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SURVIVE AND THRIVE: DRIVING FACTORS FOR SMES PERFORMANCE IN MALAYSIA

Ehab Aktham Kassab[♣]
Faculty of Business & Communication, Universiti Malaysia Perlis, Malaysia

Norshahrizan Nordin
Faculty of Business & Communication, Universiti Malaysia Perlis, Malaysia

Mohammad Harith Amlus
Faculty of Business & Communication, Universiti Malaysia Perlis, Malaysia

Badlishah Ahmad
Faculty of Electronic Engineering Technology, Centre of Excellence Advance Computing (AdvComp), Universiti Malaysia Perlis, Malaysia

ABSTRACT

Purpose: The purpose of this paper is to empirically test the relationships between entrepreneurial orientation (EO), total quality management (TQM), and small and medium-sized enterprises (SMEs) performance. It specifically examines whether innovation practices (IPs) mediate the EO, TQM, and SME performance relationships.

Design/methodology/approach: A self-administered questionnaire was utilised to collect data from owners/managers of SMEs in Malaysia. The validity and reliability of the instrument were evaluated. Structural equation model utilised to analyse the relationships using PLS 3.3.9.

Findings: Statistical outcomes displaying a significant direct effect of EO and IPs on SMEs' performance, while TQM displayed an insignificant effect on SMEs' performance. For mediation effect analysis, the indirect effect of EO and TQM on SMEs' performance through IPs was significant.

Research limitations/implications: A sample of manufacturing SMEs was investigated using a quantitative cross-sectional research design. Future research could use qualitative techniques or a longitudinal research design for further information analysis.

Practical implications: The research findings provide insights into the owners/managers of SMEs in today's dynamic manufacturing environment, with a focus on EO and TQM as driving factors to enhance their performance.

Originality/value: The research extends the literature on EO and TQM with a comprehensive understanding from the standpoint of Malaysian SMEs.

Keywords: Entrepreneurial Orientation, Total Quality Management, Innovation Practices, SMEs Performance.

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♣ Corresponding author: Faculty of Business & Communication, Universiti Malaysia Perlis, 01000, Kangar, Perlis, Malaysia. Tel:+601111442966; Email: dr.ehabkassab@gmail.com

1. INTRODUCTION

Despite the vital role of small and medium-sized enterprises (SMEs) in both developed and developing economies as productive and efficient job creators and national economic engines, large-scale seed companies, statistics show that 70% of SMEs fail to make it to their fifth anniversary every year in several countries around the world (Kassab et al., 2022a). Recently, considering the prevailing outbreak of the novel Coronavirus Disease (COVID-19) epidemic, SMEs face a greater risk of collapse in business operations given the disastrous economic and financial year in 2020. For instance, in Malaysia, based on the time series of GDP and SME GDP, the growth of SME GDP is usually higher than Malaysia's GDP, as stated by the Department of Statistics Malaysia (DOSM, 2021). Unfortunately, in 2020, the contribution of SME GDP experienced a 7% year-on-year fall to 38.2% with a value-added of RM 512.8 billion (US$121.5 billion) as against 38.9% with a value-added of RM 553.5 billion (US$131.2 billion) in 2019. The GDP growth for SMEs was negative 7.3%, and Malaysia's SME sector suffered a loss of RM 40.7 billion (US$9.64 billion) in 2020, which was less than Malaysia's GDP for the first time in 17 years since 2003 (DOSM, 2021).

The COVID-19 economic shock is unsurpassed in its complexity and intensity, exposing SMEs to an enormous economic threat (Papadopoulos et al., 2020). Additionally, SMEs' characteristics tend to be susceptible due to a lack of market-related skills and experience, managerial knowledge, entrepreneurship, poor quality management implementation, limited resource availability, and a need for technological adaptation and innovation (Kassab et al., 2022b; Yusr et al., 2022; Ali et al., 2020; Chakraborty et al., 2019). Therefore, SMEs need strong competencies in quality management, entrepreneurship, and innovativeness to survive, grow, and sustain their performance.

To survive and thrive in unique business circumstances, entrepreneurial SMEs need to operate in a high-growth, turbulent, no-rules environment in which SME owner-managers are predicted to play a vital role in assuring the long-term growth of SMEs (Kassab et al., 2022b). To achieve such a niche, SMEs must develop and implement their strategy through entrepreneurial activity (Rashid & Ratten, 2021). Entrepreneurial orientation (EO) is a commonly used strategy-making concept in entrepreneurship and strategic management literature. Besides, many researchers have exposed a potential link between EO and SMEs' performance through the literature; however, there are still studies that fail to provide sufficient proof to substantiate the direct link (Pulka et al., 2021; Kee & Rahman, 2020; Rezaei & Ortt, 2018). Many questions remain about how EO affects SMEs' performance or through which mechanisms, and the inability of researchers to identify these questions ultimately has led to continued skepticism about the true significance of EO (Kassab et al., 2022a; Wales et al., 2020; Ali et al., 2020). What is currently lacking in theoretical and empirical treatments of EO is an examination of the intermediate steps linking EO and the performance of SMEs (Khodaei et al., 2021). Additionally, Wales et al. (2020) argue in their study of EO evaluation that future studies should examine mediation because there is a lack of comprehension of the causal pathways through which EO affects other variables. Consequently, the literature in this area has endeavored to study the effect of mediatory or moderating variables to shed light on the association between EO and SMEs' performance (Seow et al., 2021; Ali et al., 2020; Ng et al., 2020).

In that regard, firms should be more innovative to compete effectively in an uncertain environment (Barney, 1991; Teece, 2016). Besides, EO is crucial for organisations to identify opportunities and consider their abilities for innovativeness, proactiveness, risk-taking, and resource leveraging to obtain a sustainable competitive edge (Falahat et al., 2021; Hoque et al., 2018). In actual fact, an entrepreneur's mission is to fundamentally change the style of a production process by adopting innovative practices (IPs) or leveraging an invention; by establishing a new product access point or a new source of material supply; and by revamping enterprise goals (Anwar et al., 2021; Zehir et al., 2015).

In a similar vein, to survive in today's intensely competitive market, SMEs must adapt and execute innovative operation management strategies that have proven successful over time (Albloushi et al., 2023). Over the past two decades, total quality management (TQM) has risen to prominence as one of the most widely adopted methods of modern operations management (Quansah & Hartz, 2021; Sahoo & Yadav, 2020; Sahoo, 2019). However, the TQM philosophy is mainly dominated by large firms, but the threat of losing contracts with major manufacturers drives SMEs to improve quality to boost the company's efficiency and competitiveness. Nonetheless, quality management practices in SMEs have been fairly discussed by very few researchers in SMEs, particularly in the manufacturing sector. Many important issues and areas are mainly untouched in academic research (Kassab et al., 2022c; Yusr et al., 2022). Additionally, there is no conclusive evidence about the context-dependent approach to TQM. In particular, some scholars assert that the context of large companies is more appropriate for TQM implementation (Georgiev & Ohtaki, 2019), while others have observed how SMEs are better suited (Ali et al., 2021; Gorondutse et al., 2020; Sahoo & Yadav, 2020). Others found no significant differences (Mahmud et al., 2019; Kalogiannidis, 2021). In addition, limited studies have empirically tested the effect of TQM on SME performance, with contradictory results. Some studies found that TQM implementation improved SME performance (Ali et al., 2020; Herzallah et al., 2014; Demirbag et al., 2006), while others found no effect (Mahmoud et al., 2019; Kober et al., 2012). Due to the discrepancy of these findings, further research on the relationships between TQM and SMEs' performance is needed to provide theoretical insights and practical direction, especially for manufacturing SMEs.

In a nutshell, most existing studies on EO, TQM, IPs, and business performance concentrate on large organisations, notably in developed countries. Accordingly, there are scarcer studies available on EO, TQM, and IPs in the SME context (Anwar & Shah, 2020; Kee & Rahman, 2020; Chakraborty et al., 2019). In light of this, it is rational to assume that prior researchers gave EO, TQM, and IPs in SMEs scant consideration. Still, there are a plethora of chances to expand the literature on EO, TQM, IPs, and SMEs' performance. In addition, many studies have proposed adding other factors as mediators to the existing relationship due to the obvious inconsistencies in findings in the literature (Kassab et al., 2022b; Ali et al., 2021; Seow et al., 2021). To address these gaps in the current literature development on SME performance and to provide theoretical and empirical evidence, this study used the implementation of EO and TQM to boost the performance of SMEs through the intermediation of IPs, particularly in manufacturing SMEs in Malaysia. Consequently, this study proposed a suitable framework based on a solid theoretical foundation for comprehensive credibility to help SMEs endure and strike a balance between "survival" and "growth," leading to more sustained performance.

2. LITERATURE REVIEW

2.1. Entrepreneurial Orientation (EO)

In a general sense, EO refers to "*the extent to which an organisation is entrepreneurial in its plans and activities and covers organisations' processes, structures, and behaviour*" (Stam & Elfring, 2008). According to Lumpkin et al. (2010), EO keeps businesses aware by unveiling new technology, keeping them aware of market trends, and assisting them in analysing new prospects. SMEs must develop and implement a strategy through entrepreneurial activity (Rashid & Ratten, 2021). EO is a well-known strategy-making concept in the entrepreneurial and strategic management literature (Covin & Wales, 2012; Miller, 1983). It is classified as a critical organisational process that helps a firm survive and improve its performance (Hunt, 2021; Achtenhagen, 2020). Furthermore, EO is recognised in the literature as SME's backbone (Kassab et al., 2022a). EO is a significant aspect influencing marketing, organisational strategy, leadership, organisational culture, and the organisation's growth and profitability (Wales et al., 2020). Similarly, the firm with a greater EO will outperform the competition. EO can partially explain strategic management behaviour since it encourages organisations to be innovative and proactive in pursuing new business prospects and tolerate risk in the face of uncertain outcomes (Jiang et al., 2018; Wiklund & Shepherd, 2003). Besides, numerous empirical studies have shown a positive relationship between EO and SME performance (Kee & Rahman, 2020; Malecki, 2018). Above and beyond, Avlonitis and Salavou (2007) stated that EO is reported to be a significant determinant of innovation. Similarly, Jaaffar et al. (2017) found that EO is crucial for strengthening the link between innovation practices and SMEs' performance. Also, according to Mahmood and Hanafi (2013), entrepreneurship can be defined as "*the endeavour to seek new opportunities and comprise experimentation and innovation that leads to new products and services enhanced traits of present services and products technically*," with "innovativeness" playing a central role. In that regard, firms should be more innovative in competing effectively in an uncertain environment (Teece, 2016; Barney, 1991). Therefore, the following hypotheses are proposed:

H1: EO has a significant effect on SMEs performance.
H2: EO has a significant effect on innovation practices.

2.2. Total Quality Management (TQM)

TQM is defined as "*a holistic approach that prioritises towering continuous improvement in all operations in the organisation to prevent defects and produce and deliver high-quality products and services to respond to the needs and demands of customers better than their competitors*" (Al Ahbabi et al., 2019). In other words, TQM is a management philosophy that emphasises the involvement and commitment of the employees throughout SMEs to deliver high-quality services and products as well as meet customer expectations in order to develop a cohesive SME environment while also guiding managers and practitioners in their strive to gain a competitive advantage from their enterprises' resources, market positions, and firm idiosyncrasies and superior performance for the exploitation of market opportunities as well as the neutralisation of competitive threats (Kassab et al., 2022c). One of the most vital strategic options for businesses to thrive, sustain performance, and acquire a competitive advantage in the marketplace is TQM (Albuhisi & Abdallah, 2018). TQM is important because it stimulates innovation, makes the

organisation adaptive to change, inspires individuals to improve quality, and unites the business around a shared goal, all of which give the organisation a valuable and distinct competitive advantage (Kassab et al., 2022c; Ali et al., 2021; Kalpande et al., 2013). Furthermore, numerous studies have found that TQM is significantly associated with innovation (Perdomo-Ortiz, Gonzalez-Benito, & Galende, 2009; Abrunhosa & Sa, 2008). Thus, adopting quality management in innovative activities assists the organisation in upgrading itself in terms of consumer needs, minimising operations that do not add value, and reducing time and costs in developing new goods (Kim et al., 2012). Therefore, TQM practices assist in creating an environment that allows innovation. Consequently, TQM implementation is crucial in enhancing organisations' capabilities to achieve superior performance objectives among SMEs. As a consequence, the following hypotheses are proposed:

H3: TQM has a significant effect on SMEs performance.
H4: TQM has a significant effect on innovation practices.

2.3. Innovation Practices (IPs)

The current competitive environment has been repeatedly described as globalised, dynamic, uncertain, turbulent, and highly competitive (Kassab et al., 2022b). Organisations competing in such an environment are compelled to innovate to improve their performance, achieve success, and gain a competitive advantage (Ng et al., 2020). Innovation can substantially impact an organisation's performance by allowing for a better market position, providing unique products and services, creating more value for organisations, and specifying entry barriers for new competitors, all of which enhance competitive advantage and superior performance (Pertuz & Pérez, 2021). Besides, according to most studies, innovation is one of the essential aspects of business performance (Modi & Rawani, 2021; Sumiati, 2020; Hall, 2011; Hall, 1998; Porter, 1990). Therefore, innovation is currently considered a sine qua non condition for firm survival in the intensive competitive environment.

Moreover, SMEs are the backbone of most economies worldwide; thus, encouraging their innovativeness is crucial for improving performance and efficiency (Kassab et al., 2022a). Consequently, researchers are eager to find out what factors encourage innovation among SMEs. According to Jaaffar et al. (2017), Kittikunchotiwut (2020), and Savitri and Syahza (2021), the performance of SMEs could be significantly improved through innovation, overcoming resource constraints by promoting EO in the enterprises. In line with this, Kee and Rahman (2020) discovered that innovation practices are an efficient mediator between EO and SME performance. In a similar vein, several researchers contend that TQM greatly enhances individuals' capabilities to innovate new or improve existing products or services (Shafiq et al., 2017). It is also highlighted that TQM creates an environment and a culture of innovation, as well as an appropriate resource to foster innovation (Silva et al., 2014; Din et al., 2013). Additionally, several studies have empirically demonstrated that quality management practices are positively related to innovation (Khalfallah et al., 2021). Moreover, studies have linked innovation as a mediator between TQM and performance. For instance, Dedy et al. (2016) prove the mediating role of process innovation in establishing a link between TQM and firm performance. Likewise, Pinho (2008) used innovation as a mediator between TQM and SME performance and found that innovation had a positive and direct impact on performance, which can be explained by the fact that TQM processes, through continuous improvement, can be viewed as a valuable resource that

helps businesses expand incremental innovations. Given the importance of a mediator and its effects (which are more profound compared to a moderator) on the link between EO and SME performance and between TQM and SME performance, it is justifiable to define EO and TQM as independent variables towards SMEs Performance and to what extent IPs mediate such relationships. Consequently, the following hypotheses are proposed:

H5: IPs have a significant positive influence on SMEs performance.
H6: IPs significantly mediate the relationship between EO and SMEs performance.
H7: IPs significantly mediate the relationship between TQM and SMEs performance.

2.4. Underpinning Theory of Resource-Based View (RBV)

The pandemic's enormous effect on humans and the global economy demonstrates that standard procedures are insufficient. The business world still requires innovation and incentive schemes to adapt successfully and efficiently while considering multiple stakeholders (Yusr et al., 2022). Also, due to the uniqueness of the current pandemic, previous studies or findings may not be sufficient to identify an adequate survival and growth strategy for SMEs. Given this uncertainty, actions to assist value creation should be implemented; otherwise, SMEs would abandon their value and potential to lead the growth of developing countries (Kassab et al., 2022b). Therefore, firms in developing countries must transform their typical management practices into proactive, high-value-added, and efficient approaches. This transformation must promote intangible capabilities and resources like entrepreneurial orientation (Kee & Rahman, 2020), total quality management (Hilman et al., 2020), and innovative practices (Seow et al., 2021). These resources are efficiently used to gain a competitive advantage, drastically improving performance in such a challenging environment. This is consistent with McDougall et al. (2019); they defined a firm in terms of the resource-based view (RBV) theory as a unique cluster of productive resources that managers can employ to achieve their targeted business objectives. Also, with the RBV, organisations can use both intangible and tangible resources and skills to improve their performance and gain a competitive edge (Barney, 1991). The RBV is one of the most notable theories contributing to driving SME performance.

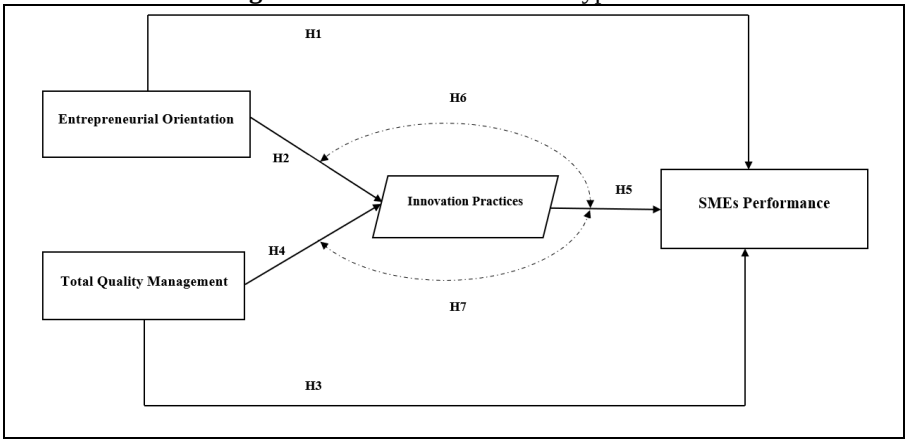
Moreover, from the point of view of RBV, Rodríguez-Gutiérrez et al. (2014) posited that the availability of entrepreneurial orientation facilitates competitive advantage and superior performance in small businesses. The acquisition of resources continues to be a fundamental tool for strategy development, which in turn promotes the growth and sustainability of SMEs worldwide. However, small business owners and managers continue to confront difficulties in acquiring many resources, such as financial, human, material (physical) resources, organisational resources, and technological resources (Bakar & Ahmad, 2010). As a result, the RBV can be used to examine a firm's internal capabilities as well as to acquire a greater knowledge of how small enterprises can use their resources to overcome the external environment's effects on their competitiveness, efficiency, and effectiveness (Barney, 1991), which is an integral part of the strategy development process of any business. Add to that, according to Barney et al. (2011), entrepreneurial orientation can be considered a dynamic intangible resource that contributes to long-term competitive advantage and greater returns. Along these lines, RBV considers a firm's resources to be a critical aspect while engaging in entrepreneurial activity.

In a similar vein, TQM practices are seen as a significant competitive advantage since they are distinctive, inimitable, and irreplaceable (Grant, 1991). The value of TQM practices can be observed in various ways, including enhanced customer loyalty, productivity improvements, and increased employee engagement and commitment due to organisational culture changes (Escrig ‐ Tena, 2004). Anyhow, TQM practices in SMEs have a brief history in the literature, and many critical issues and areas remain primarily unresolved in academic research (Yusr *et al*., 2022; Hilman et al., 2020). Furthermore, when compared to large organisations, manufacturing SMEs have been hesitant to adopt TQM (Latif et al., 2021) because they perceive the implementation of quality management systems as a daunting, complex, and continuous operational expenditure, as well as due to the fact that SMEs owner-managers tend to lack managerial insights and organisational competencies, leading to the misapplication of a quality management system (Kassab et al., 2022c; Mahmud et al., 2019). Consequently, RBV is considered relevant and used in explaining EO, TQM and SMEs performance relationships in this study.

2.5. Research Model

The research model shown in Fig 1 demonstrates the relationship among study variables. The research model reveals that EO and TQM directly affect IPs and SMEs' performance. Moreover, the direct effect of IPs on SMEs performance is considered. Also, the indirect effect of the IPs as mediation variable between EO and SMEs performance as well as between TQM and SMEs performance is included.

Figure 1: Research Model and Hypothesis



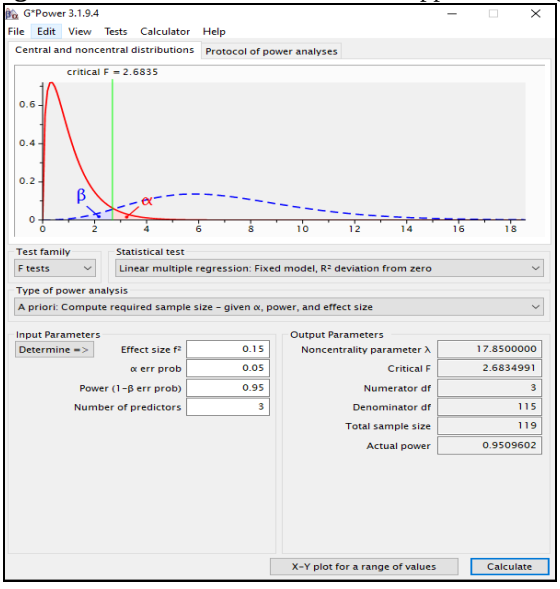
3. METHODOLOGY

As previously stated, this study aims to examine the direct and indirect effects of EO and TQM on the performance of SMEs, mediated through IPs. Using a quantitative methodology, a questionnaire was utilised to collect data from participants in a cross-sectional study. Owners/managers were chosen as the most appropriate respondents since they have the most insight into the firm's strategies, overall operational activities, and strategic decision-making

process. They can provide the most trustworthy information about the firm's performance and profile (Seow et al., 2021). This study used the Federation of Malaysian Manufacturers (FMM) 51st directory database as the target population and exclusively concentrated on particular SMEs, primarily in the manufacturing sector, considering their contribution to the development of Malaysia.

For determining the sample size, Cohen (1988) has categorised the effect sizes as "small," "medium," and "large" based on power analysis. The effect size and sample size must be balanced; the smaller the effect size, the greater the sample size. The effective sample size in this study is determined using Cohen's (1988) rule of thumb, with the use of the G*power analysis program. Henseler and Ringle (2015) suggested that power analyses should be performed. Thus, analysis based on G*Power 3.1.9.4 software was used to calculate the minimum sample size. The setting used for G*Power follows the Dattalo (2008) settings but increases the power to 95%. The settings used were (alpha = 0.05 and beta = 0.95), F-test, "*linear multiple regression: fixed model*," and R2 deviation from zero. Fig 2 displays a screenshot of the applied settings in the G*Power tool. Based on the calculations, a sample size of 119 (N = 119) is needed to achieve a statistical power of 0.95, assuming a significance level of 5% and an effect size of 0.15. Therefore, the effective sample size is 119, satisfying the analysis requirement, effective size, and minimum sample size. Any sample size greater than 119 is acceptable. Therefore, 500 questionnaires were distributed to the owners/managers of manufacturing SMEs in three Malaysian states: Selangor, Johor, and Sarawak. However, several respondents ignored the survey; therefore, researchers made follow-up phone calls and emails to ensure the highest possible response rate in the current study (Sekaran & Bougie, 2016).

Figure 2: G*Power Screenshot of the Applied Setting



The population consists of all owners/managers of manufacturing SMEs operating in three regions of Malaysia, namely Selangor, Johor, and Sarawak. However, it is difficult to provide each person in the study population with an equal chance of being selected for the sample due to the large number of manufacturing SMEs and their owners/managers. Therefore, probability sampling cannot be achieved. Instead, stratified random sampling was used to select the respondents based on the following criteria: Firstly, the business must be a manufacturing company. Secondly, the business must have more than five but less than 200 employees. Thirdly, the business's sales turnover must be more than RM300,000 and up to RM50 million. And fourthly, the business must be located in one of the three states of Malaysia (Selangor, Johor, and Sarawak). Stratified sampling is a technique where the population is divided into distinct subgroups or strata, and samples are randomly selected from each stratum (Taherdoost, 2016). In this study, the population was divided into strata based on the specific characteristics mentioned above, which were known for every sampling unit in the population. Samples were then independently selected from each stratum. This sampling design provides flexibility in using different sampling methods for each stratum and allows for more precise estimates of the target parameters compared to a simple random sample of the same size. It often requires a smaller sample size, which leads to lower costs and greater convenience for the researcher (Taherdoost, 2016).

Driven by previous literature, the measuring scale items for the constructs were adapted. For developing the EO measuring instrument, the study followed established procedures recommended by Gerbing and Anderson (1988). The EO construct was measured as a full structure and evaluated using the 12 items adopted from Hoque et al. (2018). These items include innovativeness, proactiveness, risk-taking, and resource leverage. The scale ranged from "1" to "5" where "1" denotes "strongly disagree" and "5" denotes "strongly agree". This research adopted a five-point Likert scale, which is believed to be effective in obtaining more optimum results for information processing and dependability. Similarly, TQM practices were evaluated based on the standards of performance excellence of the American Malcolm Baldrige National Quality Award (MBNQA). These standards include leadership, strategic planning, customer focus, process management, human resource management, and information and analysis. Prior research extensively used the MBNQA to define and quantify TQM standards (Hilman et al., 2020; Ali et al., 2020). In this study, the TQM construct was measured as a full structure and evaluated using the 35 items adapted from the study conducted by Abbas (2020). The scale ranged from "1" to "5" with 1 representing "strongly disagree" and 5 representing "strongly agree". Participants identified their perceptions of TQM practices in their organisations. Moreover, the IPs construct was measured as a full structure and evaluated using the 11 items adopted from Seow et al. (2021). These items include product innovation, process innovation, and marketing innovation. The scale ranged from "1" to "5" with 1 representing "strongly disagree" and 5 representing "strongly agree". Lastly, the objective of this study is to measure the non-financial performance of Malaysian manufacturing SMEs subjectively. Therefore, the study followed established procedures recommended by Anwar and Shah (2020), Al-Mamary et al. (2020), and Prieto and Revilla (2006). Thus, this study measured SMEs performance using 5 items, including customer satisfaction, employee satisfaction, quality of product and service, employee loyalty, and organisational reputation. These items were adopted from Anwar and Shah (2020). Respondents assessed their organisation's performance and rated it based on a five-point Likert scale, with 1 representing "greatly decreased" and 5 representing "greatly increased".

Furthermore, SPSS version 28 was employed for the descriptive analysis in this study. Additionally, the partial least squares structural equation modeling (PLS-SEM) was utilised to verify the developed framework in two stages: the measurement model (reliability and validity) and the structural model (predictive power (R^2), predictive relevance (Q^2), effective size (f^2) assessment and path coefficients of the model). The significance levels of loadings and path coefficients were analysed using a bootstrapping method, as suggested by Hair *et al*. (2020). The PLS method is loaded with options and is frequently employed in empirical studies of management (e.g., Ali et al., 2021; Seow et al., 2021; Kee & Rahman, 2020). Therefore, for several reasons, PLS-SEM was chosen as the analysis technique. First, prior work on structural equation models suggested that PLS was preferable to regressions when assessing mediation (Hayes & Preacher, 2014). Secondly, PLS can provide more precise estimates of the mediation effects since it can take measurement error into account (Chin, 1998). Additionally, PLS is more applicable for prediction applications due to its ability to explain variance (Hair et al., 2021). As a fourth advantage, the assumptions of PLS modeling allow for the development and validation of complicated models, which is useful for estimating large, multidimensional ones. Finally, PLS path modeling is a useful tool for latent variable path analysis using reflective indicators, and it performs well with non-normal data (Hair et al., 2020). The data was analysed using Smart-PLS 3.3.9.

4. STATISTICAL ANALYSIS AND RESULTS

Owners and managers of 500 manufacturing SMEs were sent questionnaires. A total of 219 responses were returned, of which 196 were viable and deemed valid for further analysis after eliminating outliers. The ultimate response rate was 39.2% of the population. The survey was conducted from early January to the end of May 2022, and statistical analysis was used to identify errors in all constructs during the data-gathering period.

4.1. Common Method Bias

Because self-reported questionnaires were utilised to gather the data, they were scrutinised for common method bias-variance, particularly as both the predictor and criterion variables were obtained from the same person (Podsakoff et al., 2003). Furthermore, Podsakoff and Todor (1985) warned that in this scenario, concerns over same-source bias or general method variance invariably arise when self-reported measures obtained from the same sample are utilised in research. To address this issue, the study used the Harman one-factor on the three constructs to determine common method variance bias (CMV). The first factor explained only 15.33% of the variance, indicating that CMV is not a major concern in this study.

4.2. Demographics of Respondents

Table 1 presents the findings of the descriptive demographic analysis, which show the characteristics of the respondents. The demographic profiles consist of seven features: gender, age group, level of education, work position, pre-ownership experience, years of operation, and stage of growth. Overall, the data provided by the respondents were sufficient and reflected a wide range of socioeconomic backgrounds.

Table 1: Respondents' Background Information and Company Profile

Characteristic		Frequency	Valid Percent
Gender	Male	165	84.2
	Female	31	15.8
Age group (year)	Less than 25	3	1.5
	26-35	15	7.7
	36-45	75	38.3
	46-55	66	33.7
	More than 55	37	18.9
Level of Education	High School	48	24.5
	Diploma	37	18.9
	Bachelor's Degree	80	40.8
	Master's Degree	13	6.6
	PhD Degree	10	5.1
	Others	8	4.1
Work Position	Owner	51	26.0
	Manager	24	12.2
	Director	21	10.7
	Managing Director/CEO	93	47.4
	Others	7	3.6
Pre-ownership experience (year)	Less than 1	3	1.5
	1-5	87	44.4
	6-10	39	19.9
	11-15	42	21.4
	16-20	18	9.2
	More than 20	7	3.6
Operations (year)	Less than 1	0	0
	1-5	25	12.8
	6-10	70	35.7
	11-15	44	22.4
	16-20	35	17.9
	More than 20	22	11.2
Stage of growth	Start-up	14	7.1
	Fast-growth	59	30.1
	Sustainable	79	40.3
	Global Enterprise	36	18.4
	Others	8	4.1

The respondents' background information offers valuable insights into the participants and their companies. Notably, 88% of the respondents represent fast-growing, sustainable, and global enterprises, indicating a significant presence of successful SMEs with characteristics like rapid expansion and global market presence. It's important to acknowledge that within the 6-20 years of operation, many SMEs have achieved sustainability and global recognition. Another noteworthy finding is that 46% of the respondents have less than 5 years of ownership experience, revealing the limited prior experience of SME owners/managers before joining their current roles. It's crucial to distinguish between the operational age of the enterprises and the experience of the

individuals involved, as the former may differ from the latter. Overall, this background information provides a comprehensive understanding of the SME landscape, considering both company profiles and the experience of owners/managers.

4.3. Descriptive analysis

Table 2 presents descriptive statistics regarding EO, TQM, IPs, and SMEs performance. The mean of EO is 3.373, with a standard deviation (SD) of 0.439, while the mean of TQM is 3.26, with an SD of 0.699. For IPs, the mean is 3.896, with an SD of 0.652. Finally, the mean of SMEs performance is 4.196, with an SD of 0.786.

Table 2: Descriptive Analysis

Construct	Mean	SD	Min.	Max.
EO	3.7372	0.43940	1	5
TQM	3.2602	0.69963	1	5
IPs	3.8968	0.65222	1	5
SMEs Performance	4.1964	0.78630	1	5

4.4. The Measurement Model: "Outer Model"

It is critical to evaluate the loading score of each item in its variable to ensure that the variable receives proper and adequate loading from its associated factors. Any loading score equal to or greater than 0.708 is considered a proper loading. Any loading less than 0.4 is considered weak, and the item is removed. Any factor with a loading score between 0.4 and 0.708 can be kept or deleted based on the analysis judgment (Hair et al., 2020). Therefore, factor loadings, composite reliability (CR), and average variance extracted (AVE) were used to assess the convergent validity of the measurement model, as recommended by Hair et al. (2016). Table 3 and Figure 3 demonstrate that the factor loadings for all items were above 0.708, ranging from 0.720 to 0.891. The findings show that the AVE is higher than the minimum level of 0.5 recommended by Hair et al. (2020), ranging from 0.654 to 0.771, and that the CR is higher than the minimum level of 0.7 recommended by Fornell and Larcker (1981), ranging from 0.850 to 0.917.

Table 3: Results of the Measurement Model

Constructs	Items	Loading	AVE	CR
EO	EOINN01	0.790	0.672	0.860
	EOINN02	0.808		
	EOINN03	0.860		
	EOPA01	0.808	0.717	0.884
	EOPA02	0.875		
	EOPA03	0.856		
	EORT01	0.838	0.687	0.868
	EORT02	0.819		
	EORT03	0.829		

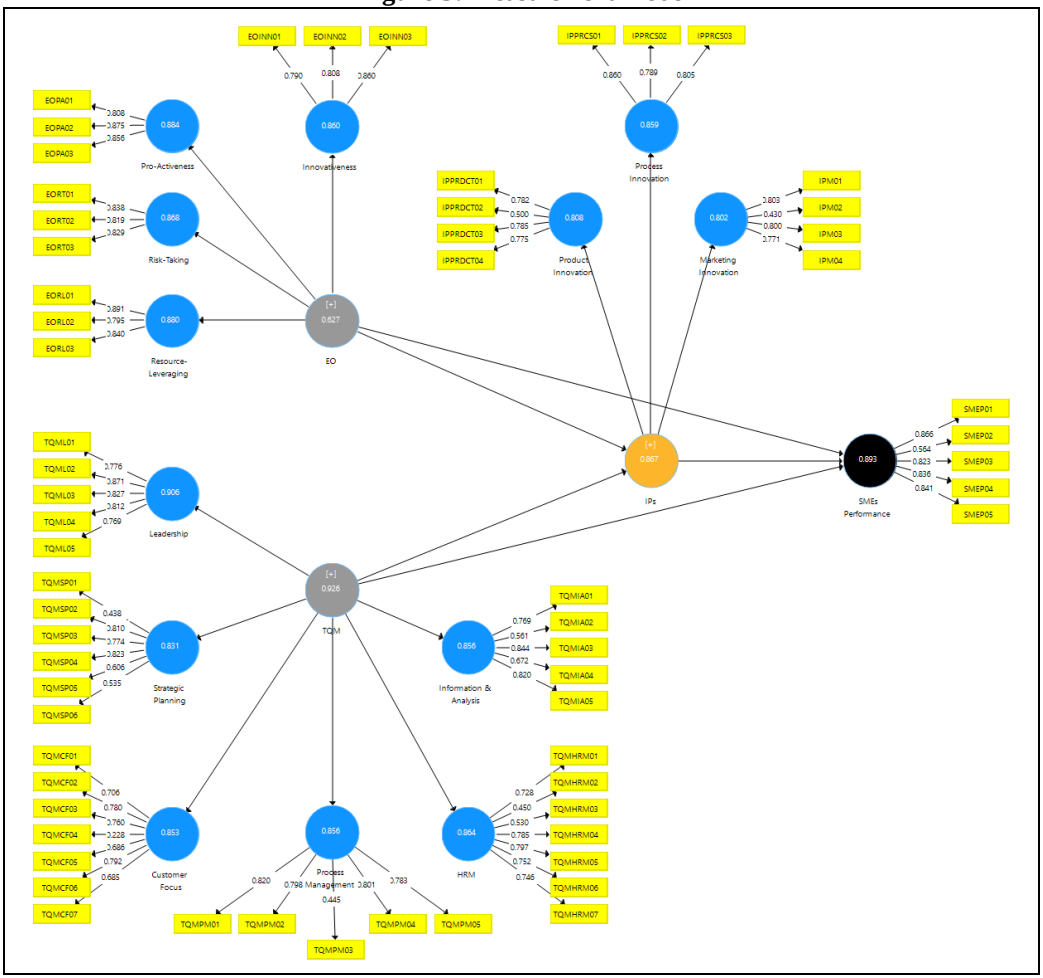
	EORL01	0.891	0.711	0.880
	EORL02	0.795		
	EORL03	0.840		
TQM	TQML01	0.776	0.659	0.906
	TQML02	0.871		
	TQML03	0.827		
	TQML04	0.812		
	TQML05	0.769		
	TQMSP01	0.438*	0.771	0.910
	TQMSP02	0.810		
	TQMSP03	0.774		
	TQMSP04	0.823		
	TQMSP05	0.606*		
	TQMSP06	0.535*		
	TQMCF01	0.706*	0.708	0.879
	TQMCF02	0.780		
	TQMCF03	0.760		
	TQMCF04	0.228*		
	TQMCF05	0.668*		
	TQMCF06	0.792		
	TQMCF07	0.685*		
	TQMPM01	0.820	0.734	0.917
	TQMPM02	0.798		
	TQMPM03	0.445*		
	TQMPM04	0.801		
	TQMPM05	0.783		
	TQMHRM01	0.728	0.664	0.888
	TQMHRM02	0.450*		
	TQMHRM03	0.530*		
	TQMHRM04	0.785		
	TQMHRM05	0.797		
	TQMHRM06	0.752		
	TQMHRM07	0.746		
	TQMIA01	0.769	0.748	0.899
	TQMIA02	0.561*		
	TQMIA03	0.844		
	TQMIA04	0.672*		
	TQMIA05	0.820		
IPs	IPPRDCT01	0.782	0.654	0.850
	IPPRDCT02	0.500*		
	IPPRDCT03	0.785		
	IPPRDCT04	0.775		
	IPPRCS01	0.860	0.670	0.859
	IPPRCS02	0.789		
	IPPRCS03	0.805		
	IPM01	0.803	0.693	0.871
	IPM02	0.430*		
	IPM03	0.800		
	IPM04	0.771		

SMEs Performance	SMEP01	0.867	0.719	0.911
	SMEP02	0.567*		
	SMEP03	0.821		
	SMEP04	0.835		
	SMEP05	0.840		

Notes: EOINN, Innovativeness; EOPA, Pro-Activeness; EORT, Risk-Taking; EORL, Resource-Leveraging; TQML, Leadership; TQMSP, Strategic Planning; TQMCF, Customer Focus; TQMPM, Process Management; TQMHRM, Human Resource Management; TQMIA, Information & Analysis; IPPRDCT, Product Innovation; IPPRCS, Process Innovation; IPM, Marketing Innovation.

* Items were deleted due to poor loading.

Figure 3: Measurement Model



The discriminant validity was calculated by taking the square root of the AVE across all factors. These values exceeded the correlation between model factors, demonstrating that discriminant validity had been achieved (Hair et al., 2020; Fornell & Larcker, 1981) (see Table 4).

Table 4: Discriminant Validity of Construct Fornell-Larcker Criterion

	EOINN	**EOPA**	**EORT**	**EORL**	**TQML**	**TQMSP**	**TQMCF**	**TQMPM**	**TQMHRM**	**TQMIA**	**IPPRDCT**	**IPPRCS**	**IPM**	**SMEs Performance**
EOINN	**0.820**													
EOPA	0.501	**0.847**												
EORT	-0.140	-0.173	**0.829**											
EORL	0.042	0.109	-0.162	**0.843**										
TQML	0.036	-0.011	-0.046	-0.139	**0.812**									
TQMSP	-0.104	-0.026	0.076	-0.020	0.265	**0.878**								
TQMCF	-0.048	-0.064	0.074	-0.023	0.461	0.458	**0.841**							
TQMPM	0.097	-0.003	0.027	0.090	0.130	0.032	0.204	**0.857**						
TQMHRM	-0.150	-0.195	0.140	-0.008	0.278	0.365	0.545	0.062	**0.815**					
TQMIA	-0.121	-0.050	0.116	-0.128	0.314	0.420	0.590	-0.057	0.490	**0.865**				
IPPRDCT	0.529	0.461	-0.095	0.086	0.173	-0.002	0.093	0.071	-0.120	0.028	**0.809**			
IPPRCS	0.482	0.439	-0.107	0.075	0.041	-0.053	0.030	0.033	-0.086	0.050	0.678	**0.819**		
IPM	0.175	0.139	-0.073	0.230	0.115	0.023	0.097	0.089	-0.020	0.083	0.346	0.285	**0.833**	
SMEs Performance	0.548	0.527	-0.101	0.161	0.095	0.043	0.059	0.151	-0.144	-0.028	0.653	0.549	0.493	**0.848**

Notes: EOINN, Innovativeness; EOPA, Pro-Activeness; EORT, Risk-Taking; EORL, Resource-Leveraging; TQML, Leadership; TQMSP, Strategic Planning; TQMCF, Customer Focus; TQMPM, Process Management; TQMHRM, Human Resource Management; TQMIA, Information & Analysis; IPPRDCT, Product Innovation; IPPRCS, Process Innovation; IPM, Marketing Innovation.

As shown in Tables 3 and 4, the results of the reliability, convergent validity, and discriminant validity tests for the measurement model are statistically acceptable. The study outcomes provide empirical evidence for the proposed concept of EO, TQM, IPs, and SMEs' performance as reflecting second-order constructs. This approach is consistent with previous research (e.g., Seow et al., 2021; Ali et al., 2020; Ng et al., 2020). Moreover, this study aims to examine the effects of EO, TQM, and IPs by treating them as a single construct. Additionally, the performance of SMEs was measured using a single construct.

4.5. Evaluation of the Structural "Inner Model"

This study is based on a statistical analysis of the structural model; therefore, it is crucial to examine model relations, effects, and power. The PLS-SEM approach was used in this study to test the model. Hence, a systematic procedure suggested by Hair et al. (2016) is applied as the model is reflective-based. 1) For model power, the R^2 value is essential and can be supported by the Q^2 value. 2) To test the effect of each latent variable on the overall R^2, f^2 assessment is applied. 3) Checking the significance of structural paths is done through bootstrapping.

4.5.1. Assessing Predictive Power of Research Model

Predictive power (R^2) represents the variance explained by the endogenous variable, while predictive relevance (Q^2) indicates the relevance of the variance explained by the endogenous variable. According to Hair et al. (2020), the rule of thumb for assessing these values is as follows: R^2 can be considered "strong" if it is greater than 0.75, "moderate" if it falls between 0.5 and 0.75, or "satisfactory" if it ranges from 0.2 to 0.5. Q^2 can be considered "large" if it is greater than 0.35, "medium" if it falls between 0.15 and 0.25, or "small" if it ranges from 0.02 to 0.15. Table 5 demonstrates the predictive power in addition predictive relevance of the endogenous latent variables, SMEs performance, and IPs. The findings for the main dependent variable, SMEs performance, indicate a moderate predictive power and a large predictive relevance. As shown in Table 5 the related R^2 value is 0.576 (power of 57.6%), and the related Q^2 is 0.399 (relevance of 39.9%). The prediction constructs (EO, TQM and IPs) can explain approximately 57.6% of the variance in SMEs performance. The other dependent variable, IPs, exhibits satisfactory predictive power and a small predictive relevance. As seen in Table 5, the related R^2 value is 0.331 (power of 33.1%), and the related Q^2 is 0.132 (relevance of 13.2%). The prediction constructs (EO and TQM) can explain approximately 33.1% of the variance in IPs.

Table 5: Summary of Predictive Relevance Based on R^2 and Q^2

	Predictive Power		**Predictive Relevance**	
	R^2 value	**Status**	**Q^2 value**	**Status**
SMEs Performance	0.576	Moderate	0.399	Large
IPs	0.331	Satisfactory	0.132	Small

4.5.2. Research Model Effective Size f^2

The effect size (f^2) represents the percentage level of impact of a latent variable within a structural model. In simple terms, the predictive power is calculated for the entire model, and then the predictive power is recalculated after removing a specific latent variable. Cohen (1988) established the following rule of thumb to differentiate the levels of effect size: f^2 values of approximately 0.02, 0.15, and 0.35 are considered small, medium, and large, respectively. The findings of the study, as shown in Table 6, indicate that the effective size of EO is medium, with a value of 0.154 on SMEs performance and a large value of 0.491 on IPs. Meanwhile, the effective size of TQM is small, with a value of 0.002 on SMEs performance and 0.026 on IPs. Additionally, for IPs, the effective size is large, with a value of 0.426 on SMEs performance.

Table 6: Effective Size

	SMEs Performance		**IPs**	
	f^2 value	**Status**	**f^2 value**	**Status**
EO	0.154	Medium	0.491	Large
TQM	0.002	NC	0.026	Small
IPS	0.426	Large		

4.5.3. Research Model Relations Path Coefficient

The study's hypotheses need to be tested, and this can be achieved by estimating the path coefficient values of the various relationships within the model. P-values and T-statistics are commonly used to assess the significance of a relationship. T-statistics indicate the significance of the path coefficient, while P-values represent the level of significance or probability estimate.

Hair et al. (2016) state the following rule of thumb for assessing these values: In psychological research, the commonly used threshold for P-value is 5%. However, some studies may use significance levels of 1% or 10%. For T-statistics, a value of 0.98 or greater is considered statistically significant for a one-tailed test, while a value of 1.96 or greater is considered significant for a two-tailed test. Two-tailed levels of estimation are necessary if the hypothesis argument requires assessing both positive and negative effects. If the hypothesis argument focuses on assessing the influence in only one direction, either positive or negative, then one-tailed estimation is appropriate.

Furthermore, Table 7 presents the assessment of path coefficients along with the corresponding T-values and Beta-values. For the main dependent variable, SMEs performance, two relationships were found to be significant: EO and IPs, while the relationship between TQM and SMEs performance was not significant. The order of precedence for these relationships based on the path coefficient value (Beta) is EO (H1: $\beta = 0.311$), TQM (H3: $\beta = 0.028$), and IPs (H5: $\beta = 0.539$). All relationships were found to be significant for the second dependent variable, IPs. The order of precedence for the accepted relationships based on the path coefficient value (Beta) is EO (H2: $\beta = 0.578$) and TQM (H4: $\beta = 0.132$).

Table 7: Path Coefficient Assessment

Hypo	Relationship	Std. Beta	Std. Error	T-value	P-value	Status
H1	EO –> SMEs Performance	0.311	0.081	3.842	0.000	Supported**
H2	EO –> IPs	0.578	0.053	10.922	0.000	Supported**
H3	**TQM –> SMEs Performance**	**0.028**	**0.049**	**0.576**	**0.565**	**Not Supported**
H4	TQM –> IPs	0.132	0.064	2.056	0.040	Supported*
H5	IP –> SMEs Performance	0.539	0.081	6.690	0.000	Supported**

Notes: Significant at P**= <0.01, P* <0.05

4.6. Mediation Effect Assessment

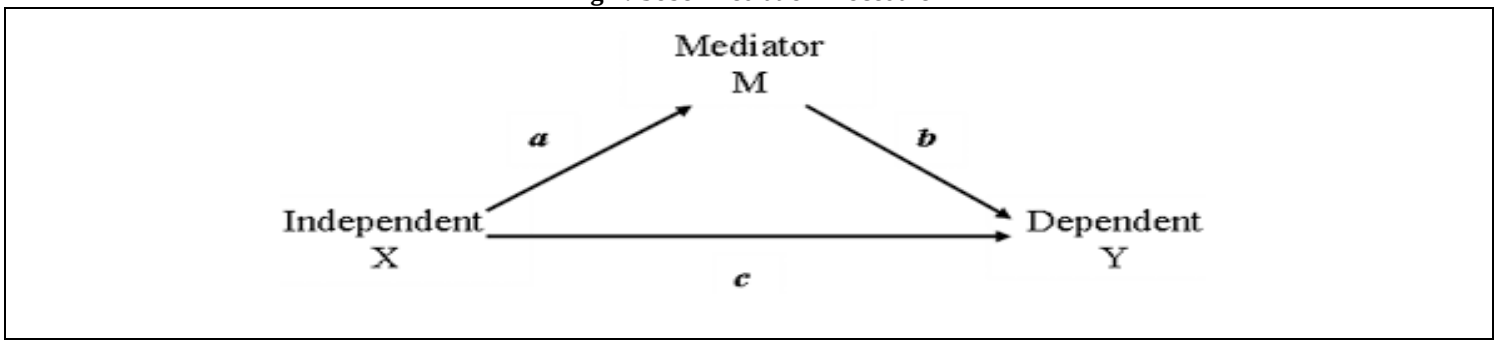
Mediation analysis aims to quantify the impact of a mediator on the relationship between two variables, the independent and dependent variables. A mediation effect is present if there is a significant indirect effect mediated by the mediator (Hayes, 2017). Three scores are crucial in mediation analysis: the direct effect, which measures the path coefficient directly between the independent and dependent variables; the indirect effect, which measures the path coefficient between the independent and dependent variables through the mediator; and the total effect, which combines both effects. Mediation can be categorised as full or partial, where partial mediation implies the presence of both direct and indirect effects, while full mediation implies only the presence of indirect effects.

Various approaches are available to assess the mediation effect, and Hayes (2017) proposed and modified one of the most commonly used methods based on the Sobel mediation procedure (see Figure 4). Table 8 presents the findings of the mediation analysis. Mediation analysis was conducted to evaluate the mediating role of IPs in the relationship between EO and SMEs performance. The results indicate that the total effect of EO on SMEs performance was significant (H6: $\beta = 0.622$, $T = 11.518$, $P < 0.001$). With the inclusion of the mediating variable IPs, the impact of EO on SMEs performance remained significant ($\beta = 0.311$, $T = 4.023$, $P < 0.001$). Moreover, the indirect effect of EO on SMEs performance through IPs was found to be significant ($\beta = 0.312$, $T = 5.928$, $P < 0.001$). This suggests that IPs partially mediate the relationship between EO and SMEs performance. Similarly, mediation analysis was performed to assess the mediating role of IPs in the relationship between TQM and SMEs performance. The results indicate that the total effect of TQM on SMEs performance was not significant (H7: $\beta = 0.099$, $T = 1.839$, $P = 0.066$). With the inclusion of the mediating variable IPs, the impact of TQM on SMEs performance became insignificant ($\beta = 0.028$, $T = 0.572$, $P = 0.567$). However, the indirect effect of TQM on SMEs performance through IPs was found to be significant ($\beta = 0.071$, $T = 1.977$, $P = 0.049$). This indicates that IPs fully mediate the relationship between TQM and SMEs performance.

Table 8: Mediation Effect Assessment

Total Effect		**Direct Effect**				**Indirect Effect**					**Status**
Coefficient	P value	Coefficient	P value	**Hypo**	Relationship	Coefficient	SD	T value	P value	BI [2.5%; 97.5%]	
0.622	0.000	0.311	0.000	**H6**	EO –> IPs –> SMEs Performance	0.312	0.053	5.928	0.000	0.203-0.406	Partial Mediation
0.099	0.066	0.028	0.567	**H7**	TQM–> IPs –> SMEs Performance	0.071	0.036	1.977	0.049	0.001-0.142	Full Mediation

Fig 4: Sobel Mediation Procedure



Source: Hayes (2017).

5. DISCUSSION, CONTRIBUTIONS, AND IMPLICATIONS

The findings of the current study are interesting. It was found that EO is significantly related to IPs as well as SMEs' performance. The findings are consistent with previous studies (Anwar & Shah, 2020; Al-Mamary et al., 2020; Kee & Rahman, 2020). EO is a well-known concept in the entrepreneurial and strategic management literature for strategy-making (Ali et al., 2020; Covin & Wales, 2012; Miller, 1983). Furthermore, EO is an important organisational process that partially explains strategic management behaviour, enabling organisations to outperform competitors by responding to innovations, taking initiative in market opportunities, and managing risk, which helps firms survive and improve performance (Kassab et al., 2022a; Hunt, 2021; Achtenhagen, 2020). Thus, SMEs with a high propensity for inventiveness, proactivity, risk-taking, and resource leveraging gain a competitive advantage and perform well.

On the other hand, it was found that TQM is insignificantly related to SMEs' performance. The lack of significance could be attributed to the duration of TQM implementation, as organisations vary in their implementation based on practice time. Additionally, in the context of Malaysian SMEs, studies by Latif et al. (2021) and Mahmud et al. (2019) indicate a lack of TQM adoption, especially among small businesses. Moreover, the literature reveals a low success rate (only 10%) of TQM implementation in SMEs (Sahoo & Yadav, 2020). While TQM philosophy is primarily dominant among large organisations, SMEs are motivated to incorporate quality into their systems to improve efficiency and competitiveness, driven by the threat of losing contracts to larger manufacturing firms. However, Malaysian SMEs have been slow to adopt TQM due to lack of conviction, perceiving the implementation of quality management systems as daunting and expensive with high operational costs. Furthermore, Malaysian SME owners-managers often lack managerial insights and organisational competencies, resulting in misapplication of quality management, product quality failures, and increased expenditure. Additionally, any compromise in quality by SMEs could jeopardise the entire industrial supply chain, leading to higher costs due to poor quality (Gorondutse et al., 2021). Consequently, as more manufacturing enterprises strive to remain competitive, SME manufacturing units face increasing difficulty in outperforming their competitors.

Furthermore, the study also revealed that IPs positively affect SMEs' performance. Additionally, the results indicated that IPs were able to mediate a positive relationship between EO and SMEs' performance. Moreover, this study's findings indicate an association between TQM and SMEs' performance, but it needs to be mediated by IPs. This means that SMEs can improve their operations by focusing more on innovation, which will have a favorable impact on their performance. Innovative practices within organisations appear to increase process efficiency and, consequently, improve SMEs' performance. Thus, in today's market, focusing on innovation as a corporate strategy is critical as it may influence gaining a lasting competitive edge (Kassab et al., 2022c; Seow et al., 2021; Mahmud et al., 2019). The use of innovation in organisations affects SMEs' performance, and some of the findings in this study are consistent with earlier research. However, the findings also demonstrate that TQM would only influence SMEs' performance through the mediating effect of IPs. This strategic aspect was found to be an effective strategy with a favorable impact on SMEs' performance. This demonstrates the importance of adopting innovative practices to improve the existing association between TQM and SMEs' performance, which was found to be insignificant in this study. In summary, since the association between TQM and IPs was found to be significant, the IPs variable is considered a mediator between

TQM and SMEs' performance. This is believed to have occurred because IPs have a significant relationship with SME performance. Thus, organisational innovations continue to play an essential role in boosting SME performance. Consequently, SMEs need to innovate their products/services and operational procedures to survive, thrive, and maintain their competitive edge. This, in turn, could help their company thrive in the face of intense market competition.

5.1. Contributions and Implications

5.1.1. Theoretical Implications

The proposed model is a revised version built upon the Resource-Based View (RBV) theory, integrating concepts of EO, TQM, and SME performance. Although there is limited existing research linking these concepts to SME performance, this study aims to establish a theoretical connection and develop a conceptual model for empirical validation. It suggests that IPs mediate the relationship between EO/TQM and SME performance. Given the current pandemic's impact, this comprehensive framework aids SMEs in surviving, thriving, and sustaining performance, especially during COVID-19. This study holds several significant theoretical implications. Firstly, it contributes to the existing literature by extending the understanding of the relationship between EO, TQM, and SME performance. Through empirical investigation, it offers additional evidence to support mixed conclusions and enriches the body of knowledge on the RBV theory. By employing the RBV perspective, this study sheds light on SME performance by emphasising the crucial role of intangible resources in positioning small enterprises with diverse capabilities for achieving competitive advantage. The RBV theory provides a theoretical basis for understanding the importance of resources in identifying long-term competitive advantages and formulating effective strategies. Secondly, this study highlighted the mediating role of IPs in the relationship between EO, TQM, and SME performance, thus contributing to a deeper understanding of the outcomes of EO and TQM. Undoubtedly, both EO and IPs are essential elements within the proposed research model. While previous studies have called for exploration into factors influencing business performance, particularly in the context of manufacturing SMEs in Malaysia (Kassab et al., 2023; Seow et al., 2021; Ng et al., 2020), the mediator effect of IPs has been notably neglected. Consequently, the findings of this study highlight the significant role IPs play as a mediator between EO/TQM and SME performance. Henceforth, with adequate use of EO and TQM, SMEs would further increase the adoption of IPs. Consequently, SMEs with active IPs can sustain their performance.

5.1.2. Practical Implications

The study could have various practical implications. Each of the constructs discussed above plays a unique role in validating the proposed research model. Firstly, the role of EO and TQM activities in enhancing enterprise performance can encourage owners/managers to get involved in executing quality system actions. For instance, enterprises should invest more in TQM implementation and innovation initiatives to provide quality products and services, participate in community and environmental improvement initiatives, and boost their performance, reputation, and sustainability. Next, the practical implications of this study are necessary for SME owners and managers. Such insights on quality management practices and issues could be used as a starting point to help SMEs develop a strong entrepreneurial spirit by helping them understand

the technical and management aspects of high-quality manufacturing and track their progress, enabling them to stay competitive in the manufacturing environment.

The owners/managers of SMEs must effectively integrate resources and capabilities, identify the management programs and systems to be implemented, and increase production efficiency. They should develop processes, products, and technological innovations and successfully introduce them to their respective markets. Thus, EO, TQM, and IPs should all be developed and adopted simultaneously, and SME managers should be aware of the mechanism by which this is possible. This fact is supported by the research of Ali et al. (2020), who found that EO and TQM alone are not enough to boost high-quality business performance. Similarly, as suggested by Hilman et al. (2020), EO should be used to complement existing firm assets and capabilities to enhance organisational performance. Furthermore, as stated by Al-Dhaafri & Al-Swidi (2016), to fully realise the potential value of EO, SMEs must invest in TQM to achieve outstanding performance. These findings align with the current research, which encourages SME owners/managers to enhance their performance by implementing TQM practices along with existing entrepreneurial-oriented activities to survive and thrive in business performance.

6. RESEARCH LIMITATIONS AND RECOMMENDATIONS FOR FUTURE STUDY

Certain limitations exist in this study, indicating the need for further research in the future. Firstly, the current study primarily focuses on decision-makers and owners of Malaysian manufacturing SMEs. As a result, the prominent findings can only be applied and generalised to the specific scope rather than SMEs as a whole. Conducting a comparable study on small businesses from different perspectives could be undertaken in the future. Next, the findings show that the proposed model can explain 57.6% of SMEs' performance and 33.1% of IPs. However, the remaining percentage (approximately 42.4% of SMEs' performance and 66.9% of IPs) suggests that unexplained variation may be caused by factors that were not previously considered. Further research is needed to determine the contribution of factors other than EO and TQM to the performance and innovation of SMEs. Furthermore, the quantitative analysis revealed that the TQM variable is not significantly associated with SMEs' performance in Malaysia. This finding is rational considering that SMEs in Malaysia have been slow to adopt TQM due to concerns about the implementation costs and ongoing operational expenses. To understand why TQM is not predicting SMEs' performance in Malaysia, future studies could conduct qualitative research. Moreover, this study relied on subjective performance metrics based on the judgments of SME owners and managers, as obtaining objective financial performance measurements and detailed interpretations of findings was challenging. Therefore, future research should also focus on objective performance indicators. Finally, this research relied on cross-sectional data, leaving the question of whether EO, TQM, or IPs improve long-term SME performance unanswered. Additionally, there is a lack of literature on longitudinal studies in this area. Thus, future research should investigate the long-term impact of EO, TQM, and IPs on the performance of SMEs.

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