

# Alliance imperative: Ambidexterity and strategic performance

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#### **Abstract**

**Purpose:** This study explores the linkages between organizational ambidexterity, strategic alliances, and strategic performance within the tenets of the relational view theory.

**Design/methodology/approach:** This research utilizes a framework based on relevant literature to investigate the factors influencing strategic performance among SMEs, emphasizing organizational ambidexterity and the benefits of strategic alliances. Data collected from Malaysian SMEs was used to empirically test the proposed model using Partial Least Squares Structural Equation Modeling (PLS-SEM).

**Findings:** The study reveals the essential impact of organizational ambidexterity on enhancing strategic performance among SMEs, while also confirming the mediating effect of strategic alliances in this association.

**Research Limitations/implications:** This study advances the relational view theory by empirically elucidating how organizational ambidexterity, facilitated through strategic alliances, enhances strategic performance. It underscores the critical role of interorganizational relationships in navigating competitive environments, demonstrating their significant impact on strategic outcomes amidst intense rivalries and hyper-competition. However, despite its contributions, this study has limitations due to its concentration on Malaysian SMEs, which may restrict the applicability of the findings to SMEs in other emerging markets or developed economies.

**Practical implications:** The study offers practical understanding particularly beneficial for SMEs, highlighting the significance of ambidexterity and relational-specific orientation in achieving a competitive edge. It empirically demonstrates how interorganizational relationships contribute to competitive positioning and strategic business outcomes.

**Originality/value:** This research opens new avenues for understanding strategic performance among SMEs in emerging market economies like Malaysia. It challenges the predominant focus on larger corporations and emphasizes the untapped potential of SMEs to achieve strategic success. By exploring the synergy of strategic alliances and ambidexterity, the study also provides a unique perspective on achieving an ideal balance between short-term stability and long-term value creation.

**Keywords:** Strategic Performance, Organizational Ambidexterity, Strategic Alliances



#### Introduction

The economic progress of emerging markets, such as Malaysia, relies significantly on the role of small and medium-sized enterprises (SMEs). Given the current business landscape, SMEs must harness their expertise and resources to thrive in an era defined by sustainable innovation, where proactive business strategies are essential. Looking ahead, SMEs must anticipate emerging challenges, emphasizing the need for adaptable and resilient operations. Crafting strategies that prioritize both flexibility and sustainability will be vital for strategic performance (SP). Traditional performance metrics in SMEs often emphasize daily operations and shortterm results. In contrast, SP focuses on aligning long-term goals with market adaptability, positioning SMEs for sustainable growth (Asare et al., 2023). The ongoing discussion about factors affecting strategic performance has predominantly centred on large enterprises, leaving the distinctive viewpoints and difficulties encountered by SMEs largely unexamined (Gelhard et al., 2016). Scholars also suggest that the business strategies of SMEs are shaped by their specific contexts and are affected by informal elements, including the management of relationships, tacit agreements, and personal engagement (Martin et al., 2019). Moreover, Welsh and White (1981) added that, SMEs differ characteristically and should not be considered merely as scaled-down versions of their larger counterparts.

Despite significant contributions in the literature, limited research on the success strategies of thriving organizations underscores the need to evaluate SP within SMEs. This includes recognizing their unique contexts and assessing the impact of interorganizational relationships, such as alliance formation, on performance outcomes. Empirical evidence also shows the influence of alliances on a company's strategic business approach has been limited, as posited by Lin and Lin (2016). Moreover, the concept of ambidexterity holds tremendous potential for SMEs, serving as a powerful tool to navigate current adversities, swiftly determine financial structures, and manage essential assets. Ambidexterity, which involves managing existing resources while pursuing new opportunities, helps SMEs adapt to changing market circumstances and preserve their competitive advantage. In combination with both viewpoint, ambidexterity and alliances enable SMEs to effectively identify opportunities for rapid growth and expansion. This line of research underscores the substantial potential of SMEs to drive innovation and growth, challenging the traditional understanding that only larger enterprises, with their extensive operational capacities and resource advantages, can achieve significant success (Roxas et al., 2016).

This current investigation seeks to delve into the intricate relationship between organizational ambidexterity (OAM), strategic alliances (SMESA), and SP within Malaysian SMEs. Specifically, OAM involves the simultaneous management of exploration and exploitation that is crucial for SMEs in navigating dynamic market environments. For context, SMESA relates to the development of collaborative relationships between multiple companies to address shared challenges and achieve objectives related to operational efficiency, knowledge sharing, and market facilitation through different methods of relationship management. SP for an organization encompasses achieving long-term objectives and sustaining a competitive advantage through effective strategy formulation, implementation, and evaluation. It involves aligning resources and capabilities with external opportunities and threats with the aim for sustainable growth. The significance of this research extends beyond empirical exploration to critically advancing the relational view theory (RV) (Dyer et al., 2018; Dyer & Singh, 1998) within the context of SMEs. The said theory suggests that achieving a competitive edge is not just about internal assets but is greatly enhanced by the unique benefits obtained from external relationships. By applying this theoretical lens to Malaysian SMEs, the study offers novel



insights into how SMESA and OAM contribute to sustainable competitive advantage and improved SP. Theoretical contributions include expanding the RV theory by demonstrating its applicability and relevance in emerging markets, identifying gaps in existing literature, and proposing modifications based on empirical findings. Practically, the study addresses key challenges faced by SMEs in emerging markets, providing actionable strategies for optimizing competitive advantage. It clarifies how SMEs can leverage ambidexterity and alliances as part of business strategies to navigate market uncertainties, allocate resources more effectively, and seize opportunities for growth and expansion. By offering in-depth examples and recommendations, the study aims to influence industry practices and policymaking, thereby enhancing its practical value and impact. This research not only fills important gaps in the current body of knowledge but also provides SMEs with effective frameworks and practical tools for achieving long-term strategic success. To attain this goal, the study establishes three principal research questions to steer its inquiry:

RQ1: To what degree does organizational ambidexterity affect strategic alliances?

RQ2: To what extent do strategic alliances impact strategic performance?

RQ3: Do strategic alliances serve as the mediator between organizational ambidexterity and strategic performance?

#### **Review of Literature**

### Strategic Performance

In the intricate landscape of today's business environment, SMEs have emerged as dynamic players where SP is essential for their sustained growth and competitive relevance. While traditional connotation for performance in SMEs typically focuses on day-to-day operations and short-term outcomes, SP emphasizes the alignment of long-term goals and adaptability to changing market conditions, positioning SMEs for sustainable growth (Asare et al., 2023). Initially, due to their inherent resource limitations, SMEs often find themselves compelled to employ carefully chosen strategic business approaches to counteract financial constraints. There are instances where access to non-bank credit sources is instrumental in supporting the growth of SMEs, as noted by Cheong et al. (2020). Chung (2011) further suggests that SMEs, in addition to financial indicators of growth, should strategically prioritize critical factors such as improving product visibility, growing market share, developing client relationships, refining network strategies, enhancing supply chain efficiency, and boosting sales. The direction of this study addresses the need to look beyond financial metrics to demonstrate growth. In alignment with this importance, achieving SP has emerged as a driving force toward enhanced performance. Such achievement involves reaching performance goals, prioritizing, and allocating resources, enabling managers to strategically review or adjust existing policies and plans to meet these objectives, as highlighted by Murray et al. (1995).

A thorough analysis of SP reveals a range of domains and influencing factors. While Chung et al. (2015) emphasize organizational learning, others highlight factors such as clientele, stock management, finance, and promotional strategies (Kim et al., 2008). Research also highlights responses to competitive dynamics (Chung, 2011) and strategic alignment (Yousaf & Majid, 2016). Additionally, the dynamic capabilities perspective is more thoroughly examined by Gelhard et al. (2016). Notably, the environment following the pandemic has greatly affected supply chains, highlighting the constraints that SMEs encounter due to their relatively limited strategic acumen, often a result of shorter operational histories (Miklian & Hoelscher, 2022). Nevertheless, a promising avenue for SMEs to navigate these challenges lies in leveraging



interorganisational relationships (IORs) which can offer crucial support. Some facets of IORs, such as business networks, enable SMEs to enhance their knowledge and overall business outcome by facilitating knowledge sharing and imposing cost reduction measures. By implementing strategies related to IORs, SMEs can better grasp the principles of SP, which in turn boosts their competitiveness and overall effectiveness. Ultimately, this study particularly explores the conceptualization of strategic performance for SMEs, extending beyond traditional financial metrics. It aims to engage in empirical exploration, which is crucial for providing definitive evidence of how IORs impact performance outcomes. This also includes integrating aspects such as long-term strategic objectives, financial gains, and market presence (Torkkeli et al., 2019).

#### Organizational Ambidexterity

In today's fast-changing environment, adaptability is crucial for success. Small businesses frequently face a variety of challenges that threaten their sustainability. To navigate such uncertainties, they employ strategies that balance immediate concerns with long-term objectives, mirroring the agility of resilient organizations that not only endure but excel amidst constant change and unpredictability. Organizational Ambidexterity (OAM) is a concept rooted in the ability to deftly manage two crucial orientations within an organization. On one hand, it involves the efficient handling of current business demands, known as 'exploitation'. On the other, it encompasses the organization's skill to navigate and adapt to external environmental shift, referred to as 'exploration' (Ramdan et al., 2022). This concept underscores the duality of organizational focus, ensuring that the short-term stability and long-term innovation are prioritized in harmony. Such dynamic balance enhances efficiency and makes organizations more agile and adaptive in the evolving market.

Organizational aambidexterity offers significant advantages for SMEs, serving as a potent tool to navigate adversities, quickly assess financial structures, key assets, and strategically identify paths for development and scaling (Vahlne & Jonsson, 2017). To remain competitive in today's market, companies must ensure that their current resources and capabilities are effectively harnessed to foster sustainable growth and progress. This necessitates leveraging their existing strengths to enhance efficiency and secure a competitive advantage over their rivals. Nurturing ambidexterity within SMEs enables them to achieve financial performance and resilience, even amidst unprecedented challenges (Liang et al., 2022). In the current market scenario, businesses must adeptly utilize their existing resources and capabilities to stay competitive. This entails optimizing their present strengths to enhance operational efficiency and gain an edge over their industry counterparts. According to Asif and De Vries (2015), proficiently managing these dimensions is instrumental in driving sustainable innovation and growth in the contemporary business landscape. This means that, while prioritizing current operations, businesses should also invest in exploring new opportunities to anticipate future market demands. Balancing both aspects is indeed crucial for bolstering their competitive position and ensuring lasting success.

# The Collaborative Advantages from Strategic Alliances

Allyship in business environment through strategic alliances have emerged as a potent approach that brings benefit from collaborative advantages. One of the most comprehensive studies on strategic alliances by Ferreira and Franco (2017) offers an in-depth conceptualization of strategic alliance formation for further clarities. They emphasize three fundamental functional motives for forming alliances: market access, knowledge acquisition, and business efficiency. Cultivating these dimensions is deemed imperatives for the growth



and adaptability of SMEs in the contemporary landscape, where demands are notably more extensive and intricate. Such factors are evident in business practices, particularly in the processes of generating, capturing, and delivering value to customers (Rohrbeck et al., 2013). In a market characterized by rapid evolution and mounting customer expectations for increasingly sophisticated products, the strategic act of forming alliances emerges as a potent catalyst for boosting their performance. Picture SMEs that keenly aware of the value inherent in cutting-edge offerings within the fiercely competitive domain of artificial intelligence (AI) solutions. As market access becoming key, synergy in IORs could unlock the doors to novel markets, seamlessly facilitating market expansion and seizing a wider array of opportunities (Bagheri et al., 2019). Besides, knowledge acquisition astutely attuned them to the dynamics of the AI landscape by understanding the significance of acquiring cutting-edge insights and expertise. The other alliance dimensions of business efficiency bring focus on operational excellence, recognise the critical need for streamlined processes for better performance beyond a capability of a single organizational. All of these dimensions serve as their gateway in SMESA, granting them access to clients and industries that would remain elusive if they were to tread the path independently. This development is in line with current development in diverse fields of study where alliance-related research was discussed within distinct contexts. Notably, strategic management research has increasingly centered on alliance-related studies, with a strong emphasis on enhancing collaborative performance (Prabhudesai & Prasad, 2017).

#### Relational View

The theory of Relational View (RV) conceptualizes competitive advantages through the lens of relational rents, emphasizing the firm's strategy for enhancing performance via collaborative efforts. This approach includes practices such as sharing expertise, fostering learning, joint investments, and effective management (Zhu et al., 2020). By forming relationships with other participants in their field and industries, companies can gain substantial advantages by leveraging the strategic value of their primary suppliers to enhance the performance of their products (Prajogo et al., 2021). The theory posits that acquiring complementary resources and capabilities from external sources is grounded in unique interorganizational synergy and cocreation activities. This theory puts forth ideas about how individual interactions, dyadic relationships, and larger networks contribute to achieving relational benefits. These advantages eventually leads to stronger collaborative efforts and, ultimately, enhanced organizational performance. Dyer et al. (2018) highlight that engagement in IORs enhances a firm's resource base and competitive edge, consistent with the perspective of the mentioned theory. Partanen et al. (2020) further highlight the significance of resources gained through network relationships. Their research shows how SMEs can significantly enhance their performance by obtaining and effectively leveraging important resources from their allies, aligning with RV conceptualizations. Despite the potential advantages, Kilduff et al. (2016) somehow offer a contrasting perspective, suggesting that rivalries and competitive environment can hinder the sustainability of interorganizational relationships. Their research highlights that in highly competitive environments, such relationships may be compromised by unethical behaviour, including deceptive practices, unethical negotiation tactics, and dishonesty.

Given these challenges, it becomes evident that the use of IORs through strategic alliances point out the importance of effectively navigating these complexities (Wilhelm & Sydow, 2018). This is especially pertinent for SMEs who, due to their inherent limitations, often find themselves seeking such alliances as a strategic response to the competitive dynamics. SMEs, given their inherent limitations, often find themselves seeking alliances as a tool to mitigate and response to the intense rivalries and hyper-competition. However, while these alliances



might present difficulties, the imperative for SMEs to join forces with other organizations remains compelling. As firms contend with the pressures of a fiercely competitive environment, they must transcend traditional 'inside-out' perspectives, such as the Resource-Based View (RBV) advocated by Barney (2001). In doing so, they increasingly rely on diverse Inter-Organizational Relationships (IORs) to mitigate internal weaknesses and undertake ambitious, resource-intensive ventures that extend beyond the capabilities of any single organization. Lavie (2006) supports this perspective by highlighting the limitations of the RBV in fully explaining competitive advantage within interconnected companies. The scholar argues that the RBV provides a limited perspective on IORs, prompting the development of subsequent conceptual arguments to address these limitations. Consequently, the RV emerges as a complementary perspective, recognizing that an organization's competitive position can be enhanced not only by its internal assets but also through its external engagements.

# **Hypothesis Development and Research Model**

The study introduces a framework for SP by analyzing both the direct and indirect interactions among variables. The framework includes three hypotheses set to investigate linkages between OAM, SMESA, and SP. Furthermore, it aims to investigate SMESA as an intervening factor between OAM and SP in Malaysian SMEs. The model provides a timely and inclusive structure for comprehending the intricate interconnections of these variables and how they affect SP.

# The Linkage Between Organizational Ambidexterity and Strategic Alliances

The concept of organizational ambidexterity represents key assets deemed capable of offering a compelling means to confront diverse challenges in the ever-changing landscape of contemporary business. It represents a strategic resource that provides SMEs with a powerful means to address the need for sustainable competitive advantages. By fostering this ability, SMEs can significantly enhance their SP, even in the face of unprecedented challenges. Effectively balancing the efficient management of current business demands with the ability to respond to external changes is recognized as a significant challenge that must be adeptly navigated by SMEs. In doing so, the literature has conclusively demonstrated that the exploration side of organizational ambidexterity facilitates the discovery of innovative concept and processes, primarily through the organization's adaptive response to environmental shifts (Russo & Schena, 2021). The formation of alliances offers SMEs the opportunity to enhance their exploration orientation, granting them access to a wealth of diverse array of resources, insights, and proficiencies. Through such relationships, SMEs can tap into fresh concepts, skills, and technologies that might otherwise be beyond their reach. This empowers them to improvise by developing novel innovations, venturing into new markets, and embracing creative business models. Through strategic business exploration, SMEs can significantly enhance their competitive advantage and build the resilience required to adeptly navigate evolving market demands.

Meanwhile, ambidexterity entails exploitation activities aimed at boosting efficiency and optimizing existing competencies, thereby maximizing the potential of current resources. This involves adapting to current environmental demands by refining and improving existing offerings to meet the needs of established customers in a familiar market environment (Khan & Naeem, 2018). By focusing on exploiting their current strengths, organization can build more effective collaborations within their environment. This can be achieved through the co-creation of resources within a hybrid collaborative model (de Man & Luvison, 2019), reinforcing existing capabilities through synergistic efforts. This approach aims to optimize and leverage



current competencies to enhance agility and flexibility, rather than embarking on entirely new ventures or markets. Ultimately, SMEs can leverage the power of ambidexterity to forge dynamic alliances that drive innovation and competitiveness. For example, a local sustainable fashion brand might use exploitation ambidexterity to optimize its existing operation practices, managing waste, and enhance the quality of its eco-friendly merchandise. Simultaneously, the brand can embrace exploration ambidexterity by forming strategic partnerships with eco-conscious influencers and technology firms, thereby accessing new global markets and utilizing advanced sustainability tracking tools. This dual approach not only advances their commitment to environmental responsibility but also unlocks the synergy between organizational ambidexterity and strategic alliances, allowing businesses to transcend conventional boundaries. Consequently, this study hypothesizes a direct causal relationship between both explorative and exploitative dimensions of organisational ambidexterity, and the formation of SMESA. Therefore, the following hypothesis is presented:

Hypothesis 1: Organizational ambidexterity has a positive relationship with the formation of strategic alliances among SMEs in Malaysia.

#### The Linkage between Strategic Alliances and Strategic Performance

Literature suggests a strong interconnection between IORs and performance (Khalid & Larimo, 2012). When organizations strategically harness SMESA in response to demanding business conditions, they open doors to a wealth of resources, expertise, and valuable networks. This, in turn, equips them with the means to enhance their performance. Such approach empowers SMEs to overcome resource limitations and gain a competitive edge in their specific industries. This type of strategy has gained increasing significance for SMEs due to the manifold benefits it offers. Extensive research demonstrates that forging alliances enables SMEs to surmount resource constraints and fortify their competitive standing (Ferreira et al., 2021; Prabhudesai et al., 2022). In essence, by consolidating resources and sharing costs, SMEs gain access to essential expertise and capabilities needed for effective market competition. This approach fosters a more cohesive and robust strategy for addressing industry challenges and seizing growth opportunities, ultimately leading to a significant enhancement in overall SP.

There is also evidence that SMESA fosters the development of innovative business models, showcasing an organization's flexibility and empowering it to align with strategic objectives (Hung et al.,2015). Additionally, SMEs can capitalize on the advantages of partnerships, including resource sharing, expertise, and efficient allocation, to improve their SP. For example, a niche textile company might focus on producing eco-friendly fabrics and partner with other firms that handle dyeing and finishing processes, thus combining their strengths to deliver a comprehensive, high-quality product. This, in turn, fosters avenues for innovation and creativity, empowering SMEs to nurture their intellectual capital and uphold a competitive advantage (Ferreira et al., 2021). Additionally, by engaging in partnerships with larger firms or forging international alliances, SMEs can access new markets and expand their market share (Brouthers et al., 2015; Talebi et al., 2017). Thus, considering this growing significance of collaboration and knowledge-sharing, the study posits the following hypotheses:

Hypothesis 2: Strategic alliances have a positive connection with strategic performance among SMEs in Malaysia.



# The Linkage between Organizational Ambidexterity, Strategic Alliances, and Strategic Performance

Strategic resources, such as OAM, can be a cornerstone for achieving a competitive advantage, as emphasized by Lavie (2006). The dual strategies of exploration and exploitation encourage SMEs to actively seek novel opportunities and expand their reach, all while capitalizing on their current strengths to foster ongoing development and stability. In Malaysia, SMEs encounter distinctive challenges stemming from their limited scale of operations and resource constraints. Ahmadi and Osman (2020) explore the paradox of innovation strategies in SMEs and present a model emphasizing balanced ambidexterity orientation. They argue that SMEs can achieve strategic performance by adeptly managing both exploitative and exploratory activities. This study aligns with the current study's perspective, suggesting that the simultaneous management of ambidexterity is crucial for SMEs to overcome innovation challenges and improve their overall strategic performance. Benner and Tushman (2003) argue that this strategy allows firms to leverage their established capabilities and achieve greater returns. As a result, by concentrating on OAM, SMEs can attain enhanced strategic performance outcomes.

However, it's worth noting that this subject matter still lacks definitive outcomes .While certain scholars highlight direct relationships, others suggest exploring mediators as a means to gain deeper insights into how ambidexterity influences organizational performance, as emphasized by Charlotta et al. (2012). The full impact of the outcome may undergo a mediating process known as strategic resources capitalisation, as outlined by Ketchen et al. (2007). Contextually, this study asserts that the primary mechanism influencing SP is leveraging OAM, which is acquired through SMESA. OAM serves as a strategic resource that influences SP by enhancing market facilitation, knowledge acquisition, and operational efficiency. Thus, the impact of OAM on SP is channelled through these dimensions facilitated by SMESA. Corroborating this perspective, recent research by Bouncken et al. (2020) supports that external engagement plays an intervening role in the association between ambidexterity and business outcomes. The framework emphasizes that the collaborative advantages gained through networking have provided benefits not only to the focal company but also to all participants in the alliance as a whole.

SMESA allows SMEs to pool their resources, facilitate the exchange of knowledge, and collectively address challenges, resulting in increased innovation, improved market position, and broader market access. The joint business model from these activities fosters a mutually beneficial scenario for all stakeholders by aligning individual gains with the shared advantages of the group. Through SMESA, SMEs aggregate their cumulative value, thereby reducing collective risk exposure and boosts their ability to excel in a competitive market (Nwokocha & Madu, 2020). For instance, consider some challenging perspective for a technology-based SME with a dynamic explorative orientation, skilled at identifying new markets and growth opportunities. This SME may encounter inherent resource constraints that impede the full exploitation of these opportunities, particularly due to the elevated R&D costs involved in the development phase (Lucena & Roper, 2016). Realistically, by engaging with other industry counterparts, this SME can leverage combined resources to enhance the development and commercialization of new products, ultimately augmenting to its strategic performance.

In summary, SMESA serves as a key intervening factor between OAM and SP, offering SMEs with the avenue to harness competitive advantages essential for thriving in a hyper-competition marketplace. It empowers SMEs to strategically achieve their performance goals and fully



realize their progress and success potential. Thus, SMESA potentially emerges as the critical link that can enhance sustainability and long-term success. Consequently, this study posits the following hypotheses:

Hypothesis 3: SMESA mediates the relationship between organizational ambidexterity and strategic performance among SMEs in Malaysia.

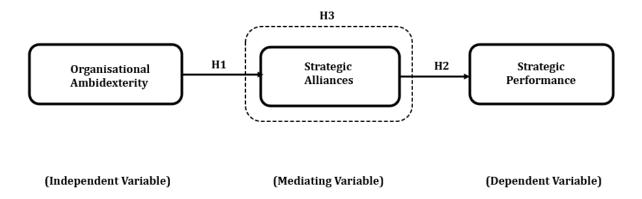


Figure 1: Research Framework

#### Methods

#### Survey and Data Collection

The conceptual assertions in the current study were empirically validated through quantitative measures by administering surveys to targeted participants using purposive sampling. The survey was guided by a positivist, deductive approach and used a cross-sectional design, with data collected at a single time over an approximately four-month period. The questionnaire was administered personally, following the recommendation by Sekaran and Bougie (2020). The targeted participants were selected according to specific criteria relevant to the study's objectives. They were SMEs listed in the 2022 SMEs Corporation directory and met all qualifying criteria set by the agency, including establishment type, shareholding structure, and other pertinent conditions. The information obtained from this source is deemed credible, given that SMEs Corporation Malaysia (SME Corp.) operates as the Central Coordinating Agency (CCA) under the Ministry of Entrepreneurs and Cooperatives Development (MECD). This agency oversees the coordination of SMEs development initiatives across various ministries and agencies. Additionally, it functions as the administrative body for the National SME Development Council (NSDC) and provides key information and data related to SMEs in Malaysia.

The survey population encompassed considerations such as the company's turnover and the number of full-time employees. Specifically, for manufacturing, sales turnover was capped at RM50 million or 200 full-time employees. Conversely, for services and other sectors, the sales turnover limit was RM20 million or 75 full-time employees. Additionally, the study focused on SMEs that incorporated alliances as a core component of their business strategy and regularly engaged in IORs. Given this, two screening questions were included as part of the eligibility criteria for survey participation, aligning with this specified criterion (Hair et al., 2014). These questions explored aspects such as the frequency of alliance formation and the



type of engagement among partners. The unit of analysis of the study is SMEs organization, and the sampling frame comprised cross-sectoral SMEs organizations in manufacturing, services, and other sectors. In this survey, the top management personnel, partners and owner-managers in these organizations served as the key informants. They were chosen due to their active involvement in shaping the company's strategic direction and, indirectly, influencing its performance. The role of a key informant is multifaceted, making it essential to select individuals based on specific qualifications. Given this study is related to IORs, the qualifications include their roles and responsibilities within the company and their knowledge of alliances (Lambe et al., 2002). This would allow them to provide valuable insights into performance outcomes for this study.

Once the target respondents were identified, a formal invitational letter was sent, accompanied by a comprehensive cover letter detailing the study's objective. The survey link was distributed through various channels, including email, WhatsApp, and Telegram. For this study, the sample size was determined based on literature recommendations that underscore the importance of using appropriate procedures for sample selection. The validity of research findings hinges on this selection, as it involves assessing adequacy and adopting diverse sampling strategies. Practical considerations such as budgetary constraints and resource availability can also significantly influence these decisions, frequently necessitating reliance on suitable sample sizes rather than complete population data (Sekaran et al., 2020; Kumar et al., 2013). Moreover, in organization-specific research, particularly within SMEs as examined in this study, sampling strategies are preferred due to the inherent difficulties in obtaining comprehensive data from entire populations (Aguinis et al., 2021). Most angles of discussion found in the literature acknowledge this data collection limitations while also suggesting methodological rigor in empirical studies.

Accordingly, a list of Malaysian SMEs was drawn from their directory provided by SMEs Corporation Malaysia. Given the potential for a low response rate, as cautioned by Sekaran and Bougie (2020), considerable effort was made in survey distribution to ensure an adequate response rate. To address this, the study has first established a threshold for the minimum sample size using power analysis techniques. This approach is widely recognized as an effective method for establishing sample sizes in research (Hair et al., 2019; Ringle et al., 2018; Uttley, 2019). This technique assesses a study's capacity to detect significant effects or differences by calculating the minimum sample size required. Specifically, power analysis focuses on the model component with the greatest number of predictors (Hair et al., 2014). In this study, G\*Power version 3.1.9.7 software was used to perform the power analysis and determine the appropriate sample size. With a significance level of 0.05, an effect size of 0.15, and a power of 0.95, the analysis indicated that a minimum sample size of 89 was necessary to meet the model's predictor requirements.

A substantial number of companies in the database were reached out through an online survey, despite the initial indication of a lower minimum sample size. Upon completion of data collection, the final sample size of 168 not only meets but exceeds the suggested minimum, providing robust statistical power for the study's findings. Demographic analysis revealed that the responses came from diverse sectors, including manufacturing (29%), services (45%), agriculture (13%), construction (11%), and finance (2%). Observably, these SMEs varied in size and represented a broad spectrum of industries. The primary motives for forming alliances were related to marketing, technology exchange, manufacturing, access to capital resources, and regulatory and compliance support, with variations being the company size and sectors.



Key informants from these organizations had between 4 and 23 years of experience with their company's strategic direction. Notably, 64% of the participating companies held various awards and accreditations, such as ISO, Halal, MESTI, KKM, MQAS, GVHP, MSPO, FSSC, CIDB, MTCC, SIR, SPK, MS, SIRIM, GMP, HACCP, CMMI, MyBHA, MTIB, NPRA, among others. These certifications underscore the reputation of these high-growth organizations despite prevailing market challenges.

#### Measurement

The items for OAM were drawn from Majid (2017) and Lubatkin (2006) to measure simultaneous management of exploitation and exploration orientation via unidimensional construct of OAM. The mediator in this study, which is SMESA, was assessed using a higher order construct adapted from Ferreira and Franco (2017b) with three key dimensions: market access, operational efficiency, and knowledge acquisition. Lastly, the items for the dependent variable, strategic performance, were adapted from Rehman and Anwar (2019). These measures were evaluated using a seven-point Likert scale, with scores ranging from 1 (strongly disagree) to 7 (strongly agree), allowing a comprehensive evaluation of participant responses.

#### **Findings**

# Data Analysis & Result

To ensure the strength and dependability of the data analysis, this study performed an in-depth evaluation of multivariate normality. In line with the approach outlined by Cain et al. (2017), Mardia's coefficient was used to assess the skewness and kurtosis of the dataset, providing insights into its distribution characteristics. This assessment was conducted using the webbased software and the analysis revealed a deviation from the assumption of multivariate normality. Subsequently, this study utilizes SmartPLS version 4.0.9.2, a second-generation structural equation modeling software, for an in-depth analysis, supported by bootstrapping techniques. To fortify the statistical reliability of the findings, the study performed a resampling bootstrapping process, generating 5,000 resamples to calculate pivotal statistical parameters, including path coefficients, standard errors, t-values, and p-values. A rigorous evaluation of the measurement model was conducted prior to commencing the analysis of the structural model, in adherence to the methodological standards advocated by Hair et al. (2019) and Ramayah et al. (2018).

# Common Method Variance Test

In line with the procedures suggested by Kock and Lynn (2012), a rigorous examination of the measurement models under SmartPLS was conducted to address common method bias (CMV). The dataset, sourced from a single origin, required an assessment for potential response bias through the Common Method Variance (CMV) test. The goal was to ensure that single-source data did not introduce significant biases. The full collinearity test was employed to assess CMV, with results indicating Variance Inflation Factor (VIF) values consistently below 3.3. This is evidenced by the VIF values, which ranged from 1.00 to 2.072, thereby ensuring the reliability of the structural model analysis and results. These findings confirm that all VIF values in this study comfortably remain below the specified threshold, in line with the guidance provided by Kock (2015).

# Assessment of PLS-SEM

The current study employed a structured two-step approach in the evaluation and reporting of Partial Least Squares Structural Equation Modeling (PLS-SEM) results, following established



best practices (Henseler et al., 2009). The overarching direction of methodological framework encompassed a meticulous examination of both the measurement model and the structural model, aligning with the comprehensive guidelines specified by Hair et al. (2019). This strategy allowed for a thorough and systematic assessment of the research framework, ensuring reliability and validity of the results.

#### Assessment of Measurement Model

This study leveraged the power of SmartPLS software to scrutinize the direct relationship between OAM,SMESA and SP. Additionally, it explored the intervening role of SMESA on the link between the OAM and SP. Initially, PLS-SEM was selected as the primary statistical technique due to its proven effectiveness in simultaneously evaluating construct validity and theoretical relationships. This method uniquely combines key aspects of data analysis, enabling a comprehensive assessment of the measurement model and the complex interplay between both dependent and independent variables. Furthermore, convergent validity was employed as a crucial component of construct validation. This testing focuses on how well measurement items capture the underlying latent variable and their correlation with other indicators of the same construct. The said methodological approach ensures that this research not only tests theoretical relationships but also rigorously assesses the validity and reliability of the underlying constructs, in accordance with the principles outlined by Hair et al. (2021). The dataset was rigorously examined using robust metrics to ensure the validity and reliability of the constructs. Key indices such as Average Variance Extracted (AVE) and Composite Reliability (CR) were utilized in this assessment.

The findings demonstrated a high level of convergent validity, with the CR index exceeding the 0.70 threshold and the AVE surpassing the 0.50 criterion. These results affirm the robustness and accuracy of the measurement items in capturing the underlying latent variables. Table 1 provides a detailed account of the AVE and CR values, showing that most constructs attained an AVE of no less than the specified thresholds. This eventually aligns with the established criteria endorsed by Hair et al. (2021) for evaluating construct validity and reliability. To enhance measurement precision, items with loadings outside the acceptable range were judiciously removed from the analysis. This refinement process resulted in a final set of 29 items, each exhibiting loadings between 0.552 and 0.836. Notably, some of the lowloading items were deleted to ensure that only the most reliable and valid indicators remained for the analysis, thereby enhancing the overall quality and robustness of the construct measurement. Further insights into the reflective second-order construct are presented in Table 2, offering a comprehensive view of the construct's validity and reliability. This study utilized the approach to streamline the model by minimizing the number of direct paths and relationships, thereby enhancing model parsimony while still effectively capturing complex interrelationships.

Following the evaluation of construct reliability and convergent validity, this study then aimed to ascertain the discriminant validity of related constructs using the HTMT (Heterotrait-Monotrait) criterion, as recommended by Henseler et al. (2015) and refined by Franke and Sarstedt (2019). The HTMT values were assessed against both stringent and lenient benchmarks. Specifically, the stringent criterion required HTMT values to be less than or equal to 0.850, while the lenient criterion permitted values up to 0.900. This rigorous evaluation ensures that constructs maintain a clear distinction from one another, thus validating their discriminant validity. The study utilized the more lenient criterion, consistent with the approach advocated by Gold et al. (2001). As shown in Table 3, all HTMT values were comfortably



below the lenient threshold of  $\leq$  0.90, indicating that the constructs are distinctly recognized by survey participants. These evaluations collectively affirm the validity and reliability of the assessment instruments, thereby bolstering the overall quality and credibility of the research outcomes.

Table 1 Measurement Model for First-Order Construct

| Variable             | Item         | Loading | CR    | AVE   |  |
|----------------------|--------------|---------|-------|-------|--|
|                      |              |         |       |       |  |
| Organizational       | Oamexplo1    | 0.773   | 0.899 | 0.501 |  |
| Ambidexterity        | Oamexplo2    | 0.826   |       |       |  |
| (OAM)                | Oamexplo3    | 0.820   |       |       |  |
|                      | Oamexplo4    | 0.642   |       |       |  |
|                      | Oamexplo5    | 0.705   |       |       |  |
|                      | Oamexploit10 | 0.726   |       |       |  |
|                      | Oamexploit11 | 0.647   |       |       |  |
|                      | Oamexploit6  | 0.614   |       |       |  |
|                      | Oamexploit9  | 0.570   |       |       |  |
| Operational          | Efficiency1  | 0.552   | 0.831 | 0.501 |  |
| Efficiency           | Efficiency3  | 0.671   |       |       |  |
|                      | Efficiency4  | 0.735   |       |       |  |
|                      | Efficiency5  | 0.767   |       |       |  |
|                      | Efficiency6  | 0.785   |       |       |  |
| Knowledge            | Knowledge1   | 0.836   | 0.821 | 0.536 |  |
| Acquisition          | Knowledge2   | 0.689   |       |       |  |
| _                    | Knowledge3   | 0.758   |       |       |  |
|                      | Knowledge7   | 0.630   |       |       |  |
| <b>Market Access</b> | Mkt1         | 0.777   | 0.824 | 0.610 |  |
|                      | Mkt2         | 0.831   |       |       |  |
|                      | Mkt3         | 0.733   |       |       |  |
| Strategic            | Perf1        | 0.743   | 0.894 | 0.514 |  |
| Performance          | Perf2        | 0.745   |       |       |  |
| (SP)                 | Perf3        | 0.692   |       |       |  |
|                      | Perf4        | 0.778   |       |       |  |
|                      | Perf5        | 0.761   |       |       |  |
|                      | Perf6        | 0.653   |       |       |  |
|                      | Perf7        | 0.708   |       |       |  |
|                      | Perf8        | 0.645   |       |       |  |

Table 2 Measurement Model for Second-Order Construct

| Variable            | Item                   | Loading | CR    | AVE   |
|---------------------|------------------------|---------|-------|-------|
| Strategic Alliances | Operational Efficiency | 0.842   | 0.892 | 0.733 |



| (SMESA) | Knowledge Acquisition | 0.856 |
|---------|-----------------------|-------|
|         | Market Access         | 0.870 |

Table 3
Discriminant Validity (using HTMT)

| Variable                        | 1     | 2     | 3 |
|---------------------------------|-------|-------|---|
| 1. Organizational Ambidexterity |       |       |   |
| 2. SMEs Performance             | 0.641 |       |   |
| 3. Strategic Alliances          | 0.846 | 0.753 |   |

# Assessment of structural model

Following Hair et al. (2017) and Cain et al. (2017), the study examined skewness and kurtosis to assess data normality and validate the suitability of statistical methods. The analyses revealed a significant departure from multivariate normality, with Mardia's coefficient of multivariate skewness at 4.540 ( $\beta$  127.141, p < 0.01) and kurtosis at 24.789 ( $\beta$  11.583, p < 0.01). These findings confirm that the data do not conform to the assumption of multivariate normality. To address this non-normality issue, PLS-SEM was applied, particularly utilizing the bootstrapping technique for hypothesis testing. This approach handles non-normally distributed data effectively and provides a robust framework for evaluating the structural model. Following Hair et al. (2019), a bootstrapping procedure with 5,000 samples was used to assess the path coefficients, standard errors, t-values, and p-values in the structural model. Additionally, a two-tailed test was conducted with 168 samples to determine the significance of the projected paths (Mitrega et al., 2021). To address Hahn and Ang's (2017) concerns regarding the limitations of relying solely on p-values for hypothesis testing, this study employed a more comprehensive approach. Alongside p-values, confidence intervals and effect sizes were also incorporated to enhance the robustness of the results. Table 4 provides a summary of the criteria used in the hypothesis evaluation:

Table 4 Hypothesis Testing

|           | Relationship           | Std   | Std   | T-     | P-     | BCI                    | BCI           | $\mathbf{f}^2$ |
|-----------|------------------------|-------|-------|--------|--------|------------------------|---------------|----------------|
|           |                        | Beta  | Dev   | Value  | Values | $\mathbf{L}\mathbf{L}$ | $\mathbf{UL}$ |                |
| Path      | n Coefficient          |       |       |        |        |                        |               |                |
| H1        | OAM -> SMESA           | 0.719 | 0.038 | 19.067 | 0.000  | 0.630                  | 0.784         | 1.072          |
| <b>H2</b> | $SMESA \rightarrow SP$ | 0.500 | 0.099 | 5.050  | 0.000  | 0.291                  | 0.680         | 0.211          |
| Spec      | cific Indirect Effect  |       |       |        |        |                        |               |                |
| <b>H3</b> | OAM -> SMESA           | 0.360 | 0.075 | 4.792  | 0.000  | 0.202                  | 0.499         | 0.131          |
|           | -> SP                  |       |       |        |        |                        |               |                |

Initially, the study observed the direct association between the predictors and the outcomes under investigation. The analysis revealed a meaningful relationship between OAM and SMESA ( $\beta$  = 0.719, t = 19.067, p < 0.05), supporting Hypothesis 1 with a strong effect size of



1.072 (Cohen, 1998). The study also found a significant relationship between SMESA and SP ( $\beta=0.500$ , t=5.500, p<0.05), validating Hypothesis 2. Furthermore, the mediation analysis showed that SMESA significantly mediates the relationship between OAM and SP ( $\beta=0.360$ , t=4.792, p<0.05), thereby confirming the support for Hypothesis 3. To ensure the robustness of these findings, effect sizes were incorporated as recommendation by Sullivan et al. (2012), demonstrating that the sample size provided adequate power to test the hypotheses. All effect sizes for H1, H2, and H3 were deemed acceptable, with the indirect effect size in the mediation analysis notably substantial at 0.131, exceeding the threshold established by Gaskin et al. (2023).

#### **Discussion and Conclusion**

Building on the interplay between SMEs and organisational performance-related literature, this study proposes a framework exploring the impact of OAM on SP, achieved through SMESA. The comprehensive analysis of 168 SMEs across various sectors robustly supports all hypotheses, both directly and indirectly. Specifically, it confirms a significant direct relationship between OAM and SMESA, highlighting the advantages of ambidexterity through both explorative and exploitative pursuits. Similarly, the findings aligns with earlier literature where value creation through exploration of new technologies, markets, and customers can be facilitated by external sources, such as alliance partners, while adhering to established agreement boundaries (Rosenkopf & Almeida, 2003). Additionally, it confirms the value derived from exploitation in alliance relationships depends not only on individual knowledge but also on mutual knowledge exchange facilitated by regular interactions with alliance partners (Zollo et al., 2002). This additional insight reinforces the need for SMEs with limited resources to embrace organisational ambidexterity through diverse exploration strategies while optimizing exploitation orientation. Ultimately, the results also underscore the dynamic interplay within SMESA and its impact on SP, highlighting its crucial role in enabling SMEs to navigate challenges and seize opportunities effectively. This adaptability significantly influences SP, as resource-constrained SMEs demonstrate relational-specific competencies by actively seeking and utilizing external knowledge while fostering internal learning through interactions (Tian & Dogbe, 2020). This adaptability is exemplified through their alliance activities, which may involve numerous vertical and horizontal interactions along the value chain (Yu et al., 2019). Such interactions within SMESA contribute to a deeper understanding of both short-term gains and long-term performance improvements, which is reflected in the interpretation of SP values.

While existing research has extensively explored the direct relationship between alliance-related strategies and business performance (Flatten et al., 2011; Hung et al., 2015; Nwokocha & Madu, 2020), this study shifts focus to the nuanced interplay of OAM and its mediated impact through SMESA on SP among SMEs. Evidently, there has been a relative scarcity of research investigating the specific conditions under which these resources impact the performance of SMEs operating in Malaysia, especially when compared to the body of work focusing on European SMEs engaging in strategic alliances (see Ferreira & Franco, 2017; Castro & Roldán, 2015; Rossmannek & Rank, 2021). This study therefore addresses these gaps by offering comprehensive empirical evidence on SMESA, specifically within the Malaysian context, characterized by unique sectoral dynamics, diverse company sizes, and varying environmental conditions. It also highlights the role of SMESA, conceptualized through market access, operational efficiency, and knowledge acquisition, as a crucial intervening factor in the relationship between OAM and SP. This finding supports previous calls to explore the influence of relational-specific factors on value creation through alliances (Nyaga & Whipple,



2011). Thus, it emphasizes the importance support to further understands the complex interplay among these factors and their implications for performance studies related to SMEs in Malaysia.

# Theoretical and Implications

Theoretically, the study emphasizes the key role of OAM and SMESA in shaping the SP among SMEs in Malaysia, guided by the RV theory. It aims to align with contemporary perspectives by expanding on the traditional RV principle, which has remained relatively static. This approach addresses evolving viewpoints on interorganizational relationships, such as value creation and value capture, as time progresses (Dyer et al., 2018). This study responds to the need for a dynamic reinterpretation of the theory by exploring how the concept of value creation and capture manifest within the contexts of OAM and SMESA, thereby impacting the overall SMEs performance. Noticeably, this research corroborates Chung et al. (2018), with both studies concurring on the notion that SP is intricately intertwined with the cultivation of alliances and relationships. This study makes meaningful contributions to the development of RV as a performance-based theory, complementing the widely cited RBV theory found in most strategic management literature. In contrast to this prominent theory, which emphasizes leveraging pooled resources within alliances to achieve competitive advantage and superior business results (Lin et al., 2009), the RV theory focuses on the value generated from IORs and how these relationships contribute to strategic outcomes (Dyer & Singh, 1998). Essentially, RBV concentrates on the internal synergy of resources, while RV highlights the strategic benefits derived from the quality and dynamics of relationships between organizations.

Earlier research by Mamun et al. (2022) proposes the adoption of a strategic orientation approach to cultivate a strong focus on innovation as a key driver of success. This study builds on that premise by integrating Zhang et al. (2020)'s findings, which emphasize the association between innovation and ambidexterity. This study reaffirms the relevance of the RV in guiding SMEs toward improved performance by considering the principle of ambidexterity, which can create and capture value. On a parallel note, the RV, as delineated by Dyer and Singh (1998), places substantial emphasis on the role of alliance-related strategies and IORs in achieving a competitive advantage. This theoretical perspective holds relevance within the sphere of SMEs, not only in European nations with notably distinct in infrastructure and system but also extends its applicability to diverse economic climate, such as Malaysia. This study particularly contributes to understanding relational-specific factors in building competitive advantages, advancing the work of Kiyabo and Isaga (2019), who initially proposed a comprehensive framework linking the RV theory to SMEs performance in the welding sector. Their study offers a nuanced understanding of the link between strategically defined entrepreneurial endeavours and SMEs performance. Similarly, the current research demonstrates that SMEs, by adopting strategic orientations such as ambidexterity and alliance strategies, can cultivate a competitive advantage, positively influencing their performance. This connection underscores the broader theoretical applicability of the RV in a more diverse contexts, highlighting its relevance in analyzing the factors driving SMEs strategic performance.

#### **Practical and Social Implications**

Practically, this study offers important guidance to SMEs, policymakers, and strategic management scholars. For SMEs operating in developing economies, building collaborative relationships with a diverse range of strategic stakeholders, including both public and private entities is key. Such engagements serve as conduits for external knowledge and resources, essential for enhancing competitive positioning and overall performance. By nurturing OAM



and strategically cultivating alliances, SMEs can efficiently acquire new resources, cutting-edge techniques, and invaluable knowledge. This is particularly vital for SMEs from less developed economies striving to compete on a global scale. For policymakers, the study underscores the need for supportive measures that foster collaboration and networking among SMEs. Initiatives that foster business partnerships and allocate resources for accessing external expertise can create a more dynamic and competitive business environment, leading to substantial growth and development within the SME sector and enhancing overall economic vitality. From a strategic management perspective, the research contributes to the understanding of SME strategic performance by highlighting the significance of both aspect of organizational ambidexterity and alliance-focused business models. The results of this study illuminate the specific challenges faced by SMEs in evolving economic contexts, such as in Malaysia, and reveal the potential benefits of adopting such strategies. This study enriches the domain of expertise on how strategic alliances and ambidexterity can drive SME success, offering practical strategies for leveraging these dynamics to achieve competitive advantage and ensure long-term growth.

# Limitations and Suggestions for Future Research

The study primarily focused on evaluating how organizational ambidexterity and the formation of strategic alliances influence the strategic performance of SMEs. Overall findings confirm a positive relationship between these variables and the strategic outcomes of SMEs. Although most hypotheses were supported, certain items of the constructs were excluded because of low factor loadings. This suggests that some of these constructs may be context-sensitive and influenced by specific environmental and operational factors. To deepen the insight into factors influencing strategic performance in various contexts, future research might explore extending the study to include SMEs from different economic environments. The said approach could provide a broader perspective on how ambidexterity and strategic alliances impact SMEs performance under varying conditions. Additionally, exploring different industry sectors and geographical regions could offer more nuanced insights into the contextual factors influencing these relationships. Furthermore, future research should seek to replicate this study across various environments to gain a more comprehensive understanding of how different organizational settings, orientations, and capabilities impact strategic performance. Exploring factors such as firm size, sector, core business activities, and management practices would be highly beneficial in uncovering how these variables shape the dynamics of performance indicators.

Methodologically, while cross-sectional approach in the current study provides important snapshots, employing longitudinal studies, experimental designs, and case studies could yield a more comprehensive understanding of ambidexterity and strategic alliances across different industries and sectors. Longitudinal data could illuminate the evolving nature of these relationships over time, and utilizing multiple data sources might provide additional perspectives on the variables under investigation. Finally, delving into specific contextual elements, such as regulatory frameworks and market structures, can also shed light on how these elements influence the effectiveness of SMEs in enhancing strategic performance among SMEs. Understanding these elements provides a pathway to advancing comprehensive knowledge of performance determinants, an area that remains underexplored in emerging market economies. This insight would ultimately provide valuable practical implications for SMEs and policymakers, helping to shape more effective strategies and supportive policies.



#### **References**

- Aguinis, H., Hill, N. S., & Bailey, J. R. (2021). Best Practices in Data Collection and Preparation: Recommendations for Reviewers, Editors, and Authors. *Organizational Research Methods*, 24(4), 678–693. https://doi.org/10.1177/1094428119836485
- Ahmadi, M. and Osman, M. H. M. (2020). Exploitative dominant balanced ambidexterity solving the paradox of innovation strategies in SMEs. *International Journal of Business Innovation and Research*, 21(1), 79. https://doi.org/10.1504/ijbir.2020.104033
- Asare, B., Nuertey, D., & Poku, E. (2023). Innovation-oriented supply chain integration for structural flexibility and strategic business performance. *Benchmarking*, 2007, 1463–5771. https://doi.org/10.1108/BIJ-10-2022-0626
- Andrew H. Gold, Arvind Malhotra & Albert H. Segars (2001) Knowledge Management: An Organizational Capabilities Perspective, *Journal of Management Information Systems*, 18:1, 185-214, DOI: 10.1080/07421222.2001.11045669
- Bagheri, M., Mitchelmore, S., Bamiatzi, V., & Nikolopoulos, K. (2019). Internationalization Orientation in SMEs: The Mediating Role of Technological Innovation. Journal of International Management, 25(1), 121–139. https://doi.org/10.1016/j.intman.2018.08.002
- Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of Management*. https://doi.org/10.1016/S0149-2063(01)00115-5
- Benner M.J., & Tushman M.L. (2003). Exploration, exploitation, and process management: the productivity dilemma revisited. *Academy of Management Review*, 28(2), 238–256.
- Bouncken, R. B., Fredrich, V., Kraus, S., & Ritala, P. (2020). Innovation alliances: Balancing value creation dynamics, competitive intensity and market overlap. *Journal of Business Research*, 112(6), 240–247. https://doi.org/10.1016/j.jbusres.2019.10.004
- Brouthers, K. D., Nakos, G., & Dimitratos, P. (2015). SME entrepreneurial orientation, international performance, and the moderating role of strategic alliances. *Entrepreneurship Theory and Practice*, 39(5), 1161-1187. https://doi.org/10.1111/etap.12101
- Cain, M. K., Zhang, Z., & Yuan, K. H. (2017). Univariate and multivariate skewness and kurtosis for measuring nonnormality: Prevalence, influence, and estimation. *Behavior Research Methods*, 49(5), 1716–1735. https://doi.org/10.3758/S13428-016-0814-1/TABLES/7
- Cohen, J. (1988). Statistical Power Analysis for the Behavioral Sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.
- Castro, I., & Roldán, J. L. (2015). Alliance portfolio management: Dimensions and performance. *European Management Review*, 12(2), 63–81. https://doi.org/10.1111/emre.12042
- Charlotta, S., Kohtamäki, M., & Andreas, K. (2012). Exploration And Exploitation Strategies, Profit Performance, And the Mediating Role of Strategic Learning: Escaping the Exploitation Trap. *Strategic Entrepreneurship Journal*, 6, 18–41. https://doi.org/10.1002/sej



- Cheong, C. W. H., Lee, M. H., & Weissmann, M. A. (2020). Credit access, tax structure and the performance of Malaysian manufacturing SMEs. *International Journal of Managerial Finance*, *16*(4), 433–454. https://doi.org/10.1108/IJMF-08-2019-0308
- Chung, H.F. (2011), Market orientation, guanxi, and business performance. *Industrial Marketing Management*, 40(4), 522-533. https://doi.org/10.1016/j.indmarman.2010.12.008
- Chung, H.F., Yang, Z. and Huang, P.H. (2015), How does organizational learning matter in SP? The contingency role of guanxi networking. *Journal of Business Research*, 68(6), 1216-1224.
- Chung, J., Yang, H., & Won, J. (2018). Relationships between the capabilities and export performance of korean clothing and textiles SMEs and the moderating effects of export mode on these relationships. *Clothing and Textiles Research Journal*, 37(1), 3-19. https://doi.org/10.1177/0887302x18797468
- De Man, A. P., & Luvison, D. (2019). Collaborative business models: Aligning and operationalizing alliances. *Business Horizons*, 62(4), 473–482. https://doi.org/10.1016/j.bushor.2019.02.004
- Dyer, J. and Singh, H. (1998). The relational view: cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, 23(4), 660. https://doi.org/10.2307/259056
- Dyer, J. H., Singh, H., & Hesterly, W. S. (2018). The relational view revisited: A dynamic perspective on value creation and value capture. *Strategic Management Journal*, 39(12), 3140–3162. https://doi.org/10.1002/smj.2785
- Ferreira, A., & Franco, M. (2017). Strategic alliances, intellectual capital and organizational performance in technology-based SMEs: Is there really a connection? *International Journal of Business and Globalisation*, 18(1), 130–151. https://doi.org/10.1504/IJBG.2017.081024.
- Ferreira, A., & Franco, M. (2017b). The Mediating Effect of Intellectual Capital in The Relationship Between Strategic Alliances and Organizational Performance in Portuguese Technology-Based SMEs. *European Management Review*, 14(3), 303–318. https://doi.org/10.1111/emre.12107
- Ferreira, A., Franco, M., & Haase, H. (2021). Strategic alliances and development of intellectual capital: a study of technology-based SMEs. *International Journal of Organizational Analysis*, 30(6), 1644-1671. https://doi.org/10.1108/ijoa-10-2020-2440
- Flatten, T. C., Greve, G. I., & Brettel, M. (2011). Absorptive capacity and company performance in SMEs: The mediating influence of strategic alliances. *European Management Review*, 8(3), 137–152. https://doi.org/10.1111/j.1740-4762.2011.01015.x
- Franke, G., & Sarstedt, M. (2019). Heuristics versus statistics in discriminant validity testing: a comparison of four procedures. *Internet Research*, 29(3), 430-447.
- Gaskin, J., Ogbeibu, S., and Lowry, P. B. (2023). Demystifying Prediction in Mediation Research and the Use of Specific Indirect Effects and Indirect Effect Sizes in H. Latan, J. F. Hair, & R. Noonan (Eds.), Partial least squares path modeling: Basic concepts, methodological issues, and applications (2nd ed.). Cham, Switzerland: Springer.



- Gelhard, C., Von Delft, S. and Gudergan, S.P. (2016), Heterogeneity in dynamic capability configurations: equifinality and strategic performance. *Journal of Business Research*, 69 (11), 5272-5279.
- Hahn, E. D., & Ang, S. H. (2017). From the editors: New directions in the reporting of statistical results in the Journal of World Business. *Journal of World Business*, 52(2), 125-126.
- Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106–121. https://doi.org/10.1108/EBR-10-2013-0128
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., & Thiele, K. O. (2017). Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, 45(5), 616–632. https://doi.org/10.1007/S11747-017-0517-X
- Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M. (2019), "When to use and how to report the results of PLS-SEM", European Business Review, 31(1),2-24. https://doi.org/10.1108/EBR-11-2018-0203
- Hair Jr, J., Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). A primer on partial least squares structural equation modeling (PLS-SEM). Sage publications.
- Henseler, J. & Fassott, G. (2009). Testing moderating effects in PLS Path Models: An Illustration of available precoedures. In V. Eposito Vinzi, W.W. Chin, J. Henseler & H. Wang (eds.), H&book of partial least squares: *Concepts methods, & applications* (pp. 713-736). Berlin Heidelberg: Springer
- Henseler, J., Ringle, C., & Sarstedt, M. (2015). A New Criterion for Assessing Discriminant Validity in Variance-based Structural Equation Modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135.
- Hung, S. C., Hung, S. W., & Lin, M. J. J. (2015). Are alliances a panacea for SMEs? The achievement of competitive priorities and company performance. *Total Quality Management and Business Excellence*, 26(1–2), 190–202. https://doi.org/10.1080/14783363.2014.927133
- Ketchen Jr., D. J., Hult, G. T.M., & Slater, S.F., (2007). Toward greater understanding of market orientation and the resource-based view. *Strategic Management Journal*, 28, 961–964.
- Khalid, S. & Larimo, J. (2012). Effects of alliance entrepreneurship on common vision, alliance capability and alliance performance, *International Business Review*, 21(5), 891–905.
- Khan, B.A., Naeem, H., (2018). The impact of strategic quality orientation on innovation capabilities and sustainable business growth: empirical evidence from the service sector of Pakistan. *International Journal of Quality and Reliability Management*, 35, 1568–1598.
- Kilduff, G.J., Galinsky, A.D., Gallo, E. & Reade, J.J. (2016), Whatever it takes to win: rivalry increases unethical behavior, *Academy of Management Journal*, 59(5), 1508-1534. https://doi.org/10.5465/amj.2014.0545
- Kim, E. Y., Ko, E., Kim, H. J., & Koh, C. E. (2008). Comparison of benefits of radio frequency identification: Implications for business strategic performance in the U.S. and Korean



- retailers. *Industrial Marketing Management*, 37(7), 797-806. https://doi.org/10.1016/j.indmarman.2008.01.007
- Kiyabo, K. and Isaga, N. (2019). Strategic entrepreneurship, competitive advantage, and smes' performance in the welding industry in tanzania. *Journal of Global Entrepreneurship Research*, 9(1). https://doi.org/10.1186/s40497-019-0188-9
- Kraaijenbrink, J., Spender, J. C., & Groen, A. J. (2010). The Resource-based view: A review and assessment of its critiques. *Journal of Management*, 36(1), 349–372. https://doi.org/10.1177/0149206309350775
- Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, 11(4), 1-10.
- Kock, N., & Lynn, G. S. (2012). Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations. *Journal of the Association for Information Systems*, 13(7), 546-580.
- Kumar, M., Talib, S. A., & Ramayah, T. (2013). *Business Research Methods*. Selangor, Malaysia: Oxford University Press.
- Lambe, C. J., Spekman, R. E., & Hunt, S. D. (2002). Alliance competence, resources, and alliance success: Conceptualization, measurement, and initial test. *Journal of the Academy of Marketing Science*, 30(2), 141–158. https://doi.org/10.1177/03079459994399
- Lavie, D. (2006). The Competitive Advantage of Interconnected Firm: An Extension of The Resource-Based View. *Academy of Management Review*, 31(3), 638–658. https://doi.org/10.1145/2611286.2611321
- Lavie, D., Stettner, U., & Tushman, M. L. (2010). Exploration and exploitation within and across organizations. *Academy of Management Annals*, 4(1), 109–155.
- Liang Wu, Heng Liu & Jianqi Zhang (2022): How does bricolage release the tensions in organizational ambidexterity for resource-constrained SMEs? A moderated mediation framework, *Technology Analysis* & *Strategic Management*, DOI: 10.1080/09537325.2022.2054317
- Lin, F.J. and Lin, Y.H. (2016). The effect of network relationship on the performance of SMEs, *Journal of Business Research*, 69 (5), 1780-1784.
- Lin, Z., Yang, H., & Arya, B. (2009). Alliance partners and firm performance: resource complementarity and status association. *Strategic Management Journal*, 30(9), 921–940. https://doi.org/10.1002/smj.773
- Lubatkin, M. H., Simsek, Z., Ling, Y., & Veiga, J. F. (2006). Ambidexterity and performance in small-to medium-sized companies: The pivotal role of top management team behavioral integration. *Journal of Management*, 32(5), 646–672. https://doi.org/10.1177/0149206306290712
- Lucena, A., & Roper, S. (2016). Absorptive Capacity and Ambidexterity in R&D: Linking Technology Alliance Diversity and Firm Innovation. *European Management Review*, 13(3), 159–178.



- 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
- Martin, D., Romero, I., & Wegner, D. (2019). Individual, Organizational, and Institutional Determinants of Formal and Informal Inter-Company Cooperation in SMEs. *Journal of Small Business Management*, 57(4), 1698–1711. https://doi.org/10.1111/jsbm.12445
- Murray, J.Y., Kotabe, M. and Wildt, A.R. (1995). Strategic and financial performance implications of global sourcing strategy: a contingency analysis, *Journal of International Business Studies*, 26(1), 181-202.
- Nyaga, G. N., & Whipple, J. M. (2011). Relationship quality and performance outcomes: Achieving a sustainable competitive advantage. *Journal of Business Logistics*, 32, 345–360.
- Nwokocha, V. C., & Madu, I. A. (2020). Strategic Alliance and Its Influence on the Performance of Small- and Medium-scale Enterprises in Enugu State, Nigeria. Global *Journal of Emerging Market Economies*, 12(2), 199-216. https://doi.org/10.1177/0974910119896634
- Majid, A. (2017). Organizational network and strategic business performance: Does organizational flexibility and Strategic Orientation Really Matter? *Journal of Organizational Change Management*. https://doi.org/10.1108/JOCM-12-2016-0298
- Mitręga, M., Siemieniako, D., Makkonen, H., Kubacki, K., & Bresciani, S. (2021). Versatile capabilities for growth in the context of transforming countries: Evidence from Polish manufacturing companies. *Journal of Business Research*, 134, 156–170. https://doi.org/10.1016/j.jbusres.2021.05.038
- Miklian, J., & Hoelscher, K. (2022). SMEs and exogenous shocks: A conceptual literature review and forward research agenda. *International Small Business Journal: Researching Entrepreneurship*, 40(2), 178–204. https://doi.org/10.1177/02662426211050796
- Muhammad Asif & Henk J. de Vries (2015) Creating ambidexterity through quality management. *Total Quality Management & Business Excellence*, 26:11-12, 1226-1241, DOI: 10.1080/14783363.2014.926609
- Partanen, J., Kauppila, O. P., Sepulveda, F., & Gabrielsson, M. (2020). Turning strategic network resources into performance: The mediating role of network identity of small- and medium-sized enterprises. *Strategic Entrepreneurship Journal*, 14(2), 178–197. https://doi.org/10.1002/sej.129
- Prabhudesai, R., & Prasad, C. V. V. S. N. V. (2017). Antecedents of SME alliance performance: a multilevel review. *Management Research Review*, 40(12), 1261–1279. https://doi.org/10.1108/MRR-12-2016-0286
- Prabhudesai, R., Pangarkar, N., & Prasad, C. V. V. S. N. V. (2022). Resource type aME alliance formation: the contingent role of perceived environmental uncertainty. *Journal of Small Business and Enterprise Development*, 29(7), 1071-1088. https://doi.org/10.1108/jsbed-02-2021-0046



- Prajogo, D., Mena, C., & Chowdhury, M. (2021). The role of strategic collaborations and relational capital in enhancing product performance a moderated-mediated model. *International Journal of Operations and Production Management*, 41(3), 206–226. https://doi.org/10.1108/IJOPM-05-2020-0256
- 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* (*Switzerland*), 14(3), 1–18. https://doi.org/10.3390/su14031679
- Ramayah, T. J. F. H., Cheah, J., Chuah, F., Ting, H., & Memon, M. A. (2018). Partial least squares structural equation modeling (PLS-SEM) using smartPLS 3.0. An updated guide and practical guide to statistical analysis.
- Rehman, A. U., & Anwar, M. (2019). Mediating role of enterprise risk management practices between business strategy and SME performance. *Small Enterprise Research*, 26(2), 207–227. https://doi.org/10.1080/13215906.2019.1624385
- Rohrbeck, R., Konnertz, L., & Knab, S. (2013). Collaborative business modeling for systemic and sustainability innovations. *International Journal of Technology Management*, 63 (1/2), 4-23.
- Rosenkopf, L., & Almeida, P. (2003). Overcoming local search through alliances and mobility. *Management Science*, 49(6), 751–766.
- Rossmannek, O., & Rank, O. N. (2021). Is it Really a Universal Phenomenon? Preferential Attachment in Alliance Networks. *European Management Review*, 18(1), 85–99. https://doi.org/10.1111/emre.12428
- Roxas, B., Ashill, N., & Chadee, D. (2016). Effects of entrepreneurial and environmental sustainability orientations on firm performance: a study of small businesses in the Philippines. *Journal of Small Business Management*, 55, 163–178. https://doi.org/10.1111/jsbm.12259
- Russo, A., & Schena, R. (2021). Ambidexterity in the context of SME alliances: Does sustainability have a role? *Corporate Social Responsibility and Environmental Management*, 28(2), 606–615. https://doi.org/10.1002/csr.2072
- Sekaran, U., & Bougie, R. (2020). Research Methodology for Business (M. Mike, J. Lise, & H. Judy (eds.); 8th ed.). John Wiley & Sons, Ltd.
- Sullivan, G. M., & Feinn, R. (2012). Using Effect Size-or Why the P Value Is Not Enough. *Journal of graduate medical education*, 4(3), 279–282. https://doi.org/10.4300/JGME-D-12-00156.1
- SME Corp Malaysia. (2022, 9 10). Retrieved from SME Corp Malaysia: https://www.smecorp.gov.my/index.php/en/policies/2020-02-11-08-01-24/smedefinition#:~:text=For%20the%20manufacturing%20sector%2C%20SMEs,time%20employees%20not%20exceeding%20200
- Talebi, K., Yadollahi Farsi, J., & Miriasl, H. (2017). Identifying the Impact of Strategic Alliances on the Performance of SMEs (Case Study: The Industry of Automotive Parts



- Manufacturers in Iran). *International Business Research*, 10(6), 227. https://doi.org/10.5539/ibr.v10n6p227
- Tian, H., Dogbe, C. S. K., Pomegbe, W. W. K., Sarsah, S. A., & Otoo, C. O. A. (2020). Organizational learning ambidexterity and openness, as determinants of SMEs' innovation performance. *European Journal of Innovation Management*, 24(2), 414–438. https://doi.org/10.1108/EJIM-05-2019-0140
- Torkkeli, L., Kuivalainen, O., Saarenketo, S., & Puumalainen, K. (2019). Institutional environment and network competence in successful SME internationalisation. *International Marketing Review*, 36(1), 31–55. https://doi.org/10.1108/imr-03-2017-0057
- Uttley, J. (2019). Power Analysis, Sample Size, and Assessment of Statistical Assumptions— Improving the Evidential Value of Lighting Research. *LEUKOS*, 15(2-3), 143–162. https://doi.org/10.1080/15502724.2018.1533851
- Vahlne, J.-E., Jonsson, A., (2017). Ambidexterity as a dynamic capability in the globalization of the multinational business enterprise (MBE): case studies of AB Volvo and IKEA. *International Business Review*, 26, 57–70.
- Welsh, A. J., & White, F. J. (1981). A Small Business is not a Little Big Business. *Harvard Business Review*, 59(4), 18–32.
- Wilhelm, M., & Sydow, J. (2018). Managing Coopetition in Supplier Networks A Paradox Perspective. *Journal of Supply Chain Management*, 54(3). https://doi.org/10.1111/jscm.12167
- Yousaf, Z. and Majid, A. (2016), Strategic performance through inter-firm networks: strategic alignment and moderating role of environmental dynamism, *World Journal of Entrepreneurship, Management and Sustainable Development*, 12(4), 282-298.
- Yu, P. L. (2019). Intercompany coopetition, trust, and opportunism: a mediated moderation model. *Review of Managerial Science*, 13(5), 1069–1092. https://doi.org/10.1007/s11846-018-0279-y
- Zhang, G., Tang, C., & Qi, Y. (2020). Alliance Network Diversity and Innovation Ambidexterity: The Differential Roles of Industrial Diversity, Geographical Diversity, and Functional Diversity. *Sustainability*, 12(3), 1041. https://doi.org/10.3390/su12031041
- Zhu, Y., Lynette Wang, V., Wang, Y. J., & Nastos, J. (2020). Business-to-business referral as digital coopetition strategy: Insights from an industry-wise digital business network. European Journal of Marketing. https://doi.org/10.1108/EJM-01-2019-0011
- Zollo, M., Reuer, J. J., & Singh, H. (2002). Interorganizational routines and performance in strategic alliances. *Organization Science*, 13 (6), 701–713. https://10.1287/orsc.13.6.701.503