



Moderating Effect of Absorptive Capacity on the Relationship Between Strategic Flexibility and Performance of Manufacturing Companies: Conceptual Model

Humaiyat Nihad Ibrahim, Haruna Isa Mohammad
Department of Business Administration
Modibbo Adama University, Yola

ABSTRACT

In manicuring industry context and environment, this study aims to conceptualize a model that could explain the relationship between the strategic flexibility, absorptive capacity and performance manufacturing company. Moreover, this study undertakes extensive literature review to find possible other impelling, regulating, and interrelated variables in the above-mentioned context. We review includes the research articles published that is indexed in Scopus and WOS data base. In manicuring industry environment, absorptive capacity has a moderating effect on the strategic flexibility and performance of manufacturing industry. The proposed model of the study is based on the hypothetical viewpoint that can be empirically confirmed by exploring each statement for the respective dimension. This study opens up future research possibilities to find how absorptive capacity moderate the connection between strategic flexibility and performance of manufacturing companies? The proposed model will assist manufacturing managers who want to scrutinize the strategic positioning and related influence on performance and what significant factors the firm needs to manage due to internal and external environmental shocks. The study also contributes significantly to strategic flexibility, absorptive capacity and performance of manufacturing companies' literature.

ARTICLE INFO

Article History

Received: April, 2025

Received in revised form: May, 2025

Accepted: July, 2025

Published online: September, 2025

KEYWORDS

Strategic Flexibility, Absorptive Capacity,
Performance of Manufacturing of
Manufacturing Companies

INTRODUCTION

With the recent competitive environment business landscape is marked by increased change, continuous disruption, and high levels of uncertainty (Jalagat, 2016). Thriving in such a complex setting increases the difficulty of achieving sustained organizational performance (OP) (Dermonde & Fischer, 2021). In this ever-evolving scenario, strategic flexibility (SF) emerges as a critical asset for organizational success (Abdullahi, et al., 2020). SF signifies an organization's capacity not only to withstand unexpected changes but also to seize emerging opportunities by adjusting its strategies in real-time. This flexibility, which includes Resource Flexibility, Technological Flexibility, Structural Flexibility, and Product and Service Flexibility,

enables organizations to continuously review their business priorities, adjust strategies, and realign actions to sustain a competitive advantage in an ever-changing market (Ahmad et al., 2023). Solid strategic flexibility has been associated with heightened innovation, a concrete competitive advantage, and the ability to compete and thrive even in turbulent times (Grewel & Tansuhaj, 2001; Zhang, 2005; Zhou & Wu, 2010).

Additionally, there is a need to understand the enabling role of complementary organizational knowledge-based capabilities to facilitate an organization's response to environmental changes (Chaudhary, 2019). One such important knowledge-based organizational capability is absorptive capacity, the ability to acquire and exploit external knowledge (Awais,

Corresponding author: Humaiyat Nihad Ibrahim

✉ hnhadibrahim@gmail.com

Department of Business Administration, Modibbo Adama University, Yola.

© 2025. Faculty of Technology Education. ATBU Bauchi. All rights reserved

2023). Absorptive capacity as a dynamic capability enables firms to analyze the usefulness of the existing resources, track knowledge in the external environment, and redeploy existing resources by combining them with external knowledge (Chaudhary, 2019). It not only enables the proactive monitoring of changes in the external environment but also the exploitation of new opportunities (Kang et al., 2022) possibly complementing the utilization of flexible strategies. Therefore, absorptive capacity may enable firms to be concurrently strategically flexible.

Absorptive capacity, which denotes the organizational ability to acquire, assimilate, transform, and apply knowledge from external sources, may moderate this relationship. Absorptive capacity potentially improves a company's ability to innovate, adapt, and address the changes occurring in the external environment (Aboelmaged & Hashem, 2019; Liu, et al., 2018). As such, absorptive capacity could also catalyze the effectiveness of strategic flexibility gaining firm performance.

This study will examine the moderating effect of absorptive capability on the relationship between strategic flexibility and firm performance since there are scant empirical studies in respect to the moderating effect of absorptive capability. Finally, most previous studies on strategic flexibility and firm performance were conducted in developed countries and focused on service firms and small businesses. For example, studies by Ahmad et al. (2023), Jitrinee & Nongnepat (2023), Matthew et al. (2022), Mohamed and Abdelaziz (2023), Muhammad et al. (2023), Najwa et al. (2021), and Rula and Ziad (2021) represent only scant research in the context of manufacturing companies in the developing country Nigeria, particularly in Adamawa State.

Therefore, this study aims to bridge these gaps by examining the mediating role of organizational learning and the moderating effect of absorptive capacity on the relationship between strategic flexibility (resource flexibility, technological flexibility, structural flexibility, product, and service flexibility) and performance of manufacturing companies in Adamawa State, Nigeria.

Literature Review and Hypotheses Development

Strategic Flexibility

Strategic flexibility is a firm's ability to respond to various demands from dynamic competitive environments (Sanchez, 1995). According to Volberda (1996), it is the degree to which an organization has a variety of managerial capabilities and the speed at which they can be activated. Strategic flexibility is the ability to adapt to environmental changes, change game plans, precipitate intentional changes, and continuously respond to unanticipated changes (Young-Ybarra & Wiersema, 1999). According to Grewal and Tansuhaj (2001), strategic flexibility is the organizational ability to manage economic and political risks by promptly responding proactively or reactively to market threats and opportunities. In the context of this study, Strategic flexibility can be defined as the proactive as well as reactive strategic moves for change, both internally and externally, by leveraging the vital and desirable aspects of the continuity of the organization in terms of resource, technology, structure and product and service capabilities.

Resource Flexibility

Resource flexibility is a fundamental principle in strategic management, stressing an organization's ability to adapt and reallocate its resources in response to dynamic and uncertain environments (Najwa et al. (2021). It involves the strategic manipulation and reconfiguration of an organization's resources to enhance its capability to take advantage of opportunities and minimize difficulties. Resource flexibility is essential in maintaining competitiveness, as it allows organizations to align their resource configuration with evolving market conditions and changing strategic objectives (Arokodare & Asikhia 2020). The effectiveness of Resource flexibility is influenced by multiple factors. A key crucial factor is the adaptability of the resource portfolio. Organizations with high resource flexibility can quickly adjust their resource mix, allocating and reallocating assets such as financial capital, human capital, technology, and physical infrastructure.



Technological Flexibility

Technological flexibility is an essential capability for organizations in the present business landscape. It outlines the organization's capacity to adapt and utilize technological resources in response to environmental changes (Schwarz, et al., 2019). The essence of technological flexibility lies in the ability to swiftly integrate emerging technologies, ensuring that current technological infrastructure can be upgraded and improved as required. The ability of multiple systems or technologies to work in harmony is crucial for operational efficiency and facilitating the efficient exchange of information. Human resource capacity plays an important role, stressing the need for a workforce that can adapt to and effectively utilize new technologies through training programs and a culture of continuous learning (Ode & Ayavoo 2020).

Structural Flexibility

Structural flexibility represents a strategic imperative within organizational dynamics, emphasizing the organization's capacity to adapt and reshape its internal structures in response to evolving business environments. It involves the ability to modify organizational hierarchies, workflows, and communication channels to enhance agility and responsiveness (Schwarz, et al., 2019). The essence of structural flexibility lies in the organization's capacity to reconfigure its formal systems quickly, whether in terms of departments, teams, or reporting structures, to align with shifting strategic priorities and external demands (Krishnan 2020). Key dimensions of structural flexibility include the organization's adaptability to changing market conditions, its ability to quickly form or dissolve teams and departments, and the effectiveness of communication channels across different hierarchical levels.

Product and Service Flexibility

Product and service flexibility, within the context of organizational dynamics, is a critical aspect that reflects an organization's ability to adapt and tailor its offerings to meet evolving market demands. It encompasses the capacity to

introduce, modify, or customize products and services efficiently in response to changing customer preferences, technological advancements, or competitive pressures (Ragmoun & Alwehabie 2020). This flexibility is essential for organizations seeking to remain competitive and responsive in dynamic business environments. Key dimensions of product and service flexibility involve the quickness to innovate and introduce new products, the capability to modify existing products and services, and the responsiveness to customer feedback for continuous improvement (Zhang & Quah, 2025). Organizations with strong product and service flexibility can navigate uncertainties, capitalize on emerging trends, and maintain a competitive lead in the market.

Absorptive Capacity

Absorptive capacity is defined as the firm's ability to identify, assimilate, and exploit external knowledge to commercial ends (Cohen & Levinthal, 1990). The concept of absorptive capacity was coined in the field of macroeconomics by Alder (1965), who described it as an economy's ability to utilize and absorb external information and resources. Cohen and Levinthal (1990) first introduced absorptive capacity into the field of management as a company's ability to acquire, assimilate, and then exploit knowledge or information for commercial ends. Cohen and Levinthal (1990) defined a firm absorptive capacity as an ability to recognize the value of new information, assimilate it, and apply it to commercial ends. However, in this definition, the emphasis is on new information, and information is not the same as knowledge (Boisot, 1998). Cohen and Levinthal (1990) refer to absorptive capacity as the ability to evaluate and utilize outside knowledge. In this study, absorptive capacity is defined as a firm-level construct: the ability to recognize the value of new external knowledge, assimilate it, and apply it to commercial ends.

Firm Performance

Robbins (1987) defined performance as the extent to which an organization, as a social

Corresponding author: Humaiyat Nihad Ibrahim

✉ hnihadibrahim@gmail.com

Department of Business Administration, Modibbo Adama University, Yola.

© 2025. Faculty of Technology Education. ATBU Bauchi. All rights reserved

system, could consider both its means and ends. Cherrington (1989) considered performance as a concept of success or effectiveness of an organization and as an indication of the organizational manner in which it is performing effectively to achieve its goals successfully. During the following decade, Adam (1994) considered organizational performance as deeply dependent on the employees' performance quality. He believed that to guarantee a high-quality organizational performance, it is essential to have regular exposure of the workers of the company to new and up-to-date knowledge and skills, which would, in turn, help them keep up with the new changes happening in the market, and, ultimately, increase the quality of organizational performance. The outcome of organizational activities, commonly referred to as organizational performance, is the culmination of various factors, encompassing the tangible results of the strategic management process (Wheelen et al., 2017). Tomal and Jones (2015) explain that organizational performance indicates the actual outputs or achievements of a company when compared with its intended outcomes.

Theoretical Review

This study was developed based on the Resource-Based View (RBV) view. Resource-Based View (RBV) theory was initially proposed by Wernerfelt in his paper titled "A Resource-Based View of the Firm," published in 1984. The theory gained prominence through the works of scholars such as Jay Barney and others who further developed and expanded its concepts. RBV holds that a firm's competitive advantage and superior performance are primarily driven by the unique and valuable resources it possesses. Resources include tangible assets, intangible capabilities, human capital, technological expertise, and organizational processes. The theory asserts that for a firm to achieve sustained competitive advantage, it must have resources that are valuable, rare, inimitable, and non-substitutable (VRIN criteria). In the context of strategic flexibility, RBV provides a lens through which organizations can understand how their resource portfolio, including flexible resources,

contributes to competitive advantage. Resources that are flexible and adaptable to changing market conditions become a source of strategic advantage, allowing the firm to navigate uncertainties and capitalize on emerging opportunities (Eisenhardt & Martin, 2000).

Hypotheses Development

Strategic Flexibility and Performance of Manufacturing Company

Strategic flexibility stands out as a crucial and dynamic organizational capability that enables firms to fully take advantage of their versatile management skills and resources, ultimately enhancing firm performance in unpredictable conditions (Li et al., 2018). These capabilities position organizations to proactively exploit emerging opportunities, mitigate risks and costs, and foster growth and profitability amid fluctuating and dynamic business environments. The impact of strategic flexibility, encompassing planning, resource, and coordination flexibility, is profound on firm performance. Scholars assert that increasing organizational efficiency and effectiveness is achievable through the enhancement of planning, resource, and coordination flexibility (Dibrell et al., 2014; Umam & Sommanawat, 2019).

Within the scope of strategic flexibility, planning flexibility, involving flexible policies, plans, and approaches, emerges as a pivotal factor in navigating uncertainties and market risks amidst turbulent business environments (Umam & Sommanawat, 2019). The organizational capacity to respond to fluctuating market conditions is increased, thereby contributing to firm performance (Eckstein, et al., 2014). Planning flexibility serves as a critical dimension, enabling organizations to pursue unforeseen opportunities arising from environmental changes and swiftly adjust plans to capitalize on these opportunities, consequently contributing to firm performance (Dibrell, et al., 2014). Therefore, it is hypothesized that;

H1: - there is positive significant effect of strategic flexibility on performance of manufacturing company.

Moderating role of absorptive capacity

Empirical works on the moderating role of absorptive capacity in the “strategic flexibility relationship remains scarce. Although strategic flexibility can enhance firm outcomes, the degree to which this relationship is moderated by absorptive capacity remains undefined (Alkaf, et al., 2024). It is deemed crucial to internalize the moderating role of absorptive capacity for a sound understanding of the correlation between external knowledge, organizational learning, and performance (Harris & Yan, 2019). Organizations can better manipulate external knowledge, improve their learning processes, and enhance their performance by leveraging their absorptive capacity (Zhou et al., 2020). For example, companies with high absorptive capacity could effectively use and apply the knowledge obtained from strategic flexibility for firm performance. On the other hand, counterparts with low absorptive capacity may struggle to implement these practices effectively and comprehend their effects on firm performance outcomes.

Based on the dynamic capability's perspective, Liu et al. (2013) found that absorptive

capability is an important source of firm performance. Wales et al. (2013) proposed an inverted U-shaped relationship between absorptive capacity and financial performance. Liu, et al. (2018) Tzokas et al. (2015) highlighted the interactive nature of absorptive capacity antecedents and how these antecedents relate to firms' performance and contributed to the understanding of the role of absorptive capability as a mechanism for translating external knowledge into tangible benefits. Even if we disregard the procedure through which absorptive capability helps a company gain competitive advantage, we can never deny that having a powerful ability to learn from external knowledge enables a company to adjust its strategy based on external changes, to develop products or services that satisfy customers' needs, or to make production plans based on inventory (Liu, et al., 2018). it is hypothesized that;

H2: - absorptive capacity moderated on relationship between strategic flexibility and performance of manufacturing company.

Conceptual Model

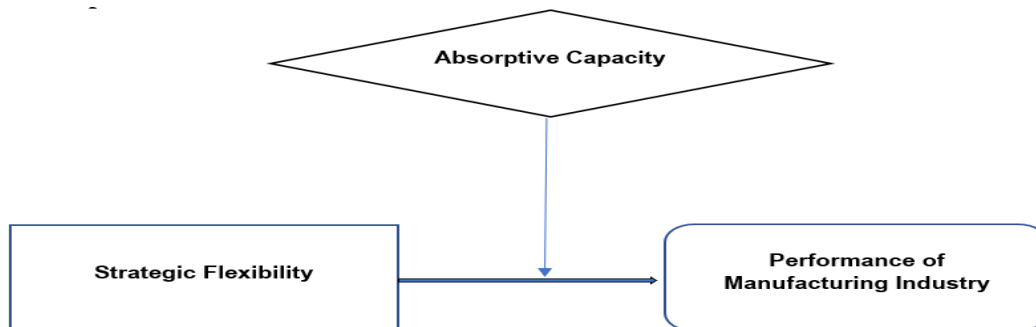


Figure 1: Conceptual framework of the study Methodology

Here the literature review procedure and related steps are shown. Identification of literature apposite for the current study where the strategic flexibility of manufacturing industry, their performances, and absorptive capacity come first, the authors propose two research questions: How strategic felicity helps manufacturing to achieve performance? 2. To what extent does absorptive capacity moderate the relationship between

strategic flexibility and performance of manufacturing company.? Papers were explored adopting the procedure as suggested by (Kitchenham, 2004). Manuscripts published in journals listed in electronic databases and indexed with Scopus, Thomson Reuters, ProQuest, EBSCO and specialized in strategic flexibility, performances, and absorptive capacity are included. Grey literature such as unpublished



thesis, conference proceeding, papers that are still unfinished, and work-in-progress are not considered. The literature review process included related studies accomplished.

DISCUSSIONS AND CONCLUSIONS

The suggested conceptual model can be helpful in appreciative how manufacturing industry manage these suspicions by looking to the all-inclusive outlook of manufacturing industry. Therefore, the study entranced the moderated relationship between absorptive capacity and with firm strategic flexibility. Hence, it can conclude that interconnectivity between strategic flexibility will better enhance the performance manufacturing. Performance of a manufacturing can be hypothesized as a multidimensional and multilevel perspective by considering scalable subjective and objective measures with respect to a performance manufacturing. The procedure of subjective measures in organizational research is a widespread practice in academic research due to the non-availability of the company financial information from the publicly available.

Further, manufacturing companies are grudgingly providing the necessary information. According to Kantur (2016), Vij and Bedi (2016), both subjective and objective measures of the firm are highly correlated. Therefore, the current study suggests that subjective measures must be supported when the performance varies from the subjective and objective measures in a manufacturing company environment. The study concludes that the strategic flexibility is a vital parameter of improving the performance of manufacturing industry.

LIMITATION AND FUTURE RESEARCH DIRECTIONS

The study was based on the review of the past studies, and the model is proposed based on theoretical examination; it requires empirical validation. The themes emerged from the review and integrated model proposed should be studied empirically. The antecedents suggested should be operationalised in comparing with different environmental conditions. Future research studies should develop and empirically validate the

performance of manufacturing construct by ascertaining various statements for subjective measures. The measures suggested in the literature may vary because of variations in the operationalisation of variables. However, the usage of subjective criteria for measuring performance of manufacturing is supported by numerous research studies.

REFERENCES

- Abdullahi, H. G., Darwina, A., & Ahmad, S. A. (2020). Driving sustainability in SMEs' performance: the effect of strategic flexibility. *Journal of Strategy and Management*. DOI10.1108/JSMA-03-2020-0064
- Aboelmaged, M. & Hashem, G. (2019). Absorptive capacity and green innovation adoption in SMEs: The mediating effects of sustainable organisational capabilities. *Journal of Cleaner Production*, DOI:10.1016/j.jclepro.2019.02.150
- Ahmad, B. D., Djoko, P., & Ika, S. (2023). The effect of strategic flexibility as a moderating variable in improving firm performance in microfinance institutions. *Journal*. <https://doi.org/10.26668/businessreview/2023.v8i7.2298>
- Alder, J.H. (1965). *Absorptive Capacity: The Concept and Its Determinants*, Brookings Institution, Washington, DC.
- Alkaf, A. R., Yusliza, M.Y., Foster, B., Farooq, K., Ramayah, T., & Muhammad, Z. (2024). Green human resource management and sustainability: the moderating role of absorptive capacity. *Industrial and Commercial Training*, DOI 10.1108/ICT-02-2024-0013
- Arokodare, M. A. & Asikhia, O. U. (2020). Strategic agility: achieving superior organizational performance through strategic foresight. *Global Journal of Management and Business Research: An Administration and Management*, 20(3), 249-4588



- Awais, A. (2023). Leadership in online education: A scoping review. *Electronic Journal of e-Learning*, 21(4), 335-352.
- Chaudhary, S. (2019). Implications of strategic flexibility in small firms: the moderating role of absorptive capacity. *South Asian Journal of Business Studies*, 8(3), 2019, 370-386
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed., Lawrence Erlbaum Associates, Mahwah, NJ.
- Cohen, W. & Levinthal, D. (1990). Absorptive capacity: a new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128-152.
- Dermonde M., Fischer B. B. (2021). Brazilian franchise startups and the COVID-19 crisis: Organizational Structure and adaption capabilities. *Revista Alcance*, 28(3(Set/Dez), 392-407.
- Dilnaz, M., Amira, K., Karim, W., Shahira, A., & Syed Z. A. (2023). Dynamic capabilities as a strategic flexibility enabler: Organizational responsiveness to COVID-19. *Journal of Asia Business Studies*, 17(4), 824-849. <https://doi.org/10.1108/JABS-01-2022-0023>
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they? *Strategic Management Journal*, 21, 1105-1121.
- Grewel, R., & Tansuhaj, P. (2001). Building organizational capabilities for managing economic crisis: the role of market orientation and strategic flexibility. *Journal of Marketing*, 65(2), 67-80.
- Harris, R. & Yan, J. (2019). The measurement of absorptive capacity from an economics perspective: definition, measurement, and importance. *Journal of Economic Surveys*, 33(3), 729-756.
- Jalagat, R. (2016). The Impact of Change and Change Management in Achieving Corporate Goals and Objectives: Organizational Perspective. *International Journal of Science and Research (IJSR)*, 5, 1233-1239.
- Jitrinee, C., & Nongnepat, T. (2023). Strategic flexibility: a systematic review and future research directions. *Journal of Strategy and Management*, 16(3), 470-491. <https://doi.org/10.1108/JSMA-08-2022-0134>.
- Kang, Y., Zhao, C., & Battisti, M. (2022). Organizational learning in SMEs' internationalization: A moderated mediating effect of absorptive capacity. *Long Range Planning*, 55(4),
- Krishnan, M. (2020). Materials, Structures and African Literary Criticism: A Response. *Cambridge Quarterly*, 49(3), 295-302.
- Liu, H., Ke, W., Wei, K. & Hua, Z. (2013). The impact of IT capabilities on firm performance: the mediating roles of absorptive capacity and supply chain agility. *Decision Support Systems*, 54(3), 1452-1462.
- Liu, X., Zhao, H., & Zhao, X. (2018). Absorptive capacity and business performance: The mediating effects of innovation and mass customization. *Industrial Management & Data Systems*, 118 (9), 1787-1803,
- Matthew, T. O., John, A., & Diane, C. K. (2023). Strategy, flexibility, and performance: how cost leaders' lack of structural flexibility negatively impacts nonfinancial performance. *Journal of Strategy and Management*, 1755-425X. <https://doi.org/10.1108/JSMA-07-2022-0120>.
- Mohammad I. H. (2019). The mediating effect of organizational learning and the moderating role of environmental dynamism on the relationship between strategic change and firm performance. *Journal of Strategy and Management*, 12(2), 275-297
- Muhammad, A., Amanat, A., Muhammad Sajid Khattak, M. Irfanullah Arfeen, M. Azam I. Chaudhary, and Aleena Syed. (2023). Strategic Flexibility and



- Organizational Performance. *Mediating Role of Innovation*. *SAGE Open*, 1–17. <https://doi.org/10.1177/21582440231181432>
- Najwa, A., Muhammad, A., Bader, O., & Ra'ed, M. (2021). The impact of strategic orientation on organizational performance: Examining the mediating role of learning culture in Jordanian telecommunication companies. *Academy of Strategic Management Journal*, 21(6), 1939-6104-20-S6-214.
- Ode, E., & Ayavoo, R. (2020) The mediating role of knowledge application in the relationship between knowledge management practices and firm innovation. *Journal of Innovation & Knowledge*, 5, 210-218
- Ragmoun, W. & Alwehabie, A. M. (2020). Sustainable human resource management (SHRM) and corporate social responsibility (CSR): An Integrated Mediated Moderation Model of dynamic capabilities (DC) on family business industry. *Management Science Letters*, 10, 2259–2268
- Rula, H. A., & Ziad, A. (2021). Strategic Flexibility Mediating the Impact of Entrepreneurial Orientation on Organizational Excellence. *International Review of Management and Marketing*, 11(6), 21-29.
- Sanchez, R. (1995). Strategic flexibility in product competition. *Strategic Management Journal*, 16(51), 135-159.
- Schwarz, M., Ossenbrink, J., Knoeri, C. & Hoffmann, V. H. (2019). Addressing integration challenges of high shares of residential solar photovoltaics with battery storage and smart policy designs. *Environmental Research Letter*, 14, 074002
- Tomal, D. R., & Jones, K. J. (2015). A comparison of core competencies of women and men leaders in the manufacturing industry. *The Coastal Business Journal*, 14(1), 13.
- Tzokas, N., Kim, Y.A., Akbar, H. & Al-Dajani, H. (2015). Absorptive capacity and performance: the role of customer relationship and technological capabilities in high-tech SMEs. *Industrial Marketing Management*, 47, 134-142.
- Volberda, H. W. (1996). Toward the flexible form: how to remain vital in hypercompetitive environments. *Organization Science*, 7(4):359-374
- Wales, W.J., Parida, V. & Patel, P.C. (2013). Too much of a good thing? Absorptive capacity, firm performance, and the moderating role of entrepreneurial orientation. *Strategic Management Journal*, 34(5), 622-633.
- Wheelen, T. L., & Hunger, J. D. (2017). *Strategic management and business policy*. Pearson.
- Young-Ybarra, C., & Margarethe W. (1999). Strategic flexibility in information technology alliances: The influence of transaction cost economics and social exchange theory. *Organization Science*, 10(4), 439-459.
- Zhang, X. & Quah, C-h. (2025). Strategic flexibility, firm performance, and firm value. *Applied and Theoretical Econometrics and Financial Crises*. DOI: 10.5772/intechopen.1008727
- Zhang, M. J. (2005). Information systems, strategic flexibility, and firm performance: an empirical investigation. *Journal of Engineering and Technology Management*, 22(3), 163-184.
- Zhou, A.J., Fey, C. and Yildiz, H.E. (2020). Fostering integration through HRM practices: an empirical examination of absorptive capacity and knowledge transfer in cross-border M&As. *Journal of World Business*, 55(2), 10094
- Zhou, K. Z., & Wu, F. (2010). Technological capability, strategic flexibility, and product innovation. *Strategic Management Journal*, 31(5), 547-561