Exploring Individual Entrepreneurial Orientation and Its Dimensions: A Conceptual Paper

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Abstract - Entrepreneurship is a significant factor that directly and indirectly influences a nation's economy and plays a crucial role in shaping its economic landscape. The long-term economic development and success of any country depends on innovative approaches and entrepreneurial initiatives. This study aims to provide a literature review on individual entrepreneurial orientation (IEO), emphasizing the significance of its five dimensions: risk-taking, competitive aggressiveness, autonomy, proactiveness, and innovativeness. By so doing, this study contributes to the literature by addressing the initial stages of conceptual model building for IEO and its dimensions, specifically within the context of small and medium-sized enterprises (SMEs). Keywords: "Entrepreneurship", "SMEs", "Individual Entrepreneurial Orientation"

1. Introduction

Entrepreneurship is recognized as a significant engine of economic development (Khyareh & Amini, 2021; Munyo & Veiga, 2022) because it contributes to national wealth and prosperity, creates new job opportunities, and increases the variety of products and services available in the market (Galindo-Martín, Castaño-Martínez, & Méndez-Picazo, 2021; Uleanya, 2020). Entrepreneurs often act as incubators for new technologies and business models, driving advancements in their industries and generating spillover effects that benefit larger companies and the overall economy (Peprah & Adekoya, 2020). However, entrepreneurs face numerous challenges due to increased competition and rapid changes in the market. They encounter obstacles such as securing financial resources, navigating complex regulatory environments, and adapting to shifts in industry structures, consumer preferences, and market conditions. Given the challenges of conducting business today, entrepreneurial orientation (EO) is crucial for ensuring a company's success.

EO emphasizes the behaviours, styles, strategies, and processes of entrepreneurs (Lumpkin & Dess, 1996). For small and medium-sized enterprises (SMEs) that are growth-oriented, adopting EO appears to be crucial (Kiyabo & Isaga, 2020; Meekaewkunchorn et al., 2021), as it significantly contributes to their business success (Okoli, Nwosu, & Okechukwu, 2021). In this context, EO provides an opportunity for SME business owners to identify potential market prospects, and the pursuit of new opportunities enhances their differentiation from other enterprises (Lumpkin & Pidduck, 2021).

In prior research, most past research mainly focused on the EO, often considered a firm-level perspective rather than an individual-level perspective (Ali, Hilman, & Gorondutse, 2020; Nguyen, Nguyen, & Do, 2022). Wahyuni & Sara (2020) argued that EO has predominantly focused on the firm level due to its origins in strategic management and organizational behaviour theories. However, Clark et al. (2023) suggest that researchers should explore a new approach by examining individual entrepreneurial orientation (IEO). By directing attention to IEO, researchers could uncover valuable insights into the cognitive and behavioural dimensions of entrepreneurship, potentially revealing new pathways for cultivating entrepreneurial mindsets and enhancing entrepreneurial outcomes.

Developing an initial conceptual model for IEO in SMEs is crucial due to the significant impact IEO has on both the growth and sustainability of these businesses (Isichei, Agbaeze, & Odiba, 2020; Okoli, Nwosu, & Okechukwu, 2021). Research indicates that a well-defined IEO framework not only facilitates the understanding of entrepreneurial behaviour within SMEs but also enhances their ability to adapt, innovate, and respond to evolving market dynamics (Zarrouk et al., 2020). Establishing an IEO model equips SMEs with the strategic capabilities necessary for success in competitive markets. Empirical evidence demonstrates a positive correlation between high levels of EO and firm performance, enabling SMEs to effectively identify and seize new market opportunities (Farida et al., 2022; Kiyabo & Isaga, 2019). This emphasizes the necessity of developing structured frameworks that guide the practical implementation of IEO, thereby fostering entrepreneurial attributes within firms.

Therefore, by examining IEO in the context of SMEs, this study can contribute to refining existing entrepreneurship theories and models, leading to a more comprehensive understanding of the entrepreneurial process and its impact on organizational outcomes in smaller enterprises. Focusing on IEO in SMEs enables the development of more accurate

and tailored models that capture the unique dynamics and challenges faced by smaller enterprises in their entrepreneurial endeavours.

2. Literature Review

2.1. Individual Entrepreneurial Orientations (IEO)

The early foundation of conceptualization of EO was initiated by Miller (1983), who defined an *entrepreneurial firm* as one that undertakes somewhat risky ventures, is first to come up with 'proactive' innovations, beating competitors to the punch, and engages in product market innovation. Based on Miller's (1983) concept, they classified these three dimensions (risk-taking, proactiveness, and innovativeness) as a unidimensional construct called entrepreneurial strategic posture (ESP), suggesting this element is essential for the development performance of small firms to confront hostile environments.

The conceptualization of EO was then further analysed and explained by Lumpkin and Dess (1996), illustrating the construct of EO. They described EO as "the processes, practices, and decision-making activities that lead to a new entry." They clarified that EO is encompassed as a multidimensional construct consisting of five independent focal constructs: proactiveness, innovativeness, autonomy, risk-taking, and competitive aggressiveness, which has changed the direction of EO research, departing from previous concepts (Wales, Covin, & Monsen, 2020).

Although all five constructs are well known and conceptualized in the literature; the measurement, dimensionality, and nature of EO continue to be a significant issue and gap in the understanding of the term "EO," which results from insignificant consensual among researchers triggering a lack of clarity with respect to the definition of EO (Lumpkin & Pidduck, 2021; Wales et al., 2019; Wales, Covin, & Monsen, 2020). Most of the previous research studies more interested in highlighting the three-dimension framework rather than five-dimension framework (Wales et al., 2019; Wales, Covin, & Monsen, 2020). Therefore, this study will be using Lumpkin & Dess's (1996) five-dimensional framework as the main conceptualization for exploring the IEO on SMEs.

2.1.1. Risk taking

Risk-taking refers to the entrepreneur's ability to make decision-making that will jeopardize the strategic firms' resources by considering the environment (Lumpkin & Pidduck, 2021). Even though taking calculated risks reduces the probability of making a mistake, an entrepreneur must refrain from evading incessantly taking on challenges and risks, considering the predominant uncertainty in the environment in which they conduct business. Entrepreneurs are inevitably exposed to risk because they operate in an uncertain, unpredictable environment and bear ultimate responsibility for their decisions. Recently, Cuevas-Vargas, Parga-Montoya, & Fernández-Escobedo (2019) stated that risk-taking enables entrepreneurs to make the right decision because they can evaluate the nature of

their judgments even though they confront an uncertain circumstance. In other words, risk-taking refers to the entrepreneur's inclination to take bold actions instead of cautious ones (Basco, Hernández-Perlines, & Rodríguez-García, 2020). On top of that, risk-taking was originally an essential trait associated with entrepreneurship. According to several scholars, entrepreneurs tend to be more risk-tolerant and contradict non-entrepreneurs in their readiness apropos risks (Lago, Delgado, & Branco, 2018; Zaleskiewicz, Bernady, & Traczyk, 2020). Therefore, non-entrepreneurs may perceive a business opportunity to be risky, but entrepreneurs do not, as they possess more reliable information and knowledge to critically examine its risk (Kazmi, Khan, & Nabradi, 2017; McCarthy, Puffer, & Lamin, 2018; Munyanyi & Chimwai, 2019).

2.1.2. Proactiveness

Proactiveness refers to the individual's capability to forecast circumstances of the market needs and actions ahead, instead of waiting for the changes to take place and then responding (Lumpkin & Pidduck, 2021). Proactive describes the characteristics of those entrepreneurs who tend to search and explore opportunities in the new market, create and develop new products, processes, or technologies ahead of their competitors and aim to become leaders in their industry (Hossain et al., 2022). Proactive entrepreneurs continually strive to improve, look for new ways to achieve their goals, scan opportunities and threats in the environment, and anticipate the outcomes of their decisions (Wales et al., 2019). Thus, most entrepreneurs initiate their own business by scrutinizing an opportunity. Consequently, they tend to display a proactive personality, such as a proclivity for influencing their surroundings by identifying opportunities, demonstrating an effort, acting, and persisting until a significant change occurs (Basco, Hernández-Perlines, & Rodríguez-García, 2020). Proactive traits also may contribute the entrepreneurial success through the strategy chosen by the entrepreneur (Leonelli, Masciarelli, & Fontana, 2019; Li et al., 2020; Purba & Paundra, 2018). For example, proactive entrepreneurs take a prospector strategy, scanning their business environment for potential prospects, and concentrating on product development and market research.

2.1.3. Innovativeness

Innovativeness is one of the oldest characteristics of entrepreneurs, which refers to a person's willingness to generate and develop new processes and products. These innovative traits emphasize the individual's conscientiousness to create and invent new ideas, experiment, and develop new technologies, services, or products (McCarthy, Puffer, & Lamin, 2018; Vaillant & Lafuente, 2019). Moreover, innovativeness indicates an entrepreneur's tendency to support and engage in creativity, novelty, experimentation, and new processes that may result in novel and futuristic products, services, or technological processes (Ferreras-Méndez et al., 2021). According to several scholars, innovativeness is inextricably associated with entrepreneurship because entrepreneurs create and develop a combination of new sources by entering the market. In the EO context, innovativeness refers to facilitating the development of technological innovation along with the changes in the firm's product and process

strategies (Simic & Slavkovic, 2019). Since entrepreneurship and innovation are closely interdependent, it is no surprise that entrepreneurs are more innovative than non-entrepreneurs (Tominc, 2019). Consequently, entrepreneurs tend to create and produce original ideas more than non-entrepreneurs (Poblete & Mandakovic, 2020).

2.1.4. *Autonomy*

Autonomy is noted as the entrepreneur or a group of individuals within an organization, has the freedom to create and execute an entrepreneurial concept (Lumpkin & Pidduck, 2021). Based on an organization's content that offers high autonomy, people are typically granted the independence to propose a new idea and concept which unfettered restraint of corporate bureaucracy (Paulus, & Hermanto, 2022). From the entrepreneur's perspective, autonomy is the unimpeded traditions and norms to explore and pursue innovative ideas productively (Lumpkin & Pidduck, 2021). Entrepreneurs aim to evade bureaucracy as they engender more in unbridled environments (rules, procedures, social norms) to evince an intensive inclination for autonomy (Wales, Covin, & Monsen, 2020). These strategic dimensions or higher levels of autonomy encourage an individual or team not only to focus on solving the problem but also to figure out the problem and discover the ideal solution. In general, it relates to the capability and desire to pursue opportunities (Alvarez-Torres, Lopez-Torres, & Schiuma, 2019; Pratono, Ratih, & Arshad, 2018). Overall, this dimension of autonomous individuals has been recognized may influencing entrepreneurs to achieve their objectives instantaneously as they encounter fewer environmental constraints.

2.1.5. Competitive aggressiveness

Competitive aggressiveness refers to the firm's or an individual's intense strive to outperform and outmanoeuvre competitors within the industry or market, and it is described as 'characterized by a combative posture and a forceful response to competitors' actions' (Lumpkin & Pidduck, 2021). Competitive aggressiveness reflects the entrepreneur's propensity to confront and actively undermine competitors to dominate them in the marketplace (Wales et al., 2019). According to Paulus & Hermanto, (2022) Competitive aggressiveness encompasses reconfiguring how services, processes, and products are distributed, reconceiving the idea and concept of the product application, and outspending competitors. Competitive aggressiveness traits of entrepreneurs tend to become an aggressively head-to-head competitor, aiming for a large market share, extensively offering a price reduction, or heavily investing in marketing, quality and service, and industrial capacity (Clark et al., 2023; Wales et al., 2021).

2.2. Development initial stage conceptual model IEO in SMEs

Entrepreneurial Orientation (EO) has played a pivotal role in advancing entrepreneurship research. However, recent studies work highlights the critical need to differentiate between conventional EO frameworks and Individual Entrepreneurial Orientation (IEO) models.

This distinction is increasingly pertinent as entrepreneurs come to understand the distinct characteristics and motivators that drive entrepreneurial behavior on an individual scale.

The traditional EO framework, as defined in seminal works, consists of dimensions such as innovativeness, risk-taking, and proactiveness, which reflect organizational characteristics that drive performance. For instance, Miller's foundational work posits that these dimensions collectively inform a firm's pursuit of opportunities and competitive positioning in the market (Meekaewkunchorn et al., 2021). This framework primarily functions at the organizational level, interpreting entrepreneurial behavior as a strategic approach of the firm rather than an expression of individual characteristics (Gupta & Batra, 2016).

Conversely, IEO emphasizes the psychological aspects of entrepreneurship through the lens of individual characteristics and intentions (Clark et al., 2023). IEO encompasses traits such as individual innovativeness, self-efficacy, and proactive behaviour, which collectively define an individual's orientation towards entrepreneurship. Moreover, individuals with elevated IEO are more likely to demonstrate strong entrepreneurial intentions, as they perceive risks and opportunities in a manner distinct from those with only an organizational EO (Kowo & Akanmu, 2021). This indicates that while traditional EO influences organizational performance, IEO is essential for initiating entrepreneurial endeavours at the individual level.

Although both dimensions intersect, they underscore distinct mechanisms influencing outcomes. Traditional EO constructs focus on the collective strategies that firms employ to seize opportunities, whereas IEO emphasizes the intrinsic motivations that propel individuals toward entrepreneurial activities (Khan et al., 2022). The interplay between external market factors and internal psychological factors presents an integrated perspective that can enhance our understanding of entrepreneurship.

Moreover, IEO is a significant determinant of business performance, as it encapsulates the personal characteristics and behaviours of individual entrepreneurs that influence strategic decision-making (Hassan, Hussain et al., 2021). IEO encompasses dimensions such as proactiveness, innovativeness, autonomy, risk-taking, and competitive aggressiveness, which are integral in navigating competitive environments and harnessing business opportunities effectively (Musara & Nieuwenhuizen, 2020; Bilal et al., 2022). By establishing a formal model centred on IEO, SMEs can gain deeper insights into how these attributes influence performance metrics, ultimately striving for sustainability and growth.

Research indicates that a strong IEO positively correlates with enhanced performance in SMEs by fostering creativity, adaptability, and a proactive stance toward market changes (Fatima & Bilal, 2020; Manzano-García & Ayala-Calvo, 2020). IEO integration with broader entrepreneurial orientation (EO) frameworks illustrates how individual traits interplay with organizational strategies to influence overall firm success. Moreover, studies have shown that SMEs led by entrepreneurs with heightened IEO are more adept at

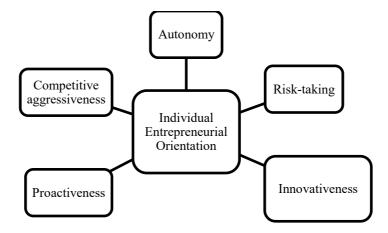
identifying and seizing market opportunities, which consequently leads to superior operational outcomes (Al Issa, 2020).

Additionally, the literature posits that fostering an IEO framework can enhance firms' dynamic capabilities, allowing SMEs to respond more effectively to changes in the marketplace (Abdelkareem, Battour, & Al-Awlaqi, 2022). By creating an initial model, SMEs delineate the key components of IEO and facilitate the establishment of pathways for innovation and competitive advantages derived from entrepreneurial behaviours (Karami & Tang, 2019; Wahyuni & Sara, 2020).

Moreover, integrating IEO within a structured model allows for the elucidation of mediating and moderating factors, which can propel research forward in identifying other variables that impact the relationship between and business performance (Cuevas-Vargas, Parga-Montoya, & Fernández-Escobedo, 2019; Anggraini et al., 2022). For instance, examining how external environments or internal competency frameworks interact with IEO can guide strategic initiatives that enhance the viability of SMEs (Raymond & Selamat, 2023). Therefore, developing a model for IEO can serve as a diagnostic tool for SMEs aiming to align their entrepreneurial attributes with their operational and strategic goals.

In conclusion, while traditional EO frameworks serve to explain organizational behaviours conducive to performance, IEO conceptual models capture the essence of individual entrepreneurial behaviour and its motivational traits. Understanding both approaches allows for a more comprehensive framework that not only enhances the performance of organizations but also promotes individual entrepreneurial intentions and actions.

Figure 1: Conceptual model of individual entrepreneurial orientation in SMEs



3. Conclusions

The initial conceptual model of individual entrepreneurial orientation (IEO) in small and medium-sized enterprises (SMEs) marks a significant advancement in comprehending the role of individual entrepreneurial behaviours within smaller organizational contexts. The conclusion of this study highlights the significant contribution made to the field of entrepreneurship research by developing an initial conceptual model of individual entrepreneurial orientation in SMEs. This conceptual model provides a framework for understanding how personal characteristics and organizational factors interact to influence entrepreneurial behaviour within SMEs. Future research can build upon this foundation to further explore the nuances of IEO and its impact on SMEs' performance and growth.

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References

- Abdelkareem, R., Battour, M., & Al-Awlaqi, M. (2022). Entrepreneurial Orientation, Dynamic Capabilities, and Business Processes Performance: Evidence from Egyptian SMEs. https://doi.org/10.21203/rs.3.rs-1557654/v1
- Al Issa, H. E. (2020). When grit leads to success: The role of individual entrepreneurial orientation. *Verslas: teorija ir praktika*, 21(2), 643-653.
- Ali, G. A., Hilman, H., & Gorondutse, A. H. (2020). Effect of entrepreneurial orientation, market orientation and total quality management on performance: Evidence from Saudi SMEs. Benchmarking: *An International Journal*, 27(4), 1503-1531.
- Alvarez-Torres, F. J., Lopez-Torres, G. C., & Schiuma, G. (2019). Linking entrepreneurial orientation to SMEs' performance. *Management Decision*, 57(12), 3364-3386.
- Anggraini, F., Yunilma, Y., Desiyanti, R., & Hakim, L. (2023). The impacts of intellectual capital and entrepreneurship orientation on business performance. *Jurnal Ekonomi Dan Bisnis*, 26(2).
- Atkinson, C., Lupton, B., Kynighou, A., & Antcliff, V. (2022). Small firms, owner managers and (strategic?) human resource management. *Human Resource Management Journal*, 32(2), 449-469.
- Basco, R., Hernández-Perlines, F., & Rodríguez-García, M. (2020). The effect of entrepreneurial orientation on firm performance: A multigroup analysis comparing China, Mexico, and Spain. *Journal of Business Research*, 113, 409-421.
- Bilal, A. R., Fatima, T., Iqbal, S., & Imran, M. K. (2022). I can see the opportunity that you cannot! A nexus between individual entrepreneurial orientation, alertness, and access to finance. *European Business Review*, 34(4), 556-577.
- Clark, D. R., Pidduck, R. J., Lumpkin, G. T., & Covin, J. G. (2023). Is It Okay to Study Entrepreneurial Orientation (EO) at the Individual Level? Yes!. *Entrepreneurship Theory and Practice*, 10422587231178885.

- Covin, J. G., & Slevin, D. P. (1986). The development and testing of an organizational-level 31 entrepreneurship scale. In R. Ronstadt, J. A. Hornaday, R. Peterson, & K. H. Vesper (Eds.), Frontiers of entrepreneurship research 1986 (pp. 628-639). *Wellesley, MA: Babson College*.
- Covin, J. G., & Wales, W. J. (2012). The Measurement of Entrepreneurial Orientation. Entrepreneurship: Theory & Practice, 36(4), 677-702.
- Covin, J. G., & Wales, W. J. (2019). Crafting high-impact entrepreneurial orientation research: Some suggested guidelines. *Entrepreneurship theory and practice*, 43(1), 3-18.
- Covin, J.G., Slevin, D. P. (1988). The influence of organization structure on the utility of an entrepreneurial top management style. *Journal of Management Studies* 25(3):217-234.
- Cuevas-Vargas, H., Parga-Montoya, N., & Fernández-Escobedo, R. (2019). Effects of entrepreneurial orientation on business performance: The mediating role of customer satisfaction—A formative–Reflective model analysis. *SAGE Open, 9(2), 2158244019859088*.
- Dess, G. G., & Lumpkin, G. T. (2005). The role of entrepreneurial orientation in stimulating effective corporate entrepreneurship. *Academy of Management Perspectives*, 19(1), 147-156.
- Eggers, F. (2020). Masters of disasters? Challenges and opportunities for SMEs in times of crisis. Journal of business Research, 116, 199-208.
- Fatima, T., & Bilal, A. R. (2020). Achieving SME performance through individual entrepreneurial orientation: An active social networking perspective. *Journal of Entrepreneurship in Emerging Economies*, 12(3), 399-411.
- Farida, F. A., Hermanto, Y. B., Paulus, A. L., & Leylasari, H. T. (2022). Strategic entrepreneurship mindset, strategic entrepreneurship leadership, and entrepreneurial value creation of SMEs in east Java, Indonesia: A strategic entrepreneurship perspective. *Sustainability*, 14(16), 10321.
- Ferreras-Méndez, J. L., Olmos-Penuela, J., Salas-Vallina, A., & Alegre, J. (2021). Entrepreneurial orientation and new product development performance in SMEs: The mediating role of business model innovation. *Technovation*, 108, 102325.
- Galindo-Martín, M. Á., Castaño-Martínez, M. S., & Méndez-Picazo, M. T. (2021). The role of entrepreneurship in different economic phases. *Journal of Business Research*, 122, 171-179.
- Gupta, V. K., & Batra, S. (2016). Entrepreneurial orientation and firm performance in Indian SMEs: Universal and contingency perspectives. *International Small Business Journal*, 34(5), 660-682.
- Hassan, A., Anwar, I., Saleem, I., Islam, K. B., & Hussain, S. A. (2021). Individual entrepreneurial orientation, entrepreneurship education and entrepreneurial intention: The mediating role of entrepreneurial motivations. *Industry and Higher Education*, 35(4), 403-418.
- Hossain, K., Lee, K. C., Azmi, I. B., Idris, A. B., Alam, M. N., Rahman, A., & Ali, N. M. (2022). Impact of innovativeness, risk-taking, and proactiveness on export performance in a developing country: Evidence of qualitative study. *RAUSP Management Journal*, 57(2), 165–181
- Howard, M. C., & Floyd, A. (2021). Reassessing passion and perseverance as dimensions of individual entrepreneurial orientation: A conceptual and empirical investigation into theory and measurement. *Entrepreneurship Research Journal*, (0), 000010151520200383.
- Hughes, M., & Morgan, R. E. (2007). Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth. *Industrial Marketing Management*, 36(5), 651–661.
- Isichei, E. E., Agbaeze, K. E., & Odiba, M. O. (2020). Entrepreneurial orientation and performance in SMEs. *International Journal of Emerging Markets*, 15(6), 1219-1241.

- Kazmi, S. Z. A., Khan, S., & Nabradi, A. (2017). What differentiates the entrepreneurs from non-entrepreneurs on nature and nurture?. *Applied Studies in Agribusiness and Commerce*, 11(3-4), 45-52.
- Karami, M., & Tang, J. (2019). Entrepreneurial orientation and SME international performance: The mediating role of networking capability and experiential learning. *International Small Business Journal*, 37(2), 105-124.
- Khan, M. A., Rathore, K., & Sial, M. A. (2020). Entrepreneurial orientation and performance of small and medium enterprises: Mediating effect of entrepreneurial competencies. *Journal of Commerce and Social Sciences (PJCSS)*, 14(2), 508-528.
- Khyareh, M. M., & Amini, H. (2021). Governance quality, entrepreneurship and economic growth. *Journal of Competitiveness*, 13(2), 41.
- Kiyabo, K., & Isaga, N. (2020). Entrepreneurial orientation, competitive advantage, and SMEs' performance: application of firm growth and personal wealth measures. *Journal of Innovation and Entrepreneurship*, 9, 1-15.
- Kowo, S. A., & Akanmu, P. M. (2021). The efficacy of entrepreneurship orientation on SMEs' performance. *Journal of Islamic Economic and Business Research*, 1(1), 40-58.
- Lago, M., Delgado, C., & Branco, M. C. (2018). Gender and propensity to risk in advanced countries: Comparison between entrepreneurs and non-entrepreneurs. *PSU Research Review*.
- Leonelli, S., Masciarelli, F., & Fontana, F. L. (2019). The impact of personality traits and abilities on entrepreneurial orientation in SMEs. *Journal of Small Business & Entrepreneurship, 1-26*.
- Li, C., Murad, M., Shahzad, F., Khan, M. A. S., Ashraf, S. F., & Dogbe, C. S. K. (2020). Entrepreneurial passion to entrepreneurial behavior: role of entrepreneurial alertness, entrepreneurial self-efficacy and proactive personality. *Frontiers in Psychology, 11*.
- 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.
- Lumpkin, G. T., & Pidduck, R. J. (2021). Global entrepreneurial orientation (GEO): An updated, multidimensional view of EO. In Entrepreneurial orientation: Epistemological, theoretical, and empirical perspectives (Vol. 22, pp. 17-68). *Emerald Publishing Limited*.
- Lumpkin, G. T., & Dess, G. (1996). Clarifying the entrepreneurial orientation construcy and linking it to performance. *Academy of Management Review*, 21(1), 135–172.
- Mallinguh, E., Wasike, C., & Zoltan, Z. (2020). Technology acquisition and smes performance, the role of innovation, export and the perception of owner-managers. *Journal of Risk and Financial Management*, 13(11), 258.
- Manzano-García, G., & Ayala-Calvo, J. C. (2020). Entrepreneurial orientation: Its relationship with the entrepreneur's subjective success in SMEs. *Sustainability*, 12(11), 4547.
- Mazzarol, T., Reboud, S., Mazzarol, T., & Reboud, S. (2020). Entrepreneurs vs. Owner-managers. Small Business Management: Theory and Practice, 31-68.
- McCarthy, D. J., Puffer, S. M., & Lamin, A. (2018). Entrepreneurial orientation in a hostile and turbulent environment: Risk and innovativeness among successful Russian entrepreneurs. *European Journal of International Management*, 12(1-2), 191-221.
- Meekaewkunchorn, N., Szczepańska-Woszczyna K., Muangmee, C., K., & N., & Khalid, B. (2021). Entrepreneurial orientation and SME performance: The mediating role of learning orientation. *Economics and Sociology*, 14(2), 294-312.
- Miller D. (1983). The Correlates of Entrepreneurship in three types of firms. *Management Sciences*, 29(7), 770 791.

- Munyanyi, W., & Chimwai, L. (2019). Risk attitude, risk perception and risk management strategies adoption in Zimbabwean small and medium enterprises. *Journal of Management and Economic Studies*, 1(2), 53-68.
- Munyo, I., & Veiga, L. (2022). Entrepreneurship and Economic Growth. *Journal of the Knowledge Economy*, 1-18.
- Musara, M., & Nieuwenhuizen, C. (2020). Informal sector entrepreneurship, individual entrepreneurial orientation and the emergence of entrepreneurial leadership. *Africa Journal of Management*, 6(3), 194-213.
- Nguyen, A., Nguyen, P. V., & Do, H. (2022). The effects of entrepreneurial orientation, social media, managerial ties on firm performance: Evidence from Vietnamese SMEs. *International Journal of Data and Network Science*, 6(1), 243-252.
- Okoli, I. E. N., Nwosu, K. C., & Okechukwu, M. E. (2021). Entrepreneurial orientation and performance of selected SMEs in Southeast, Nigeria. *European Journal of Business and Management Research*, 6(4), 108-115.
- Paulus, A. L., & Hermanto, Y. B. (2022). The competitive advantage of furniture SMEs in East Java: The role of aggressiveness in entrepreneurship orientation. *Economies*, 10(6), 139.
- Peprah, A. A., & Adekoya, A. F. (2020). Entrepreneurship and economic growth in developing countries: Evidence from Africa. *Business Strategy & Development*, 3(3), 388-394.
- Poblete, C., & Mandakovic, V. (2020). Experts in entrepreneurship: opportunities and context evaluation from the perspective of entrepreneurs and non-entrepreneurs. *Journal of Entrepreneurship in Emerging Economies*.
- Raymond, Y., & Selamat, F. (2023). The impact of entrepreneurial orientation on business performance through entrepreneurial competency as mediation variable: a study on smes in culinary sector in Jakarta. *International Journal of Application on Economics and Business*, 1(2), 103-111.
- Pratono, A. H., Ratih, R. V. S., & Arshad, D. (2018). Does entrepreneurial autonomy foster SME growth under technological turbulence? The empirical evidence from Indonesia. *Journal of Technology in Behavioral Science*, 3(3), 170-178.
- Purba, D. E., & Paundra, J. (2018). Core Self-Evaluations and Innovative Behavior Among Micro-Entrepreneurs: The Mediating Effect of Proactive Personality. *Psychological Research on Urban Society*, 1(1), 55-64.
- Rahman, A., Civelek, M., & Kozubíková, L. (2016). Proactiveness, competitive aggressiveness and autonomy: a comparative study from the Czech Republic. Equilibrium. *Quarterly Journal of Economics and Economic Policy*, 11(3), 631-650.
- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: Cumulative empirical evidence. *Entrepreneurship Theory and Practice*. 33. 761-788.
- Simic, M., & Slavkovic, M. (2019). The role of human capital in entrepreneurial innovativeness: Evidence from Serbia. Facta Universitatis, Series: *Economics and Organization*, 049-058.
- Surya, B., Menne, F., Sabhan, H., Suriani, S., Abubakar, H., & Idris, M. (2021). Economic growth, increasing productivity of SMEs, and open innovation. *Journal of Open Innovation: Technology, Market, and Complexity, 7(1), 20.*
- Tominc, P. (2019). Perceived Innovativeness and Competitiveness of Early-Stage Entrepreneurs. *Croatian Economic Survey, 21(1), 87-108.*
- Uleanya, C. (2020). Roles of entrepreneurship as a tool to improve economic development: Case of job creation in developing nations. *Journal of Entrepreneurship Education*, 23(6).
- Vaillant, Y., & Lafuente, E. (2019). Entrepreneurial experience and the innovativeness of serial entrepreneurs. Management Decision. *Management Decision*, 57(11), 2869-2889.

- Wahyuni, N. M., & Sara, I. M. (2020). The effect of entrepreneurial orientation variables on business performance in the SME industry context. *Journal of Workplace Learning*, 32(1), 35-62.
- Wales, W., Gupta, V. K., Marino, L., & Shirokova, G. (2019). Entrepreneurial orientation: International, global and cross-cultural research. *International Small Business Journal*, 37(2), 95-104.
- Wales, W., Shirokova, G., Beliaeva, T., Micelotta, E., & Marino, L. (2021). The impact of institutions on the entrepreneurial orientation-performance relationship. *Global Strategy Journal*, 11(4), 656-685.
- Wales, W. J., Covin, J. G., & Monsen, E. (2020). Entrepreneurial orientation: The necessity of a multilevel conceptualization. *Strategic Entrepreneurship Journal*, 14(4), 639-660.
- Zaleskiewicz, T., Bernady, A., & Traczyk, J. (2020). Entrepreneurial risk taking is related to mental imagery: A fresh look at the old issue of entrepreneurship and risk. *Applied Psychology*, 69(4), 1438-1469.
- Zarrouk, H., Sherif, M., Galloway, L., & El Ghak, T. (2020). Entrepreneurial orientation, access to financial resources and SMEs' business performance: The case of the United Arab Emirates. *Journal of Asian Finance, Economics and Business*, 7(12), 465-474.