

ENTREPRENEURIAL SUPPLY CHAIN MANAGEMENT COMPETENCE IN BAMBOO-BASED CREATIVE MICRO-BUSINESSES

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Abstract

This study aims to identify the most dominant dimensions of Entrepreneurial Supply Chain Management (SCM) Competence and those requiring improvement within bamboo-based creative micro-enterprises. The research adopts a descriptive quantitative approach involving 66 bamboo artisans in Mekarsari Village, Selaawi District, Garut Regency. Data were analyzed using descriptive statistics (means and standard deviations) to map artisans' competency levels. The findings indicate strengths in the adoption of appropriate production technologies, employee involvement in continuous improvement, alertness to technological developments, the maintenance of strong relational ties, and proximity to suppliers that reduces lead times. Areas requiring enhancement include the uneven diffusion of product innovation, a shift in technology opportunity orientation from merely operational to strategic, more consistent communication governance, and broader utilization of delivery services, which is currently constrained by damage risk. Practical implications emphasize strengthening innovation orientation and proactiveness through training and mentoring for new product development, improving e-business literacy, refining internal communication mechanisms with employees, and establishing safe logistics Standard Operating Procedures.

Keywords: *Entrepreneurial SCM Competence, Bamboo Creative, Micro-Businesses*

1. INTRODUCTION

The increasingly competitive business environment compels firms to enhance their performance (Borowski, 2021; Purnomo et al., 2019). In Mekarsari Village, Selaawi District, Garut Regency an established hub of bamboo-based creative enterprises, particularly birdcage making artisans face resource constraints, market fluctuations, and a dispersed, informal supply chain structure. Under these conditions, birdcage artisans are required not only to be efficient and adaptive, but also to remain competitive due to intense rivalry among numerous similar producers in the market (Oktrivina et al., 2023).

Mekarsari Village possesses substantial potential in bamboo craftsmanship and ecotourism. Initially, the village was recognized as a weaving center producing household items such as rice baskets (for storing or rinsing rice), sieves (for separating fine and coarse materials), baskets, and hats. Weaving expertise has been transmitted intergenerationally, supported by the abundant availability of bamboo in the Selaawi area. A pivotal shift occurred in 1976, when Mr. Nene introduced the first round-shaped birdcage an innovation at the time, as cages were generally square. This idea subsequently catalyzed the emergence of Mekarsari as a bamboo birdcage production hub that endures to the present day.

Field observations in Mekarsari indicate a surge in demand for birdcages during the COVID-19 pandemic. While many sectors experienced contraction, the birdcage segment in Mekarsari expanded. This development was linked to Large-Scale Social Restrictions, which kept people at home and stimulated new leisure pursuits, including the hobby of keeping songbirds.

Against this backdrop, the concept of entrepreneurial supply chain management (SCM) competence is clearly manifested among Mekarsari's birdcage artisans. Artisans leverage relational capital (strong supplier–customer networks), cross-artisan coordination capabilities within and around the village, as well as innovation and proactiveness orientations including a readiness to take risks (Akbar et al., 2014; C.-C. Hsu et al., 2011; Laosirihongthong, 2011). In other words, entrepreneurial SCM competence serves as a “bridge” that transforms artisans' intangible resources networks, market knowledge, and coordinated ways of working into effective supply chain management strategies and superior performance within a complex and risk-laden birdcage ecosystem (Barney et al., 2001; C.-C. Hsu et al., 2014). From a resource-based view (RBV), the competitive advantage of small firms derives not only from physical assets but also from intangible, valuable, rare, and inimitable resources and capabilities, including entrepreneurial SCM competence (Barney et al., 2001; C.-C. Hsu et al., 2011; Zhu & Zhao, 2011).

This study investigates how birdcage artisans in Mekarsari perceive Entrepreneurial SCM Competence. Specifically, it examines perceived strengths and weaknesses in everyday practice across its key dimensions: relational capital, coordination capability, innovation orientation, proactiveness, and risk-taking (Akbar et al., 2014; C.-C. Hsu et al., 2011; C. C. Hsu et al., 2014; Laosirihongthong, 2011). Employing a descriptive quantitative approach, artisans' perceptions are mapped using simple statistics (means and standard deviations) to clearly identify the most dominant aspects of Entrepreneurial SCM Competence and those requiring improvement. The results are expected to inform targeted programs such as training, innovation mentoring, network strengthening, and enhancements in digital and business literacy aligned with the actual conditions of artisans within the birdcage cluster.

2. METHODOLOGY

This study employs a descriptive quantitative approach involving 66 bamboo artisans in Mekarsari Village, Selaawi District, Garut Regency. According to Ghozali (2016), descriptive statistics provide a summary or depiction of data based on measures such as mean, standard deviation, variance, maximum, minimum, sum, range, kurtosis, and skewness. Data were collected using a questionnaire with a 1–5 Likert scale, after which the mean and standard deviation were calculated.

The primary objective is to numerically characterize the sample profile in order to portray the competency levels of the artisans. The mean scale adopted follows Arikunto (2010), 1.00–1.80 Very Low, 1.81–2.60 Low, 2.61–3.40 Moderate, 3.41–4.20 High, and 4.21–5.00 Very High. Subsequently, the analysis results are presented in tables accompanied by concise explanations. The analytical focus is directed toward identifying the most dominant aspects of entrepreneurial supply chain management competence and the aspects that still require improvement within bamboo-based creative micro-enterprises..

3. FINDINGS AND DISCUSSION

Based on the results of descriptive statistical calculations related to entrepreneurial supply chain management competencies, which are divided into five factors innovation orientation, risk-taking characteristics, proactiveness orientation, relational capital skills, and coordination capabilities, which will be explained comprehensively.

3.1 Innovation orientation

Descriptive statistics for Innovation Orientation (Table 1) indicate a high-scoring indicator, namely “new technologies in new product development,” with a mean of 3.59 and a standard deviation of 1.01, suggesting reasonably consistent respondent perceptions. A mean score of 3.59 falls into the “High” category, indicating that artisans are fairly active in leveraging new technologies for new product development. The use of modern equipment such as wood-cutting machines, spray-paint compressors, and drying devices helps reduce dependence on time-consuming manual techniques. Common, appropriate technologies adopted by artisans include electric drills for perforating cage frames, power saws for more precise cutting, and electric sanders to accelerate finishing. Prior studies likewise show that the use of technology can support the new product development process (Aloulou, 2019; Batra et al., 2015; Liu & Wang, 2022; Qosasi et al., 2019).

Furthermore, the lowest indicator for new product development speed obtained a mean value of 2.98 and a standard deviation value of 1.09, indicating that there was considerable variation among respondents, with some innovating quickly and others slowly. The mean value of 2.98 for this indicator falls into the “Moderate” category, indicating that artisans' product development is still limited or that innovation is still limited and uneven. Observations show that artisans' innovation patterns generally focus on process improvement, namely how to produce bird cages more quickly without compromising quality, rather than on new product development. However, some artisans are capable of product innovation, such as developing decorative lamps based on bird cage designs, because they have creativity, a wider network, access to equipment and materials, and the courage to experiment.

Support to encourage the creation of a wider range of innovative products, which is certainly needed by craftsmen, includes training to develop creativity beyond their main products, encouragement and guidance to dare to try out new designs, and, most importantly, access to markets that are ready to absorb innovative products. Due to these limitations in support, birdcage artisans tend to focus on meeting demand for products that already have a guaranteed market (Cooper, 2011; Freel, 2000).

Table 1. Factor Innovation orientation

No	Indicator	Mean	Stdev
1	Innovative product development	2.82	1.15
2	New technologies in new product development	3.59	1.01
3	Speed of new product development	2.98	1.09
4	New products introduced	3.09	1.20
5	New products marketed	3.11	1.14

Source: Primary Data (2025)

3.2 Risk-taking characteristics

Descriptive statistics for Risk-Taking Characteristics (Table 2) show that the highest-scoring indicator “the role of employees in improving the company” records a mean of 3.88 with a standard deviation of 1.20, indicating that employees are perceived to contribute significantly, although the degree of confidence is not uniform across units or individuals. This is likely attributable to differences in opportunities for participation, decision-making authority, or communication patterns. A mean score of 3.55 for this indicator falls within the “High” category, suggesting that, in general, employees are perceived as contributing to the enterprise.

However, confidence in employees’ roles in improvement is not evenly distributed across all units or individuals. This variation is influenced by limited opportunities for participation, asymmetric authority, and predominantly top-down communication. Field observations indicate that employees with access to training, creative space, and open communication tend to be more confident and actively contribute, whereas those with less support tend to act merely as executors. These findings underscore the need for broader employee involvement through expanded access to training, delegated authority, and two-way communication mechanisms to optimize contributions to process improvement (O’Regan et al., 2006; Tharenou et al., 2007).

By contrast, the lowest-scoring indicator “engaging in innovation” shows a mean of 3.11 and a standard deviation of 1.07, indicating substantial heterogeneity: some respondents are motivated to innovate, while others remain hesitant or face structural and cultural constraints, resulting in uneven innovation. A mean of 3.11 falls within the “Moderate” category, reflecting varied risk-taking practices in innovation among birdcage artisans in Mekarsari Village, Selaawi District, with a pattern that is not yet uniform. A portion of artisans have undertaken product diversification, updated designs, and adopted modern production equipment to enhance value added and efficiency. Nevertheless, others remain hesitant due to limited capital, insufficient technical and market knowledge, and strong path dependence on inherited production traditions that favor established models.

These conditions indicate that the propensity to take innovative risks is strongly shaped by structural factors (access to finance, infrastructure, literacy) and cultural factors (design conventions, reliance on intermediaries) (Rosenbusch et al., 2011). Accordingly, stronger support is required through targeted training (e.g., design, process, and digital marketing), risk-tolerant microfinance schemes, and expanded market access such as via marketplaces so that innovation capacity and risk-taking can develop more consistently across the artisan ecosystem (Cui & Pan, 2015; Nikaido et al., 2015).

Table 2. Factor Risk-taking characteristics

No	Indikator	Mean	Stdev
1	Making changes	3.55	1.08
2	Learning	3.65	1.03
3	Making improvements	3.64	0.95
4	Innovating	3.11	1.07
5	The role of employees in improving the company	3.88	1.20
6	Having a plan	3.77	0.92
7	Reviewing the plan	3.80	0.93

Source: Primary Data (2025)

3.3 Proactiveness orientation

Descriptive statistics for Proactiveness Orientation (Table 3) indicate that the highest-scoring indicator “consistently keeping up with the latest technology” records a mean of 3.71 and a standard deviation of 0.89, suggesting that respondents’ perceptions of this indicator are the most consistent and homogeneous. A mean of 3.71 falls within the “High” category. Artisans perceive that keeping up with technology is not limited to physical production tools (e.g., engraving machines or modern finishing equipment) but also encompasses the adoption of digital marketing platforms, namely social media and e-commerce.

This proactive stance stems from the awareness that technology can enhance production efficiency, yield finer detail and greater precision, and improve quality consistency. On the marketing side, it is reflected in the use of social media and e-commerce to reach broader markets and respond more rapidly to evolving design trends (Cui & Pan, 2015; Trainor et al., 2014). Accordingly, the ability to actively learn and implement new technologies is not merely a matter of following trends, but a proactive strategy to improve quality, efficiency, and competitive advantage in the marketplace (García-Morales et al., 2007; Gnizy et al., 2014; Teece, 2007).

Conversely, the lowest-scoring indicator “always identifying opportunities arising from new technologies” shows a mean of 3.11 and a relatively high standard deviation of 1.17, indicating heterogeneous views: some artisans perceive themselves as already proactive, while many others have yet to demonstrate sufficient proactiveness. A mean of 3.11 falls within the “Moderate” category. In general, artisans construe opportunities at an operational level, focusing on expediting production and maintaining quality consistency. Implementations include the use of bamboo dryers during the rainy season, sanding machines to shorten processing time, and electric drills to accelerate perforation. However, this orientation has not broadly shifted toward leveraging more strategic opportunities. Ideally, birdcage artisans should optimize digital technologies through e-commerce and social media to expand market reach and offer online customized orders so that consumers obtain unique, higher value-added products (García-Morales et al., 2007; Gnizy et al., 2014; Teece, 2007).

Table 3. Factor Proactiveness Orientation

No	Indicator	Mean	Stdev
1	Keeping up with the latest technology	3.71	0.89
2	Seeing opportunities in new technology	3.11	1.17
3	Actively learning to use new technology	3.48	1.03
4	Seeking information about more advanced technology	3.17	1.18

No	Indicator	Mean	Stdev
5	Striving to create new things	3.29	1.09

Source: Primary Data (2025)

3.4 Relational capital skill

Descriptive statistics for Relational Capital Skill (Table 4) indicate that the highest-scoring indicator maintaining good relationships records a mean of 4.26 and the lowest standard deviation among all indicators (0.66), reflecting strong consistency and suggesting that relationship maintenance is well-ingrained in the prevailing work culture. A mean of 4.26 falls within the “Very High” category. Artisans perceive that maintaining good relationships is a key success factor involving multiple stakeholders. Strong ties with suppliers ensure the smooth flow and quality of raw materials. Good relationships with fellow artisans foster a collaborative environment for knowledge sharing and mutual support (Lawson et al., 2008; Shin et al., 2019). Meanwhile, engagement with the Mekarsari Village government can unlock access to training programs and various business facilitation measures. Overall, robust relational networks help build the ecosystem and ensure long-term business sustainability (Madsen, 2020).

Conversely, the lowest-scoring indikator facilitating communication shows a mean of 3.68 with a relatively high standard deviation of 1.19, indicating elevated scores yet noticeable heterogeneity in perceived ease of communication. A mean of 3.68 falls within the “High” category. Birdcage artisans perceive ease of communication as essential to building strong and sustainable relational capital (Indrayani et al., 2022). Consistent Krause et al., (2007); Lawson et al., (2008), effective communication with raw material suppliers, fellow artisans, and customers enables the development of trust, loyalty, and long-term partnerships. This not only facilitates the exchange of information on material availability and emerging design trends, but also accelerates problem resolution and the handling of customer feedback, ultimately creating strong personal connections (Gligor & Bozkurt, 2021; Yang et al., 2022).

Table 4. Factor Relational Capital Skill

No	Indicator	Mean	Stdev
1	Requesting criticism and suggestions	4.02	0.94
2	Understanding needs and expectations	4.06	0.80
3	Having specific criteria	3.82	1.09
4	Facilitating communication	3.68	1.19
5	Resolving complaints	4.00	0.89
6	Building long-term relationships	4.23	0.76
7	Maintaining good relationships	4.26	0.66
8	Specific criteria for monitoring performance	4.05	0.88
9	Product development role	3.86	1.07

Source: Primary Data (2025)

3.5 Coordination capability

Descriptive statistics for Coordination Capability (Table 5) indicate that the highest-scoring indikator facilitating communication records a mean of 3.68 with a standard deviation of 1.19, revealing noticeable heterogeneity among actors and suggesting that communication facilities and protocols should be strengthened and clarified to achieve more consistent coordination. A mean of 3.68 falls within the “High” category. Birdcage artisans perceive ease of communication as essential for building strong and sustainable relational capital. Effective communication with raw-material suppliers, fellow artisans, and customers enables the development of trust, loyalty, and long-term partnerships (Krause et al., 2007). This not only facilitates the exchange of information regarding material availability and emerging design trends, but also accelerates problem resolution and the handling of customer feedback, ultimately creating strong personal connections (Wang & Hu, 2020).

Conversely, the lowest-scoring indikator using delivery services shows a mean of 3.36 and the highest standard deviation (1.41), reflecting the greatest lack of uniformity; the utilization and quality of delivery services appear to vary substantially across artisans. A mean of 3.36 falls within the “Moderate” category. Most artisans report not using general third-party delivery services outside the village to mitigate potential product damage during transit. As an alternative, they prefer self-delivery or renting vehicles from local providers specialized in transporting birdcages. This option is the primary preference because it is viewed as safer and more effective in minimizing the risk of damage during shipment.

Table 5. Factor Coordination capability

No	Indicator	Mean	Stdev
1	Establishing regular communication	4.00	0.96
2	Communication network platform	3.42	1.10
3	Good customer relations	4.27	0.57
4	Proximity to supplier locations	4.53	0.64
5	Use of delivery services	3.36	1.41
6	Supply chain management	4.06	0.63
7	Supplier production plans	3.98	0.75
8	Customer production plans	4.02	0.73
Total		3.96	0.85

Source: Primary Data (2025)

4. CONCLUSION

Based on the discussion, the descriptive study of 66 birdcage artisans in Mekarsari Village reveals a profile of entrepreneurial SCM competence, with the highest-scoring indicators for each factor as follows innovation orientation “new technologies in new product development”, risk-taking characteristics “the role of employees in improving the company”, proactiveness orientation “keeping up with the latest technology”, relational capital skill “maintaining good relationships”, and coordination capability “proximity to supplier locations.” this pattern underscores artisans’ strengths in leveraging technology for product development, engaging

employees in continuous improvement, remaining alert to the latest technologies, maintaining robust relationships, and capitalizing on strategic proximity to suppliers within the same area to ensure smooth supply flows.

The lowest-scoring indicators are Innovation Orientation “Innovative product development”, Risk-Taking Characteristics “Innovating”, Proactiveness Orientation “Seeing opportunities in new technology”, Relational Capital Skill “Facilitating communication”, and Coordination Capability “Use of delivery services.” These findings indicate scope for improvement in the depth of product innovation (beyond mere technology adoption), the courage to undertake innovation, the ability to identify strategic opportunities from new technologies, the strengthening of communication governance/facilitation, and the optimization of competent delivery services to reduce product damage during shipment.

Overall, the Mekarsari ecosystem is supported by strong networks and well-orchestrated processes. However, accelerating product innovation, enhancing the exploration of technology/digital-based opportunities, and standardizing logistics remain priority areas. These findings imply the need to reinforce innovation orientation and proactiveness through training, mentoring, and e-business literacy, to establish product standards, and to develop safe shipping standard operating procedures to sustain competitive advantage in an increasingly competitive market. The results provide a contextual roadmap for prioritizing the development of entrepreneurial SCM competence within rural bamboo artisan clusters.

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REFERENCES

- Akbar, I., Muzaffar, M., & Cheema, K. ur R. (2014). Entrepreneurial Supply Chain Management Competence: Performance of Manufacturing Small and Medium Enterprises. *SSRN Electronic Journal*, 1(2), 39–46. <https://doi.org/10.2139/ssrn.2386969>
- Aloulou, W. J. (2019). Impacts of strategic orientations on new product development and firm performances: Insights from Saudi industrial firms. *European Journal of Innovation Management*, 22(2), 257–280.
- Arikunto, S. (2010). *Prosedur Penelitian Suatu Pendekatan Prakti*. Rineka Cipta.
- Barney, J., Wright, M., & Ketchen Jr, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management*, 27(6), 625–641.

- Batra, S., Sharma, S., Dixit, M. R., Vohra, N., & Gupta, V. K. (2015). Performance implications of industry appropriability for manufacturing SMEs. *Journal of Manufacturing Technology Management*, 26(5), 660–677. <https://doi.org/10.1108/JMTM-09-2013-0132>
- Borowski, P. F. (2021). Innovation strategy on the example of companies using bamboo. *Journal of Innovation and Entrepreneurship*, 10(1), 3. <https://doi.org/10.1186/s13731-020-00144-2>
- Cooper, R. G. (2011). Perspective: The Innovation Dilemma: How to Innovate When the Market Is Mature. *Journal of Product Innovation Management*, 28(s1), 2–27. <https://doi.org/10.1111/j.1540-5885.2011.00858.x>
- Cui, M., & Pan, S. L. (2015). Developing focal capabilities for e-commerce adoption: A resource orchestration perspective. *Information & Management*, 52(2), 200–209.
- Freel, M. S. (2000). Barriers to Product Innovation in Small Manufacturing Firms. *International Small Business Journal: Researching Entrepreneurship*, 18(2), 60–80. <https://doi.org/10.1177/0266242600182003>
- García-Morales, V. J., Ruiz-Moreno, A., & Llorens-Montes, F. J. (2007). Effects of Technology Absorptive Capacity and Technology Proactivity on Organizational Learning, Innovation and Performance: An Empirical Examination. *Technology Analysis & Strategic Management*, 19(4), 527–558. <https://doi.org/10.1080/09537320701403540>
- Ghozali, I. (2016). *Aplikasi analisis multivariete dengan program IBM SPSS 23* (8th ed.). Badan Penerbit Universitas Diponegoro.
- Gligor, D., & Bozkurt, S. (2021). The role of perceived social media agility in customer engagement. *Journal of Research in Interactive Marketing*, 15(1), 125–146. <https://doi.org/10.1108/JRIM-12-2019-0196>
- Gnizy, I., E. Baker, W., & Grinstein, A. (2014). Proactive learning culture. *International Marketing Review*, 31(5), 477–505. <https://doi.org/10.1108/IMR-10-2013-0246>
- Hsu, C.-C., Tan, K. C., Jayaram, J., & Laosirihongthong, T. (2014). Corporate entrepreneurship, operations core competency and innovation in emerging economies. *International Journal of Production Research*, 52(18), 5467–5483. <https://doi.org/10.1080/00207543.2014.915069>
- Hsu, C.-C., Tan, K. C., Laosirihongthong, T., & Leong, G. K. (2011). Entrepreneurial SCM competence and performance of manufacturing SMEs. *International Journal of Production Research*, 49(22), 6629–6649. <https://doi.org/10.1080/00207543.2010.537384>
- Hsu, C. C., Tan, K. C., & Laosirihongthong, T. (2014). Antecedents of SCM practices in ASEAN automotive industry: Corporate entrepreneurship, social capital, and resource-based perspectives. *International Journal of Logistics Management*, 25(2), 334–357. <https://doi.org/10.1108/IJLM-06-2012-0050>
- Indrayani, H., Satriya, C. Y., Rahma, A., & Sukma, R. H. O. M. (2022). Developing

- Social Capital in Reputation of Jepara as a Carving City. *Jurnal Perencanaan Pembangunan: The Indonesian Journal of Development Planning*, 6(1), 106–115. <https://doi.org/10.36574/jpp.v6i1.261>
- Krause, D. R., Handfield, R. B., & Tyler, B. B. (2007). The relationships between supplier development, commitment, social capital accumulation and performance improvement. *Journal of Operations Management*, 25(2), 528–545. <https://doi.org/10.1016/j.jom.2006.05.007>
- Laosirihongthong, T. (2011). Asean Automotive Supply Chain Management (Scm): Entrepreneurial Scm Competence and Performance. *The 11th International DSI and the 16th APDSI Joint Meeting, Taipei, Taiwan, 2011*.
- Lawson, B., Tyler, B. B., & Cousins, P. D. (2008). Antecedents and consequences of social capital on buyer performance improvement. *Journal of Operations Management*, 26(3), 446–460. <https://doi.org/10.1016/j.jom.2007.10.001>
- Liu, Y., & Wang, M. (2022). Entrepreneurial orientation, new product development and firm performance: the moderating role of legitimacy in Chinese high-tech SMEs. *European Journal of Innovation Management*, 25(1), 130–149. <https://doi.org/10.1108/EJIM-05-2020-0204>
- Madsen, H. L. (2020). Business model innovation and the global ecosystem for sustainable development. *Journal of Cleaner Production*, 247, 119102. <https://doi.org/10.1016/j.jclepro.2019.119102>
- Nikaido, Y., Pais, J., & Sarma, M. (2015). What hinders and what enhances small enterprises' access to formal credit in India? *Review of Development Finance*, 5(1), 43–52. <https://doi.org/10.1016/j.rdf.2015.05.002>
- O'Regan, N., Ghobadian, A., & Sims, M. (2006). Fast tracking innovation in manufacturing SMEs. *Technovation*, 26(2), 251–261. <https://doi.org/10.1016/j.technovation.2005.01.003>
- Oktrivina, A., Masri, I., Hatta, I. H., Rizky, Y., Mandagie, O., Mulyadi, M., & Mukri, C. (2023). Pengembangan Strategi Industri Kreatif Sangkar Burung di Kecamatan Bogor Barat Menghadapi Persaingan Global. *BERDAYA: Jurnal Pendidikan Dan Pengabdian Kepada Masyarakat*, 5(2), 179–186. <https://doi.org/10.36407/berdaya.v5i3.930>
- Purnomo, M., Permana, E., Qosasi, A., Febrian, A. F., & Miftahuddin, A. (2019). Entrepreneurial orientation in micro and small enterprises of traditional food centers in Bandung, West Java. *Binus Business Review*, 10(3), 167–174.
- Qosasi, A., Maulina, E., Purnomo, M., Muftiadi, A., Permana, E., & Febrian, F. (2019). The Impact of Information and Communication Technology Capability on the Competitive Advantage of Small Businesses. *International Journal of Technology*, 10(1), 167. <https://doi.org/10.14716/ijtech.v10i1.2332>
- Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing*, 26(4), 441–457.

- Shin, N., Park, S. H., & Park, S. (2019). Partnership-Based Supply Chain Collaboration: Impact on Commitment, Innovation, and Firm Performance. *Sustainability*, 11(2), 449. <https://doi.org/10.3390/su11020449>
- Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>
- Tharenou, P., Saks, A. M., & Moore, C. (2007). A review and critique of research on training and organizational-level outcomes. *Human Resource Management Review*, 17(3), 251–273. <https://doi.org/10.1016/j.hrmmr.2007.07.004>
- Trainor, K. J., Andzulis, J. M., Rapp, A., & Agnihotri, R. (2014). Social media technology usage and customer relationship performance: A capabilities-based examination of social CRM. *Journal of Business Research*, 67(6), 1201–1208. <https://doi.org/10.1016/j.jbusres.2013.05.002>
- Wang, C., & Hu, Q. (2020). Knowledge sharing in supply chain networks: Effects of collaborative innovation activities and capability on innovation performance. *Technovation*, 94–95, 102010. <https://doi.org/10.1016/j.technovation.2017.12.002>
- Yang, L., Huo, B., & Gu, M. (2022). The impact of information sharing on supply chain adaptability and operational performance. *The International Journal of Logistics Management*, 33(2), 590–619. <https://doi.org/10.1108/IJLM-11-2020-0439>
- Zhu, Z., & Zhao, J. (2011). The sources of e-business competitive advantages between travel agencies and online travel service firms in China. *International Journal of Information Systems and Change Management*, 5(2), 160–179. <https://doi.org/10.1504/IJISCM.2011.041513>