analysis by assessing direct, indirect, and total effects to understand how an independent variable (knowledge sharing, sensing capability influences a dependent variable (sustainable performance) (Bwabo et al., 2023).

Additionally, conditional process analysis in some fashion does combine conditional indirect as well as conditional direct effects. The study tested the significance of the path coefficients to debunk direct and moderation hypotheses effects through bootstrapping Confidence Interval (CI) techniques to test the significance of indirect effects and direct effects (Preacher & Hayes, 2008). The study used 10,000 bootstrap samples to reveal the efficacy of the path coefficients in the conceptual relationships between independent, dependent, and moderator variables as mentioned earlier.

Table 1 Discriminant analysis

	Agility	Knowledge Sharing	Organization Culture	Organization Structure	Sensing Capability	Sustainable Performance
Agility	**0.802**					
Knowledge Sharing	0.299	**0.867**				
Organization Culture	0.575	0.312	**0.823**			
Organization Structure	0.238	0.382	0.192	**0.841**		
Sensing Capability	0.438	0.2	0.564	0.167	**0.813**	
Sustainable Performance	0.604	0.291	0.548	0.173	0.588	**0.788**

Table 1 presents the discriminant validity that is crucial in structural equation modelling, including moderation analysis using Process Macro-built underneath smartPLS 4 to ensure constructs are distinct and measure different concepts. According to Trinchera (2018) and Hayes and Rockwood (2020), the square root of the Average Variance Extracted (AVE) for each construct should exceed its correlations with other constructs in the model. Arguably, the AVE measures the variance captured by a construct relative to measurement error, with values above 0.5 considered adequate. For instance, to confirm discriminant validity, the study √AVE should be higher than any correlation the construct has with other constructs. Therefore, the study presented Cronbach's alpha (CR), AVE, and discriminant analysis (DA) values among the constructs as follows; knowledge sharing (CR; 0816: AVE: 0.643; DA; 0.867), sensing capability (CR;0.882 AVE;0.661; DA;0.813), agility (CR;0.816; AVE; 0.643; DA;0.802), and sustainable performance (CR; 0.811; AVE;0.621; DA0.788), organization culture (CR; 0.859; AVE; 0.678; DA;0.823), organization structure (CR; 0.92; AVE 0.707; DA; 0.841). DA scores are higher than normal AVE, the lowest √AVE is 0.788 and the highest correlation between

constructs is 0.867, this confirms DA, showing each construct is distinct and accurately measures a unique aspect. The study findings suggested that the study has model accuracy because the CR is above 0.7, and the study has illustrated enough theoretical clarity, and practical relevance, in that sense, our study confirmed the reliability and validity of the constructs.

4. Study Analyses and Findings

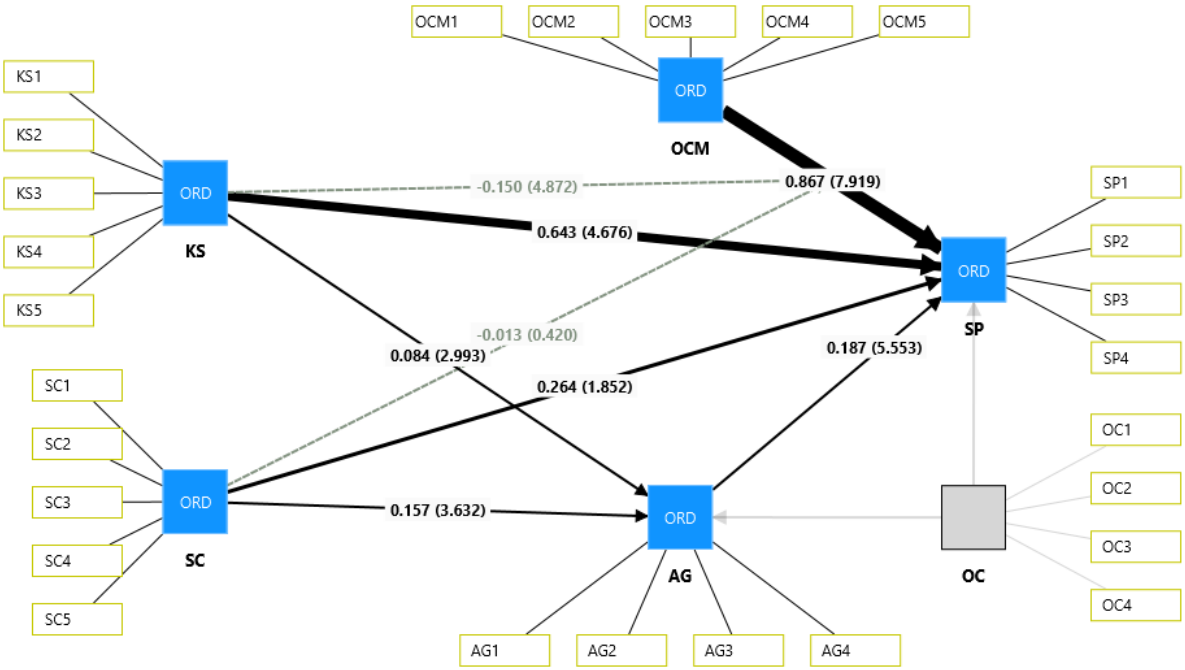

Figure 3 Moderation path analysis for organizational culture

Table 2 Specific indirect effect

Paths	Coefficient	STD	T-Statistics	P- values	Decision
KS->AG->SP	0.016	0.006	2.509*	0.012	Supported
SC->AG->SP	0.029	0.01	2.865**	0.004	Supported

Notes: STD=Standard Error, ***Sig. at 5%

The study tested the specific total direct effects effect between knowledge sharing and sensing capability on sustainable performance, nonetheless, before examining the strength of diret effects, it is worth to navigate the indirect relationships among the variables. Thus, Table 2 the findings suggested that agility mediates the effects of knowledge sharing on sustainable performance with the beta values of (β=0.016, t=2.509*), in that case, the Process Macro also confirmed that agility mediates the effects of knowledge sharing on sustainable performance..

Nonetheless, the strength of the relationship described through the Sobel test was quite strong. In a similar vein, the findings have also confirmed that agility mediates the effects of sensing capability on sustainable performance with the beta value scores of (β=0.029, t=2.865**), the study also confirmed that agility mediates the effects of sensing capability on sustainable performance. However, the beta value scores obtained through Process Macro are a bit lower compared to the beta value obtained through the Sobel test which had stronger coefficient values. Altogether, the study findings also discovered that agility among employees of the dairy microfirms mediates the effects of knowledge sharing and sensing capability on sustainable performance in Tanzania.

Table 3 Conditional Direct Effect

	Coefficient	STD	T -statistics	P-values	Decision
OCM->SP conditional on KS at one and SC at zero	0.717	0.106	6.792***	0.000	Supported
OCM->SP conditional on KS at zero and SC at one	0.854	0.095	8.957***	0.000	Supported
OCM->SP conditional on KS at zero and SC at zero	0.867	0.11	7.919***	0.000	Supported
OCM->SP conditional on KS at one and SC at one	0.704	0.08	8.375***	0.000	Supported

Notes: STD=Standard Error, ***Sig. at 5%

On the other hand, Table 3 presented the condition direct, the conditional direct effect refers to the direct impact of knowledge sharing and sensing capability on sustainable performance at specific levels of the moderator variable, which is organization culture. This helps in understanding how the strength or direction of the relationship between knowledge sharing and sensing capability and sustainable performance changes as organizational culture changes. Before making a deep dive into the moderation mediation effects of both the organization's culture as well as structure, the study revealed the condition of direct effect between knowledge sharing and sustainable performance while considering the influence of the organization's culture on the dairy microfirms in Tanzania. The study findings have discovered that as organizational culture changes while the knowledge sharing is one and sensing capability is at zero, the organization culture has significant moderation effects of (β=0.717, t=6.792***). Furthermore, the findings also illustrated that when knowledge sharing is at zero and sensing capability is one the strength of moderation effects increases with the beta values of (β=0.854, t=8.957***). Likewise, when both the knowledge sharing and sensing capability are at zero the strength of moderation on the sustainable performance of the Tanzanian dairy microfirms

increases with the beta value of (β=0.867, t=7.919***). On the other hand, when knowledge sharing and sensing capability both are at one level the strength of moderation effects of the organization culture decreases a little bit with the beta values of (β=0.704, t=8.375***). These findings have suggested that organization culture does influence the knowledge sharing and sensing capability on sustainable performance given the fact that the beta values of all conditions turned out to be statistically significant.

Table 4 Conditional Indirect Effect

Paths & Hypotheses	Coefficient	STD	T-statistics	P -values	Decision
H5: AG->SP	0.187	0.034	5.553***	0.000	Supported
H3: KS->AG	0.084	0.028	2.993***	0.000	Supported
H1: KS->SP	0.659	0.139	4.75***	0.000	Supported
H4: SC->AG	0.157	0.043	3.632***	0.000	Supported
H2: SC->SP	0.293	0.142	2.072***	0.000	Supported
H6a: KSXOCM>SP	-0.15	0.031	4.872***	0.000	Supported
H6b: SCXOCM>SP	-0.013	0.032	0.42	0.674	Not supported

Notes: STD= Standard Error, ***Sig. at 5%

Having constructed and demonstrated the conditional direct effect, it is worth examining the conditional indirect effects. The conditional indirect effect is the effect of the knowledge sharing and sensing capability on sustainable performance through agility, certainly, it is conditional on the value of the moderator. It examines whether the mediation process changes at different levels of the moderator and how the moderator variable influences the direct relationships. In doing so, the study evaluates the efficacy of H1-H6b. Thus, Table 4 and Figure 3 showcased the conditional indirect effects, the study findings revealed that the relationship between agility and sustainable performance has a lower beta value of (H5: β=0.187, t=5.553***), and the findings confirmed H5. The study findings also unraveled a weaker relationship between knowledge sharing toward agility with the beta value of (H3: β=0.084, t=2.993***), the significant beta value supported H3. On the other hand, the study discovered a positive significant relationship between sensing capability and agility with the beta value of (H4:β=0.157, t=3.632***), therefore, H4 is supported. After confirming the conditional effect of agility, the study evaluated the strength of direct effects before introducing the moderator to confirm if the strength of the relationship has been improved or dampened following the moderating effects of organization culture. Thus, the study findings provide evidence of the

significant relationship between knowledge sharing on sustainable performance with the stronger beta coefficient values of (H1:β=0.659, t=4.75***), of course, it substantially supports H1b. Furthermore, the study confirmed the direct positive significant relationship between sensing capability and sustainable performance (H2:β=0.293, t=2.072***), thus, it supports H2. These results implied that before introducing the moderating variable (organization culture) the direct effects between knowledge sharing and sensing capability are critically strong.

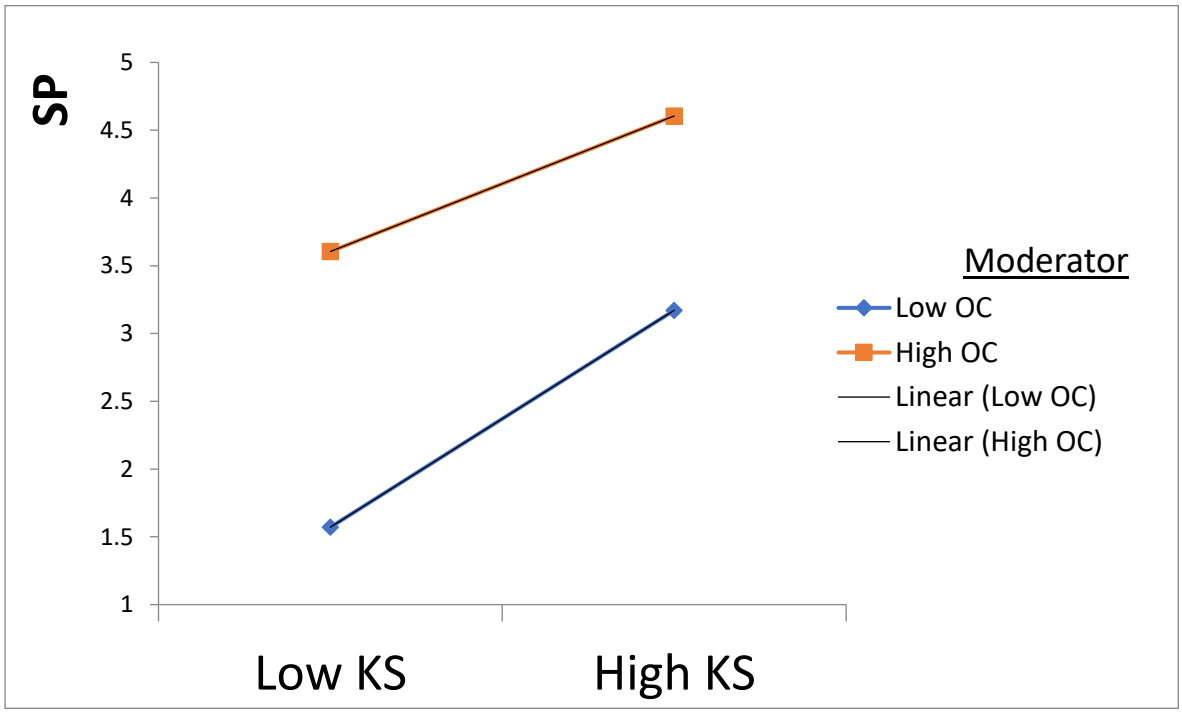

Figure 4 Simple slope analysis between KS and SP

Furthermore, Table 3 and Figure 4 presented the moderation effect of organizational culture on the direct effect between sensing capability and knowledge sharing on sustainable performance, as mentioned earlier, the direction strength is substantial for the former and the latter. Nonetheless, moderating the effect of organizational culture in the relationship between knowledge sharing and sustainable performance turned out to be negative with the beta value of (H6a: β=-015, t=4.872***), despite being negative but is statistically significant, in that case, it supported H6a that organization culture moderate the relationship between knowledge sharing on sustainable performance. Put differently, before the introduction of the moderator the relationship between knowledge sharing had a positive beta value, following the influence

of the moderator the relationship has been altered into a negative, this implies that the organization culture has a negatively moderate relationship between knowledge sharing on sustainable performance. Arguably, the relationship is dampened following the introduction of the organizational culture, further, the study visualizes the slope that links knowledge sharing on sustainable performance moderated by organization culture. Figure 4 confirms that organizational culture dampens the relationship between knowledge sharing and sustainable performance. However, organization culture did not confirm moderation effects on the relationship between sensing capability toward sustainable performance because of the negative and insignificant beta value of (H6b: β=-0.013, t=0.42), therefore, H6b is not supported.

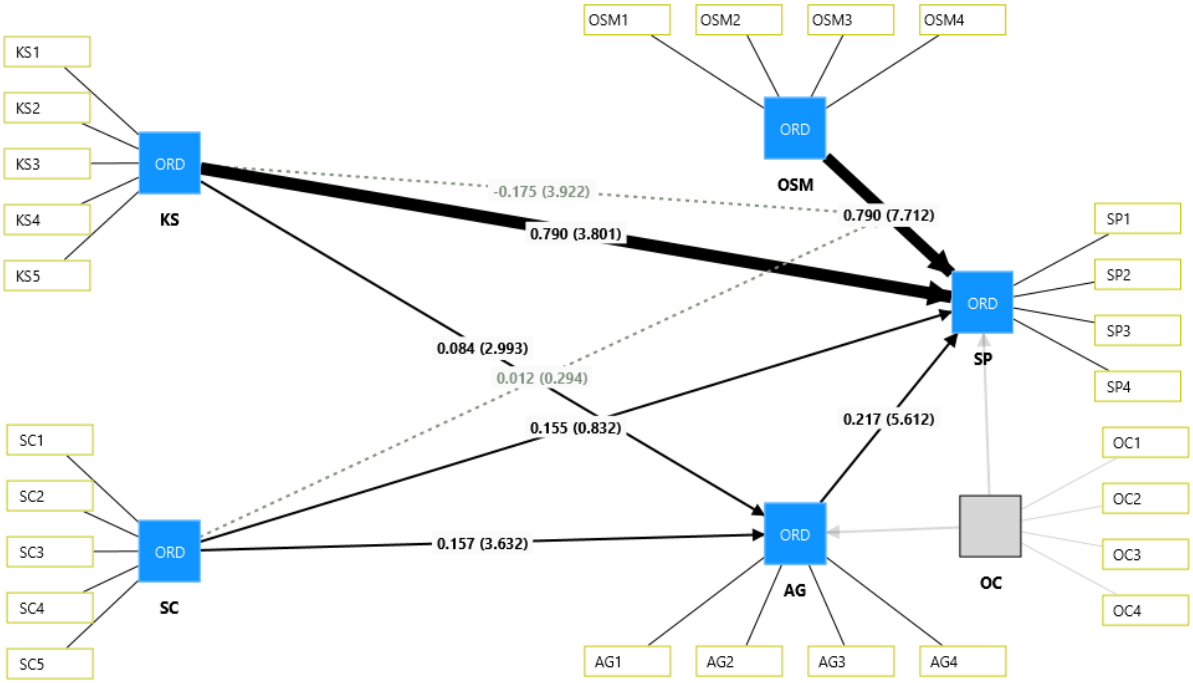

Figure 5 Moderation path analysis for organization structure

Regarding the moderation effects of the organization structure in the relationship between sensing capability and knowledge sharing toward sustainable performance. Even though the Figure 5 presented the structural relationship that showcased the organization structure is moderated the direct effect only, it is also significant to navigate specific direct effects and the conditional indirect effect to shed light on how the organization structure could change the

strength of relationship among knowledge sharing, sensing capability on sustainable performance.

As mentioned earlier, Table 1 revealed that the specific indirect effect of sensing capability knowledge sharing through agility has a significant supported beta coefficient to improve sustainable performance. The conditional analysis has confirmed that agility has lower beta values of (β=0.016, t=2.509*), and agility has specifically mediated the relationship between sensing capability on sustainable performance with the beta weight of (β=0.029, t=2.865**), the former supported H3 and the latter supported H4. Figure 5 revealed moderator influences the direct effect only, for this case, the study delves deep and examines how the moderator (organization structure) influences knowledge sharing and sensing capability on sustainable performance of the Tanzanian dairy microfirms.

Table 5 Conditional Direct Effect

	Coefficient	STD	T-statistics	P-values	Decision
OSM->SP conditional on KS at one and SC at zero	0.615	0.098	6.255***	0.000	Supported
OSM->SP conditional on KS at zero and SC at one	0.802	0.099	8.094***	0.000	Supported
OSM->SP conditional on KS at zero and SC at zero	0.79	0.102	7.712***	0.000	Supported
OSM->SP conditional on KS at one and SC at one	0.627	0.078	8.052***	0.000	Supported

Note, STD= Standard Error, ***Sig. at 5%

Table 5 and Figure 5 showcased the conditional direct effect of knowledge sharing on sustainable performance while holding sensing capability as zero as the strong beta value of (β=0.615, t=6.255***). Furthermore, conditional direct effects of sensing capability while considering knowledge sharing as zero has the beta value of (β=0.802, t=8.094***), of course, this is a stronger coefficient in comparison to the former beta values. In addition to that, the study findings also revealed that holding knowledge sharing and sensing capability constant in the organization structure weakens its beta coefficient value (β=0.79, t=7.712***). Undoubtedly, this conditional direct effect is less if compared when knowledge sharing is zero and sensing capability is at one. Lastly, a conditional direct effect when carried out by the study when both the knowledge sharing and sensing capability at one beta value dropped a little bit to (β=0.627, t=8.052***). In summary, the study has met all necessary direct effect conditions before evaluating the indirect effects conditions that take into consideration the role of agility

as well as the moderation effect of organization structure towards the direct path of sensing capability and knowledge sharing on sustainable performance.

Table 6 Conditional Indirect Effect

	Coefficient	STD	T-statistics	P-value	Decision
H5: AG->SP	0.217	0.039	5.612***	0.000	Supported
H3: KS->AG	0.084	0.028	2.993***	0.000	Supported
H1: KS->SP	0.809	0.21	3.845***	0.000	Supported
H4: SC->AG	0.157	0.043	3.632***	0.000	Supported
H2: SC->SP	0.189	0.185	1.025	0.306	Not supported
H7a: KSXOSM->SP	-0.175	0.045	3.922***	0.000	Supported
H7b: SCXOSM->SP	0.012	0.4	0.294	0.769	Not supported

Notes: STD=Standard Error, ***Sig. at 5%

Table 6 examined conditional indirect effects to get the tip of the iceberg on how the organization structure has either weakened or strengthened the relationship between knowledge sharing and sensing capability on sustainable performance. Table 6 revealed indirect effects between knowledge sharing on agility with the lower beta value of (β=0.084, t=2.993***), thus, it supported H3. Furthermore, sensing capability has been influenced by agility with the beta value of (H4: β=0.157, t=3.632***), therefore, H4 has been supported. Having constructed a significant indirect relationship, it is important to assess the direct effects. The study findings confirmed that agility has the stronger beta values of (H3: β=0.084, t=2.917***), this beta value index is stronger than the knowledge sharing effects on agility and the sensing capability and agility. The results implied that agility is the significant potential mediator of knowledge sharing and sensing capability on sustainable performance. The above significant beta values score supported H5b.

Following the preceding explanation, the study examined the significance of the direct effects and then compared the results after introducing the organization structure as the potential moderator. For instance, the conditional indirect effect confirmed that knowledge sharing has significant beta values of (H1:β=0.809, t=3.845***) on sustainable performance, therefore, H1 has been supported. At the same time, sensing capability has weaker beta values on sustainable performance (H2: β=0.189, t=1.025), thus, H2a is not supported, interestingly, organization structure has stronger beta values of (β=0.79, t=7.712***) to impact sustainable performance. It is vividly seen that there are significant positive relationships in the interplay between

sensing capability knowledge sharing, and organization structure on sustainable performance. Having carried out the direct effects relationship analysis, the study tested the moderation effect and discovered that organization structure negatively influences the relationship between knowledge sharing on sustainable performance with the significant beta values scores of (H7a: β=-0.175, t=3.922***), therefore, it confirmed H7a that organization structure is moderates negatively the relationship between knowledge sharing and sustainable performance. Figure 18 presented the simple slope analysis to significantly support the aforementioned findings and visualize how knowledge sharing influences sustainable performance when moderated by the organization structure. Interestingly, the organization structure has positive insignificant effects in the relationship between sensing capability and sustainable performance with the beta values of (H7b: β=0.012, t=0.294), thus, H7b is not supported.

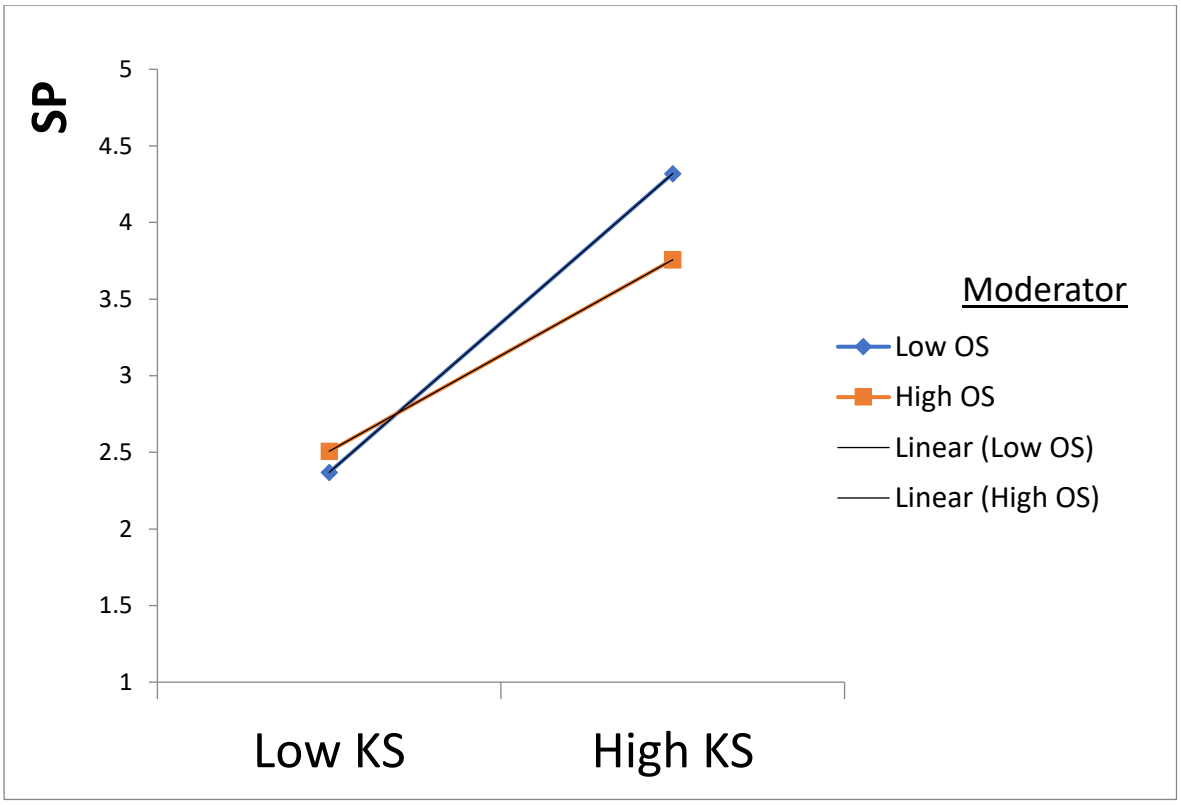

Figure 6 Simple slope analysis between KS and SP

5. Discussions and Conclusion

This study develops new domains by suggesting that the interactions between organizational culture and structure on knowledge sharing and sensing capability shape the sustainable performance of dairy microfirms from different perspectives. Arguably, this study advanced contemporary research about organizational culture and structure from internal resources control of corporate dynamic capabilities. First, it discusses the direct effects of the relationships between employees' knowledge sharing and sensing capability in promoting sustainable performance. In addition to that, the study complemented the former conceptual analyses and catapulted new theoretical insights about interactions of culturalization and structurization on corporate dynamic capabilities as well as sustainable performance at a firm-level. Therefore, this study discusses the results at three levels: conditional indirect, direct effects, and moderation effects analyses.

First, conditional indirect effects; the study findings affirmed H1 that knowledge sharing has a direct positive significant effect on sustainable performance. The findings implied that when dairy microfirms employees actively share knowledge between, departments, or external stakeholders, they experience tangible improvements in their sustainable practices and outcomes. Moreover, this direct positive relationship suggests that the dissemination of knowledge among employees contributes directly to enhancing the microfirms ability to operate sustainably. For instances, knowledge sharing likely leads to better-informed decision-making, innovation in sustainable practices, and more efficient use of resources. These findings are also consistence with (Sabuhari, 2020). The study also confirmed H2 that sensing capability has a direct positive significant effect on sustainable performance. In that sense, the study results suggested that microfirms have ability to detect, interpret, and respond to changes in its external environment directly contributes to its overall sustainability outcomes. Bwabo et al. (2023) has obtained similar results.

Furthermore, these findings confirmed that sensing capability allows organizations to proactively monitor market trends, customer preferences, regulatory changes, and technological advancements. Therefore, effectively sensing these external signals, organizations can adjust their strategies, operations, and product offerings promptly. The study findings are also supported and confirmed by Widen et al. (2013). Therefore, a strong sensing

capability is crucial for enhancing sustainable performance by enabling microfirms to stay ahead of changes, adapt effectively, and maintain competitive advantage in dynamic business environments. The study also confirmed H3 that knowledge sharing has a direct positive significant effect on agility. These findings are also obtained by Zimuto and Maritz (2019). These findings implied that when employees among microfirms share knowledge effectively across teams, departments, or with external partners, they enhance their ability to respond quickly and effectively to changes and challenges. Agility in this context refers to the microfirms capacity to adapt its strategies, processes, and operations swiftly in response to new opportunities or threats in the environment. When knowledge is shared freely within an organization, it facilitates a more informed and collaborative decision-making process. This, in turn, enables teams to innovate faster, solve problems more creatively, and implement changes more efficiently. Shared knowledge can also lead to a deeper understanding of market dynamics, customer needs, and emerging trends, allowing Tanzanian dairy microfirms to make proactive adjustments to their business strategies.

Overall, the positive impact of knowledge sharing on agility helps organizations to maintain flexibility, responsiveness, and resilience in the face of uncertainty or rapid changes in their operating environment. This can ultimately lead to improved competitive advantage and sustained performance over time. The study also discovered that sensing capability has a direct positive significant effect on agility, it indicates that an organization's ability to sense and respond to changes in its external environment enhances its overall agility. Sensing capability refers to the organization's capacity to detect, interpret, and understand signals from the external environment, such as market trends, customer preferences, and competitive actions. Agility, on the other hand, refers to the organization's ability to quickly adapt and respond to these changes by adjusting its strategies, processes, and operations. When a microfirms possesses strong sensing capabilities, it can gather timely and accurate information about external changes. This information provides a foundation for making informed decisions and taking swift actions in response to market shifts or emerging opportunities. Effective sensing enables proactive adjustments to business strategies, resource allocation, and operational practices, which are essential for maintaining competitive advantage and market responsiveness. Therefore, a direct positive significant effect of sensing capability on agility implies that organizations with robust sensing capabilities are better positioned to anticipate

changes, make timely decisions, and adapt quickly to dynamic market conditions. This enhances their overall agility and resilience in a competitive business environment. The study affirmed H5 that agility has a direct positive significant effect on sustainable performance.These findings are in line with Bwabo et al. (2023). The findings unraveled that an microfirms ability to respond quickly and effectively to changes and challenges in its environment contributes positively to its overall sustainability outcomes. Furthermore, dairy microfirms that are agile can more easily adjust their practices to meet sustainability goals, such as reducing environmental impact, improving social responsibility, and enhancing economic viability over the long term. Agility allows organizations to innovate rapidly, optimize resource use, and respond promptly to regulatory changes or market demands related to sustainability. By fostering a culture of adaptability and responsiveness, agile dairy microfirms can sustain their performance by continuously improving their sustainability practices and maintaining their competitive edge.

Second, conditional direct effects: Following the preceding discussion regarding the conditional indirect effects, the study extended its discussion and debunked the influence of organizational culture and structure on the direct relationships between sensing capability and knowledge sharing at a specified level of condition. About the conditional effects of organizational culture, the study findings revealed strong beta variation in the relationships of sensing capability, knowledge sharing on the sustainable performance (Denison, 2010). For instance, the findings suggests that while a strong organizational culture and high levels of knowledge sharing can significantly enhance sustainable performance. The dairy microfirms can effectively leverage its internal strengths to improve sustainability practices, but its ability to respond to external changes and integrate new external information into its sustainability strategy is constrained. Therefore, to maximize sustainable performance, it would be beneficial for the organization to also develop its sensing capabilities, enabling it to adapt and thrive in a dynamic external environment (Denison, 2012). Regarding the conditional effects of organizational structure, the finding suggests that effectiveness of knowledge sharing and sensing capability on sustainable performance are fundamentally determined by organizational structure, and the role of organizational culture in driving sustainable performance becomes even more critical (Koçak & Warglien, 2020; Wilhelm et al., 2022). A strong sustainability-focused structure can still promote sustainable practices, but the overall impact may be limited

by the lack of information flow and adaptability. To enhance sustainable performance in such a scenario, it is essential for the organization to address some of the organizational structure deficiencies. In that sense, improving knowledge-sharing mechanisms and developing sensing capabilities can help align structure values with practical actions, enabling the dairy microfirms in Tanzania to innovate, adapt, and sustain its performance in a dynamic environment (Hunter et., 2020). In summary, while organizational structure can still positively influence sustainable performance, its impact is might be constrained by low knowledge sharing and sensing capability. Addressing these areas can significantly amplify the benefits of a strong organizational structure in achieving sustainability goals.

Third, moderation effects; the study findings confirmed H6a that organizational culture has a negatively moderate relationship between knowledge sharing and sustainable performance, it implies that certain aspects of organizational culture may hinder the effectiveness of knowledge sharing initiatives in improving sustainable performance outcomes. These findings are consistency with Shuaib and He (2021). Arguably, a negatively moderate relationship suggests that aspects of the organizational culture, such as lack of trust, resistance to change, or siloed information sharing practices, may undermine the benefits that knowledge sharing could otherwise bring to sustainable performance. For example, if there is a culture of competition rather than collaboration among employees, it may discourage open sharing of knowledge that is essential for implementing sustainable practices across the organization. Moreover, organizational culture can influence how knowledge is valued, disseminated, and applied within the organization. A culture that does not prioritize learning or innovation may limit the adoption of new sustainable practices that could otherwise enhance performance over the long term. Conversely, a positive organizational culture that promotes openness, collaboration, and continuous learning is likely to foster effective knowledge sharing practices that contribute positively to sustainable performance outcomes. In summary, a negatively moderate relationship between organizational culture and knowledge sharing on sustainable performance suggests that addressing cultural barriers and fostering a supportive culture for knowledge sharing are critical steps in maximizing the benefits of shared knowledge for achieving sustainability goals within an organization.

Furthermore, the study findings confirmed H7a that organizational structure moderates negatively the relationship between knowledge sharing and sustainable performance, it suggests that certain characteristics or aspects of the organizational structure hinder the positive impact of knowledge sharing on sustainable performance outcomes. These findings are in line with Soderstrom and Weber (2020). In this context, a negative moderation implies that the existing organizational structure may create barriers or challenges that limit the effectiveness of knowledge sharing initiatives in improving sustainability performance. For example, a hierarchical or siloed organizational structure may inhibit the flow of information across departments or levels, reducing the opportunities for knowledge sharing related to sustainable practices. Furthermore, rigid or bureaucratic structures may slow down decision-making processes related to sustainability initiatives, thereby delaying the implementation of innovative ideas or practices that could enhance sustainable performance. Lack of integration across different parts of the organization due to structural barriers may also hinder the alignment of sustainability goals and strategies. Conversely, dairy microfirms with more flexible, decentralized, or flat organizational structures may facilitate easier communication and collaboration, thereby enhancing the effectiveness of knowledge sharing in promoting sustainable performance. These structures can promote agility, responsiveness, and innovation, which are critical for adapting to changing environmental, social, and economic conditions. In summary, addressing the negative moderation of organizational structure on the relationship between knowledge sharing and sustainable performance involves considering structural changes that promote openness, collaboration, and alignment of goals across the organization. Creating a supportive organizational structure that facilitates communication and decision-making can enhance the impact of knowledge sharing on achieving sustainability objectives over the long term.

Contributions to structurization and culturalization research. Effective structurization and culturalization are vital in shaping corporate dynamic capabilities, enabling organizations to adapt and thrive in dynamic environments. Structurization involves designing organizational structures, processes, and systems that facilitate coordination, integration, and agility. Well-designed structures streamline operations and enable quick responses to market changes, supporting the development and deployment of dynamic capabilities. On the other hand, culturalization focuses on cultivating a supportive organizational culture that promotes

innovation, learning, and adaptability. A strong organizational culture encourages knowledge sharing, collaboration, and proactive problem-solving, enhancing the organization's ability to develop new capabilities and respond effectively to challenges. Integrating structurization and culturalization synergistically aligns organizational structures with cultural values and strategic goals, fostering adaptive resilience and sustaining competitive advantage in volatile markets.

5.1 Conclusion

Based on the confirmed hypotheses that effective structurization and culturalization significantly contribute to corporate dynamic capabilities, several reputable conclusions can be drawn. First, organizations that strategically design their structures to promote coordination, integration, and agility are better equipped to develop and deploy dynamic capabilities. These capabilities enable them to respond swiftly to market changes, innovate effectively, and maintain competitiveness. Second, fostering a supportive organizational culture that values innovation, learning, and adaptability enhances the organization's capacity to cultivate and leverage dynamic capabilities. A culture that promotes knowledge sharing, collaboration, and proactive problem-solving enhances organizational resilience and facilitates sustainable growth. Finally, integrating structurization with culturalization creates a synergistic effect, aligning organizational structures with cultural values and strategic objectives. This alignment strengthens the organization's ability to navigate uncertainties, capitalize on opportunities, and sustain long-term success in dynamic business environments. Overall, organizations that invest in both structurization and culturalization are well-positioned to enhance their corporate dynamic capabilities and achieve sustainable competitive advantage.

Funding: Supported by the National Social Science Funding of China (21BTQ070), National Foreign Expert Project (Foreign Youth Talent Program) (QN2023014007, QN2023014008,QN2023014009), Jiangsu Funding Program for Excellent Postdoctoral Talent(2023ZB759).

References

Albert, D. (2024). What do you mean by organizational structure? Acknowledging and harmonizing differences and commonalities in three prominent perspectives. *Journal of Organization Design*, *13*(1), 1–11. https://doi.org/10.1007/s41469-023-00152-y

Anjos, F., & Reagans, R. (2020). Networks in the balance: an agent-based model of optimal exploitation. *Journal of Organization Design*, *9*(1). https://doi.org/10.1186/s41469-020-00084-x

Argote, L., & Ingram, P. (2000). Knowledge transfer: A basis for competitive advantage in firms. *Organizational Behavior and Human Decision Processes*, *82*(1), 150-169.

Barney, J. B. (1986). Organizational Culture: Can It Be a Source of Sustained Competitive Advantage? *Academy of Management Review*, *11*(3), 656–665. https://doi.org/10.5465/amr.1986.4306261

Bocken, N. M. P., Short, S. W., Rana, P., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*, *65*, 42–56. https://doi.org/10.1016/j.jclepro.2013.11.039

Bwabo, M., Zhiqiang, M., & Mingxing, L. (2022). Understanding the link between knowledge sharing and sustainable performance of micro-dairy firms: Multiple parallel mediations and heterogeneity effect', paper presented at the International Food Marketing Research Symposium, Food, and Consumer Economic Research Centre, Texas A&M University and the Institute of Food Products Marketing, University of Tampa, 14th–16th June.

Bwabo, M. H., Zhiqiang, M., & Mingxing, L. (2023). Unobserved heterogeneity of dynamic capability and sustainable performance of dairy microfirms. *South African Journal of Economic and Management Sciences*, *26*(1), 1–12. https://doi.org/10.4102/sajems.v26i1.4970

Bwabo, M. H., Zhiqiang, M., & Mingxing, L. (2024). Conceptualizing a nexus between agility, unobserved differences of dynamic capability, and sustainable performance of microfirms. *Sustainable Economies*, Under press.

Carnahan, S., Agarwal, R., & Campbell, B. (2010). The Effect of Firm Compensation Structures on the Mobility and Entrepreneurship of Extreme Performers. *Business*, *920*(October), 1–43. https://doi.org/10.1002/smj

Clement, J., & Puranam, P. (2018). Searching for structure: Formal organization design as a guide to network evolution. *Management Science*, *64*(8), 3879–3895. https://doi.org/10.1287/mnsc.2017.2807

Cummings, J. N. (2004). Work groups, structural diversity, and knowledge sharing in a global organization. *Management Science*, *50*(3), 352-364.

Dencker, J. C., & Gruber, M. (2015). The effects of opportunities and founder experience on new firm performance. *Strategic Management Journal*, *36*(7), 1035–1052. https://doi.org/10.1002/smj.2269

Denison, D., Nieminen, L., & Kotrba, L. (2014). Diagnosing organizational cultures: A conceptual and empirical review of culture effectiveness surveys. *European Journal of Work and Organizational Psychology*, *23*(1), 145–161. https://doi.org/10.1080/1359432X.2012.713173

Denison, D. R. (2010). What is the Difference between Organizational Culture and Organizational Climate ? A Native ' s Point of View on a Decade of Paradigm Wars Between What Is The Difference And Culture Organizational Climate ? A Native ' S Point Of View On A Decade Of Paradi. *Academy* of *Management Review*, *21*(3), 619–654.

Davenport, T. H., & Prusak, L. (1998). *Working knowledge: How organizations manage what they know*. Harvard Business School Press.

Eccles, R. G., & Serafeim, G. (2013). The performance frontier: Innovating for a sustainable strategy. *Harvard Business Review*, *91*(5), 50-60.

Eisenman, M., Paruchuri, S., & Puranam, P. (2020). The design of emergence in organizations. *Journal of Organization Design*, *9*(1). https://doi.org/10.1186/s41469-020-00089-6

Fainshmidt, S., & Frazier, M. L. (2017). What Facilitates Dynamic Capabilities? The Role of Organizational Climate for Trust. *Long Range Planning*, *50*(5), 550–566. https://doi.org/10.1016/j.lrp.2016.05.005

Felin, T., & Hesterly, W. S. (2007). The knowledge-based view, nested heterogeneity, and new value creation: Philosophical considerations on the locus of knowledge. *Academy of Management Review*, *32*(1), 195–218. https://doi.org/10.5465/AMR.2007.23464020

Garvin, D. A. (1993). Building a learning organization. *Harvard Business Review*, *71*(4), 78-91.

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal, 17*(S2), 109-122.

Hayes, A. F., & Rockwood, N. J. (2020). Conditional Process Analysis: Concepts, Computation, and Advances in the Modeling of the Contingencies of Mechanisms. *American Behavioral Scientist*, *64*(1), 19–54. https://doi.org/10.1177/0002764219859633

Henseler, J., & Schuberth, F. (2020). Using confirmatory composite analysis to assess emergent variables in business research. *Journal of Business Research*, *120*(July), 147–156. https://doi.org/10.1016/j.jbusres.2020.07.026

Hernández-Linares, R., Kellermanns, F. W., & López-Fernández, M. C. (2021). Dynamic capabilities and SME performance: The moderating effect of market orientation. *Journal of Small Business Management*, *59*(1), 162–195. https://doi.org/10.1111/jsbm.12474

Hunter, S. D., Bentzen, H., & Taug, J. (2020). On the "missing link" between formal organization and informal social structure. *Journal of Organization Design*, *9*(1). https://doi.org/10.1186/s41469-020-00076-x

Koçak, Ö., & Warglien, M. (2020). When three's a crowd: how relational structure and social history shape organizational codes in triads. *Journal of Organization Design*, *9*(1). https://doi.org/10.1186/s41469-020-00078-9

Kurtmollaiev, S. (2020). Dynamic Capabilities and Where to Find Them. *Journal of Management Inquiry*, *29*(1), 3–16. https://doi.org/10.1177/1056492617730126

Lin, H. F. (2007). Knowledge sharing and firm innovation capability: An empirical study. *International Journal of Manpower*, *28*(3/4), 315-332.

Mudalige, D., Ismail, N. A., & Malek, M. A. (2019). Exploring the Role of Individual Level and Firm Level Dynamic Capabilities in SMEs' Internationalization. *Journal of International Entrepreneurship*, *17*(1), 41–74. https://doi.org/10.1007/s10843-018-0239-2

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review, 23*(2), 242-266.

Nidumolu, R., Prahalad, C. K., & Rangaswami, M. R. (2009). Why sustainability is now the key driver of innovation. *Harvard Business Review, 87*(9), 56-64.

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science, 5*(1), 14-37.

Nuhu, N. A., Baird, K., & Appuhami, R. (2019). The impact of management control systems on organisational change and performance in the public sector: The role of

organisational dynamic capabilities. *Journal of Accounting and Organizational Change*, *15*(3), 473–495. https://doi.org/10.1108/JAOC-08-2018-0084

Okoumba, W. V. L., Mafini, C., & Bhadury, J. (2020). Supply chain management and organizational performance: Evidence from SMEs in South Africa. *Africa Journal of Management*, *6*(4), 295–326. https://doi.org/10.1080/23322373.2020.1830689

Pitesa, M., & Pillutla, M. M. (2019). Socioeconomic mobility and talent utilization of workers from poorer backgrounds: The overlooked importance of within-organization dynamics. *Academy of Management Annals*, *13*(2), 737–769. https://doi.org/10.5465/annals.2017.0115

Pitelis, C. N., Teece, D. J., & Yang, H. (2023). Dynamic Capabilities and MNE Global Strategy: A Systematic Literature Review-Based Novel Conceptual Framework. *Journal of Management Studies*. https://doi.org/10.1111/joms.13021

Puranam, P., Maciejovsky, B., Aggarwal, V., Argote, L., Baumann, O., Knudsen, T., Liu, C., Raveendran, M., Srikanth, K., & Stieglitz, N. (2017). *Working Paper Series Organizational Structure and Organizational Learning*.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879–891. https://doi.org/10.3758/BRM.40.3.879

Sabuhari, R., Sudiro, A., Irawanto, D. W., & Rahayu, M. (2020). The effects of human resource flexibility, employee competency, organizational culture adaptation and job satisfaction on employee performance. *Management Science Letters*, *10*(8), 1777–1786. https://doi.org/10.5267/j.msl.2020.1.001

Salvador, F., Alba, C., Madiedo, J. P., Tenhiälä, A., & Bendoly, E. (2021). Project managers' breadth of experience, project complexity, and project performance. *Journal of Operations Management*, *67*(6), 729–754. 1470785320915686https://doi.org/10.1002/joom.1140

Sarhan, N., Harb, A., Shrafat, F., & Alhusban, M. (2020). The effect of organizational culture on the organizational commitment: Evidence from hotel industry. *Management Science Letters*, *10*(1), 183–196. https://doi.org/10.5267/j.msl.2019.8.004

Sarstedt, M., Hair, J. F., Nitzl, C., Ringle, C. M., & Howard, M. C. (2020). Beyond a tandem analysis of SEM and PROCESS: Use of PLS-SEM for mediation analyses! *International Journal of Market Research*, *62*(3), 288–299. https://doi.org/10.1177/

Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. Doubleday.

Singh, R., Charan, P., & Chattopadhyay, M. (2019). Dynamic capabilities and responsiveness: moderating effect of organization structures and environmental dynamism. *Decision*, *46*(4), 301–319. https://doi.org/10.1007/s40622-019-00227-4

Soderstrom, S. B., & Weber, K. (2020). Organizational Structure from Interaction: Evidence from Corporate Sustainability Efforts. *Administrative Science Quarterly*, *65*(1), 226–271. https://doi.org/10.1177/0001839219836670

Suifan, T. (2021). How innovativeness mediates the effects of organizational culture and leadership on performance. *International Journal of Innovation Management*, *25*(2). https://doi.org/10.1142/S136391962150016X

Schilke, O., & Goerzen, A. (2010). Alliance management capability: An investigation of the construct and its measurement. *Journal of Management*, *36*(5), 1192–1219. https://doi.org/10.1177/0149206310362102

Shuaib, K. M., & He, Z. (2021). Impact of organizational culture on quality management and innovation practices among manufacturing SMEs in Nigeria. *Quality Management Journal*, *28*(2), 98–114. https://doi.org/10.1080/10686967.2021.1886023

Tadesse Bogale, A., & Debela, K. L. (2024). Organizational culture: a systematic review. *Cogent Business and Management*, *11*(1). https://doi.org/10.1080/23311975.2024.2340129

Teece, D. J. (1996). Firm organization, industrial structure, and technological innovation. *Journal of Economic Behavior and Organization*, *31*(2), 193–224. https://doi.org/10.1016/S0167-2681(96)00895-5

Teece, D. J. (2019). A capability theory of the firm : an economics and (Strategic) management perspective management perspective. *New Zealand Economic Papers*, *0*(0), 1–43. https://doi.org/10.1080/00779954.2017.1371208

Tulcanaza-Prieto, A. B., Aguilar-Rodríguez, I. E., & Artieda, C. (2021). Organizational culture and corporate performance in the ecuadorian environment. *Administrative Sciences*, *11*(4). https://doi.org/10.3390/admsci11040132

Trinchera, L., Marie, N., & Marcoulides, G. A. (2018). A Distribution Free Interval Estimate for Coefficient Alpha. *Structural Equation Modeling*, *25*(6), 876–887. https://doi.org/10.1080/10705511.2018.1431544

Vaara, E., Sonenshein, S., & Boje, D. (2016). Narratives as Sources of Stability and Change in Organizations: Approaches and Directions for Future Research. *Academy of Management Annals*, *10*(1), 495–560. https://doi.org/10.5465/19416520.2016.1120963

Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review*, *20*(2), 115-131.

Wagner, M., & Hollenbeck, J. R. (2010). Organizational science and organizational reality: Complexity, agility, and the essence of organizational effectiveness. *Organization Science, 21*(6), 1016-1033.

Weare, C., Lichterman, P., & Esparza, N. (2014). Collaboration and Culture: Organizational Culture and the Dynamics of Collaborative Policy Networks. *Policy Studies Journal*, *42*(4), 590–619. https://doi.org/10.1111/psj.12077

Wilhelm, H., Maurer, I., & Ebers, M. (2022). (When) Are Dynamic Capabilities Routine? A Mixed-Methods Configurational Analysis. *Journal of Management Studies*, *59*(6), 1531–1562. https://doi.org/10.1111/joms.12789

Yiing, L. H., & Ahmad, K. Z. Bin. (2009). The moderating effects of organizational culture on the relationships between leadership behaviour and organizational commitment and between organizational commitment and job satisfaction and performance. *Leadership and Organization Development Journal*, *30*(1), 53–86. https://doi.org/10.1108/01437730910927106

Yip, J. A., Levine, E. E., Brooks, A. W., & Schweitzer, M. E. (2020). Worry at work: How organizational culture promotes anxiety. *Research in Organizational Behavior*, *40*(xxxx), 100124. https://doi.org/10.1016/j.riob.2020.100124

Zander, U., & Kogut, B. (1995). Knowledge and the Speed of the Transfer and Imitation of Organizational Capabilities: An Empirical Test. *Organization Science*, *6*(1), 76–92. https://doi.org/10.1287/orsc.6.1.76

Zimuto, J., & Maritz, R. (2019). Modelling effect of valuable resources on franchise outlet performance: Dynamic sensing capability as mediator, *South African Journal of Economic and Management Sciences*, 22(1), 1–9. https://doi.org/10.4102/sajems.v22i1.2706

Zollo, M., & Winter, S. G. (2002). Knowledge, Knowing, and Organizations. *Organization Science*, *13*(3), 339–351.

Zhiqiang, M. A., Bwabo, M., Mingxing, L. I., Weijun, H. U., & Panga, F. (2020). Unobserved heterogeneity in public procurement governance and value for money. *Lex Localis*, *18*(1), 95–121. https://doi.org/10.4335/18.1.95-121