International Journal on Management Education & Emerging Technology
ISSN: 2583-9438

Entrepreneurial Orientation for SME Performance in Malaysia

Chong Poh Ling[1], Khondaker Sazzadul Karim[2]
[1]Department of Accounting, Finance and Economics Sunway University, Malaysia, [2] Eligibility Specialist, Department of Social Services Human Resources Administration, New York, USA
pohlingc@sunway.edu.my

Abstract

This research aims to identify the gap between the theoretical concept of entrepreneurial orientation and its practical implications for firm performance. Utilizing design science, the study seeks to bridge this gap by contributing actionable knowledge to enhance firm performance. Entrepreneurial orientation encompasses innovativeness in developing new or modified processes and products/services, risk-taking in uncertain conditions, and proactive exploitation of business opportunities. This study refines the conceptual framework of entrepreneurial orientation as a design artefact, integrating theoretical constructs empirically linked to firm performance. The enhanced concept is subsequently tested and demonstrated using empirical data from a successful business venture to validate its constructs and facilitate its application in future research and practice.

Article Info

Keywords:
Entrepreneurial orientation, innovativeness, risk taking, proactiveness and firm performance

Date of Submission: 30/06/2024
Date of Review: 10/08/2024
Date of Acceptance: 10/09/2024
IJMEET / Volume 2, Issue 3, 2024
ISSN: 2583-9438

INTRODUCTION

Entrepreneurial orientation (EO) has expanded significantly in research, encompassing various fields such as internationalization, family business, public administration, education, and psychology (Wales et al., 2021). Despite the proliferation of research on EO, the conceptualization and measurement of this construct remain an ongoing debate, highlighting the need for construct-specific advice to generate high value-added EO research (Covin & Wales, 2019). In Malaysia, the failure of small and medium enterprises (SMEs) is often attributed to a lack of knowledge on EO and entrepreneurship (Jeganathan et al., 2021; Abeyarathna, 2021). Given the importance of EO in driving firm performance, this research aims to establish a high value-added EO concept to address the gap between existing theoretical understanding and its practical application. Understanding this gap is critical for deploying EO concepts effectively in practice, as it necessitates a comprehensive assessment of how EO should be conceptualized and measured to enhance firm performance.

In the broader context of entrepreneurship research, scholars have recommended qualitative approaches that do not rely solely on predefined keywords or coding schemes to explore EO in depth (Javadian et al., 2020). Additionally, design science has emerged as an inclusive approach that integrates relevance and rigor, urging researchers to move beyond their roles as observers and analysts of established artifacts to actively contribute to the design of new artifacts (Dimov et al., 2022). The nature of EO aligns with the principles of design science, as it involves innovativeness to create new or modified processes for new or modified products and services, risk-taking under uncertain conditions, and proactive exploitation of business opportunities.

As defined by ISO 9001 (2015), products and services are sequences of processes, indicating that EO is inherently linked to the design of new or changed processes that realize or distribute value. Recent findings emphasize the need to refine theories on how EO enhances new value creation and its implications for firm growth (Wales et al., 2023). This reinforces the necessity of establishing a robust EO concept (design artefact) within a design science research framework to contribute to firm performance based on actionable knowledge.

The concept of EO revolves around the creation of new or modified processes that generate value, which is essential for firms to maintain competitiveness in dynamic environments. The resource-based view (Barney, 1991) emphasizes the role of valuable, rare, inimitable, and non-substitutable resources, including capabilities and knowledge, in securing a competitive advantage. Innovation, which involves designing processes or objects for new or modified products and services, is a subset of these capabilities. Within the Malaysian context, SMEs contribute significantly to the economy, accounting for nearly 38.2% of GDP and 48% of employment (SME Corp Malaysia, 2023). However, despite their economic significance, many SMEs struggle with innovation and strategic risk-taking due to resource constraints and an uncertain business environment. Strengthening the EO concept and ensuring its effective deployment at the firm level under predetermined criteria, such as actionable knowledge and value realization, can help Malaysian SMEs improve their performance. The ability to visually examine and compare EO-driven process designs through systematic design science research ensures that these concepts are validated and applicable for future research and practice.

LITERATURE REVIEW

This section explores the key dimensions of entrepreneurial orientation (EO) and firm performance that are relevant to the development or modification of processes (objects) based on empirical review. The relationship between EO, firm performance, and value creation is examined to facilitate a visual comparison of generated ideas or objects, enabling the selection of the most effective alternatives. Accordingly, these dimensions will be investigated in depth.

2.1 Entrepreneurial orientation

The conceptualization of entrepreneurial orientation (EO) has been a continuous focus of systematic inquiry in the literature (Miller, 1983; Covin & Slevin, 1991; Lumpkin & Dess, 1996). However, EO has also faced criticism, with some researchers arguing that its existing dimensions are not firmly grounded in sound theory

or robust data. Many studies have freely modified or expanded EO dimensions while still labeling their constructs as EO (Marino, 2011). EO is applicable to both individuals and organizations (Rauch, Wiklund, Lumpkin, & Fresel, 2013) and reflects how a firm performs rather than merely what it does (Lumpkin & Dess, 1996).

Miller (1983) originally conceptualized EO with three core dimensions: innovativeness, risk-taking, and proactiveness. **Innovativeness** refers to a firm's inclination toward creativity, experimentation, and technological leadership, often demonstrated through research and development (R&D) and the introduction of new products or services. **Risk-taking** involves making bold strategic decisions, venturing into uncertain markets, investing heavily in new opportunities, and committing significant resources despite uncertainty. **Proactiveness** represents a forward-thinking, opportunity-seeking approach, characterized by launching new products or services ahead of competitors and anticipating future market demands.

Lumpkin and Dess (1996) extended EO research by linking it to firm performance and emphasizing its multidimensional nature, incorporating processes, structures, and behaviors. As strategic management evolved, the focus of entrepreneurship shifted toward entrepreneurial processes, decision-making styles, methods, and approaches used by managers to identify new product-market opportunities, adopt emerging technologies, and engage in risky ventures. In addition to Miller's (1983) three original dimensions, Lumpkin and Dess (1996) introduced two additional dimensions: **competitive aggressiveness** and **autonomy.**

To remain competitive, firms must innovate by developing new products or services supported by improved processes while addressing performance-related gaps. These gaps, often associated with risk and uncertainty, highlight the importance of innovativeness and risk-taking as fundamental EO dimensions. Additionally, firms must proactively identify business opportunities and introduce products or services before their competitors, reinforcing the significance of proactiveness.

While innovativeness, proactiveness, and risk-taking are directly related to firm performance, competitive aggressiveness and autonomy are less relevant to new product and process development. Strengthening the conceptualization of EO, particularly in designing new processes that enhance firm performance, necessitates a focus on these three core dimensions.

The successful introduction of new products or services requires the careful design of efficient and reliable production processes. Once these processes are validated, firms can proceed with manufacturing and market introduction. The choice of research methodology and EO dimensions depends on the specific focus of a study. In this research, the emphasis is on design, requiring **innovativeness** to create new processes, **proactiveness** to seize business opportunities, and **risk-taking** to operate in uncertain environments. Therefore, these three EO dimensions are the most relevant for this study.

2.2. Entrepreneurial orientation and firm performance

The relationship between entrepreneurial orientation (EO) and firm performance has been widely debated in the literature. Tang et al. (2008) suggested that EO exhibits an inverted U-shaped relationship with firm performance, indicating that while moderate levels of EO enhance performance, excessively high levels may have diminishing returns. Runyan et al. (2008) found no significant relationship between EO and firm performance in older firms. Similarly, Covin and Slevin (1989) examined EO in relation to environmental contingencies and found that entrepreneurial firms outperformed their conservative counterparts in hostile environments, characterized by intense competition, uncertainty, and limited market opportunities, whereas conservative firms thrived in benign environments, which provided stability, resource abundance, and investment opportunities. Lumpkin and Dess (1996) posited that EO is particularly beneficial for new market entrants, emphasizing the need to understand how new firms should strategically behave to achieve successful market entry. Gupta and Wales (2017) further asserted that the ultimate value of EO is determined by its contribution to firm performance. Given these varying findings, further in-depth research is required to identify the conditions under which EO drives firm performance and to strengthen its conceptual framework for effective application in practice.

The impact of EO on firm performance is contingent upon the successful design and implementation of new processes that facilitate the introduction of new products and services. Translating a business opportunity into tangible value through EO requires time, and the sustainability of further opportunities depends on multiple

factors, including product-market dynamics and the manufacturing environment. The process of bringing products and services to market consists of two distinct stages: (1) the design and development of production processes and (2) the execution of these processes by personnel. The former necessitates a specialized research approach, namely **design science research,** as traditional social science research methodologies are inadequate for developing design artefacts that shape new processes. In contrast, the latter relates to personnel behavior and social attitudes toward executing established processes. Given that process design and personnel performance are **mutually exclusive** domains, distinct indicators and measures must be established to assess firm performance in relation to process design, separate from those used to evaluate personnel performance.

Wiklund and Shepherd (2005) and Anderson and Eshima (2013) have contributed to an emerging scholarly consensus that firms adopting an **entrepreneurial strategic posture** tend to outperform those with a **conservative strategic posture**. Covin and Slevin (1989) similarly predicted that small firms must adopt an organic structure and entrepreneurial strategic posture to succeed in hostile environments, whereas a mechanistic structure and conservative strategic posture are more effective in benign environments. Lumpkin and Dess (1996) reinforced this view, arguing that EO is linked to superior firm performance, particularly in the context of new market entry. Gupta and Wales (2017) further emphasized that the value of EO should ultimately be assessed based on its contribution to firm performance. However, a critical gap remains: there is currently no established mechanism to assess the **value creation** embedded within the EO concept. This gap limits the ability to determine whether EO directly generates value for firms.

The absence of an embedded value creation assessment mechanism within EO may represent a fundamental shortcoming in its conceptualization and measurement. This limitation could explain inconsistencies in empirical findings regarding the relationship between EO and firm performance. To address this gap, future research must focus on developing a robust value creation construct within the EO framework, enabling a clearer evaluation of EO's impact on firm performance and ensuring its practical relevance for business strategy.

2.3 Firm performance

Wiklund and Shepherd (2005) examined various approaches to measuring firm performance, including key financial metrics such as growth, profitability, and cash flow. Their study also incorporated subjective performance assessments, relying on respondents' self-reported perceptions of performance relative to competitors, often expressed in terms of "better or worse."

In a meta-analysis on entrepreneurial orientation (EO), Rauch, Wiklund, Lumpkin, and Frese (2013) distinguished between financial and non-financial performance measures. The primary financial indicators included **sales and return on investment (ROI)**, while non-financial measures encompassed **satisfaction and global success ratings.** This distinction underscores the multifaceted nature of performance evaluation in EO research.

Similarly, Ramayah, Samat, and Lo (2011) identified key dimensions of firm performance, including **return on investment, financial performance, sales growth, productivity, customer satisfaction, and employee satisfaction.** For the purpose of this research, **cost reduction, customer satisfaction, and employee satisfaction** are considered the **primary dimensions** of firm performance, as they are directly relevant to the design and implementation of new processes. Other dimensions, such as financial performance and sales growth, are regarded as **secondary dimensions**, as they are contingent upon the successful outcomes of the primary dimensions.

2.4 Value creation

Value creation plays a central role in entrepreneurial success, as firms must generate value through efficient processes and product innovation. Bowman and Ambrosini (2000) differentiate between value creation, which occurs within the firm through employee efforts, and value capture, which is determined by bargaining power in market transactions. They further classify value into use value (perceived customer value), exchange value (realized at the point of sale), and customer surplus (the difference between perceived value and price). From an EO perspective, firms can create value by introducing innovative products that differentiate them from competitors or by reducing production costs to enhance price competitiveness. In Malaysia, SMEs face challenges in achieving cost efficiency due to high operational costs and limited economies of scale. However,

EO-driven strategies such as process innovation and proactive market positioning can help firms reduce costs, enhance customer satisfaction, and improve employee engagement.

Ultimately, the integration of EO with design science research provides a structured approach to value creation for SMEs. By developing and testing new process designs, firms can systematically enhance their performance through innovation, risk-taking, and proactive opportunity identification. The findings of this research will contribute to the literature by strengthening EO conceptualization, validating its constructs through empirical case studies, and providing actionable knowledge for SMEs in Malaysia. This will enable firms to deploy EO strategies effectively, ensuring sustained growth and competitive advantage in an evolving business landscape.

Entrepreneurial orientation (EO) plays a critical role in enhancing firm performance by synchronizing both external and internal variables to create superior products and services. From an external perspective, firms must identify business opportunities and assess risks under conditions of uncertainty in the business environment. Internally, firms must leverage their resources effectively, drawing upon the resource-based view (RBV) as conceptualized by Barney (1991), which emphasizes the significance of valuable, rare, inimitable, and non-substitutable (VRIN) resources. These resources, both tangible (property-based) and intangible (knowledge-based), serve as inputs in the production process, aligning with the principles of ISO 9001 (2015). To sustain long-term business success, firms must engage in knowledge creation, as posited by the theory of organizational knowledge creation (Nonaka et al., 1994), ensuring that resources are utilized efficiently through well-designed processes. The crafting and designing of these processes should emphasize resource optimization to achieve cost reduction, customer satisfaction, and employee satisfaction, thereby contributing to firm sustainability. The effective use of resources is further reinforced by stakeholder theory, which underscores the need to address the requirements of interested parties fairly, and by rational choice theory, which advocates for the selection of the best ideas, processes, and resources from among various alternatives.

In the context of EO, its dimensions contribute functionally to the creation of new or improved processes that drive the production of novel or modified products and services. EO also facilitates the proactive exploitation of business opportunities while embracing risk-taking in uncertain market conditions (Miller, 1983; Covin & Slevin, 1991). The innovation of new processes requires the generation of ideas, followed by a rational evaluation of alternatives based on their potential for value creation to ensure a positive impact on firm performance. Once an optimal idea is selected, firms must establish appropriate organizing structures, which include defining activities, identifying key stakeholders, and integrating stakeholder requirements with know-how development. Notably, firm performance can be enhanced even without introducing entirely new products or services; improvements in process efficiency, cost savings, and increased employee satisfaction can yield significant gains.

Value creation plays a fundamental role in firm performance through resource-based value, rational-based value, and fairness-based value. Resource-based value stems from minimizing waste and maximizing the productive use of firm resources, aligning with the RBV framework. Rational-based value is achieved by selecting the most beneficial processes, ideas, or objects from available alternatives through logical assessment, a concept derived from rational choice theory (Goll & Rasheed, 1998; Yu & Raksong, 2019). Fairness-based value, in line with stakeholder theory (Waheed et al., 2002), ensures that employees' interests and expectations are equitably addressed, contributing to overall firm performance. Empirical studies indicate that these three dimensions are positively correlated with firm performance.

Furthermore, the examination of value creation serves as a moderating factor in the relationship between EO and firm performance by guiding decision-making processes through the visual comparison of proposed and existing processes, thus aiding in the selection of the most effective alternatives. This moderation function is embedded within the innovativeness dimension of EO but warrants distinct consideration due to its dual role in both process design and decision-making. As illustrated in Figure 1, the relationship between EO, value

creation, and firm performance underscores how firms can optimize their strategic orientation to achieve superior outcomes. Firm performance itself is evaluated through key dimensions such as cost reduction, customer satisfaction, and employee satisfaction, derived from the findings of Ramayah, Samat, and Lo (2011), which highlight the primary determinants of financial and operational success, including return on investment, sales growth, and productivity. For the purpose of this study, cost reduction, customer satisfaction, and employee satisfaction are classified as primary dimensions, while other performance indicators are considered secondary, dependent on these foundational elements.

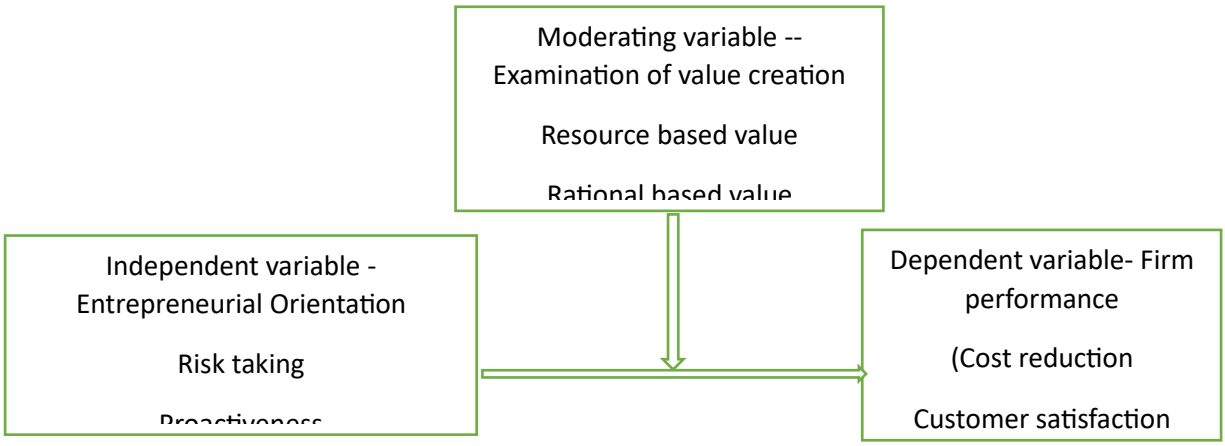

Figure 1-Conceptual framework

In Malaysia, where small and medium-sized enterprises (SMEs) play a crucial role in economic development, the principles of EO become particularly relevant. The Malaysian business environment is characterized by high levels of competition, technological disruption, and regulatory uncertainties, making risk-taking and proactive opportunity identification essential for long-term success. The government, through agencies such as SME Corp and MDEC, has emphasized the importance of innovation-driven entrepreneurship by providing incentives and funding for research and development (R&D) initiatives. However, many Malaysian firms, particularly SMEs, face challenges related to resource constraints, lack of technological capabilities, and limited access to global markets. By adopting a strong EO, Malaysian firms can navigate these challenges by leveraging their existing resources more effectively and aligning their strategic decisions with market needs. The emphasis on value creation through resource efficiency, rational decision-making, and stakeholder engagement can further enhance Malaysian firms' competitiveness on both domestic and international fronts.

EO functions by proactively determining business opportunities and designing new processes to support the production of innovative products and services while simultaneously addressing risks arising from uncertainty. Risks emerge in both existing and new processes, necessitating the application of innovation to develop viable solutions. Therefore, innovativeness is a crucial component of EO, required not only to address business risks but also to capitalize on emerging opportunities. The proactiveness dimension of EO facilitates decision-making concerning business opportunities, while the risk-taking dimension enables firms to assess and mitigate uncertainties through innovative solutions. Consequently, innovativeness mediates the relationship between proactiveness and the intended process outcome, as well as between risk-taking and the intended process outcome. This mediating effect highlights that innovativeness is both a consequence of proactive opportunity identification and a response to risk-related challenges. The innovativeness is consequence of proactiveness and risk taking as shown in Figure 2.

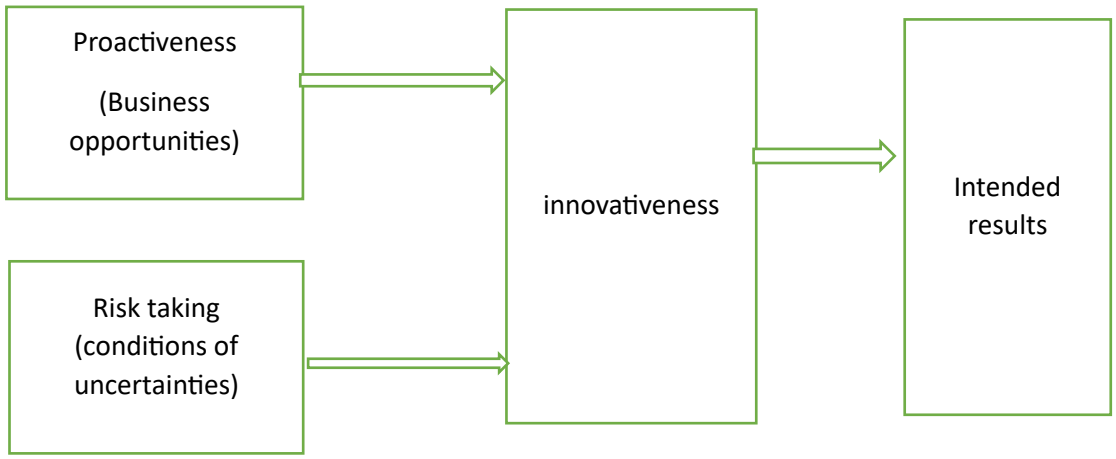

Figure 2 - Relationship among dimensions of EO

The innovativeness dimension encompasses three key sub-dimensions: ideation, organizing structures, and know-how, derived from the concept of innovation capability (Saunila, 2017, 2020). Ideation involves generating creative solutions for identified risks and opportunities and selecting the most viable option from a range of alternatives. Organizing structures refer to the systematic process of defining activities, identifying stakeholders, and aligning stakeholder requirements to ensure a coherent process flow, as outlined in the ISO 9001 (2015) framework. To achieve intended process outcomes, stakeholder requirements must be systematically incorporated into the process design to ensure alignment across all activities. Value creation plays a crucial moderating role in this relationship by facilitating the selection of the most impactful ideas, thereby strengthening the connection between ideation and organizing structures. As depicted in Figure 3, the sub-dimensions of innovativeness interact sequentially to drive firm performance.

For Malaysian firms, particularly SMEs, the ability to integrate EO into their strategic framework can significantly enhance performance outcomes. By embedding value creation principles into their innovation processes, Malaysian businesses can improve operational efficiency, foster stakeholder engagement, and achieve sustainable growth. This approach aligns with Malaysia's broader economic objectives, such as the Shared Prosperity Vision 2030, which seeks to promote inclusive and high-value economic growth. Given the increasing emphasis on digital transformation and Industry 4.0 adoption in Malaysia, firms that leverage EO effectively by incorporating digital tools into their innovation and decision-making processes are more likely to achieve competitive advantages in the global marketplace. As such, this study provides valuable insights into how EO, value creation, and firm performance interact, offering practical implications for Malaysian firms seeking to enhance their strategic agility and long-term sustainability.

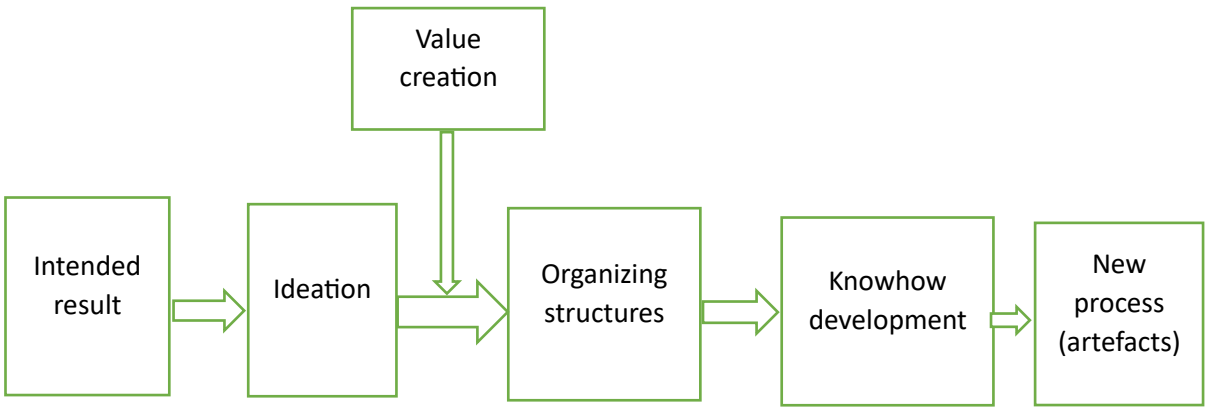

Figure 3 -relationship among dimensions of innovativeness

3. MATERIALS AND METHODS

This section expands on the research methodology discussion with an academic writing style while incorporating a Malaysian perspective. The discussion will integrate the role of design science research (DSR) in addressing entrepreneurial orientation (EO) challenges within Malaysia's SME landscape, linking theoretical insights with empirical considerations.

In this study, the design science research (DSR) methodology is employed to develop and refine a conceptual framework that integrates entrepreneurial orientation (EO) with a structured approach to value creation. As outlined by Peffers et al. (2007), DSR follows a systematic process comprising six stages: problem identification and motivation, definition of the objectives of a solution, design and development, demonstration, evaluation, and communication. This methodological framework ensures that the research remains iterative, allowing for the continuous refinement of conceptual and practical applications. Furthermore, Holmström et al. (2009) describe DSR as a methodology suited for addressing complex, unstructured problems in operational management. They outline four phases of DSR: solution incubation, solution refinement, substantive (mid-range) theory development, and formal theory establishment. These phases are critical in transforming abstract concepts into tangible, applicable solutions that contribute to the body of knowledge and practical applications.

In the context of Malaysia, the DSR methodology is particularly relevant due to the challenges faced by small and medium-sized enterprises (SMEs), which account for approximately 97.4% of total business establishments in the country (SME Corp Malaysia, 2023). Despite government initiatives such as the SME Master Plan and financial incentives to encourage entrepreneurship, many SMEs struggle with firm performance due to their limited access to resources, high operating costs, and knowledge gaps in entrepreneurial practices. The Malaysian SME sector exhibits varying degrees of entrepreneurial orientation, with some businesses demonstrating strong innovativeness and risk-taking capabilities, while others remain constrained by a conservative approach to business operations. This study adopts DSR to provide a structured and empirical approach to crafting and evaluating new business processes, particularly for SMEs seeking sustainable growth.

The research begins by identifying the core problem: the challenge of creating innovative yet sustainable business processes that enable SMEs to proactively exploit business opportunities while managing risks under uncertainty. The literature highlights the need for conceptualization and measurement of EO, emphasizing the role of structured value creation in addressing business-related issues. This aligns with previous studies that have identified the gap between entrepreneurial strategy formulation and its practical execution within Malaysian SMEs (Hashim et al., 2018). The objective is to establish a sequence of EO dimensions, innovativeness, proactiveness, and risk-taking, that can guide SMEs in crafting efficient processes that contribute to firm performance. A crucial aspect of this approach is the integration of value creation, which allows businesses to compare newly crafted processes against traditional or less effective methods. By establishing a structured evaluation framework, this study ensures that the designed processes are both theoretically sound and practically viable.

To demonstrate the validity and applicability of the framework, a case study on home gardening is employed. This case provides an empirical setting to test the design artefact by analyzing its effectiveness in addressing key business challenges. The demonstration phase involves applying the framework to an actual business process, assessing whether the proposed constructs function as intended without lapses or inefficiencies. Given the fluctuating nature of vegetable prices in Malaysia due to seasonal factors such as monsoons and supply chain disruptions, the case study explores how an entrepreneurial approach to home gardening can lead to sustainable business practices. The selection of suitable crops, cost reduction strategies, and efficient resource utilization are examined through the lens of EO.

Following the demonstration, the evaluation phase is conducted using the six evaluation criteria established by Van Aken et al. (2016). These criteria assess the validity of the framework by determining whether it provides a novel and effective solution to a real-world problem, integrates existing literature, and generates structured evidence of its practical utility. The evaluation also incorporates the four aspects of design science research outlined by Vom Brocke et al. (2020), which emphasize problem identification, solution design, solution instantiation, and solution effectiveness. Within the Malaysian SME context, this multi-faceted evaluation ensures that the framework aligns with local business challenges while maintaining its theoretical rigor. The findings indicate that the conceptual framework successfully facilitates decision-making in high-risk environments, enabling businesses to innovate while maintaining operational efficiency.

The final stage of the research involves communicating the findings to relevant stakeholders, including entrepreneurs, policymakers, and academics. Effective communication of research outcomes is critical for ensuring that the insights gained from this study translate into actionable strategies for SMEs. By structuring the dimensions and sub-dimensions of EO within a coherent framework, this research provides valuable guidance for entrepreneurs seeking to enhance their business performance. The practical implications extend to policymakers, who can use the findings to design targeted interventions that support SME growth. For instance, agencies such as SME Corp Malaysia and the Malaysian Global Innovation & Creativity Centre (MaGIC) could leverage these insights to develop training programs that enhance SMEs' capabilities in process innovation and risk management.

4. DATA ANALYSIS AND RESULTS

4.1 Case - Home Gardening Process

This section examines the challenges faced by home gardeners, the processes involved, and the strategies required for business sustainability. It further explores the role of ideation and organizational structures in determining suitable products for the business and how ideation is utilized to address business challenges, including the water distribution system.

4.2 Background of Home Gardening

The market prices of vegetables fluctuate based on external environmental conditions. For instance, during floods, vegetable shortages lead to price increases, while prices stabilize when conditions return to normal. The cost of vegetable production in home gardening is typically higher than in large-scale farming due to differences in resource access and economies of scale. To ensure the viability of home gardening, it is crucial to significantly reduce production costs; otherwise, the business may not be sustainable.

Home gardening involves two primary processes: selecting appropriate crops to attract customers based on fluctuating vegetable prices and ensuring a consistent supply of necessary resources. Given the relatively high production costs, home gardeners should target niche markets by cultivating unique and attractive plant varieties. Additionally, cost-effective access to essential resources, such as water and organic fertilizers, is vital for sustaining home gardening operations.

To establish a viable home gardening business, careful preplanning is required, including selecting appropriate products, services, and processes while addressing potential business challenges. The selected vegetable should yield a reasonable profit margin, maintain continuous demand, and ensure customer satisfaction. Additionally, the necessary resources for cultivation must be consistently available, and operational costs minimized. The home gardening business process integrates external market demands with internal production activities. Ideation plays a critical role in these processes, with the best ideas being selected based on criteria such as customer satisfaction, employee well-being, and cost reduction.

4.3 Proactiveness - Ideation and Organizational Structures for Home Gardening

Ideation in home gardening must be strategically conducted to reduce costs and optimize efficiency. Uncertainty in the business arises due to cost variations in the competitive market and the perishable nature of the produce, which must be sold promptly. Sophisticated marketing techniques, such as surveys, can be

employed to identify optimal vegetable choices that attract customers. However, such methods may be financially impractical (Uthayakumar, 2021). As an alternative, past experiences and personal preferences can serve as valuable sources for idea generation.

For instance, the researcher identified a variety of ash plantain (Monthan) with a texture and taste similar to potatoes. Initially cultivated for personal consumption, surplus produce was sold at a local grocery store, where it gained popularity. The grocery store employees conveyed customer feedback to the researcher, prompting an expansion of the garden. However, a significant challenge was the high water supply cost during the dry season (January to March). While access to organic manure was not an issue due to the availability of mango and pimpia tree leaves and household waste for composting, an efficient and cost-effective water distribution system was necessary for sustaining the business. The ideation process focused on identifying alternative water distribution methods and selecting the most viable organizational structure to implement the chosen solution.

4.4 Risk taking with ideation and organizing structures for water distribution process

The water distribution process is crucial for plant cultivation, with the objective of establishing a cost-effective water supply system. Several options were explored during the ideation process:

a) Establishing a rainwater harvesting system for water distribution.
b) Utilizing the national water supply and drainage board's tap water system.
c) Directing rainwater to plant cavities during the rainy season.

Among these options, option (b) was the least viable due to the high costs associated with water consumption from the national supply. Although option (a) was more feasible, it required substantial investment and involved higher distribution-related labor costs than option (c). Option (c) emerged as the most viable alternative as it incurred no investment or maintenance costs and required minimal effort for water distribution. However, to sustain the plants during the three-month dry season, an additional innovative mechanism was necessary. This involved planting ash plantains at a depth of approximately two feet and filling the cavity with mango and pimpia leaves. This technique facilitated air circulation around the roots while retaining moisture, thereby reducing water requirements. As a result, the strategy proved successful, ensuring business feasibility with minimal losses. The home garden continued to thrive, incorporating additional banana varieties for both consumption and sale.

The challenges of competing in the market were effectively mitigated through strategic cost-reduction measures, ideation, and the selection of optimal business solutions. The process of identifying a suitable product and developing a zero-cost water distribution system contributed to long-term sustainability by leveraging natural resources at no expense. By carefully evaluating challenges and implementing strategic solutions, the researcher successfully reduced risks and fostered business sustainability. The approach of crafting new or modified processes while emphasizing value creation highlights the significance of innovative and sustainable business development. Such practices are essential for ensuring long-term business success while contributing to broader sustainable development goals.

5. DISCUSSION AND CONCLUSION

This section employs the six evaluation criteria of design science research proposed by Van Aken et al. (2016) and the evaluation framework established by Vom Brocke et al. (2020) to assess the extent to which the conceptual framework developed as a design artefact effectively addresses risks and opportunities in a consistent, efficient, and effective manner. Additionally, the findings are analyzed in the context of the existing literature on entrepreneurial orientation (EO), highlighting how the results challenge prior studies and outlining the implications of this research for future academic inquiry and practical applications.

5.1 Design science research evaluation

The six evaluation criteria of design science research articulated by Van Aken et al. (2016) provide a robust framework for assessing how the conceptual framework contributes to resolving a field problem related to firm performance. The results of the case study indicate that the conceptual framework, structured around the organizing dimensions of EO and its sub-dimensions of innovativeness, is grounded in actionable knowledge.

This framework serves as a model for designing objects and processes within the EO domain, thereby addressing business challenges by leveraging opportunities in uncertain conditions. The framework enables the establishment of a cost-effective water supply system, ultimately ensuring customer satisfaction at a reasonable price.

The enhanced conceptualization of EO integrates relevant literature and existing EO dimensions while incorporating an added perspective on value creation. This ensures the reliability of each design iteration through visual comparison of ideas during the ideation phase, followed by the selection of the most viable alternative for structuring organizational processes and knowledge development. The demonstrated case study illustrates that the constructs embedded within the conceptual framework align with real-world entrepreneurial activities, reinforcing its applicability in business settings characterized by uncertainty. By elucidating the various dimensions of EO, the framework provides mechanisms for addressing complex business challenges, managing risks, and identifying opportunities under uncertain conditions. Moreover, the conceptual framework emphasizes a design approach informed by actionable knowledge, integrating proactiveness and risk-taking, and a design process enriched with innovativeness and value creation. These elements are systematically compared to identify optimal solutions.

Within the design science research paradigm, the identification and articulation of a significant business problem are achieved through a novel yet practical approach based on actionable knowledge. The solution design is structured around an embedded construct of value creation, which facilitates the selection of the best alternative through a visual comparison technique. This ensures that the design artefact consistently produces reliable outcomes for addressing both risks and opportunities, as demonstrated in the case study. The framework incorporates key theoretical constructs from empirical research on firm performance, thereby enhancing its robustness. External consistency is ensured through validation in a real-world business case without experimental controls. The effectiveness of the design is reinforced by evaluating ideas at the ideation stage rather than at the final stage of development, thus eliminating unnecessary activities. Efficiency is further enhanced by embedding the value creation construct within the design artefact, enabling a systematic evaluation of designed processes for managing risks and seizing opportunities.

5.2 Characteristics of the strengthened concept of entrepreneurial orientation

The enhanced conceptualization of EO maintains the fundamental dimensions of risk-taking, proactiveness, and innovativeness while challenging the prevailing scholarly consensus that firms adopting an entrepreneurial strategic posture outperform those that follow a more conservative management approach (Anderson & Eshima, 2013). The findings suggest that firm performance is more closely linked to innovation than to the specific strategic posture adopted.

Two distinct pathways for innovativeness are identified within the framework: one pathway focuses on proactively identifying future business opportunities based on customer needs and expectations (entrepreneurial strategic posture), while the other pathway addresses current and future business challenges through risk-taking initiatives. This dual-path approach contributes to firm performance by facilitating the innovative transformation of business processes. The framework also supports backward integration, allowing firms to develop innovative solutions for mitigating risks and leveraging emerging business opportunities through process redesign. Additionally, the simultaneous consideration of business risks and opportunities within the ideation phase ensures the selection of the most viable alternative for enhancing firm performance.

The conceptualization of EO has historically been subject to definitional inconsistencies. The Covin and Slevin (1989) instrument, which measures EO, combines past behaviors with present attitudes, leading to potential assessment ambiguities (Brown et al., 2001; Gupta & Gupta, 2015; Wiklund, 1999). Alternative conceptualizations, such as those by Lumpkin and Dess (1996), which emphasize processes, structures, and behaviors; Covin and Wales (2011), which focus on decision-making; and Covin et al. (2006), which examine preferences, beliefs, and behaviors, have contributed to this definitional variation. The strengthened EO concept introduced in this study addresses these challenges by embedding a construct of value creation, thereby providing a more consistent and actionable framework.

5.3 Implications of the strengthened concept

The ability of EO to drive innovation, proactively exploit business opportunities, and manage risks under conditions of uncertainty holds significant implications for policymakers. The conceptual framework facilitates informed decision-making by integrating value creation considerations into policy deliberations. This allows policymakers to strategically position products and services by accounting for both internal and external variables. Given the inherent complexity of EO measurement, the introduction of a simple comparison mechanism based on value creation mitigates measurement challenges and enhances the feasibility of policy implementation. Moreover, this approach provides a structured methodology for evaluating the impact of newly designed processes on products and services. The adoption of simplified measurement techniques reduces costs and mitigates complications associated with traditional complex measurement methodologies, thereby enhancing efficiency.

For practitioners, the strengthened EO concept offers a valuable tool for problem-solving, risk reduction, and opportunity exploration. Internal and external business dynamics necessitate continuous process redesign, underscoring the importance of a comprehensive understanding of the enhanced EO framework. By embedding value creation within the decision-making process, firms can optimize resource utilization and contribute to sustainable development.

In conclusion, the strengthened EO concept is designed to overcome conceptualization and measurement challenges by integrating relevant constructs of value creation, regardless of definitional variations in EO. This framework serves as a critical resource for researchers, practitioners, and policymakers, facilitating more accurate evaluations, improved performance outcomes, and more informed investment decisions. By fostering a deeper understanding of EO, this research provides a foundation for advancing both theoretical and practical applications in the field of entrepreneurial management.

5.4 Conclusion

Malaysian SMEs encounter various challenges, barriers, and failures related to firm performance. A key issue is their limited knowledge of entrepreneurship and entrepreneurial orientation (EO), which hinders their ability to address these performance gaps. The literature review on EO highlights the need for future research to focus on improved conceptualization, enhanced measurement approaches with practical value, and the adoption of design science methodology.

This study bridges the gap between theory and practice by developing constructs based on empirical findings that positively influence firm performance. These constructs are grounded in actionable knowledge and a design science research approach. Using design research methodology, a conceptual framework (design artefact) was developed based on existing literature to create a reliable object or process. This framework incorporates value-creation constructs within the established EO dimensions of innovativeness, proactiveness, and risk-taking. A business venture case study was employed to demonstrate and validate the design artefact, ensuring the reliability and validity of its constructs. This research strengthens the EO concept while addressing conceptual, measurement, and practical implementation gaps, thereby advancing knowledge in the field.

The refined EO framework clarifies the sequence and interactions of EO dimensions, risk-taking, proactiveness, and innovativeness, while further detailing the sub-dimensions of innovativeness, namely ideation, organizational structures, and know-how development. A successful case study of a risky new venture illustrates how practitioners can apply this concept effectively, while the enhanced EO conceptualization provides researchers with a more reliable and validated foundation for future studies. Moving forward, researchers should focus on designing processes, products, and systems using the strengthened EO framework, given its alignment with design principles.

In this case study, value was created through the proactive identification of a business opportunity, innovative cost reduction, and risk mitigation within the context of a water distribution system. However, this approach may not be universally applicable to more complex scenarios. In such cases, researchers and practitioners

should refer to the schematic process diagrams outlined in the ISO 9001 (2015) standard for a more detailed exploration of the necessary elements. For this study, only the major elements of the standard were relevant and have been incorporated.

This research contributes to the existing body of knowledge by addressing recommendations from previous studies and enhancing the understanding of how EO is linked to firm performance. It provides insights into EO's conceptualization, measurement, and value creation potential. The findings emphasize the importance of proactively identifying business opportunities in high-risk, uncertain environments and innovatively solving challenges to maximize benefits while managing risks, thereby reinforcing the significance of EO in achieving business success.

REFERENCES

Abeyarathna, K. G. (2021, April). Contemporary analysis of small and medium business failures in Sri Lanka. *Central Asian Journal of Innovations on Tourism Management and Finance*, pp. Volume: 02, Issue: 04, pp. 2660-454.

Anderson, B.S. and Eshima, Y. . (2013). The influence of firm age and intangible resources on the relationship between entrepreneurial orientation anf firm growth among Japanese SMEs. *Journal of business venturing*, 28(3) pp 413-429.

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management* , 99-120.

Bowman, C. and Ambrosini, V. (2000). Value creation versus value capture: Towards a coherent definition of value in strategy. . *British journal of management* , Vol. 11 pp 1-15.

Brown, T.E., Davidson, P. P. and Wiklund J. (2001). An operationaization of Stevenson's conceptualization of entrepreneurship as opportunity-based firm behavior. *Strategic Management Journal*, 22(10), pp 953-968.

Covin J G & Slevin D P. (1991,). A conceptual model of entrpreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1): 7-25.

Covin J G and Wales W J. (2019). Crafting High -Impact Entrepreneurial Orientation Research: Some suggested Guidelines. *Entrepreneurship Theory and Practice*, Volume 43 issue 1, pp 3-18 https://10.1177/1042258718773181.

Covin J., G. and Wales W., J. (2011). The measurement of Entrepreneurial Orientation. *Entrepreneurship Theory and Practice*, pp. Vol. 36, Issue 4 https://doi.org/10.1111%2Fj.1540-6520.2010.00432.x.

Covin, J. G., & Slevin, D. P. . (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management*, 10(1), 75-87.

Covin, J. G.; Green, K. M. and Slevin D. P. . (2006). Strategic process effects on the entrepreneurial orientation sales growth rate relationship. *Entrepreneurship theory and practice*, 30(1), pp 57-81.

Dimov, D.; Maula, M. and Romme, A, G. L. (2022). Crafting and assessing Design Science for Entrepreneurship. *Entrepreneurship Theory and Practice*, 1-25.

Goll, I. and Rasheed, A. M. A. (1998). Rational Decision Making and Firm Performance: The moderating role of the envirionmnet. *Strategic Management Journal*, https://doi,org/10.1002/(SICI)1097-0266.

Gupta, V. K. and Gupta, A. (2015). The concept of entrepreneurial orientation. *Foundation and trends in Entrepreneurship*, 11(2), 55-137.

Holmstrom, J., Ketokivi, M. and Haneri, A.P. (2009). Bridging practice and theory: A design science appo=roach . *Decision sciences*, 40(1) pp 65-87.

ISO 56000. (2020). Innovation management - Fundamentals and viocabulary. *International Organization for Standardization*.

ISO 9000. (2015, 09 15). ISO 9000 Quality management systems-Fundamentals and vocabulary. *International Organization for Standardization*. Geneva, Switzerland.

ISO 9001. (2015). Quality Management System -Requirements. *International organzation for standardization*.

Javadian, G.; Dobratz, C'; Gupta., A.; Gupta, V. K. and Martin J A. (2020). Qualitative research in Entrepreneurship Studies: A State-of-Science . *The Journal of Entrepreneurship*, 29 (2) 223-258.

Jeganathan, P. P.; Degambode, S.; and Prasad D.. (2021). A framework for the SME development in the Western Province of Sri Lanka. *European Journal of Management and Marketing Studies*, Vol. 6 Issue 4 .

Lumpkin G T and Dess G G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, Vol. 21 pp 135-172.

Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29 (7) : 770-791.

Newbert, S. (2008). Value, resources, competitive advantage and firm perforamncr:A conceptual-level empirical investigation of the resource-based view of the firm. *Strategic Management Journal*, 745-768, doi: 10.1002/smj.686.

Peffers, K; Tuunanen, T; Rathenberger, M.A. and Chatterjee, A.S. (2007). A design science research methodology for information systems research. *Journal of Management Information Systems* , Vol. 24, No., 3, pp 44-77 DOI 10.2753/MIS0742-1222240302.

Ramayah, T.; Samat, N. and LO, M. C. (2011). Market Orientation, service quality and organizational performance. *Asia Pacific Journal of Business Administration*, 3(1), 8-27.

Rauch, A; Wiklund, J,. Lumpkin, G. T. and Frese, M. (2013). Entrepreneurial orientation and business performance: Cumulative empirical evidence. *Entrepreneurship Theory and Practice*, http://hdl.handle.net/10036/4249.

Saunila, M. (2017). Innovation capability in achieving higher performance: Perspective of management and employees. *Technology Analysis & Strategic Management*, 29(8) pp 903-916.

Saunila, M. (2020). Innovation Capability in SMEs: A systematic review of literature. *Journal of Innovation & Knowledge*, Vol. 5, Issue 4 PP. 260-265.

Tang, J. T. (2008). Exploring an inverted U-shape relationship between entrepreneurial orientation and performance in Chineese ventures. *Entrepreneurship Theory and Practice*, 32(1) pp 219-239.

Uthayakumar, T. (2021). Home gardening. Unpublished.

Van Aken, J.; Chandrasekaran, A.; and Jalman, J. (2016). Conducting and publishing design science research: Inaugurakl essay of the design science department of the journal of the operations management. *Journal of operations management*, 47-48, 1-8.

Vom Brocke, J.; Hevner, A.; Maedche, A. (2020). Introduction to design science research. In J. vom Brocke, A. Hevner, & A. Maedche, *Design science research, cases,.* Cham: doi.org/10-1007/978-3-030-46781-4_1.

Waheed, A., Waheed, S., Ahmed, N., and Karamat, J. (2002). Work engagement and organizational performance: the mediating role of innovative work behaviour and mediating role of perceived distributive fairness in manufacturing industry in Pakistan. *International Journal of BUsiness Performance Management*, Vo. 24, No. 1, pp. 47-72.

Wales W J, Kraus S, Filser M, Stockmann C & Covin J G. (2021 May). The status quo of research on entrepreneurial orientation: Conversational landmarks and theoretical scaffolding. *Business research*, pp 564-577.

Wales, W. J.; Covin, J. G.; SChuler J. and Baum, M. (2023). Entrepreneurial orientation as a theory of new value creation. *The Journal of Technology Transfer*, 48: 1752-1772 http://doi.org/10.1007/s10961-023-10021-1.

Wiklund, J. (1999). The sustainability of the entrepreneurial orientation-performance relationship. *Entrepreneurship Theory and Practice*, pp. 24(1), 37-48.

Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small vusiness performance : A configurational approach. *Journal of Business Venturing*, pp. 20(1), 71-91.

Yu, B. and Raksong. (2019). Rational decision making and firm performance-Empirical evidence from SMEs in Thailand. *Panyapiwat Journal*, Vol. 11, No. 3.