JOURNAL OF BUSINESS AND SOCIAL SCIENCES
eISSN:2805-5187 | Vol.2025, Issue 1, No.12

From Crisis to Competitiveness: A Schumpeterian Perspective on Entrepreneurial Orientation and SME Sustainability in Malaysia

Lim Siok Kian Cathy*, Yeo Chu May Amy, Yip Mum Wai, Tay Lee Chin

Faculty of Accountancy, Finance and Business, Tunku Abdul Rahman University of Management and Technology, Jalan Genting Klang, Setapak, 53300, Kuala Lumpur, Malaysia

***Email**: sklim@tarc.edu.my

Abstract

Small and medium-sized enterprises (SMEs) form the backbone of Malaysia's economy but continue to face high failure rates due to market volatility, resource limitations, and technological disruptions. The COVID-19 crisis further intensified these challenges, exposing structural weaknesses that threaten both performance and survival. While Entrepreneurial Orientation (EO) has long been recognised as a key driver of business success, the effectiveness of its dimensions: innovativeness, proactiveness, and risk-taking, in ensuring post-crisis sustainability remains underexplored from a Schumpeterian perspective. This study investigates the relationship between EO dimensions and firm performance among Malaysian SMEs, focusing on how entrepreneurial behaviour contributes to competitiveness in the aftermath of crisis. Using data analysed through IBM SPSS and AMOS, the results reveal that only risk-taking shows a significant negative effect on firm performance, whereas innovativeness and proactiveness are not significant predictors. These findings suggest that excessive or unmanaged risk may weaken firm resilience in volatile environments, while innovation and proactive strategies may require longer time horizons to yield benefits. By framing the analysis within Schumpeter's theory of innovation and creative destruction, this study provides empirical insights into how SMEs can transition from crisis to competitiveness. It highlights the importance of balanced entrepreneurial behaviour, where calculated risk-taking, continuous learning, and adaptive strategies are essential for long-term sustainability in uncertain economic conditions.

Keywords

Entrepreneurial Orientation (EO), SME Performance in Malaysia, Schumpeter's Theory of Innovation (STI)

Submission: 13 August 2025; **Acceptance:** 17 October 2025 **Available online:** October 2025

Introduction

Small and Medium-sized Enterprises (SMEs) are critical to Malaysia's economic vitality, contributing significantly to employment and GDP. According to the Department of Statistics, SMEs account for 98.5% of the country's businesses, contribute 38.3% to the national GDP, and employ two-thirds of the workforce (Department of Statistics Malaysia, 2021). The Malaysian government has implemented various initiatives to promote the development and sustainability of SMEs, recognising their strategic importance in the 21st-century globalised economy (Ministry of Economy, 2023; Marchese & Potter, 2018). These efforts are particularly crucial given that SMEs constitute over 90% of the business community, employ 60-70% of the workforce, and contribute 55% to the Gross Domestic Product in developing nations (Adenan et al., 2024).

Despite their significant contributions, Malaysian SMEs face unique challenges, including intense competition, limited access to finance, and difficulties in adopting new technologies and sustainable practices such as ESG (Sidek et al., 2019; Salin et al., 2023). Such challenges, coupled with a high failure rate estimated at 60% for Malaysian SMEs, necessitate a rigorous investigation into strategic orientations that can mitigate risks and foster long-term viability (Umbaris et al., 2020). The challenges Malaysian SMEs face in adopting ESG reporting, such as limited expertise and financial resources, underscore the importance of strategic alignment with entrepreneurial orientation to overcome these hurdles and capitalise on emerging opportunities for sustainable business practices (Adenan et al., 2024).

To thrive in today's highly competitive business environment, SMEs must cultivate a strong EO, which includes a willingness to innovate, take risks, and be proactive (Chelliah et al., 2023). Research from various contexts supports the idea that fostering EO can significantly impact business success (Issau et al., 2021). Study found that integrating quality and innovation strategies helped Indian SMEs achieve global sustainability (Naruetharadhol et al., 2024). Similarly, Malaysian SMEs can leverage entrepreneurial orientation to navigate market complexities and enhance their competitive edge, especially by embracing sustainable practices (Das & Rangarajan, 2020).

Several studies highlight that EO is critical to SME success (Alam et al., 2022; Hamdan & Alheet, 2020; Abdulrab et al., 2020). This factor drives business performance by fostering innovation (Adam & Alarifi, 2021; Bahta et al., 2020). Despite the acknowledged importance of SMEs in Malaysia's economic framework, their performance remains a subject of considerable scrutiny and concern (SME Corporation Malaysia, 2021). There has been a lack of progress in the performance of SMEs, despite the government's dedicated initiatives to cultivate an environment conducive to entrepreneurship and innovation (SME Corporation Malaysia, 2021). EO effect on the performance of business (Asad et al., 2022; Chen et al., 2020), there remains a lack of research

investigating these relationships within the specific context of Malaysian SMEs, particularly in emerging market conditions (Bezerra et al., 2024; Mohammad & Wasiuzzaman, 2021).

The ongoing digital transformation and the increasing emphasis on sustainability further amplify the importance of these internal capabilities, compelling SMEs to strategically align their innovation efforts with market demands and environmental considerations (Tolossa et al., 2024; Jaini & Hussin, 2019; Bamgbade et al., 2017). Furthermore, the integration of Environmental, Social, and Governance (ESG) principles is increasingly recognised as a crucial driver for long-term resilience and competitive advantage among Malaysian SMEs, necessitating a deeper examination of how these practices intersect with entrepreneurial orientation and innovation to foster sustainable performance (Adenan et al., 2024). This strategic emphasis on sustainability also positions SMEs to meet better evolving regulatory requirements and stakeholder expectations, ultimately improving their overall resilience and attractiveness to investors (Adenan et al., 2024; Salin et al., 2023).

The COVID-19 pandemic has substantially influenced small enterprises, resulting in the closure of businesses. The researcher found that business that can innovate and adapt to change survive and thrive (Resmi et al., 2020). The pandemic's adverse effects on SMEs, including widespread salary reductions, layoffs, and bankruptcies, further accentuate the urgency of understanding how entrepreneurial orientation and innovation capabilities can be leveraged to mitigate such vulnerabilities (Chen et al., 2022). The Malaysian Global Innovation and Creativity Center projected that approximately 40% of SMEs would cease operations if the COVID-19 pandemic persisted for three to six months, underscoring the critical need for robust innovation and adaptive strategies (Poon & Tung, 2022).

Hence, this research is strategically designed to address the influence of EO and SME performance within the Malaysian economic landscape. This study seeks to address several key research questions related to the performance of SMEs in Malaysia. It explores the relationship of EO impacts on SME performance. The present study is significant in examining the relationship between EO and performance within the context of SMEs in Malaysia (Widyanti & Mahfudz, 2020). This study aims to provide a comprehensive understanding of how these factors interact to drive the growth and sustainability of SMEs, offering critical insights for policymakers and business leaders (Lim & Teoh, 2021).

Literature Review

SMEs are widely recognised as the backbone of economies, contributing significantly to innovation, employment, and economic growth (Mustapa et al., 2022). In Malaysia, SMEs play a central role in driving technological advancements and providing adaptability in a rapidly

changing global economy (Ministry of Economy, 2023; Bicocchi et al., 2019; Marchese & Potter, 2018). Despite their importance, Malaysian SMEs face persistent challenges such as resource constraints and market access barriers (Chowdhury et al., 2021). These limitations highlight the need to strengthen EO as a strategic lever for competitiveness and sustainability (Utomo & Susanta, 2021). Furthermore, the dynamic environment necessitates that SMEs in Malaysia enhance their capacity to move beyond being mere followers and offer distinct and unique products (Mohezar et al., 2020).

EO represents a firm's strategic posture, defined by innovativeness, proactiveness, and risk-taking (Makhloufi et al., 2021; Covin & Slevin, 1989). Studies show that SMEs with strong EO are more likely to invest in innovation, anticipate market shifts, and pursue opportunities that contribute to superior performance outcomes (Bezerra et al., 2024; Wiklund & Shepherd, 2021). Empirical evidence further demonstrates that EO enhances a firm's innovation capacity by fostering creativity, risk-taking, and proactive decision-making, which are crucial for SMEs to remain competitive in dynamic environments (Isichei et al., 2020; Basco et al., 2019). EO is a pivotal strategic orientation that enables SMEs to navigate competitive pressures and capitalise on emerging opportunities, fostering sustainable growth and enhanced performance (Adenan et al., 2024; Ramdan et al., 2022).

The COVID-19 pandemic significantly disrupted businesses globally, and Malaysian SMEs were no exception (Ha et al., 2021). Many faced severe operational and financial constraints due to movement restrictions, supply chain disruptions, and shifting consumer demands (Mamun et al., 2022). SMEs with limited digital infrastructure and cash flow reserves were particularly vulnerable (Frantika et al., 2022). Firms that had embraced EO through proactive responses, new product development, or risk-taking ventures were better positioned to adapt and pivot their strategies (Koporčić et al., 2025). These actions included exploring alternative supply chains, launching digital platforms, and entering new markets (Choi et al., 2020). EO acted as a guiding mindset that enabled firms to recognize crisis-driven opportunities rather than view the pandemic purely as a threat (Peñarroya-Farell & Miralles, 2022).

COVID-19 was a global stress test that validated theoretical assumptions about the relationship between EO, innovation, and performance (Forliano et al., 2022). The crisis forced Malaysian SMEs to confront their strategic limitations while highlighting the importance of strategic agility (Mamun et al., 2022). Those that demonstrated high EO managed to survive and, in some cases, emerge stronger (Mamun et al., 2022).

In the context of entrepreneurial orientation, the attribute of innovativeness plays a vital role in enhancing firm performance and growth (Wu et al., 2024). A culture that promotes innovation strengthens an organisation's tendency to be innovative, thereby reinforcing the positive relationship between entrepreneurial drive and market orientation (Shaher & Ali, 2020).

Innovativeness is widely recognised as a critical factor for achieving organisational success, as both creativity and innovation are key drivers of entrepreneurial orientation among entrepreneurs (Akumbom & Vukenkeng, 2024). Furthermore, entrepreneurial orientation and innovation are essential for attaining competitive advantage and sustaining long-term success, particularly in the dynamic environment shaped by the Fourth Industrial Revolution (Cheng et al., 2025).

Proactiveness represents another crucial dimension of entrepreneurial orientation, reflecting a forward-looking mindset and a willingness to engage in innovative or new-venture activities (Wu et al., 2024). It is considered a strategic posture that signifies a firm's readiness to compete aggressively and act ahead of market trends (Eggers et al., 2018). The proactive component of entrepreneurial orientation significantly influences business performance, particularly through its impact on functional outcomes (Franczak et al., 2023). Research further indicates that proactiveness predicts entrepreneurial tendencies and behaviour, underscoring its educational implications in shaping entrepreneurial mindsets (Wu et al., 2024). The relationship between entrepreneurial orientation and business performance especially within the context of microenterprise growth highlights the importance of proactiveness as a foundation for improving performance and fostering innovation (Wu et al., 2024).

Risk-taking has also been extensively examined in relation to entrepreneurial orientation and business performance (Wu et al., 2024). The literature consistently establishes a strong link between risk-taking propensity and entrepreneurship, emphasising its role in entrepreneurial goal formation (Franczak et al., 2023). Ma (2024) demonstrated that risk-taking propensity, together with proactiveness, moderates the relationship between green creativity and green entrepreneurship, illustrating its significance in entrepreneurial pursuits. Researchers have explored how entrepreneurship education influences the financial risk propensity of university students, further linking entrepreneurial development with risk-taking behaviour (Hussain et al., 2021). Bernardus et al. (2023) found that the inclination to take risks mediates the relationship between experiential learning and entrepreneurial mindset, reinforcing the importance of risk-taking in cultivating entrepreneurial traits (Bandera et al., 2018). However, Kihm and Kamal (2020) challenged the assumption that an entrepreneurial approach always results in higher risk, suggesting a more nuanced relationship between risk-taking and entrepreneurial orientation (Zichella, 2017). Perlines et al. (2019) conceptualised entrepreneurial orientation as an integration of innovativeness, proactiveness, and risk-taking, highlighting the multidimensional and interdependent nature of these attributes (Niemand et al., 2020).

The following hypotheses are proposed:

H1: Innovativeness has a positive effect on the performance of SMEs.
H2: Proactiveness has a positive effect on the performance of SMEs.
H3: Risk-taking has a positive effect on the performance of SMEs.

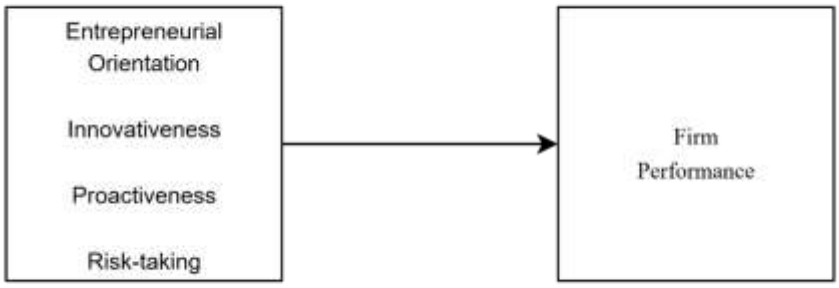

Figure 1: Research Model

Schumpeter's Theory of Innovation (STI)

Schumpeter's Theory of Innovation (STI) is widely acknowledged as a crucial element of economic progress (Langroodi, 2021). The concept entails replacing current products and processes with new and enhanced innovations, resulting in the dynamic reshaping of the economic environment (Mehmood et al., 2019). Entrepreneurial efforts drive this process to improve efficiency, quality, and cost-effectiveness, resulting in the obsolescence of established enterprises and technology (Mushangai, 2023). Hence, this research applied the Theory of Innovation to focus on how SME's innovativeness, proactiveness, and risk-taking influence their firm's innovation capabilities and, consequently, their performance. This dynamic, often termed "creative destruction," posits that innovation is not merely an incremental improvement but a transformative force that reconfigures markets and industries, fundamentally altering competitive landscapes (Costa et al., 2023). This theoretical framework is particularly salient for understanding the strategic imperatives of Small and Medium-sized Enterprises in Malaysia, as it underscores how their capacity for innovation directly impacts their survival and growth in a rapidly evolving global market (Ramdan et al., 2022).

According to Schumpeter's theory, innovation is an ongoing process that introduces new goods, production processes, and organisational forms. This translates to the idea that innovation capabilities within SMEs are crucial for their performance and growth (Odwaro et al., 2022; Kamalrulzaman et al., 2021). This is reflected in how SMEs in Malaysia might adopt new technologies or business models, disrupting traditional practices but leading to improved performance. Specifically, firm process innovativeness, such as the adoption of lean techniques, significantly influences environmental sustainability adoption and overall performance in Malaysian firms (Wang et al., 2021).

Schumpeter posits that innovation is the principal catalyst for economic transformation and advancement in capitalist nations (Hindmoor, 2008). He highlighted the significance of the entrepreneur in delivering groundbreaking ideas that challenge established markets and

technologies, consequently paving the way for the emergence of fresh economic prospects (Jiříček & Dostálová, 2020). This process ultimately results in replacing outmoded technologies and restructuring industries (Xing & Sharif, 2020; Bamgbade et al., 2017). STI also emphasises the pivotal function of credit creation in enabling innovation and economic progress (Caiani et al., 2014). Scholars highlighted the crucial role of innovative entrepreneurs in driving economic growth, emphasising the importance of technological advancements and how they influence the general functioning of the economy (Jiříček & Dostálová, 2020). Schumpeter's contributions have significantly impacted evolutionary economics, which recognises innovation as an internal component that propels economic advancement (Eggink, 2013).

The literature provides a foundational mathematical framework for analysing Schumpeter's theory on the growth of SMEs within the context of the "innovation and capital paradigm" (Ren & Yuan, 2022). Kamalrulzaman et al. (2021) have utilised STI to create measures for firms' innovation capacities by examining several aspects of innovation. The research emphasises the crucial significance of innovation in improving the competitiveness and sustainability of SMEs (Guo-xiang et al., 2020). Schumpeter's innovation theory describes the entrepreneur as the primary driver for economic advancement, possessing the ability to convert ideas into profitable commercial endeavors that disrupt the existing order (Vaz-Curado & Mueller, 2019). This entrepreneurial endeavor plays a vital role in promoting competition and fostering the implementation of innovative methods in various sectors, improving overall company performance and contributing to economic growth (Costin et al., 2019).

Schumpeter highlighted that the entrepreneur's tendency to undertake risks and allocate resources towards novel technologies distinguishes between prosperous organisations and those that remain stagnant (Shkurat & Temerbek, 2020). This differentiation between the economy's cyclic flow and the dynamic economic development process emphasises the need for ongoing innovation to prevent stagnation (Günar & Doğan, 2020; Sebayang et al., 2022). This viewpoint is especially pertinent in the swiftly evolving economic environment, where technological progress and globalisation are restructuring businesses and generating new market dynamics (Lipieta, 2018).

Schumpeter's theory also posited that to foster innovation, organisations must establish conducive environments that facilitate imaginative thinking and the execution of novel concepts. This enables firms to effectively adapt to evolving market conditions and cultivate a climate that nurtures innovative ideas, ultimately enhancing firm performance (Caputo & Ayoko, 2021). Entrepreneurs are frequently regarded as people who stimulate change inside companies, and their capacity to introduce new ideas is greatly affected by the organisational environment in which they work (Henrekson et al., 2023). Studies suggest that companies that possess flexibility and adaptability are able to promptly react to market shifts and technological progress, which is crucial for maintaining a competitive edge in the current rapidly evolving business landscape (Caputo & Ayoko, 2021).

Within the framework of STI, process innovation represents a fundamental mechanism of "creative destruction," whereby firms adopt new or significantly improved production, delivery, or operations methods to replace outdated practices. (Costa et al., 2023). By introducing lean manufacturing, automation, or digitalised workflows, firms can reduce costs, enhance efficiency, and improve product quality, thereby reshaping competitive dynamics. (Abreu et al., 2024). In the SME context, process innovation strengthens operational performance and contributes to sustainability by enabling energy-efficient systems, waste reduction, and environmentally responsible supply chains (Lin & Chen, 2021). This transformative approach aligns with Schumpeter's notion that innovation disrupts existing structures while simultaneously creating new opportunities for growth and resilience (Sossa et al., 2024) This is particularly relevant for service-oriented innovations, which, despite previous research focusing on new service development and process innovation, still present challenges in clear operationalisation due to their problematic outcomes (Channa et al., 2020). Furthermore, integrating process innovations often necessitates re-evaluating organisational structures and strategic decisions, aligning with contingency theory, which posits that the dynamism of its operational environment influences an organisation's strategic choices (Channa et al., 2020).

Complementing this is product innovation, which in STI is viewed as a powerful driver of market transformation (Pacheco-Cubillos et al., 2024). Introducing new or significantly improved goods and services challenges established offerings, redefines consumer preferences, and opens access to new markets. Product innovation allows SMEs to move beyond price competition by differentiating their offerings, capturing niche markets, and responding proactively to evolving customer demands (Anzules-Falcones & Novillo-Villegas, 2023). In Malaysia, SMEs that innovate in products, whether by integrating digital technologies into traditional services or creating eco-friendly alternatives embody Schumpeter's vision of entrepreneurs who disrupt established markets to generate fresh economic opportunities (Mohamad et al., 2022) Through product innovation, SMEs contribute not only to their own survival and competitiveness but also to broader economic progress, consistent with Schumpeter's view of innovation as the engine of capitalist development (Osiyevskyy et al., 2025)

Methodology

This study employed a quantitative, cross-sectional research design to investigate the relationships among EO and SME performance in Malaysia. In line with prior entrepreneurship research, a structured questionnaire survey was chosen as the primary data collection instrument to gather standardized responses for statistical analysis. The focus on EO as a driver of firm outcomes is grounded in STI. The study provides a snapshot of how EO relates to performance outcomes, which are critical for the long-term survival of these firms.

The target population for the study was Malaysian SMEs across various industries. The respondents were key decision-makers in these firms (owners, C-suite executives, general managers, and other senior managers) with comprehensive knowledge of their firm's strategies and performance. Using Krejcie and Morgan's (1970) sample size guidelines for a large population, a target sample of 398 SME executives was determined, corresponding to a 95% confidence level and 5% margin of error. A non-probability sampling strategy was implemented in two stages. First, purposive sampling was used to deliberately recruit participants holding senior positions, to ensure they could provide informed insights on EO and firm performance. This method ensured that data were collected from individuals capable of reporting on their firms' strategic orientations and innovation activities. To improve sector and regional representation, efforts were made to include SMEs from different industries and locations within Malaysia. In the second stage, a snowball sampling technique was employed to increase the sample size if needed: initial respondents were asked to refer other qualified SME leaders in their network. This combination of purposive and snowball sampling helped achieve a final sample of approximately 398 SME respondents, exceeding the initial target and enhancing the statistical power of the analysis.

Data were collected through a self-administered structured questionnaire distributed online. The survey was implemented via Google Forms, which allowed cost-effective and wide-reaching data gathering from geographically dispersed respondents. A multi-channel approach was used to maximise response rates: personalised email invitations were sent to potential participants, followed by reminders; additionally, the survey link was shared through mobile messaging apps (e.g., WhatsApp) and posted in SME-oriented social media groups or forums. This approach leveraged professional networks and online communities to reach various SME owners and managers. Participation was voluntary, and respondents were assured of confidentiality. Before full deployment, the questionnaire and study procedure were reviewed and approved for ethical compliance, ensuring that respondents' rights and data privacy were protected (e.g., through informed consent and secure data handling).

The research instrument was a structured questionnaire divided into two sections. Section A captured demographic and firm information (e.g., respondent's age, position, firm size, industry) via checklist items. Section B contained items measuring the primary constructs: entrepreneurial orientation, innovation capabilities, and SME performance. All measurement items were closed-ended statements assessed on a five-point Likert scale (1 = "strongly disagree" to 5 = "strongly agree"). All constructs in this study were measured with established multi-item scales adapted from prior research. EO was measured by an 18-item scale covering its three dimensions – innovativeness, proactiveness, and risk-taking. These items were adapted from the seminal EO scale by Covin and Slevin (1989) and a later refinement by Mahmood et al. (2013). Respondents indicated how much their firm favors new ideas, acts proactively in the market, and takes calculated risks. A higher score reflects a stronger entrepreneurial strategic posture.

All scale items were contextualised to the Malaysian SME environment while preserving their original meaning. The use of established scales helps ensure the validity of the measurements' content. Additionally, incorporating multiple items per construct allows for assessing each construct's reliability and validity through statistical analysis.

Analysis and Results

The collected survey data were analysed using IBM SPSS and AMOS software. First, data cleaning and screening were performed to handle any missing responses and to detect outliers, ensuring the integrity of subsequent analyses. Then, descriptive statistics (means, standard deviations, frequencies) were computed to summarise the sample characteristics and give an overview of the distributions of EO and firm performance variables. Next, a two-step approach was adopted for hypothesis testing using Structural Equation Modeling (SEM). In the measurement model stage, the reliability and validity of each construct were evaluated. Internal consistency reliability was confirmed with Cronbach's alpha and Composite Reliability (CR) coefficients, with values above 0.70 indicating acceptable reliability. Convergent validity was assessed by examining factor loadings and the Average Variance Extracted (AVE) for each construct, requiring AVE values $\geqslant 0.50$. Discriminant validity was verified using the Fornell–Larcker criterion and the Heterotrait–Monotrait (HTMT) ratio, ensuring that each construct's AVE square root exceeded its inter-construct correlations and that HTMT values were below 0.85. The measurement model demonstrated good fit and adequate reliability and validity, allowing progression to testing structural relationships. In the structural model stage, AMOS was used to test the hypothesised paths between EO and SME performance. This approach enabled simultaneous estimation of all relationships, including the mediating effect of innovation capabilities on the EO–performance link. Model fit indices (such as CFI, TLI, RMSEA) were evaluated to ensure the structural model adequately represents the data. Finally, hypothesis testing results were obtained from the SEM path analysis, which provides estimates for the direct effect of EO on performance. The analysis sequence from descriptive stats and reliability checks to SEM hypothesis testing aligns with recommended practices in quantitative management research. All statistical tests were conducted at a 5% significance level. The findings from the SEM analysis were then interpreted to determine whether EO serves as a significant driver of SME performance in the Malaysian context.

Figures and Tables

Table 1
Demographic Characteristics of Respondents

Demographic	Profile	Sample (n)	Percentage (%)
Gender	Female	210	52.8
	Male	188	47.2
	Total	**398**	**100**
Age	Less than 25	64	16.1
	26 – 34	52	13.1
	35 – 44	106	26.6
	45 – 54	73	18.3
	55 – 64	68	17.1
	Above 65	35	8.8
	Total	**398**	**100**
Education	Secondary	79	19.8
	Diploma or equivalent	81	20.4
	Bachelor Degree	75	18.8
	Master Degree	87	21.9
	Doctorate or Professional Degree	76	19.1
	Total	**398**	**100**
Position	Executive	59	14.8
	Senior Executive	58	14.6
	C-level Executive	53	13.3
	Manager	67	16.8
	General Manager	50	12.6
	Business Owner	57	14.3
	Total	**398**	**100**

Respondent Profile

The demographic distribution of respondents was relatively balanced, with 210 females (52.8%) and 188 males (47.2%). In terms of age, the largest proportion fell within the 35–44 range, followed by those aged 45–54 and 55–64. The educational backgrounds encompass Secondary, Diploma, or equivalent, Bachelor Degree, Master Degree, and Doctoral or Professional

qualifications. The Master Degree emerged as the most common level of education (n = 87, 21.9%), followed by Diploma or equivalent holders (n = 81, 20.4%).

The participants held diverse positions, including those of business owners, C-level executives, general managers, managers, assistant managers, senior executives, and executives. Manager accounted for the largest group (n = 67, 16.8%), followed by executives (n = 59, 14.8%).

Table 2
Firm Profile

Category	Sample (n)	Percentage (%)
No. of Employees		
Less than 10	96	24.1
11 – 50	86	21.6
51 – 200	117	29.4
Above 200	99	24.9
Total	**398**	**100**
Industry Sector		
Manufacturing	159	39.9
Other	108	27.1
Services	131	32.9
Total	**398**	**100**
Location		
East Malaysia	14	3.5
West Malaysia	384	96.5
Total	**398**	**100**

The number of employees defines firm size and was classified into four categories: less than 10, 11–50, 51–200, and above 200. The findings indicate that the majority of participating SMEs were medium-sized, with 51–200 employees (n = 117, 29.4%), followed by larger firms employing more than 200 individuals (n = 99, 24.9%). In terms of industry classification, respondents represented SMEs across three main sectors, namely manufacturing, services, and other industries. The manufacturing sector accounted for the largest proportion of firms (n = 159, 39.9%), while the services sector (n = 131, 32.9%) and other sectors (n = 108, 27.1%) comprised the remainder. Geographically, the distribution of SMEs was heavily concentrated in West Malaysia (n = 384, 96.5%), with only a small representation from East Malaysia (n = 14, 3.5%).

Measurement and Model Assessment

The analysis revealed that both constructs exceeded the minimum threshold of 0.70 for Cronbach's Alpha and Composite Reliability. This indicates that the items within each construct are consistently measuring the same underlying concept. The constructs recorded AVE values greater than 0.50, confirming that the indicators effectively represent their respective latent variables. The HTMT ratios were below 0.85, indicating that each construct is empirically distinct and measures a separate concept. This finding confirms that Entrepreneurial Orientation and Firm Performance are independent constructs.

Table 3
Model Fit Indices for the Structural Equation Model

Fit Index	**Obtained Value**
χ^2/df (Chi-square / Degrees of Freedom)	2.31
CFI (Comparative Fit Index)	0.951
TLI (Tucker–Lewis Index)	0.943
RMSEA (Root Mean Square Error of Approximation)	0.056
SRMR (Standardized Root Mean Square Residual)	0.041

Table 4
Reliability and Convergent Validity of Constructs

Construct	**Cronbach's Alpha (α)**	**CR**	**AVE**	**HTMT**
Entrepreneurial Orientation	0.83	0.86	0.57	0.702
Firm Performance	0.82	0.85	0.60	0.702

Note. α = Cronbach's Alpha; CR = Composite Reliability; AVE = Average Variance Extracted; HTMT = Heterotrait–Monotrait Ratio.

Hypothesis Testing

The results of hypothesis testing for the three dimensions of Entrepreneurial Orientation (EO), innovativeness, proactiveness, and risk-taking, on Firm Performance (FP) using SPSS and AMOS. A total of 5,000 bootstrapped samples and 95% confidence intervals were applied to ensure robust estimation.

Table 5
Structural Model Results for Entrepreneurial Orientation Dimensions on Firm Performance

Hypothesis	Path	Estimate (Unstd.)	β (Std.)	CR	p-value	Result
H1	INNO → FP	0.002	0.003	0.083	0.934	Supported
H2	PROA → FP	0.002	0.004	0.107	0.915	Not Supported

H3	RISKT → FP	-0.043	-0.084	-2.384 0.017	Supported

Note. Dependent variable: Innovativeness (INNO), Proactiveness (PROA), Risk Taking (RISKT), and Firm Performance (FP). Coefficients are standardized (β). Significance level at $p < 0.05$. CR = Critical Ratio.

Results and Discussions

This section presents the results of the data analysis on the relationship between entrepreneurial orientation (EO) and SME performance in Malaysia, within the post-pandemic context.

The structural model was analyzed using AMOS to test the direct effects of the three dimensions of Entrepreneurial Orientation, Innovativeness, Proactiveness, and Risk-taking on Firm Performance (FP). The model fit indices were within acceptable thresholds, indicating a good overall model fit. The results revealed that only Risk-taking had a significant negative relationship with firm performance ($\beta = -0.084$, C.R. $= -2.384$, $p = 0.017$), suggesting that firms engaging in higher risk-taking activities may experience decreased performance. In contrast, Innovativeness ($\beta = 0.003$, $p = 0.934$) and Proactiveness ($\beta = 0.004$, $p = 0.915$) showed no significant effect on firm performance. These findings suggest that not all dimensions of entrepreneurial orientation have a direct influence on SME performance, and risk-taking appears to play a negative role.

The results of this study provide new insights into how Malaysian SMEs behave after an economic crisis from Schumpeterian perspective. The findings show that among the three dimensions EO, innovativeness, proactiveness, and risk-taking, only risk-taking has a statistically significant relationship with firm performance, and the direction of this relationship is negative ($\beta = -0.084$, $p = 0.017$). Both innovativeness ($\beta = 0.003$, $p = 0.934$) and proactiveness ($\beta = 0.004$, $p = 0.915$) did not significantly predict firm performance.

When SMEs take more risks in a challenging and uncertain environment, it may reduce their performance instead of improving it (Nguyen et al., 2021). The SMEs in Malaysia face financial constraints, limited market access, and unstable demand after crises such as the COVID-19 pandemic (Ramzi et al., 2022). Without sufficient resources, high risk-taking such as investing in untested products or expanding can weaken rather than strengthen a firm's position (Hamid et al., 2023).

On the other hand, the lack of significant impact from innovativeness and proactiveness suggests that Malaysian SMEs may still be recovering from the crisis, focusing more on short-term survival rather than long-term innovation (Khan et al., 2022). Innovative efforts may also take time to show results, especially for smaller firms that lack research funding, skilled talent, or technology infrastructure (Caballero-Morales, 2021). This is consistent with previous research suggesting that

the benefits of EO are context-dependent in developing economies, structural challenges can delay the positive effects of innovation and opportunity-seeking behaviors (Manning & Vavilov, 2023).

From a Schumpeterian perspective, these findings illustrate that not all entrepreneurial behaviors contribute equally to recovery and competitiveness (Morris et al., 2023). While Schumpeter emphasised the role of innovation and risk-taking in "creative destruction," this study shows that in times of instability, uncontrolled risk-taking may lead to vulnerability rather than renewal (Shore et al., 2024).
The path from crisis to competitiveness may therefore depend on balancing innovation with prudence, and risk-taking with resilience (Jusoh et al., 2025). This implies a strategic prioritisation of entrepreneurial orientation dimensions, wherein firms must carefully calibrate their risk-taking propensity and innovative endeavors to align with their resource endowments and market stability, ultimately enhancing entrepreneurial resilience (Shore et al., 2024).

Conclusion

This study examined how the three dimensions of Entrepreneurial Orientation: innovativeness, proactiveness, and risk-taking, affect SME performance and sustainability in Malaysia after an economic crisis. The results reveal that only risk-taking has a significant, but negative, effect on performance, while innovativeness and proactiveness do not show direct influence.

These findings highlight that entrepreneurial orientation is not equally effective across all dimensions, especially during recovery periods. Firms that take excessive risks without adequate preparation or financial buffers may struggle to sustain operations. In contrast, innovative and proactive strategies may take longer to translate into performance gains, as they require time, market stability, and support systems to mature.

From a Schumpeterian perspective, crises represent both danger and opportunity. They disrupt traditional business models but also encourage new ways of thinking, producing, and competing.
For Malaysian SMEs, moving from crisis to competitiveness involves developing a strategic form of entrepreneurial orientation, one that embraces innovation and market responsiveness but maintains careful risk management.

To sustain competitiveness, SMEs should: (i) Strengthen their internal capabilities for innovation and digital adoption; (ii) Practice calculated risk-taking, supported by financial literacy and contingency planning; and collaborate with government and industry partners to build support networks and knowledge-sharing ecosystems.

Overall, this study concludes that sustainable recovery and competitiveness require not just entrepreneurship, but smart entrepreneurship. Malaysian SMEs can transform crises into opportunities by learning, adapting, and innovating within their means, turning risk into resilience and innovation into long-term growth.

Acknowledgements

I would like to express heartfelt gratitude to Prof. Dr Yeo Chu May Amy, Prof. Ts. Dr Yip Mum Wai, and Dr Tay Lee Chin for their invaluable guidance, constructive feedback, and continuous encouragement throughout this research.
I would also like to extend my sincere thanks to the participating SMEs for their crucial cooperation in the data collection process, and to the conference reviewers for their insightful and constructive comments, which have significantly improved the quality of this paper.
This paper is derived from my doctoral research at Tunku Abdul Rahman University of Management and Technology (TAR UMT).

References

Abdulrab, M., Alwaheeb, M. A., Al-Mamary, Y. H., Alshammari, N. G., Balhareth, H., Soltane, H. B., & Saleem, I. (2022). Effect of entrepreneurial orientation and Strategic orientations on financial and nonfinancial performance of small and medium enterprises in Saudi Arabia. https://doi.org/10.1002/pa.2305.

Abreu, M. F., Alves, A. C., & Moreira, F. (2024). Business Overall Performance and Sustainability Effectiveness: An Indicator to Measure Companies' Lean–Green Compliance. Sustainability, 16(11), 4508. https://doi.org/10.3390/su16114508.

Achmad, F., & Wiratmadja, I. I. (2025). Organizational Performance and Competitive Advantage in SMEs: The Role of Green Innovation and Knowledge Management. Journal of Open Innovation Technology Market and Complexity, 100532. https://doi.org/10.1016/j.joitmc.2025.100532.

Adam, N.A., & Alarifi, G. (2021). Innovation practices for survival of small and medium enterprises (SMEs) in the COVID-19 times: the role of external support. Journal of Innovation and Entrepreneurship, 10, (15). https://doi.org/10.1186/s13731-021-00156-6.

Adenan, F. A., Ariff, A., & Adnan, S. M. (2024). ESG in Small and Medium-Sized Enterprises: Malaysian Perspectives. E3S Web of Conferences, 574, 3001. https://doi.org/10.1051/e3sconf/202457403001.

Ahmed, U., Mozammel, S., & Zaman, F. (2020). Impact Of Ecological Innovation, Entrepreneurial Self-Efficacy And Entrepreneurial Orientation On Environmental Performance And Energy Efficiency. International Journal of Energy Economics and Policy, 10(3), 289. https://doi.org/10.32479/ijeep.9227.

Ahmed, W., Najmi, A., & Ikram, M. (2020). Steering firm performance through innovative capabilities: A contingency approach to innovation management. Technology in Society, 63, 101385. https://doi.org/10.1016/j.techsoc.2020.101385.

Akumbom, P., & Vukenkeng, A. W. (2024). Entrepreneurship orientation and performance of small and medium sizes enterprises in bamenda III. Management Science Letters, 15(2), 63. https://doi.org/10.5267/j.msl.2024.5.004.

Alam, S. S., Md Salleh, M. F., Masukujjaman, M., Al-Shaikh, M. E., Makmor, N., & Makhbul, Z. K. M. (2022). Relationship between Entrepreneurial Orientation and Business Performance among Malay-Owned SMEs in Malaysia: A PLS Analysis. Sustainability (Switzerland), 14(10). https://doi.org/10.3390/su14106308.

Alfarsi, Y. (2021). The impact of entrepreneurs characteristics on the performance of small medium enterprises: the case of the Kingdom of Saudi Arabia (KSA). The Euraseans Journal on Global Socio-Economic Dynamics, (3(28)), 115-128. https://doi.org/10.35678/2539-5645.3(28).2021.115-128.

Ali, G.A., Abdullah, H.H., & Gorondutse, A.H. (2017). The effect of entrepreneurial orientation, market orientation, total quality management and organisational culture on the SMEs performance: A theoretical framework, JBRMR, Volume 12 Issue 1. https://doi.org/10.24052/jbrmr/v12is01/teoeomotqmaocotspatf.

Alshahrani, M. A., & Salam, M. A. (2022). The Role of Supply Chain Resilience on SMEs' Performance: The Case of an Emerging Economy. *Logistics*, *6*(3), 47. https://doi.org/10.3390/logistics6030047

Amaro, V. V., Casquet, C. G., & Barroso-Méndez, M. J. (2021). Innovation Orientation in the Non-profit Sector: Analysis of Its Impact on the Performance of Spanish Non-governmental Development Organizations. Frontiers in Psychology, 12. https://doi.org/10.3389/fpsyg.2021.797621.

Amoa-Gyarteng, K., & Dhliwayo, S. (2024). Cultivating success: organizational culture's influence on innovation and performance in SMEs. Cogent Business & Management, 11(1). https://doi.org/10.1080/23311975.2024.2397070.

Amin, M., Ramayah, T., Aldakhil, A. M., & Kaswuri, A. H. B. (2016). The effect of market orientation as a mediating variable in the relationship between entrepreneurial orientation and SMEs performance. *Nankai Business Review International*, *7*(1), 39. https://doi.org/10.1108/nbri-08-2015-0019.

Anwar, M. and Shah, S. (2020). Entrepreneurial orientation and generic competitive strategies for emerging SMEs: financial and nonfinancial performance perspective. Journal of Public Affairs, 21(1). https://doi.org/10.1002/pa.2125.

Anzules-Falcones, W., & Novillo-Villegas, S. (2023). Innovation Capacity, Entrepreneurial Orientation, and Flexibility: An Analysis from Industrial SMEs in Ecuador. Sustainability, 15(13), 10321. https://doi.org/10.3390/su151310321.

Arshad, A. S., Rasli, A., Arshad, A. A., & Zain, Z. M. (2014). The impact of entrepreneurial orientation on business performance: a study of technology-based SMEs in Malaysia. Procedia - Social and Behavioral Sciences, 130, 46–53. https://doi.org/10.1016/j.sbspro.2014.04.006.

Autio, E., Kenney, M., Mustar, P., Siegel, D. S., & Wright, M. (2014). Entrepreneurial innovation: The importance of context. Research Policy, 43(7), 1097. https://doi.org/10.1016/j.respol.2014.01.015.

Awad, J. A. R., & Martín-Rojas, R. (2024). Digital transformation influence on organisational resilience through organisational learning and innovation. Journal of Innovation and Entrepreneurship, 13(1). https://doi.org/10.1186/s13731-024-00405-4.

Bahta, D. T., Jiang, Y., Islam, R., & Ashfaq, M. (2020). Corporate social responsibility, innovation capability and firm performance: evidence from sme. Social Responsibility Journal, 17(6), 840-860. https://doi.org/10.1108/srj-12-2019-0401.

Bamgbade, J. A., Kamaruddeen, A. M., & Nawi, M. N. M. (2017). Towards environmental sustainability adoption in construction firms: An empirical analysis of market orientation and organizational innovativeness impacts. Sustainable Cities and Society, 32, 486. https://doi.org/10.1016/j.scs.2017.04.015.

Bandera, C., Collins, R., & Passerini, K. (2018). Risky business: Experiential learning, information and communications technology, and risk-taking attitudes in entrepreneurship education. The International Journal of Management Education, 16(2), 224. https://doi.org/10.1016/j.ijme.2018.02.006.

Błach, J., Wieczorek-Kosmala, M., & Trzęsiok, J. (2020). Innovation in SMEs and Financing Mix. Journal of Risk and Financial Management, 13(9), 206. https://doi.org/10.3390/jrfm13090206.

Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99-120. https://doi.org/10.1177/014920639101700108.

Basco, R., Hernández-Perlines, F., & Rodríguez-García, M. (2019). The effect of entrepreneurial orientation on firm performance: A multigroup analysis comparing China, Mexico, and Spain. Journal of Business Research, 113, 409. https://doi.org/10.1016/j.jbusres.2019.09.020.

Bezerra, R. R. R., Martins, V. W. B., & Macêdo, A. N. (2024). Validation of Challenges for Implementing ESG in the Construction Industry Considering the Context of an Emerging Economy Country. Applied Sciences, 14(14), 6024. https://doi.org/10.3390/app14146024.

Bicocchi, N., Cabri, G., Mandreoli, F., & Mecella, M. (2019). Dynamic digital factories for agile supply chains: An architectural approach. Journal of Industrial Information Integration, 15, 111. https://doi.org/10.1016/j.jii.2019.02.001.

Bitencourt, C. C., Santini, F. de O., Ladeira, W. J., Santos, A. C., & Teixeira, E. K. (2019). The extended dynamic capabilities model: A meta-analysis. European Management Journal, 38(1), 108. https://doi.org/10.1016/j.emj.2019.04.007.

Brege, H., & Kindström, D. (2019). Exploring proactive market strategies. Industrial Marketing Management, 84, 75. https://doi.org/10.1016/j.indmarman.2019.05.005.

Caballero-Morales, S. (2021). Innovation as recovery strategy for SMEs in emerging economies during the COVID-19 pandemic. *Research in International Business and Finance*, *57*, 101396. https://doi.org/10.1016/j.ribaf.2021.101396.

Calvo, E., Cui, R., & Wagner, L. (2020). Disclosing Product Availability in Online Retail. Manufacturing & Service Operations Management, 25(2), 427. https://doi.org/10.1287/msom.2020.0882.

Carson, R. T., Zivin, J. G., Louviere, J. J., Sadoff, S., & Shrader, J. (2022). The Risk of Caution: Evidence from an Experiment. Management Science, 68(12), 9042. https://doi.org/10.1287/mnsc.2021.4292.

Cavallo, A., Sanasi, S., Ghezzi, A., & Rangone, A. (2020). Competitive intelligence and strategy formulation: connecting the dots. Competitiveness Review An International Business

Journal Incorporating Journal of Global Competitiveness, 31(2), 250. https://doi.org/10.1108/cr-01-2020-0009.

Chai, M., Jin, C., Liu, P., & Foster, W. T. (2025). Ambidextrous Innovation, Organizational Resilience, and the High-Quality Development of Enterprises: A Dynamic Analysis Based on the Enterprise Life Cycle. Sustainability, 17(8), 3325. https://doi.org/10.3390/su17083325.

Chen, B., Wang, L., Li, B., & Liu, W. (2022). Work stress, mental health, and employee performance. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.1006580.

Cheng, P., Wu, S., & Xiao, J. (2025). Exploring the impact of entrepreneurial orientation and market orientation on entrepreneurial performance in the context of environmental uncertainty. Scientific Reports, 15(1). https://doi.org/10.1038/s41598-025-86344-w

Choi, S. B., Lee, W. R., & Kang, S. (2020). Entrepreneurial Orientation, Resource Orchestration Capability, Environmental Dynamics and Firm Performance: A Test of Three-Way Interaction. Sustainability, 12(13), 5415. https://doi.org/10.3390/su12135415.

Chelliah, M. K., Aravindan, K. L., & Muthaiyah, S. (2023). Entrepreneurial Orientation and Open Innovation Promote the Performance of Services SMEs: The Mediating Role of Cost Leadership. Administrative Sciences, 13(1). https://doi.org/10.3390/admsci13010001.

Chen, Y., Lin, Y., & Lai, Y. (2022). The determinants of green entrepreneurship: the perspectives of leadership, culture, and creativity. Business Strategy and the Environment, 32(6), 3432-3444. https://doi.org/10.1002/bse.3309.

Chowdhury, P., Paul, S. K., Kaisar, S., & Moktadir, M. A. (2021). Covid-19 pandemic related supply chain studies: a systematic review. Transportation Research Part E: Logistics and Transportation Review, 148, 102271. https://doi.org/10.1016/j.tre.2021.102271.

Costa, B., Varejão, J., & Gaspar, P. D. (2024). Development of a Value Stream Map to Optimize the Production Process in a Luxury Metal Piece Manufacturing Company. Processes, 12(8), 1612. https://doi.org/10.3390/pr12081612.

Covin, J. and Slevin, D. (1989). Strategic management of small firms in hostile and benign environments. strategic management Journal, 10(1), 75-87. https://doi.org/10.1002/smj.4250100107.

Danso, A., Adomako, S., Damoah, J., & Uddin, M. (2016). Risk-taking propensity, managerial network ties and firm performance in an emerging economy. The Journal of Entrepreneurship, 25(2), 155-183. https://doi.org/10.1177/0971355716650367.

Das, M., & Rangarajan, K. (2020). Impact of policy initiatives and collaborative synergy on sustainability and business growth of Indian SMEs. *Indian Growth and Development Review*, *13*(3), 607. https://doi.org/10.1108/igdr-09-2019-0095.

Donbesuur, F., Ampong, G., Owusu-Yirenkyi, D., & Chu, I. (2020). Technological innovation, organisational innovation and international performance of SMEs: the moderating role of domestic institutional environment. Technological Forecasting and Social Change, 161, 120252. https://doi.org/10.1016/j.techfore.2020.120252.

Eggers, F., Niemand, T., Filser, M., Kraus, S., & Berchtold, J. (2018). To network or not to network – Is that really the question? The impact of networking intensity and strategic orientations on innovation success. Technological Forecasting and Social Change, 155, 119448. https://doi.org/10.1016/j.techfore.2018.09.003.

Expósito, A. and Sanchís, J. (2018). Innovation and business performance for Spanish SMEs: new evidence from a multi-dimensional approach. International Small Business Journal Researching Entrepreneurship, 36(8), 911-931. https://doi.org/10.1177/0266242618782596.

Faye, P., Peralta, B., Hannah, M., Bernal, J.E., Jessica C. Diche, A., La, A.R., CarlosIgnacioJr., P., Lugay, J.K., & Ngo (2022). Developing a Business Strategy for the Recovery of Micro, Small, and Medium-sized Food Service Enterprises Affected by the COVID-19 Pandemic Using Structural Equation Modelling. Proceedings of the International Conference on Industrial Engineering and Operations Management.

Fadzil, S. M., & Rashid, M. F. (2022). A design framework for SMEs resilience in Malaysia. *IOP Conference Series Earth and Environmental Science*, *1082*(1), 12006. https://doi.org/10.1088/1755-1315/1082/1/012006.

Franczak, J., Gyensare, M. A., Lanivich, S. E., Adomako, S., & Chu, I. (2023). How and when does founder polychronicity affect new venture performance? The roles of entrepreneurial orientation and firm age. Journal of Business Research, 172, 114408. https://doi.org/10.1016/j.jbusres.2023.114408

Fey, S., & Kock, A. (2022). Meeting challenges with resilience – How innovation projects deal with adversity. International Journal of Project Management, 40(8), 941. https://doi.org/10.1016/j.ijproman.2022.10.006.

Forliano, C., Orlandi, L. B., Zardini, A., & Rossignoli, C. (2022). Technological orientation and organizational resilience to Covid-19: The mediating role of strategy's digital maturity. Technological Forecasting and Social Change, 188, 122288. https://doi.org/10.1016/j.techfore.2022.122288.

Frantika, S. Y., Eltivia, N., & Riwajanti, N. İ. (2022). The Effect of the Pandemic on E-Commerce Competition in Indonesia. Zenodo (CERN European Organization for Nuclear Research). https://doi.org/10.5281/zenodo.5905305.

Freiling, J., & Schelhowe, C. L. (2014). The Impact of Entrepreneurial Orientation on the Performance and Speed of Internationalization. Journal of Entrepreneurship Management and Innovation, 10(4), 169. https://doi.org/10.7341/20141047.

Gama, F. (2018). Managing the collaborative front end of innovation in manufacturing firms: requirements, capabilities, and conditions.

Günday, G., Ulusoy, G., Kılıç, K., & Alpkan, L. (2011). Effects of innovation types on firm performance. International Journal of Production Economics, 133(2), 662. https://doi.org/10.1016/j.ijpe.2011.05.014.

Gürlek, M., & Tuna, M. (2018). Reinforcing competitive advantage through green organisational culture and green innovation. The Service Industries Journal, 38(7-8), 467-491. https://doi.org/10.1080/02642069.2017.1402889.

Guzzo, D., Trevisan, A. H., Echeveste, M. E. S., & Mascarenhas, J. (2019). Circular Innovation Framework: Verifying Conceptual to Practical Decisions in Sustainability-Oriented Product-Service System Cases. Sustainability, 11(12), 3248. https://doi.org/10.3390/su11123248.

Hagin, C. and Caesar, L. D. (2021). The antecedents of success among small- and medium-sized enterprises: evidence from ghana. Journal of Global Entrepreneurship Research, 11(1), 279-297. https://doi.org/10.1007/s40497-021-00285-y.

Ha, S. T., Lo, M., Suaidi, M. K., Mohamad, A. A., & Razak, Z. (2021). Knowledge Management Process, Entrepreneurial Orientation, and Performance in SMEs: Evidence from an Emerging Economy. Sustainability, 13(17), 9791. https://doi.org/10.3390/su13179791

Halim, H.A., Ahmad, N.H., Ramayah, T., & Hanifah, H. (2014). The Growth of Innovative Performance among SMEs: Leveraging on Organisational Culture and Innovative Human Capital.

Hamdan, Y. and Alheet, A. F. (2020). Influence of organisational culture on pro-activeness, innovativeness and risk taking behaviour of smes. Entrepreneurship and Sustainability Issues, 8(1), 203-217. https://doi.org/10.9770/jesi.2020.8.1(13).

Hamid, N., Sanusi, S., Norizan, S., Urus, S. B. T., & Lestari, E. D. (2023). Determinants of Business Resilience Framework for Small Businesses: Moderating Effects of Financial Literacy. Review of Economics and Finance, 21, 55. https://doi.org/10.55365/1923.x2023.21.6

Hasnan, S.F., Hamid, M.N., Kasim, M.M., & Ramli, R. (2017). National culture and its implications to firm innovation capabilities from Malaysian perspective.

Hughes, M., Chang, Y.-Y., Hodgkinson, I. R., Hughes, P., & Chang, C. (2020). The multi-level effects of corporate entrepreneurial orientation on business unit radical innovation and financial performance. Long Range Planning, 54(1), 101989. https://doi.org/10.1016/j.lrp.2020.101989.

Hoq, M. Z., Ha, N. C., & Said, S. M. (2009). SMEs in the Malaysian Economy. *International Journal of Marketing Studies*, *1*(2). https://doi.org/10.5539/ijms.v1n2p3

Hussain, I., Nazir, M., Hashmi, S. B., Vaio, A. D., Shaheen, I., Waseem, M., & Arshad, A. (2021). Green and Sustainable Entrepreneurial Intentions: A Mediation-Moderation Perspective. Sustainability, 13(15), 8627. https://doi.org/10.3390/su13158627.

Indrawati, H., Caska, & Suarman, S. (2020). Barriers to technological innovations of SMEs: how to solve them? International Journal of Innovation Science, 12(5), 545. https://doi.org/10.1108/ijis-04-2020-0049.

Ishak, N., Aziz, N. A. A., & Rahim, F. A. (2024). Green policy effect on firm sustainability: examining the stock performance of ESG adopters in heavy-polluter industry in Malaysia. Cogent Economics & Finance, 12(1). https://doi.org/10.1080/23322039.2024.2334102.

Isichei, E., Agbaeze, K., & Odiba, M. (2020). Entrepreneurial orientation and performance in SMEs. International Journal of Emerging Markets, 15(6), 1219-1241. https://doi.org/10.1108/ijoem-08-2019-0671.

Issau, K., Acquah, I. S. K., Gnankob, R. I., & Hamidu, Z. (2021). Innovation orientation and performance of small and medium-sized enterprises (SMES) in Ghana: evidence from manufacturing sector. Innovation & Management Review, 19(4), 290. https://doi.org/10.1108/inmr-07-2020-0092.

Jaini, A., & Hussin, N. (2019). Towards Developing a Framework of Enviropreneurial Marketing Strategy for SMEs in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, *9*(9). https://doi.org/10.6007/ijarbss/v9-i9/6300

Jewels, T., Rawshdi, A.A., Abusharekh, R.N., & Shamisi, A.S. (2012). Organisational Culture and Its Effects on Innovation within ERP Systems. https://doi.org/10.4018/978-1-61350-341-6.CH007.

Jusoh, R., Mat, T. Z. T., & Yahya, N. (2025). Navigating Disruption: Strategic Decision-Making for Resilient Malaysian SMEs. International Journal of Academic Research in Economics and Management Sciences, 14(1). https://doi.org/10.6007/ijarems/v14-i1/24109

Kakumbi, G., & Phiri, J. (2022). Adoption of Social Media for SME Growth in the Covid-19 Era: A Case of SMEs in the Clothing industry in Lusaka, Zambia. *Open Journal of Business and Management*, *10*(6), 3202. https://doi.org/10.4236/ojbm.2022.106159.

Kanchanabha, B., & Badir, Y. F. (2021). Top management Team's cognitive diversity and the Firm's ambidextrous innovation capability: The mediating role of ambivalent interpretation. Technology in Society, 64, 101499. https://doi.org/10.1016/j.techsoc.2020.101499.

Khan, K., Liu, S., Xiong, B., Zhang, L., & Li, C. (2022). Innovation to Immune: Empirical Evidence From COVID-19 Focused Enterprise Surveys. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.850842.

Khan, M., Aljabri, Q., & Saif, N. (2019). Dynamic relationship between corporate board structure and firm performance: evidence from Malaysia. International Journal of Finance & Economics, 26(1), 644-661. https://doi.org/10.1002/ijfe.1808.

Koporčić, N., Kukkamalla, P. K., Marković, S., & Maran, T. (2025). Resilience of small and medium-sized enterprises in times of crisis: an umbrella review. Review of Managerial Science. https://doi.org/10.1007/s11846-025-00883-0.

Koulouris, A., Misailidis, N., & Petrides, D. (2021). Applications of process and digital twin models for production simulation and scheduling in the manufacturing of food ingredients and products. Food and Bioproducts Processing, 126, 317. https://doi.org/10.1016/j.fbp.2021.01.016.

Kuriakose, S., & Tiew, H. S. B. M. Z. (2022). Malaysia - SME Program Efficiency Review. https://doi.org/10.1596/37137.

Laily, N. and Ernawati, D. (2020). The effect of knowledge sharing and innovation behavior on the performance of batik entrepreneurs. Jurnal Manajemen, 24(2), 194. https://doi.org/10.24912/jm.v24i2.643.

Langroodi, F. E. (2021). Schumpeter's Theory of Economic Development: A Study of the Creative Destruction and Entrepreneurship Effects on the Economic Growth. Journal of Insurance and Financial Management, 4(3). https://journal-of-insurance-and-financial-management.com/index.php/JIFM/article/view/187.

Lawson, B. and Samson, D. (2001). Developing innovation capability in organisations: a dynamic capabilities approach. International Journal of Innovation Management, 05(03), 377-400. https://doi.org/10.1142/s1363919601000427.

Leiponen, A., & Helfat, C. E. (2019). Innovation objectives, knowledge sources, and the benefits of breadth. Strategic Management Journal, 40(7), 1011-1033.

Lichtenthaler, U., & Lichtenthaler, E. (2020). Intellectual property strategies and firm performance: A review of the evidence. Journal of Management, 46(1), 122-156.

Lim, C. H., & Teoh, K. B. (2021). Factors influencing the SME business success in Malaysia. *Annals of Human Resource Management Research*, *1*(1), 41. https://doi.org/10.35912/ahrmr.v1i1.380

Liu, Y. (2016). The impact of innovation capability on organisational performance: The mediating role of organisational culture. Journal of Intelligence Studies in Business, 6(3), 67-78.

Lopez, E., Flecha-Ortiz, J. A., Santos-Corrada, M., & Dones, V. (2024). The role of organisational resilience in sme service innovation and value cocreation. Journal of Services Marketing, 38(4), 443-459. https://doi.org/10.1108/jsm-03-2023-0081.

Luu, T. D. (2023). Fostering strategic entrepreneurship of SMEs: the role of organisational change forces. Management Decision, 61(3), 695-719. https://doi.org/10.1108/md-08-2021-1024.

Maaodhah, A. S. A., Singh, H., Al-Juboori, Z. M. A., Pitchy, A. L. B. A., & Ekene, I. (2021). The Impact of Market Orientation and Entrepreneurial Orientation on Firm Performance of Wholesale and Retailer SMES in Malaysia. International Journal of Academic Research in Business and Social Sciences, 11(6). https://doi.org/10.6007/ijarbss/v11-i6/10019

Makhloufi, L., Laghouag, A., Sahli, A. A., & Bélaïd, F. (2021). Impact of Entrepreneurial Orientation on Innovation Capability: The Mediating Role of Absorptive Capability and Organizational Learning Capabilities. Sustainability, 13(10), 5399. https://doi.org/10.3390/su13105399.

Malaysia SME Corporation. (2021). Economic performance outlook 2021: Chapter 2. In MSME Insights 2021 (New Release). https://www.smecorp.gov.my/

Mamun, A., Hayat, N., Fazal, S., Salameh, A., Zainol, N., & Makhbul, Z. (2022). The mediating effect of innovation in between strategic orientation and enterprise performance: evidence from Malaysian manufacturing small-to-medium-sized enterprises. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.887895.

Ma, Y. (2024). Entrepreneurs' Spirit and Corporate Green Development: The Mediating Role of New-Quality Productivity. Sustainability, 16(17), 7648. https://doi.org/10.3390/su16177648.

Manning, S., & Vavilov, S. (2023). Global development agenda meets local opportunities: The rise of development-focused entrepreneurship support. Research Policy, 52(7), 104795. https://doi.org/10.1016/j.respol.2023.104795

Marchese, M. and J. Potter (2018), "The SME Ombudsman: International profile and a policy proposal for Mexico", OECD SME and Entrepreneurship Papers, No. 5, OECD Publishing, Paris, https://doi.org/10.1787/b07afd3d-en.

Martins, I., & Perez, J. P. (2025). Individual entrepreneurial orientation: analyzing what we know, what we need to know, and future directions. Journal of Small Business Management, 1. https://doi.org/10.1080/00472778.2025.2472199.

Mehmood, T., Alzoubi, H. M., Alshurideh, M. T., Al-Gasaymeh, A., & Ahmed, G. (2019). Schumpeterian Entrepreneurship Theory Evolution and Relevance. Academy of Entrepreneurship Journal, 25(4). https://www.abacademies.org/articles/Schumpeterian-entrepreneurship-theory-evolution-and-relevance-1528-2686-25-4-301.pdf

Memon, A., An, Z. Y., & Memon, M. Q. (2019). Does financial availability sustain financial, innovative, and environmental performance? Relation via opportunity recognition. Corporate Social Responsibility and Environmental Management, 27(2), 562. https://doi.org/10.1002/csr.1820.

Méndez, J. L., Olmos-Peñuela, 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. https://doi.org/10.1016/j.technovation.2021.102325.

Migliori, S., Massis, A. D., Maturo, F., & Paolone, F. (2020). How does family management affect innovation investment propensity? The key role of innovation impulses. Journal of Business Research, 113, 243. https://doi.org/10.1016/j.jbusres.2020.01.039.

Ministry of Economy. (2023). National Energy Transition Roadmap: Energising the nation, powering our future. Ministry of Economy. https://www.ekonomi.gov.my.

Mohammad, W. M. W., & Wasiuzzaman, S. (2021). Environmental, Social and Governance (ESG) disclosure, competitive advantage and performance of firms in Malaysia. Cleaner Environmental Systems, 2, 100015. https://doi.org/10.1016/j.cesys.2021.100015.

Mohammad, W. M. W., & Wasiuzzaman, S. (2021). Environmental, Social and Governance (ESG) disclosure, competitive advantage and performance of firms in Malaysia. Cleaner Environmental Systems, 2, 100015. https://doi.org/10.1016/j.cesys.2021.100015.

Mohezar, S., Sulaiman, A., Nazri, M., & Omar, S. (2020). Corporate entrepreneurship, national policies and supply chain collaborations: an empirical study of Malaysian LED

manufacturers. Asia Pacific Journal of Innovation and Entrepreneurship, 14(2), 189. https://doi.org/10.1108/apjie-12-2019-0087.

Morris, S. S., Carlos, C., Kistruck, G. M., Lount, R. B., & Elly, T. (2023). The impact of growth mindset training on entrepreneurial action among necessity entrepreneurs: Evidence from a randomized control trial. Strategic Entrepreneurship Journal, 17(3), 671. https://doi.org/10.1002/sej.1472

Mujtaba, & Bahaudin. (2023). The Mediating Role of Dynamic Capability on the Relationship between E-Leadership Qualities and Innovation Management: Insights from Malaysia's Medical Ice Industry. https://sure.sunderland.ac.uk/id/eprint/17168/.

Mushangai, D. (2023). Dynamic capabilities: Axiomatic formation of firms' competitive competencies. Social Sciences & Humanities Open, 8(1), 100654. https://doi.org/10.1016/j.ssaho.2023.100654.

Najar, T., & Dhaouadi, K. (2020). Chief Executive Officer's traits and open innovation in small and medium enterprises: the mediating role of innovation climate. Journal of Small Business and Enterprise Development, 27(4), 607. https://doi.org/10.1108/jsbed-04-2020-0109.

Naranjo-Valencia, J. C., Jimenez-Jimenez, D., & Sanz-Valle, R. (2022). Entrepreneurial orientation and innovation capability: The role of knowledge acquisition and decision-making autonomy. Journal of Business Research, 144, 161-173.

Naruetharadhol, P., ConwayLenihan, A., & McGuirk, H. (2024). Assessing the Role of Public Policy in Fostering Global Eco-Innovation. Journal of Open Innovation Technology Market and Complexity, 10(2), 100294. https://doi.org/10.1016/j.joitmc.2024.100294.

Nasir, W. M. N. B. W. M., Mamun, A. A., & Breen, J. (2017). Strategic Orientation and Performance of SMEs in Malaysia. SAGE Open, 7(2). https://doi.org/10.1177/2158244017712768

Newaz, M. N., Datta, P., & Alam, R. M. K. (2022). Do the organizational proficiencies dominate in innovation and can manage the major factors of innovation? A Systematic Literature Review of Last 5 Decades. Journal of Business & Retail Management Research, 16(2). https://doi.org/10.24052/jbrmr/v16is02/art-06.

Niemand, T., Rigtering, C., Kallmünzer, A., Kraus, S., & Maâlaoui, A. (2020). Digitalization in the financial industry: A contingency approach of entrepreneurial orientation and strategic vision on digitalization. European Management Journal, 39(3), 317. https://doi.org/10.1016/j.emj.2020.04.008.

Ng, K.-S., Ahmad, A. R., Chan Wei, K., & Hairul Rizad Md, S. (2017). SMES Are Embracing Innovation for Business Performance. Journal of Innovation Management in Small and Medium Enterprises, 1–17. https://doi.org/10.5171/2017.824512.

Nguyen, A. T. H., Nguyen, P. V., & Thi, H. (2021). 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. https://doi.org/10.5267/j.ijdns.2021.9.004

Ogbonna, Emmanuel & Harris, Lloyd. (2013). Organisational Cultural Perpetuation: A Case Study of an English Premier League Football Club. British Journal of Management. 25. https://doi.org/10.1111/1467-8551.12037.

Ok, C., & Ahn, H. S. (2019). How Does Entrepreneurial Orientation Influence the Sustainable Growth of SMEs? The Role of Relative Performance. Sustainability, 11(19), 5178. https://doi.org/10.3390/su11195178.

Omar NA, Md. Aris H, Nazri MA, Jannat T, Shah Alam S (2022) Does the relationship marketing orientation of an entrepreneur support agency improve performance? Evidence from small- and medium-size enterprises in Malaysia. PLoS ONE 17(6): e0269319. https://doi.org/10.1371/journal.pone.0269319

Osiyevskyy, O., Sinha, K. K., Shirokova, G., & Shtepa, S. (2025). Innovation Capabilities Decoded: Risks and Rewards in Small and Medium Enterprise Performance. European Management Journal. https://doi.org/10.1016/j.emj.2025.01.011.

Park, J., Kim, B., & Han, S. (2020). The effect of technology based small and medium-Sized enterprise's entrepreneurial orientation, organisational culture and the support Of technopark on the innovation performance. The Korea Academia-Industrial cooperation Society, 21, 181-189. https://doi.org/10.5762/KAIS.2020.21.4.181.

Peñarroya-Farell, M., & Miralles, F. (2022). Business Model Adaptation to the COVID-19 Crisis: Strategic Response of the Spanish Cultural and Creative Firms. Journal of Open Innovation Technology Market and Complexity, 8(1), 39. https://doi.org/10.3390/joitmc8010039.

Pinto, S. de L., Muniz, J., Freitas, C. R. de, & Luche, J. R. D. (2025). A Framework for the Innovation Management Capacity: Empirical Evidence from the Porto Digital Cluster in Brazil. Administrative Sciences, 15(5), 191. https://doi.org/10.3390/admsci15050191.

Piramanayagam, S., Dixit, S. K., & Seal, P. P. (2022). We are in survival mode: how family-owned small foodservice firms in India responded to the Covid-19 pandemic. Journal of Family Business Management. https://doi.org/10.1108/JFBM-10-2021-0130.

Plinta, D., & Radwan, K. (2023). Implementation of Technological Innovation in a Manufacturing Company. Applied Sciences, 13(10), 6068. https://doi.org/10.3390/app13106068.

Poon, W. C., & Tung, S. E. H. (2022). Consumer risk perception of online food delivery during the COVID-19 Movement Control Order (MCO) in Malaysia. Journal of Foodservice Business Research, 26(2), 381. https://doi.org/10.1080/15378020.2022.2054657

Pusung, C. S., Narsa, N. P. D. R. H., & Wardhaningrum, O. A. (2023). Innovation, competitive strategy and msme performance: a survey study on culinary smes in indonesia during the covid-19 pandemic. Business: Theory and Practice, 24(1), 160-172. https://doi.org/10.3846/btp.2023.16676.

Putniņš, T. J., & Sauka, A. (2019). Why does entrepreneurial orientation affect company performance? Strategic Entrepreneurship Journal, 14(4), 711. https://doi.org/10.1002/sej.1325.

Rakyta, M., Bubeník, P., Biňasová, V., Mičieta, B., & Štaffenová, K. (2022). Advanced Logistics Strategy of a Company to Create Sustainable Development in the Industrial Area. Sustainability, 14(19), 12659. https://doi.org/10.3390/su141912659.

Ramdan, M. R., Aziz, N. A. A., Abdullah, N. L., Samsudin, N., Singh, G. S. V., Zakaria, T., Fuzi, N. M., & Ong, S. Y. Y. (2022). SMEs Performance in Malaysia: The Role of Contextual Ambidexterity in Innovation Culture and Performance. Sustainability, 14(3), 1679. https://doi.org/10.3390/su14031679.

Ramzi, M. I., Mohamad, W. M. F. W., & Ridzwan, R. (2022). Financial Management Practices: Challenges for SMEs in Malaysia. International Journal of Academic Research in Accounting Finance and Management Sciences, 12(3). https://doi.org/10.6007/ijarafms/v12-i3/15152

Rauch, A., Wiklund, J., Lumpkin, G., & Fresé, M. (2009). Entrepreneurial orientation and business performance: an assessment of past research and suggestions for the future. Entrepreneurship Theory and Practice, 33(3), 761-787. https://doi.org/10.1111/j.1540-6520.2009.00308.x.

Rehman, S. U., Elrehail, H., Nair, K., Bhatti, A., & Taamneh, A. (2021). MCS package and entrepreneurial competency influence on business performance: the moderating role of business strategy. European Journal of Management and Business Economics, 32(1), 1. https://doi.org/10.1108/ejmbe-04-2020-0088

Resmi, S., Pahlevi, R.W., & Sayekti, F. (2020). The growth of creative micro, small, and medium enterprises (MSMEs) business in special region of Yogyakarta before and after Covid-19 pandemic. International Journal of Entrepreneurship (Vol. 24, Issue 4).

Roux, I. L., & Bengesi, K. M. K. (2014). Dimensions of entrepreneurial orientation and small and medium enterprise performance in emerging economies. Development Southern Africa, 31(4), 606. https://doi.org/10.1080/0376835x.2014.913474

Salfore, N., Ensermu, M., & Kinde, Z. (2023). Business model innovation and firm performance: Evidence from manufacturing SMEs. Heliyon, 9(6). https://doi.org/10.1016/j.heliyon.2023.e16384.

Salin, A. S. A. P., Shamsudin, S. M., Omar, N., & Raman, S. A. (2023). ESG COMPLIANCE – CHALLENGES FOR MSMES IN MALAYSIA. Deleted Journal, 114. https://doi.org/10.33102/iiecons.v10i1.129.

Saunila, M. (2016). Innovation capability for SME success: Perspectives of financial and operational performance. Journal of Small Business and Enterprise Development, 23(4), 634-651. https://doi.10.1108/JAMR-11-2013-0063.

Sawaean, F.A., & A. M. Ali, K. (2021). The Nexus Between Learning Orientation, TQM Practices, Innovation Culture, and Organisational Performance of SMEs in Kuwait. Interdisciplinary Journal of Information, Knowledge, and Management, 16, 147-172. https://doi.org/10.28945/4743.

Se-gu, O., Lee, S. B., & Hwang, S. (2025). Climbing the Value Chain: The Critical Role of Innovation Routines in Korean SMEs' Global Competitiveness. Systems, 13(4), 274. https://doi.org/10.3390/systems13040274.

Shah, S. and Ahmad, M. (2019). Entrepreneurial orientation and performance of small and medium-sized enterprises. Competitiveness Review an International Business Journal Incorporating Journal of Global Competitiveness, 29(5), 551-572. https://doi.org/10.1108/cr-06-2018-0038.

Shaher, A. T. Q., & Ali, K. A. M. (2020). The effect of entrepreneurial orientation and knowledge management on innovation performance: The mediation role of market orientation. Management Science Letters, 3723. https://doi.org/10.5267/j.msl.2020.6.020.

Shepherd, D. A., Wiklund, J., & Dimov, D. (2021). Envisioning Entrepreneurship's Future: Introducing Me-Search and Research Agendas. Entrepreneurship Theory and Practice, 45(5), 955-966. https://doi.org/10.1177/10422587211026872.

Shore, A., Tiwari, M., Tandon, P., & Foropon, C. (2024). Building entrepreneurial resilience during crisis using generative AI: An empirical study on SMEs. Technovation, 135, 103063. https://doi.org/10.1016/j.technovation.2024.103063

Sidek, S., Mohamad, M. R., & Nasir, W. M. N. W. M. (2019). Entrepreneurial Orientation and SME Performance: The Serial Mediating Effects of Access to Finance and Competitive Advantage. International Journal of Academic Research in Business and Social Sciences, 9(9). https://doi.org/10.6007/ijarbss/v9-i9/6271

SME Corporation Malaysia. (2023). Profile and importance to the economy. SME Corp. Malaysia. https://www.smecorp.gov.my/index.php/en/policies/2020-02-11-08-01-24/profile-and-importance-to-the-economy

SME Corporation Malaysia. (2024). SME statistics https://www.smecorp.gov.my/index.php/en/policies/2020-02-11-08-01-24/sme-statistics

Soares, M. do C., & Perin, M. G. (2019). Entrepreneurial orientation and firm performance: an updated meta-analysis. RAUSP Management Journal, 55(2), 143. https://doi.org/10.1108/rausp-01-2019-0014.

Sonni, A. F. (2025). Digital transformation in journalism: mini review on the impact of AI on journalistic practices. Frontiers in Communication, 10. https://doi.org/10.3389/fcomm.2025.1535156.

Tan, L. P., Choe, K. L., Ng, Y. K., Lai, K. F., & Khor, H. C. (2023). The Environmental, Social, and Governance (ESG) In Malaysia SME: A Case Study of Vitrox. In Advances in economics, business and management research/Advances in Economics, Business and Management Research (p. 344). Atlantis Press. https://doi.org/10.2991/978-94-6463-342-9_26.

Taneo, S. Y. M., Hadiwidjojo, D., Sunaryo, S., & Sudjatno, S. (2020). Creative destruction and knowledge creation as the mediation between innovation speed and competitiveness of food small and medium-sized enterprises in Malang, Indonesia. Competitiveness Review An International Business Journal Incorporating Journal of Global Competitiveness, 30(2), 195. https://doi.org/10.1108/cr-12-2017-0090.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. In International Journal of Medical Education (Vol. 2, p. 53). https://doi.org/10.5116/ijme.4dfb.8dfd

Thị, U. N., Van, M. H., Mahmud, I., & Vu, T. T. L. (2023). Innovation and the Sustainable Competitive Advantage of Young Firms: A Strategy Implementation Approach. Sustainability, 15(13), 10555. https://doi.org/10.3390/su151310555

Thomran, M., Alshallaqi, M., Al-Mamary, Y. H., & Abdulrab, M. (2022). The key enablers of competitive advantage formation in small and medium enterprises: The case of the Ha'il region. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.1030405.

Tolossa, A. T., Singh, M., & Gautam, R. K. (2024). Unveiling the Nexus: the crucial role of competitive advantage in bridging entrepreneurial marketing practices and sustainable firm performance in small and medium enterprises. Journal of Innovation and Entrepreneurship, 13(1). https://doi.org/10.1186/s13731-024-00398-0.

Umbaris, Y. M. Y., Gisip, I. A., & Ambad, N. A. (2020). Strategic Orientation and Performance of Small And Medium Enterprises (SMEs) in Sabah, Malaysia. Journal of Social Transformation and Regional Development, 2(1). https://doi.org/10.30880/jstard.2020.02.02.002.

Uygur, M. (2023). Effect of logistics costs on export and company performance: a research on trc 1. International Journal of Eurasia Social Sciences. https://doi.org/10.35826/ijoess.3267.

Vaio, A. D., Palladino, R., Pezzi, A., & Kalisz, D. (2020). The role of digital innovation in knowledge management systems: A systematic literature review. Journal of Business Research, 123, 220. https://doi.org/10.1016/j.jbusres.2020.09.042

Wai, L. Y., Keng, C. W., & Abdullah, A. A. (2020). CHINESE ENTREPRENEURIAL CAPABILITIES AND PRACTICES: CASE OF MALAYSIAN SME. Advanced International Journal of Business Entrepreneurship and SMEs, 2(5), 15. https://doi.org/10.35631/aijbes.25002.

Wang, Y., Xu, S., & Ma, E. (2021). Serve perfectly, being happier: A perfectionistic perspective on customer-driven hotel employee citizenship behavior and well-being. International Journal of Hospitality Management, 96, 102984. https://doi.org/10.1016/j.ijhm.2021.102984

Widianingsih, Y. P. N., Setiawan, D., Aryani, Y. A., & Gantyowati, E. (2023). The Relationship between Innovation and Risk Taking: The Role of Firm Performance. Risks, 11(8), 144. https://doi.org/10.3390/risks11080144

Widyanti, S., & Mahfudz, M. (2020). The effect of entrepreneurial orientation, use of information technology, and innovation capability on SMEs' competitive advantage and performance: evidence from Indonesia. Diponegoro International Journal of Business, 3(2), 115–122. https://doi.org/10.14710/dijb.3.2.2020.115-122.

Wu, C., Botella-Carrubi, D., & González-Tejero, C. B. (2024). The empirical study of digital marketing strategy and performance in small and medium-sized enterprises (SMEs). Technological Forecasting and Social Change, 200, 123142. https://doi.org/10.1016/j.techfore.2023.123142

Xiao, Z., Xiao-yun, C., Dong, M. C., & Gao, S. (2021). Institutional support and firms' entrepreneurial orientation in emerging economies. Long Range Planning, 55(1), 102106. https://doi.org/10.1016/j.lrp.2021.102106.

Yahaya, H., & Nadarajah, G. (2023). Determining key factors influencing SMEs' performance: A systematic literature review and experts' verification. Cogent Business & Management, 10(3). https://doi.org/10.1080/23311975.2023.2251195.

You, L., Hou, D., & Ali, S. (2022). Impact of online convenience on generation Z online impulsive buying behavior: The moderating role of social media celebrity. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.951249.

Zahoor, N., Gölgeci, İ., Haapanen, L., Ali, I., & Arslan, A. (2022). The role of dynamic capabilities and strategic agility of B2B high-tech small and medium-sized enterprises during COVID-19 pandemic: Exploratory case studies from Finland. Industrial Marketing Management, 105, 502. https://doi.org/10.1016/j.indmarman.2022.07.006.

Zichella, G. (2017). Entrepreneurial Cognition: Three Essays on Entrepreneurial Behavior and Cognition Under Risk and Uncertainty. Research Portal Denmark, 145.

Zhu, W., Dai, X., Tian, Y., Hu, X., & Zhang, C. (2019). How Intellectual Capital Combination Method Can Improve Corporate Performance in China's Information Technology Industry. IEEE Access, 8, 4824. https://doi.org/10.1109/access.2019.2963060