

Ambidextrous Leadership and Innovation Capabilities Correlation: The Moderating Role of Financial Literacy in Malaysian Manufacturing SMEs

Fatema Salim Rashid Al Shibli

PhD. Scholar Azman Hashim International Business School Universiti Teknologi Malaysia,
Kuala Lumpur, Malaysia
Email: rashid-20@graduate.utm.my

AP Dr. Harcharanjit Singh Associate Professor

Azman Hashim International Business School, Universiti Teknologi Malaysia, Kuala Lumpur,
Malaysia
Email: harcharanjit@utm.my/ HMSingh@su.edu.om

Hanan Ahmed Abdallah Al-Balushi, Miad Murayh M Alqahtani

PhD. Scholar Azman Hashim International Business School Universiti Teknologi Malaysia,
Johor Bahru, Malaysia
Email: hanan20@graduate.utm.my/ hbloushi@su.edu.om, mmiad@graduate.utm.my

To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v14-i7/22214>

DOI:10.6007/IJARBSS/v14-i7/22214

Published Date: 15 July 2024

Abstract

There is many significant empirical research which highlighted on the factors that might have impact on innovation capabilities. This conceptual paper aims to examine the relationship between ambidextrous leadership and innovation capabilities. The research also explored the moderation role of financial literacy between ambidextrous leadership and innovation capabilities. Present research provides a comprehensive discussion on how ambidextrous leadership impact innovation capabilities. This independent variable is important in influencing firm performance of Malaysian Small and Medium Enterprise (SMEs). This research pointed out the key value of ambidextrous leadership on innovation capabilities for the consideration of the owner/managers. Furthermore, Ambidextrous Leadership theory was used in the present research to investigate the impact of ambidextrous leadership on innovation capabilities. While Resource-Based View (RBV) theory was used in this research to examine the moderation impact of financial literacy between ambidextrous leadership and

innovation capabilities. There are many implications of the research conceptual framework for theory and practices are discussed.

Keywords: Ambidextrous Leadership, Financial Literacy, Innovation Capabilities

Introduction

There is a great attention given to the small and medium-sized manufacturing sector in the past years. This happened due to the necessity of economic diversification for the countries. Thus, SMEs contribute significantly to the GDP (Chatterjee & Bhattacharjee, 2020; Hernita et al., 2021). SMEs have a key role in enhancing job opportunities, social welfare and in reducing the rate of poverty (Zafar & Mustafa, 2017). SMEs provide a substantial contribution to Malaysia and to most countries around the world (Sana et al., 2020). In 2020, SMEs accounted for 13.5% of Malaysia's exports; the manufacturing sector contributed 9.4%, the services sector 3.9%, and the agriculture sector 0.3% (Ramdan et al., 2022).

SMEs sectors in Malaysia, are classified as construction, services, mining and quarrying, and manufacturing (SME Corp Malaysia, 2020). Malaysian SMEs contribute significantly to overall exports and employment (Chin & Lim, 2018). According to Cheah et al (2022) SMEs encounter different challenges, such as high levels of international competitiveness and information and communication (Ruslan et al., 2020). According to the SME Corp. Malaysia (2022), there are almost 242,540 small and 19,459 medium-sized firms in Malaysia. The GDP performance of SMEs changed from 13.5% in 2014 to 1.0% in 2021 as shown in Figure 1. Even with the small improvement in 2021, the outcomes are still low when compared to past years. According to Zulkifli and Omar (2019), the GDP contribution of SMEs serves as a proxy for their performance. Previous research has recommended that future research should look at the factors behind the decline in performance of Malaysian SMEs' (Cheah et al., 2022). In order to improve their company performance and competitiveness, SMEs need to promote their innovation capabilities (Hanifah et al., 2019).

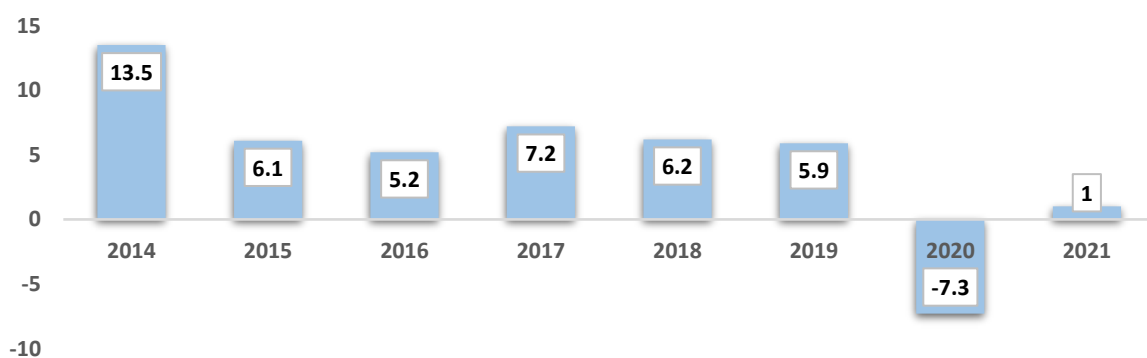


Figure 1 Annual Percentage Change of SMEs GDP from 2014-2021 (Source: DOSM, 2022)

Cheah et al (2022) claimed that Malaysian SMEs' performance growth is impacted by their lack of innovation compared to large enterprises. Malaysia ranks 37, which is lower than both 2020 and 2021 (Global Innovation Index, 2022). This is shown in Table 1.2, the Global Innovation Index (2022) for innovation output. Future studies should examine the cause of the decrease in innovation in the performance of manufacturing SMEs (Ibrahim et al., 2018). Based on the discussion above and recommendations from previous studies. The present

research aims to analyse one of the factors behind Malaysian manufacturing SMEs' low performance in terms of innovation capabilities.

Table 1

Manufacturing SMEs GDP percentage in selected ASEAN states

| YR | GII | Innovation Inputs | Innovation Outputs |
|------|-----|-------------------|--------------------|
| 2020 | 33 | 34 | 36 |
| 2021 | 36 | 36 | 34 |
| 2022 | 36 | 35 | 37 |

Source: Global Innovation Index 2022

Literature Review

Research Related to Innovation Capabilities

Majority of the firms from different industries are focusing in fostering the innovation to ensure success in the markets. Thus, academic discussion has concentrated on the innovation capabilities concept (Saunila, 2020). Thus, adoption of concepts or behaviours pertaining to novel for a company equipment, policies, systems, goods, processes, programs, or services is referred to as innovation capabilities (Borah et al., 2022). There are some researchers have contended that innovation capabilities are made up of certain competencies including resource exploitation, networking, marketing, learning, and entrepreneurial competencies. According to Jia et al (2021), innovation has become a vital tool for businesses to gain long-term competitive advantages and adapt to changes in the business environment (Ali et al., 2021).

In addition, Malaysian SMEs lack innovative capabilities for a number of factors, including a lack of advancements in personnel' creative aptitudes and competencies (Yuen & Ng, 2021). Another issue for Malaysian manufacturing SMEs is shifting consumer preferences, which has compelled these companies to fulfil customer needs by enhancing their capacity for innovation in terms of processes, goods, and logistics (Zulkiffli et al., 2021). Past research argued that more thorough study is needed to determine the true state of SMEs' capacity for innovation. Thus, they recommended future studies to investigate the impact of innovation capabilities among SMEs in different context than Chian (Ali et al., 2020). Based on the above discussion, the present research examined one of the factors (ambidextrous leadership) which could impact on innovation capabilities. It also investigated the moderation impact of financial literacy on the relationship between ambidextrous leadership and innovation capabilities.

Research Design and Methods

The conceptual framework of the research is to increase understanding of the impact of ambidextrous leadership, which might be relevant and improve the innovation capabilities of manufacturing firm in Malaysia. Furthermore, this study will provide significant new understandings of how financial literacy affect the relationship between ambidextrous leadership and innovation capabilities. Based on evaluation of prior studies, the construct this conceptual research. Furthermore, as shown in Figure 2, the literature review was synthesised by using academic research pertinent to ambidextrous leadership, innovation capabilities, and financial literacy.

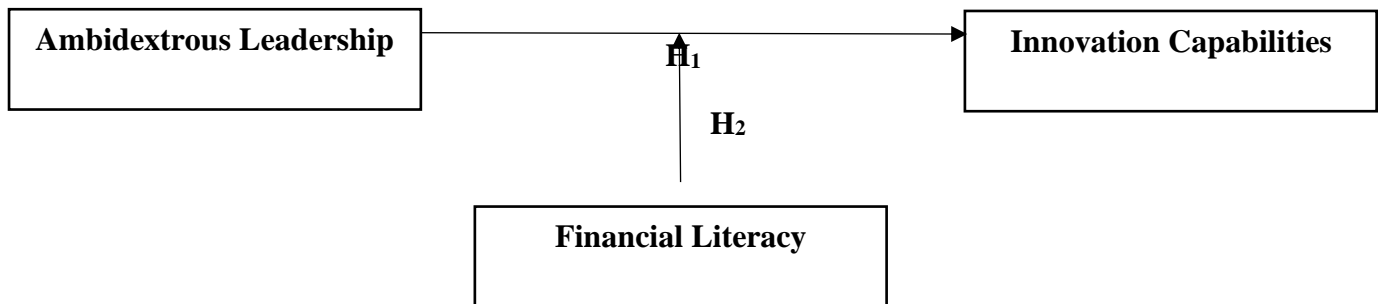


Figure 2 Conceptual Framework.

The research has two (2) hypotheses were developed to examine the effect of the variables on innovation capabilities. Moreover, future studies might conduct quantitative research to gather the research data. This research used ambidextrous leadership theory and the resource-based view (RBV) theory. This conceptual research technique made use of a dependable strategy for conducting a systematic review. In the future, the quantitative method may be used to conduct an empirical test of the suggested conceptual framework.

Ambidextrous Leadership and Innovation Capabilities

Businesses need innovation to maintain or increase their competitiveness. Past research indicated that innovation capability has a positive and significant relationship with SMEs performance (Bahta et al., 2021). Previous research has demonstrated the importance of innovation for SMEs, as they may be less susceptible to financial difficulties. There are several prior studies have shown that innovation is essential to SMEs' survival and success. Overall, these results indicate that while innovation is critical to SMEs' growth and their ability to respond to uncertainty and crises, they should also carefully manage their innovation process by making deliberate investments in the skills and resources that will enable them to innovate (Demirkan et al., 2022).

The term "ambidextrous leadership" was developed by Rosing et al (2011) and describes how a skilled leader of a creative workforce must encourage both closing and opening leadership and be able to transition between the two with ease. The effects of ambidextrous leadership on firms' innovation have been discussed in a growing body of research recently, but its influencing mechanism has not received enough attention (Jia et al., 2022). In addition, there is a strong correlation between innovation and ambidextrous leadership. An organization's degree of innovation can be raised by encouraging managers to exercise ambidextrous leadership (Alghamdi, 2018; Li et al., 2020). Leaders that exhibit ambidextrous behaviours support innovation Poon et al (2020), guarantee success over the long run, and help organizations reach greater performance levels (Poon & Mohamad, 2020). Previous research has highlighted the need for more studies to investigate the relationship between ambidextrous leadership and innovation capabilities (Jia et al., 2021; Li et al., 2020). Therefore, past studies recommended that future studies should investigate the relationship between ambidextrous leadership and innovation capabilities (Luo et al., 2018). Moreover, it is postulated when ambidextrous leadership increase in a firm its innovation capabilities will increase. Thus, there is a positive relationship between ambidextrous leadership and innovation capabilities. Based on the previous discussion, the following hypothesis was developed:

H₁: There is a positive relationship between ambidextrous leadership and innovation capabilities

Ambidextrous Leadership, Innovation Capabilities and Financial Literacy

The term ambidextrous leadership describes a leader that combines the complimentary qualities of opening and closing, two (2) paradoxical leadership behaviours (Jia et al., 2021; Kafetzopoulos, 2021; Wu et al., 2022). Additionally, a company's capacity for innovation is defined as its ability to implement concepts or behaviours pertaining to tools, systems, products, programs, processes, or services (Borah et al., 2022). Previous research has demonstrated a favourable correlation between ambidextrous leadership which encompasses both opening and closing behaviours and creativity (Jia et al., 2021). However, there are mix findings about the relationship between innovative leadership and ambidextrous leadership skills. Innovation skills are strongly correlated with ambidextrous leadership. As a result, better and innovative services and goods are created, which is good for the growth of a company (Alghamdi, 2018). Past studies indicated that ambidextrous leadership has a positive relationship on innovation capabilities (Ahmad et al., 2022; Luo et al., 2018). However, past study indicated that there was no significant relationship between ambidextrous leadership on innovation capabilities (Li et al., 2020). Past research indicated that there is a negative relationship between ambidextrous leadership and innovation capabilities (Palm, 2021). In addition, managers and directors with a background in finance are urged to take part in various risk reduction techniques, such as hedging and corporate financial policies. Financial literacy in past research was measured using questions concerning inflation, interest rates, and future values. However, when it comes to SMEs, it's critical that management handle the financial situation well (Yang et al., 2018).

According to Hayes and Preacher (2014), a moderating impact might be present when there is an inconsistent relationship between two (2) factors, according to MacKinnon (2011), the value of a moderating variable may have an impact on the degree of correlation between an independent and dependent variable. Based on past research, ambidextrous leadership, has a substantial impact on innovation capabilities. However, financial literacy moderates the relationship between ambidextrous leadership and innovation capabilities. In addition, due to the high demand for financial literacy in manufacturing firms, there is a high possibility that it might moderate the relationship between ambidextrous leadership and innovation capabilities. Thus, its postulated that financial literacy among owner/manager in manufacturing SMEs would strengthen the relationship between ambidextrous leadership and innovation capabilities. Based on the past literature review this research proposes that financial literacy strengthen the relationship between ambidextrous leadership and innovation capabilities. Therefore, based on the above-mentioned discussion the following hypothesis was proposed:

H₂: Financial literacy strengthen the relationship between ambidextrous leadership and innovation capabilities

Underpinning Theory

Ambidextrous Leadership

Ambidextrous Leadership Theory and Ambidextrous Leadership

Based on the ambidextrous leadership theory, an organization's employee may encourage in both exploitative and exploratory innovative behaviors when leaders adopt the opening and

closing leadership styles (Isichei et al., 2022; Kafetzopoulos, 2021; Rosing et al., 2011). In contrast, prior studies described ambidextrous leadership as a synthesis of transactional and transformational leadership philosophies. According to Luo et al (2018), this research suggests that proficient leaders possess the capacity to discern whether transformational or transactional leadership is most appropriate. Previous studies distinguished between transformative leadership and ambidextrous leadership (Luu, 2017). However, despite certain conceptual and empirical parallels to opening and shutting behaviors, these leadership styles dubbed “ambidextrous” are cognitively and empirically different (Rosing & Zacher, 2023). Moreover, leaders with opposing opening and closing leadership philosophies are successful in meeting the market's ongoing need for innovation (Lyu et al., 2022). They are particularly effective at inspiring and fostering innovation in those who follow them (Zacher & Rosing, 2013). The ambidexterity theory of leadership posited that ambidextrous leadership includes three elements, that are closing leadership behavior, opening leadership behavior, and flexibility to flip between both behaviors. Opening leadership fosters explorative behavior, while closing leadership behavior fosters exploitative behavior (Alghamdi, 2018). Past research investigated the relationship between ambidextrous leadership and innovation using the ambidexterity theory (Li et al., 2020).

The Resource-based view (RBV)

Resource-Based View Theory and Innovation Capabilities

In the tense competition in the market, firms require special, precious, unusual, and non-replaceable resources (Barney, 1991). This will enable them to sustain and can gain a long-term competitive advantage. To generate revenue and build company value, businesses need to develop or get resources and capabilities that are unique, durable, and challenging for rivals to copy. Businesses that utilize their resources as efficiently as possible will thus succeed (Dahiya, 2021). In order to provide returns, a firm's resource identification, portfolio, deployment, and development are emphasized by the resource-based view (RBV) theory (Saeidi et al., 2019). It demonstrates how firms may gain a competitive edge by utilizing immobile and imperfectly imitable resources (Dahiya, 2021; Khan et al., 2022). Prior research investigated the significance of utilizing an organization's assets to develop innovative capabilities and provide imaginative products and services (Borah et al., 2022). Previous studies on innovation capability have used RBV theory (Shou et al., 2017). Businesses may operate more effectively when they build and manage their resources and capabilities using innovation capabilities, which are derived from the RBV theory.

Resource-Based View Theory and Financial Literacy

RBV theory posited that a company with distinct resources both tangible and intangible becomes more competitive and performs better than other companies with less resources and capabilities (Barney 1991). According to the RBV hypothesis, performance and a sustained competitive advantage can be facilitated by financial literacy as an internal company competence (Yang et al., 2018). The RBV confirms that managing a company's resources both tangible and intangible in order to gain a competitive edge through enhanced performance, may be accomplished through financial literacy. Based on the results of the past study provide more evidence for the RBV theory, which holds that financial literacy elements may assist businesses in enhancing performance and competing (Alharbi et al., 2022).

Design/methodology/approach

A comprehensive review of relevant books, journal articles, conference materials, proceedings, and systematic reviews was carried out as part of the conceptual study design. The size of the literature study and the variations in the research were taken into consideration while developing the theoretical framework (Figure 2). Previous research has revealed that the relationship between ambidextrous leadership and innovation capabilities is varied. According to the review of past literature, the present research examined the moderation impact of financial literacy between ambidextrous leadership and innovation capabilities

Results and Discussion

The development of this conceptual paper was developed by previous research, conference proceedings, conference materials, and relevant literature. Thus, the theoretical framework was developed based on differences found in earlier study (Figure 2). The results of previous research indicate a strong and positive correlation between ambidextrous leadership, innovation capabilities, and financial literacy.

Research Implication

This study extends our understanding of the performance of Malaysian manufacturing SMEs. The findings of this study should provide the Malaysian government with crucial knowledge regarding what regulations need to be tightened up on manufacturing SMEs to boost their productivity. Empirical data indicates that in order for Malaysian policymakers to create effective strategies for boosting manufacturing SMEs in Malaysia, this research is essential. This is predicated on the findings of past studies. Therefore, based on this conceptual research, ambidextrous leadership has significant impact innovation capabilities. Moreover, it also indicated that financial literacy strengthens the relationship between ambidextrous leadership and innovation capabilities.

Conclusion and Future Research

The main objective of this research was to evaluate the Malaysian manufacturing SMEs' declining in innovation capabilities. The present research investigated the relationship between ambidextrous leadership and innovation capabilities. The study also investigated the moderating impact of financial literacy ambidextrous leadership and innovation capabilities. Thus, to achieve high performance among manufacturing SMEs in Malaysian, firms should foster the ambidextrous leadership and innovation capabilities. The conceptual framework could be empirically examined in future studies. Future research has to investigate other moderators in between. Future studies could explore other independent variables that could improve the theoretical model in the present research. Future studies might be conducted in another county, in a different sector.

References

- Ahmad, M., Wu, Q., & Khattak, M. S. (2022). Intellectual capital, corporate social responsibility and sustainable competitive performance of small and medium-sized enterprises: Mediating effects of organizational innovation. *Kybernetes, Emerald Insight*. <https://www.emerald.com/insight/content/doi/10.1108/K-02-2022-0234/full/html>.
- Alghamdi, F. (2018). Ambidextrous leadership, ambidextrous employee, and the interaction between ambidextrous leadership and employee innovative performance. *Journal of Innovation and Entrepreneurship*, 7(1), 1–14.
- Ali, H., Hao, Y., & Aijuan, C. (2020). Innovation capabilities and small and medium enterprises' performance: An exploratory study. *The Journal of Asian Finance, Economics and Business*, 7(10), 959-968.
- Alharbi, R. K., Yahya, S. B., & Kassim, S. (2022). Impact of religiosity and branding on SMEs performance: does financial literacy play a role? *Journal of Islamic Marketing*, 13(12), 2717-2741.
- Bahta, D., Yun, J., Islam, M. R., & Ashfaq, M. (2021). Corporate social responsibility, innovation capability and firm performance: evidence from SME. *Social Responsibility Journal*, 17(6), 840-860.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Bogodistov, Y., & Wohlgemuth, V. (2017). Enterprise risk management: A capability-based perspective. *The Journal of Risk Finance*, 18(3), 234–251.
- Borah, P. S., Iqbal, S., & Akhtar, S. (2022). Linking social media usage and SME's sustainable performance: The role of digital leadership and innovation capabilities *Technology in Society*, 68, 101900.
- Chatterjee, M., & Bhattacharjee, T. (2020). Ownership concentration, innovation and firm performance: Empirical research in Indian technology SME context. *South Asian Journal of Business Studies*, 10(2), 149–170.
- Cheah, J., Leong, S. Y., & Fernando, Y. (2022). Innovation strategies and organisational performance: The moderating role of company size among small-and medium-sized companies. *Benchmarking: An International Journal*. Emerald Insight. <https://www.emerald.com/insight/content/doi/10.1108/BIJ-03-2021-0139/full/html>
- Chin, Y. W., & Lim, E. S. (2018). SME policies and performance in Malaysia. Economics working research. *ISEAS*, (3).
- Dahiya, R. (2021). *Firm performance in the era of big data analytics: The effects of analytical human capital on firm capabilities and performance*. [Doctoral dissertation, Louisiana Tech University].
- Demirkan, I., Srinivasan, R., & Nand, A. (2022). Innovation in SMEs: the role of employee training in German SMEs. *Journal of Small Business and Enterprise Development*, 29(3), 421-440.
- Hanifah, H., Abdul Halim, H., Ahmad, N. H., & Vafaei-Zadeh, A. (2019). Emanating the key factors of innovation performance: leveraging on the innovation culture among SMEs in Malaysia. *Journal of Asia Business Studies*, 13(4), 559–587.
- Hayes, A. F., & Preacher, K. J. (2014). Statistical mediation analysis with a multicategorical independent variable. *British Journal of Mathematical and Statistical Psychology*, 67(3), 451–470.

- Hernita, H., Surya, B., Perwira, I., Abubakar, H., & Idris, M. (2021). Economic business sustainability and strengthening human resource capacity based on increasing the productivity of small and medium enterprises (SMES) in Makassar city, Indonesia. *Sustainability (Switzerland)*, 13(6), 1–37.
- Ibrahim, A. I., & Raman, K. (2018). The impact of intellectual capital on firm performance in Malaysia. *UNIMAS Review of Accounting and Finance*, 2(1), 20–30.
- Isichei, E. E., Aminu, A. A., Chukwu, B. I., Ike, N. M., Agbaeze, K. E., & Anthony, I. (2022). Linking ambidextrous leadership and small and medium scale enterprises export performance. *South African Journal of Business Management*, 53(1), 14.
- Jia, R., Hu, W., & Li, S. (2022). Ambidextrous leadership and organizational innovation: The importance of knowledge search and strategic flexibility. *Journal of Knowledge Management*, 26(3), 781-801.
- Kafetzopoulos, D. (2021). Ambidextrous leadership: a narrative literature review for theory development and directions for future research. *Baltic Journal of Management*, 17(2), 206–232.
- Khan, A., Yaqub, R. M. S., & Javeed, A. (2022). Mediating role of working capital management in the relationship of corporate governance measures and firm performance: Panel research from Pakistan. *Journal of Accounting and Finance in Emerging Economies*, 7(2), 281–294.
- Li, S., Jia, R., Seufert, J. H., Wang, X., & Luo, J. (2020). Ambidextrous leadership and radical innovative capability: The moderating role of leader support. *Creativity and Innovation Management*, 29(4), 621–633.
- Luo, B., Zheng, S., Ji, H., & Liang, L. (2018). Ambidextrous leadership and TMT member ambidextrous behavior: The role of TMT behavioral integration and TMT risk propensity. *The International Journal of Human Resource Management*, 29(2), 338–359.
- Luu, T. (2017). Ambidextrous leadership, entrepreneurial orientation, and operational performance: Organizational social capital as a moderator. *Leadership & Organization Development Journal*, 38(2), 229–253.
- Lyu, C., Peng, C., Li, R., Yang, X., & Cao, D. (2022). Ambidextrous leadership and sustainability performance: serial mediation effects of employees' green creativity and green product innovation. *Leadership & Organization Development Journal*, 43(8), 1376–1394.
- MacKinnon, D. P. (2011). Integrating mediators and moderators in research design. *Research on Social Work Practice*, 21(6), 675–681.
- Mishra, B. K., Rolland, E., Satpathy, A., & Moore, M. (2019). A framework for enterprise risk identification and management: the resource-based view. *Managerial Auditing Journal*, 34(2), 162–188.
- Palm, D. (2021). Ambidextrous Leadership and Creative Team Climate for Innovativeness in Swedish Healthcare.
- Poon, W. C., & Mohamad, O. (2020). Organisational context and behavioural complexity affecting ambidextrous behaviours among SMEs. *International Journal of Organization Theory & Behavior*, 23(3), 225–244.
- Ramdan, M. R., Abd Aziz, N. A., Abdullah, N. L., Samsudin, N., Singh, G. S. V., Zakaria, T & Ong, S. Y. Y. (2022). SMEs performance in Malaysia: The role of contextual ambidexterity in innovation culture and performance. *Sustainability*, 14(3), 1679.

- Rosing, K., Frese, M., & Bausch, A. (2011). Explaining the heterogeneity of the leadership-innovation relationship: Ambidextrous leadership. *The Leadership Quarterly*, 22(5), 956–974.
- Rosing, K., & Zacher, H. (2023). Ambidextrous leadership: A review of theoretical developments and empirical evidence. In R. Reiter-Palmon & S. T. Hunter (Eds.), *Handbook of organizational creativity*. Elsevier.
- Ruslan, R. A. H. M., Gan, C., Hu, B., & Quang, N. T. T. (2020). Impact of microcredit on SMEs performance in Malaysia. *International Journal of Business and Economics*, 19(1), 109–130.
- Saeidi, P., Saeidi, S. P., Sofian, S., Saeidi, S. P., Nilashi, M., & Mardani, A. (2019). The impact of enterprise risk management on competitive advantage by moderating role of information technology. *Computer Standards & Interfaces*, 63, 67–82.
- Sana, A. K., Poddar, S., & Paul, B. (2020). Contribution of small and medium enterprises (SMEs) towards Malaysian economic growth: An empirical research. *International Journal on Recent Trends in Business and Tourism (IJRTBT)*, 4(2), 18–27.
- Saunila, M. (2020). Innovation capability in SMEs: A systematic review of the literature. *Journal of Innovation & knowledge*, 5(4), 260-265.
- Shou, Y., Shao, J., & Chen, A. (2017). Relational resources and performance of Chinese third-party logistics providers: the mediating role of innovation capability. *International Journal of Physical Distribution & Logistics Management*, 47(9), 864–883.
- SME Corp Malaysia (2020). *SMEs Annual Report*. smescorp.gov.my.
- SME Corp Malaysia (2022). *SMEs Annual Report*. smescorp.gov.my.
- Tze Yin, K., Ai Ping, T., Siti Nabihah, A. K., & Sukumar, L. (2023). Does enterprise risk management influence performance? Evidence from Malaysian private higher education institutions. *International Journal of Advanced Research in Economics and Finance*, 5(1), 131–146.
- Wu, L., Sun, L., Chang, Q., Zhang, D., & Qi, P. (2022). How do digitalization capabilities enable open innovation in manufacturing enterprises? A multiple case study based on resource integration perspective. *Technological Forecasting and Social Change*, 184, 122019.
- Yang, S., Ishtiaq, M., & Anwar, M. (2018). Enterprise risk management practices and firm performance, the mediating role of competitive advantage and the moderating role of financial literacy. *Journal of Risk and Financial Management*, 11(3), 35.
- Yuen, Y., & Ng, X. (2021). Enhancing innovation performance of small and medium enterprises in Malaysia. *Management Science Letters*, 11(3), 887–894.
- Zacher, H., & Rosing, K. (2013). Ambidextrous leadership and team innovation. *Leadership & Organization Development Journal*, 36(1), 54–68.
- Zafar, A., & Mustafa, S. (2017). SMEs and its role in economic and socio-economic development of Pakistan. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 7(4), 1–16.
- Zulkifli, C., & Omar, C. (2019). Small and medium enterprises (SME): Contribution and challenges. *International Journal of Research in Commerce and Management Studies*, 1, 1, 53–59.
- Zulkifli, N. A., & Padlee, F. (2021). Sustainable outsourcing decisions, competitive capabilities and business performance of Malaysian manufacturing SMEs: A confirmatory factor analysis approach. *Journal of Sustainability Science and Management*, 16(1), 158–173.