

BUSINESS STRATEGY, RESOURCES AND CAPABILITIES AND ORGANISATIONAL INNOVATION PERFORMANCE

*Rapiyah Mohamed
Che Zuriana Muhammad Jamil
Hafizah Abd Mutualib

DOI: <https://doi.org/10.37178/ca-c.21.5.057>

***Rapiyah Mohamed**, Tunku Puteri Intan Safinaz School of Accountancy, College of Business, Universiti Utara Malaysia 06010 Sintok, Kedah, Malaysia.
Correspondence author email: rapiyah@uum.edu.my

Che Zuriana Muhammad Jamil: Tunku Puteri Intan Safinaz School of Accountancy, College of Business, Universiti Utara Malaysia 06010 Sintok Kedah Malaysia

Hafizah Abd Mutualib: Tunku Puteri Intan Safinaz School of Accountancy, College of Business, Universiti Utara Malaysia 06010 Sintok Kedah Malaysia

Abstract

The survival of small and medium enterprises (SMEs) is crucial for Malaysian economic growth and employment opportunity. Innovation is a strategic weapon to compete in the market. The intense competition requires SMEs to continue searching for new ideas and innovate. However, the innovation performance of SMEs is at a low level. This could hinder SMEs to maintain customers and increase their business profitability. Hence, the objective of this paper is to examine the factors that influence innovation performance. Specifically, this paper investigates the influence of business strategy on innovation performance indirectly through organisational resources and capabilities. The framework of this study is based on the Resource-based View theory. A total of 40 samples of SMEs in the manufacturing sector were collected and used for data analysis. The data were analysed using SmartPLS 3.3.3 version. The findings confirmed the hypothesis that organisational resources and capabilities have a mediating effect in the relationship between business strategy and innovation performance. The findings agree with the Resource-based View theory on the importance of resources and capabilities as a source for competitive advantage. Further, the results provide SME managers and policymakers the importance of understanding the role of business strategy, resources, and capabilities to improve innovation performance.

Keyword: Blue ocean strategy, innovation performance, resources, capabilities, small and medium enterprises

Introduction

Malaysian small and medium enterprises (SMEs) play a vital role in sustaining economic growth and support the national vision to become a developed country by 2020. The main objective of this study is to examine the roles of business strategy and resources and capabilities on innovation performance. This study extends the previous research by including resources and capabilities together in a modified model. Unlike other past studies that focused on competitive strategy, the modified model also includes business strategy, which is based on the Blue Ocean Strategy (BOS). Specifically, the research objective is to examine the effect of BOS on innovation performance indirectly through resources and capabilities. The research framework is based on the Resource-based View theory (RBV).

The business environment keeps changing rapidly, and firms must always be innovative in their products or services to remain competitive. Despite much supports from the government, the innovation performance among Malaysian SMEs is relatively low. SMEs are still facing many challenges in innovating new and timely demanded products as per market requirements. Prior studies also showed that only a small number of SMEs are aware of the benefits of innovation. Due to the significant contribution of SMEs to the Malaysian economy, it is crucial to fully understand the factors that influence innovation performance. The modified model proposed in this study will benefit the managers in SMEs in giving them ideas and knowledge on improving innovation performance.

Innovation is fundamental to competitiveness, and this matters as much to SMEs as it does to big businesses [1]. Recent empirical studies found that the innovation performance of Malaysian SMEs is at a low level compared to other countries [2-4] for SMEs to improve their innovation performance and, subsequently, business performance.

Literature Review

Resource-based View Theory

The RBV theory emphasises the importance of firm-specific resources and capabilities, especially resources and capabilities that reside within firms, in explaining differences in firm performance [5,6]. The popularity of the RBV appears to lie in the premise that firms can control their unique resources and capabilities better than they can control their industry [7].

Innovation Performance

[8] defined product innovation as the new creation of a new product from new materials or the improvement of existing products to fulfill customers' satisfaction. It also refers to the introduction of new products and services to create new markets or customers or to satisfy the existing market or customers [9]. Product innovation is one of the essential sources of competitive advantage for the organisation [10]. The quality of the product could be enhanced through innovation and positively contributes to a firm's competitive advantage [11]. According to [12] product innovation protects an organisation from market threats and competitors.

Generally, process innovation refers to the process of reengineering and enhancing the internal operation of a business process [13]. According to [14] process innovation involves an organisation's functions which include technical design, research and development, manufacturing, management, and commercial activities. [15] noted that process innovation is the creation of technology enhancement and the development of a process or system. For example, innovation in technology, skill, technique, system, or procedure that is used in the process of transforming input into output [16]. In the manufacturing industry, process innovation is considered as the primary distinctive competence for competitive advantage [17]. In particular, such innovation is positively related to the growth of an organisation [18].

Business Strategy and Innovation performance

The BOS focuses on creating a new industry or distinctive market segment that renders existing competitors largely irrelevant, hence obtaining a dramatic and durable competitive advantage [19]. Author [20] that with greater competitive convergence among companies within most industry segments, a more sustainable strategy would be for firms to shift focus from benchmarking with the competition to creating new uncontested market space. The cornerstone of the BOS is value innovation, which is a systematic process of creating a quantum leap in value for both buyers and the company to the extent that existing competition becomes inconsequential.

In defining the BOS, [20] postulated that companies can develop new growth opportunities by shifting focus from strategies aimed at outperforming or beating the existing competition to strategic moves of creating new uncontested market spaces with expansive boundaries and potential. Furthermore, companies operate in a market universe can be viewed as being composed of two oceans: the red ocean, which represents all the industries in existence today; and the blue ocean that represents all the non-existent industries, in unknown market spaces [20].

The cornerstone of BOS is value innovation, which focuses on driving buyer value up while simultaneously driving costs down, hence, the creation of a leap in value for both the company and its buyers. Cost savings are made by eliminating and reducing factors an industry competes on, whereas buyer value is lifted by raising and creating elements that the industry has never offered [20]. This sequence of activities, as encapsulated in the BOS, leads to a quantum leap in value for a company and its customers, resulting in superior organisational performance.

Prior studies reported on the effect of BOS on various dimensions of organisational performance, such as marketing and innovation performances. A study by [21] on the effect of applying BOS in the Egyptian travel agencies revealed that BOS has a positive significant effect on marketing performance. They explained that BOS is a dynamic process since it affects market shares, customer satisfaction, customer loyalty, and innovation. [3] found that three of five constructs of BOS had influenced innovation performance in the Malaysian manufacturing industries.

Resources and Capabilities and Innovation Performance

In general, internal resources is the underlining theme in the RBV theory. The first idea of RBV came from [22], who suggested that the growth of a sustained firm is dependent on its internal firm characteristics such as management capability and economy of scale. The RBV investigates the internal resources of a firm to sustain its competitive advantage [23]. Resources are anything that would be a source of a firm's strength and weakness and are defined as those tangible and intangible assets that are tied semi-permanently to the firm [6]. Resources can be either given exogenously or created within the firm, and they may refer to tangible assets (i.e. equipment) or intangible assets (i.e. knowledge, human capital). Intellectual capital is a valuable resource in the form of accumulated knowledge that is embedded within an organisation, while social capital resides in the relationship firms have with their network partners. [24] argued that innovation is the ultimate outcome of the creation of new knowledge which results from the combination and interaction between intellectual capital and social capital of firms. While social capital is defined as "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" [24, p.243] In this study, knowledge management and creativity management are selected to represent intellectual capital as internal resources that firms develop and own to realise innovation. For social capital, this study focuses on two major trading partners with whom most firms intensively interact: customers and suppliers. The relationships with both customers and suppliers represent network resources that firms develop for enhancing innovation. There is evidence that intellectual and social capital are evolving in Malaysian manufacturing industries [25].

As contended by [5,6,22,26,], the main idea of capability is based on the RBV of a firm. According to [27,28], past literature on the performance of an organisation were designated on how firms utilise their resources to create competitive advantage [29, 30,31] and how the resource-based must be planned and developed effectively to adapt with environmental changes based on dynamic capability perspective [32]. The idea of capabilities is typically described in terms of firm building blocks or core capabilities [33, 34], noted that an organisation's capabilities consist of resources, processes, and values.

In the view of [35], the definition of dynamic capabilities is still being debated in the literature. They explained that capabilities can either be operational or dynamic, and both reflect the firm's capacity to perform a particular activity or function. However, while

operational capabilities help the firm perform basic functional activities, dynamic capabilities refer to the transformation and reconfiguration of operational capabilities. They argued that dynamic capabilities can create value indirectly by changing operational capabilities. One of the operational capabilities is technological capabilities, which focus on technology development, new product development, and manufacturing resources [35]. Three types of internal capabilities identified by [36] are research and development (R&D), marketing, and manufacturing. According to them [36], these three types of capabilities have different impacts on product and process innovativeness.

In particular, research and development (R&D) has emerged as the main theme in the international new ventures and fast internationalisation literature and is seen as a significant source of competitive advantage [37,38,39]. Authors [40] attested that research and development capability is one of the firm's competencies to develop and apply varying technology to produce new products and services effectively.

Marketing capability refers to the improved use of customer and relevant business competencies, increasing the number of existing customers or market research and analysis, as well as improving market and product delivery process [41]. Authors [42] confirmed that marketing capabilities and innovation performance are positively related. Furthermore, a strong market capability helps firms to utilize their limited resources very effectively [43] and at the same time enhance customer cooperation [44].

Author [26] defined manufacturing capability as a complex capability integrating a large number of specific skills relating to components manufacturing, supply chain management, production scheduling, assembly processes, quality control procedures, and inventory control mechanism. The RBV suggests that a company with strong manufacturing capabilities can enjoy an enduring competitive advantage and achieve superior performance. These capabilities enable the firm to develop new products and expedite its market introductions [45]. Authors [36] provided empirical evidence that manufacturing capability has a positive association with innovation performance.

Business Strategy, Resources and Capabilities, and Innovation Performance

Authors [46] highlighted that top management had focused more attention on business strategy as it is crucial for a company's survival and wealth creation in the current highly competitive global market. Business strategy can be defined as the long-term direction of an organization [47]. There is an inter-linkage between business strategy and resources and capabilities. The RBV argues that in formulating a business strategy, companies must ensure that the strategy is formulated according to the strong set of resources that they possessed, in which these resources can generate capabilities that will lead to superior performance [48]. In strategic management literature, most researchers focused on author's [49] competitive strategy (for example [46, 50]). However, in recent years, the BOS had gained attention due to its ability to promote different ways of competing in the market. Authors [20] pointed that the BOS stresses the concept of value creation in uncontested markets (blue ocean), whereas conventional business strategy models focus on competing inside an existing market (red ocean) by trying to win the competition.

The BOS concept involves decision-making at all levels, such as corporate, middle, and business management levels, where the actual implementation of policies takes place [51]. The concept establishes that innovation and efficiency occur when

several resources are deployed to the maximum satisfaction at a low cost [52]. Authors [53], revealed the wide application of the BOS concept in the private sector, where corporate organisations are competing for profit and advantage within the industry. Several researchers suggested applying strategic management to maintain organisational efficiency in terms of delivery of quality service and use it as a competitive advantage [52]. On the other hand, [54] mentioned that several leading researchers in strategic management proposed an innovative approach to management, in the way of working towards decreasing irrelevant cost implications, avoidable limitation, and redirect resources to value for money schemes [52]. Whilst, in the case of business enterprises, they may have to remove competition through innovation as suggested in the BOS.

[55] argued that the blue ocean does not directly pursue competing excellence because, generally, companies that pursue competing excellence are trapped in competition. One way to achieve excellent organisational performance is by having a good innovation performance. However, it is found that innovation performance in SMEs is at a low level, managers in SMEs do not focus much on innovation [4]. Many SMEs have difficulties in achieving successful innovation, despite having invested significantly in technology [56]. Thus, it is necessary to investigate the factors that influence innovation performance in SMEs [57]. The study found that the key drivers of innovation performance are innovation strategy and technological capabilities. Author [58] argued that organisations can improve their innovation performance if they continue to reconfigure their resource-based strategy development and technological improvements. Authors [57], highlighted that business strategy, management capabilities, financial capital, technically qualified staff and technology information, strong R&D intensity, entrepreneur orientation, and innovation networks contribute to a better innovation performance for SMEs in China. Authors [56] concluded that business strategy, organisational culture, and leadership are related to innovation.

Factors that relate to innovation performance are varied and can change over time. The determinants of innovation performance have been the subject of a large portion of existing research [59]. Prior studies focused on three major areas, which are internal resources, external resources, and internal capabilities. In an organisation, there are two important sources to create a competitive advantage, namely resources and capabilities.

Both resources and capabilities are essential to enhance innovative performance. However, in prior studies, these two factors had been investigated separately (see for example [50]), resulted in inconclusive determinants of innovative performance. For future research, [50] suggested including capabilities such as R&D and technology investment.

Hence, this study proposes a modified framework that includes both resources and capabilities. This modified framework consists of internal and external resources together with internal capabilities. The current research follows prior studies such as [50] who suggested that more research should be conducted to examine the relationships between innovation performance, internal resource, external resource, and competitive strategy, particularly in the developing countries. In line with this, [60] stated that the relationship between organisational strategy, capabilities, and innovation performance received less empirical support. RBV recognises that resources and capabilities are important sources for competitive advantage. The theory argues that the ability to innovate depends on the

company's underlying resources and capabilities [61]. Thus, companies with well-managed resources and capabilities will receive better innovation performance [62], and a set of complementary capabilities is required to build innovation performance [63]. Meaning that to enhance innovation performance, companies, including SMEs, must consider the influence of resources and capabilities on innovation performance.

Accordingly, this brings to the argument that having a business strategy is not sufficient. More than that, the business strategy must be linked closely to the company's resources and capabilities to gain a better innovation performance. Based on this argument, this study hypothesises that the relationship between business strategy and innovation performance is indirectly influenced by resources and capabilities. There are three hypotheses in this study:

H_1 : There is a relationship between business strategy and innovation performance.

H_2 : There is a relationship between internal resources and capabilities and innovation performance.

H_3 : Internal resources and capabilities indirectly influence the relationship between business strategy and innovation performance.

Research Methodology

In this study, the survey method was employed for data collection as it is suitable for collecting data from a large sample size, thus allowing the researcher to generalise the results for the entire population [64]. The sample selection in this study consisted of SME manufacturing firms with sales turnover ranging from RM15 million to RM50 million or having a total number of employees ranging from 75 to 200 (www.smecorp.gov.my). The research instrument used in this study was a survey questionnaire as it is regarded as the most preferred research instrument by the academic community for survey methods [65]. The structured survey questionnaires were e-mailed to the managers of the selected firms. The data used in the study was based on 40 respondents. The response rate for this study was 13.33%. The data collection was conducted during the movement control order (MCO) in which many respondents were working from home. It was a big obstacle to contact respondents directly as the email in the FMM book directory only consists of general company email. The researchers had to contact each company to get the personal email of respondents. During the MCO it is difficult to communicate with the companies as they only operate within limited business hours.

In Structural Equation Modelling (SEM) application, a general rule of thumb is that the minimum sample size should be no less than 200 (preferably no less than 400, especially when observed variables are not normally distributed multivariate) [66]. According to [67], the suggested sample size is about 150 to 300. Accordingly, this study selects 300 SME manufacturing firms using a simple random sampling method.

The unit analysis is the organisation, and the respondents are senior management, middle management, and other relevant managers from various departments such as general, finance, production. The selection of these respondents is because they have been considered knowledgeable and suitable persons to provide opinions on this matter and also due to their direct involvement in the implementation of business strategy and innovation process.

The dependent variable in this study is innovation performance, which consists of both product and process. The mediating variables are capabilities that involve internal resources (knowledge management and creativity management), network resources (supplier relationship and customer network), and capabilities (R&D, marketing, and manufacturing). The independent variable is the blue ocean strategy that comprises five dimensions, namely creating uncontested marketplace, making the competition irrelevant, creating and capturing new demand, and achieving differentiation and low cost. The measurement of variables is adapted from prior studies: business strategy [3]; resources and capabilities [36, 50] and innovation performance [50].

Results

Measurement Model

This study applied the SEM technique, through SmartPLS 3.3.3 version, for hypothesis testing. PLS is considered a suitable method in a situation where data fails to fulfill normality conditions. PLS-SEM is widely accepted modelling technique since last decade as it is a non-parametric technique of testing research model [21,68]. PLS model outcomes are deemed more reliable compared to the ordinary least square (OLS) model when empirical data have missing values, the sample size is smaller, or involves issues regarding multicollinearity [69]. Thus, this study used SmartPLS as the sample tested is smaller in size. The research model includes three reflective variables, and all the variables are second-order variables. The PLS-SEM covers both measurement and structural models.

The measurement model consists of several individual items, namely reliability, internal consistency reliability, convergent reliability, and discriminant validity. Table 1 shows the upper factor loading is 0.931 and the lower factor loading is 0.527, where both are higher than 0.50, as suggested by [70]. The internal consistency reliability was determined by calculating composite reliability (CR) and Cronbach's alpha [71]. However, researchers had identified CR is more suitable than Cronbach's alpha for PLS-SEM [72]. Table 1 demonstrates that CR and Cronbach's alpha for first-order latent variables (LVs) are greater than 0.70, thus, the internal consistency reliability criterion is fulfilled. The average variance extracted (AVE) was calculated to measure convergent validity and the standardized value of AVE is equal to or greater than 0.50 [70]. Table 1 reveals that the convergent validity criterion is fulfilled. Variance Inflation Factor (VIF) was calculated to assess multicollinearity, and the value of VIF or full-collinearity should be below 5 [70]. This research used WarpPLS 7.0 to calculate full-collinearity because it cannot be computed in SmartPLS. Table 1 shows that the full-collinearity value of all first-order LVs is below 5. Thus, there is no issue regarding multicollinearity.

Table 1: Reliability of the Constructs and Factor Loadings of Indicators (first-order)

Constructs	Items	Factor Loading	AVE	CR	R ²	α	Full collinearity
Creating uncontested marketplace	BCUM1 BCUM2 BCUM3 BCUM4 BCUM5 BCUM7	0.778 0.729 0.726 0.712 0.568 0.740	0.507	0.859		0.807	3.142
Making the competition irrelevant	BMCI1 BMCI2 BMCI4	0.849 0.765 0.724	0.610	0.824		0.707	2.939
Creating and capturing new demand	BCCD 1 BCCD 2 BCCD 3 BCCD4	0.822 0.632 0.757 0.672	0.525	0.814		0.701	3.202
Breaking the value-cost trade offs	BVCT 1 BVCT2	0.662 0.676	0.509	0.838		0.770	2.002

	BVCT 3 BVCT 4 BVCT 5	0.715 0.747 0.762					
Achieving differentiation and low costs	BADL1 BADL2 BADL3	0.825 0.734 0.719	0.579	0.804		0.716	2.863
Knowledge management	KM1 KM2 KM3 KM4	0.764 0.840 0.709 0.811	0.612	0.863		0.791	2.501
Creativity management	CM1 CM2 CM3 CM4	0.795 0.782 0.778 0.750	0.603	0.859		0.783	2.162
Customer network	CUSR1 CUSR2 CUSR3 CUSR4 CUSR5	0.666 0.821 0.813 0.807 0.628	0.565	0.865		0.803	1.417
Supplier Relationship	SUPM1 SUPM2 SUPM3	0.527 0.776 0.819	0.517	0.756		0.726	1.545
R&D	RD1 RD2 RD3 RD4	0.894 0.877 0.931 0.894	0.808	0.944		0.921	1.817
Marketing	MARKET1	0.828	0.713	0.909		0.865	2.339

	MARKET2	0.878					
	MARKET3	0.892					
	MARKET4	0.776					
Manufacturing	MANU1	0.859	0.720	0.912		0.871	3.715
	MANU2	0.838					
	MANU3	0.869					
	MANU4	0.829					
Product Innovation	PROD1	0.901	0.715	0.926		0.900	2.361
	PROD2	0.861					
	PROD3	0.826					
	PROD4	0.867					
	PROD5	0.767					
Process Innovation	PROC1	0.817	0.762	0.927		0.895	2.566
	PROC2	0.866					
	PROC3	0.913					
	PROC4	0.892					

In the second step, the measurement model was applied to generate second-order variables such as blue ocean strategy (e.g. creating uncontested marketplace, making the competition irrelevant, creating and capturing new demand, breaking the value-cost tradeoffs), internal resources and capabilities (e.g. knowledge management, creativity management, supplier relationship, customer network, R&D, manufacturing, and marketing), and innovation performance (e.g. process innovation and product innovation). This research followed a two-stage approach for second-order constructs that is the default approach in WarpPLS [73]. Hence, the measurement model was analysed with second-order variables (See Table 2). The research framework is reflective-reflective. This study fulfilled the criterion of AVE, CR, and full-collinearity.

Table 2: Reliability of the Constructs and Factor Loading of Indicators at second-order

Second -Order	Items	Factor Loading	AVE	CR	R ²	Full collinearity
Blue Ocean Strategy	Creating uncontested marketplace	0.877	0.638	0.898		2.510
	Making the competition irrelevant	0.796				
	Creating and capturing new demand	0.785				
	Breaking the value-cost trade offs	0.753				
	Achieving differentiation and low costs	0.777				
Internal Resources and Capabilities	Knowledge Management	0.722	0.520	0.882	0.591	3.271
	Creativity Management	0.735				
	Supplier Relationship	0.535				
	Customer Network	0.721				
	R&D	0.624				
	Manufacturing	0.813				
	Marketing	0.755				
Innovation Performance	Process Innovation	0.947	0.895	0.945	0.555	2.249
	Product Innovation	0.945				

Authors [69] proposed a traditional metric to compute the discriminant validity. Later, [74] suggested a new method i.e. heterotrait- monotrait (HTMT) for discriminant validity by stating that the traditional metric is not suitable in a situation where loadings have smaller differences. The HTMT value must be below 0.90 for conceptually identical variables and 0.85 for variables different in concept [74]. Table 3 reveals that the HTMT value is below the standardized value. Thus, this study fulfilled the HTMT criterion.

Table 3: Heterotrait-monotrait Ratio (HTMT) for second-order

Variables	BADL	BVCT	BCCD
Blue Ocean Strategy			
Innovation Performance	0.726		
Internal Resources and Capabilities	0.806	0.844	

Regression Model Test

The bootstrapping procedure was applied on 5,000 subsamples to test the hypotheses. Table 4 demonstrates the results of both direct and indirect hypotheses. The p-value and t-value were used for hypothesis testing. Blue ocean strategy does not influence innovation performance (β -values=0.171, $p<0.082$, and t -value=1.502) and H_1 is not supported. Moreover, internal resources and capabilities have a significant positive influence on innovation performance (β -values=0.606, $p<0.000$, and t -value=6.942) and supported H_2 . Finally, internal resources and capabilities significantly mediate between blue ocean strategy and innovation performance (β -values=0.466, $p<0.000$, and t -value=5.269) and supported H_3 .

Table 4 Testing for Direct and Indirect Effects

Hypotheses	Paths	B Value	T-values	P-values	BCI LL	BCI UL	β^2	Remarks
H1	BOS-->IP	0.171	1.502	0.082	- 0.008	0.28	0.017	No
H2	IR C-->IP	0.606	6.942	0	0.525	0.751	0.338	Yes
H3	BOS->IRC-->IP	0.466	5.269	0	0.393	0.616	---	Yes

The β^2 value shows whether an exogenous construct influences endogenous construct [75]. The β^2 has various classifications like small ($\beta^2=0.02$), medium ($\beta^2=0.15$), and high effect ($\beta^2=0.35$), as recommended by [76]. Table 5 demonstrates that BOS has no effect, but internal resources and capabilities have a medium effect on innovation performance.

The Explanatory and Predictive Power of the Model

The R-square value is calculated to determine the explanatory power of a research framework [60]. In SmartPLS, the algorithm technique is used to calculate R^2 , and the value of R^2 should be greater than 0.10 [77]. Table 2 reveals that the R^2 value is greater than the standard criterion. The second instrument used to measure the quality of a research framework is cross-validated redundancy or Q^2 , as suggested by [78]. In SmartPLS, the blindfolding technique is used to calculate cross-validated redundancy. The value of Q^2 should be greater than zero [78]. This study showed that Q^2 of internal resources and capabilities is 0.244 and innovation performance is 0.455. The value of R^2 and Q^2 is greater than the standardized value.

Conclusion

In the intense marketplace, small and large companies continuously compete to win the markets and customers. Companies must be able to create and manage innovation performance effectively to succeed in such a business environment. Innovation is a key driver for achieving an economic growth [79]. Managers in SMEs must understand the factors that influence innovation performance as past studies had shown that there is a significant relationship between innovation performance and business performance (for example [80, 81]. A good innovation performance can also assist SMEs in achieving and sustaining competitive advantage [4]. This research attempts to provide an understanding that business strategy is a significant driver for enhancing innovation performance. Specifically, the research focused on BOS as this strategy encouraged companies to think creatively, through the ability to create a new and uncontested marketplace with new demand and high profitable growth. Also, BOS emphasises value innovation, which is in line with improving innovative performance. Research on BOS from 1998 until recently has gained much attention from researchers [82]. However, there is limited evidence on the role of BOS in enhancing innovation performance. From the perspective of RBV, resources and capabilities are vital in fostering innovation.

Hence, the main objective of this study is to investigate the indirect effect of resources and capabilities on the link between business strategy and innovation performance. The results of this study support the hypothesis that resources and capabilities are the mediators in this relationship. The results benefit the managers in SMEs by giving them ideas and knowledge on improving innovation performance.

This study contributes to enrich the knowledge of the effective model to improve innovation performance. By understanding the role of business strategy and resources and capabilities on innovation performance, the Malaysian manufacturing SMEs will be exposed to new ideas on the important factors influencing innovation performance. Consequently, the findings provide empirical evidence to the strategic management literature regarding BOS. Additionally, the study contributes to the body of knowledge by supporting the RBV theory that identifies resources and capabilities as vital sources for competitive advantage.

The research framework in this study is expected to be a foundation for future research in further examining the concept of BOS, resources and capabilities, innovation performance, and business performance from the perspective of RBV theory.

ACKNOWLEDGEMENTS

This research was supported by Ministry of Higher Education (MoHE) of Malaysia through Fundamental Research Grant Scheme (FRGS/1/2018/SS01/UUM/02/29). The authors are also grateful for the administrative assistance provided by the Research and Innovation Management Centre (RIMC), Universiti Utara Malaysia.

References

1. Brassell, M., and Reid, B. *Innovation, intangibles and integrated reporting: A pilot study of Malaysian SMEs*, 2015. June. The Association of Chartered Certified Accountants (ACCA),
2. Hameed, W.U., et al., *Determinants of Firm's open innovation performance and the role of R & D department: an empirical evidence from Malaysian SME's*. Journal of Global Entrepreneurship Research, 2018. **8**(1): p. 1-20 DOI: <https://doi.org/10.1186/s40497-018-0112-8>.
3. Shafiq, M., et al., *Relationship of blue ocean strategy and innovation performance: an empirical study*. City University Research Journal, 2017. p. 74-80.
4. Y.Y. Yuen., and X. P. Ng, *Enhancing innovation performance of small and medium enterprises in Malaysia*. Management Science Letter, 2021. **11**: p.887-894
5. Barney, J., *Firm resources and sustained competitive advantage*. Journal of

- Management, 1991. 17(1): p. 99-120
 DOI: <https://doi.org/10.1177/014920639101700108>.
6. Wernerfelt, B, *A resource-based view of the firm*. Strategic Management Journal, 1984. 5: p. 171-180 DOI: <https://doi.org/doi:10.1002/smj.4250050207>.
 7. Rumelt, R., *Towards a strategic theory of the firm*. (in Lamb, R; 1984 *Competitive Strategic Management*, Prentice-Hall, Ed.). 1984, Englewood Cliffs (NJ).
 8. Gopalakrishnan, S. and F. Damancpour, *A review of innovation research in economics, sociology and technology management*. Omega, 1997. 25(1): p. 15-28.
 9. Wang, C.L. and P.K. Ahmed, *The development and validation of the organisational innovativeness construct using confirmatory factor analysis*. European Journal of Innovation Management, 2004 DOI: <https://doi.org/10.1108/14601060410565056>.
 10. Camison, C. and A.V. Lopez, *An examination of the relationship between manufacturing flexibility and firm performance: The mediating role of innovation*. International Journal of Operations & Production Management, 2010. DOI: <https://doi.org/10.1108/01443571011068199>.
 11. Garvin, D. A, *Competing on the eight dimensions of quality*. Harvard Business Review, 1987. 65(6): p.101–109.
 12. Hult, G.T.M., R.F. Hurley, and G.A. Knight, *Innovativeness: Its antecedents and impact on business performance*. Industrial Marketing Management, 2004. 33(5): p. 429-438 DOI: <https://doi.org/10.1016/j.indmarman.2003.08.015>.
 13. Cumming, B. S, *Innovation Overview and Future Challenges*. European Journal of Innovation Management, 1998. 1(1: p. 21 – 29.
 14. Freeman, C, *The Economics of Industrial Innovation*, 2nd. 1982, Frances Printer, London, UK.
 15. Oke, A., G. Burke, and A. Myers, *Innovation types and performance in growing UK SMEs*. International Journal of Operations & Production Management, 2007 DOI: <https://doi.org/10.1108/01443570710756974>.
 16. Zhuang, L., D. Williamson, and M. Carter, *Innovate or liquidate- Is all organisations convinced? A two-phased study into the innovation process*. Management Decision, 1999.
 17. Nemetz, P.L. and L.W. Fry, *Flexible manufacturing organizations: implications for strategy formulation and organization design*. Academy of Management Review, 1988. 13(4): p. 627-639
 DOI: <https://doi.org/10.5465/amr.1988.4307510>.
 18. Morone, P. and G. Testa, *Firms growth, size and innovation an investigation into the Italian manufacturing sector*. Econ. Innov. New Techn., 2008. 17(4): p. 311- 329 DOI: <https://doi.org/10.1080/10438590701231160>.
 19. Thompson, A., Peteraf, M., Gamble, J., and Stirickland, A., *Crafting and executing strategy: Concepts and readings*. 18th ed. 2012, New York, NY: MC Graw-Hill.
 20. Kim, W. C., & Mauborgne, R., *Blue Ocean Strategy: How to create uncontested market space and make the competition irrelevant*. 2005, Boston: Harvard Business School Press.
 21. Eltobgy, A. and Y. Abd Elmoaty, *Effect of Applying Blue Ocean Strategy on Marketing Performance in the Egyptian Travel Agents*. International Journal of Heritage, Tourism and Hospitality, 2018. 12(2): p. 382-399 DOI:<https://doi.org/10.21608/ijhth.2019.31999>.
 22. Penrose, E. T., *The theory of the growth of the firm*. 1959, Barsil Blackwell, Oxford.
 23. Glavas, A. and J. Mish, *Resources and capabilities of triple bottom line firms: going over old or breaking new ground?* Journal of Business Ethics, 2015. 127(3):p. 623-642.
 24. Nahapiet, J. and S. Ghoshal, *Social capital, intellectual capital, and the organizational advantage*. Academy of Management Review, 1998. 23(2): p. 242- 266 DOI: <https://doi.org/10.2307/259373>.

25. Ngah, R. and A.R. Ibrahim, *The relationship of intellectual capital, innovation and organizational performance: A preliminary study in Malaysian SMEs*. Advances in Global Business Research, 2012.
26. Grant, R. M., *Contemporary Strategy Analysis, Concepts, Techniques, Applications*. 1995, Blackwell Business, Oxford.
27. Nonala, I. and M. Kenney, *Towards a new theory of innovation management: A case study comparing Canon, Inc. and Apple Computer, Inc.* Journal of Engineering and Technology Management, 1991. **8**(1): p. 67-83 DOI: [https://doi.org/10.1016/0923-4748\(91\)90005-C](https://doi.org/10.1016/0923-4748(91)90005-C).
28. Hamel, G. and C.K. Prahalad, *The core competence of the corporation*. Harvard Business Review, 1990. **68**(3): p. 79-91.
29. Danneels, E., *The dynamics of product innovation and firm competences*. Strategic Management Journal, 2002. **23**(12): p. 1095-1121 DOI: <https://doi.org/10.1002/smj.275>.
30. Teece, D.J., *Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance*. Strategic Management Journal, 2007. **28**(13): p. 1319-1350 DOI: <https://doi.org/10.1002/smj.640>.
31. Eisenhardt, K.M. and J.A. Martin, *Dynamic capabilities: what are they?* Strategic Management Journal, 2000. **21**(10-11): p. 1105-1121 DOI: [https://doi.org/10.1002/1097-0266\(200010/11\)21:10/11%3C1105::AID-SMJ133%3E3.0.CO;2-E](https://doi.org/10.1002/1097-0266(200010/11)21:10/11%3C1105::AID-SMJ133%3E3.0.CO;2-E).
32. Christensen, J.F., *Asset profiles for technological innovation*. Research Policy, 1995. **24**(5): p. 727-745 DOI: [https://doi.org/10.1016/0048-7333\(94\)00794-8](https://doi.org/10.1016/0048-7333(94)00794-8).
33. Leonard-Barton, D., *Core capabilities and core rigidities: A paradox in managing new product development*. Strategic Management Journal, 1992. **13**(S1): p. 111- 125.
34. Börjesson, S., and Löfsten, H., *Capabilities for innovation in small firms - A study of 131 high-tech firms and their relation to performance*. International Journal of Business Innovation and Research, 2012. **6**(2): p.149-176. Doi: <https://doi.org/10.1504/IJBIR.2012.045634>
35. Pratogerou, A., Caloghirou, Y., and Lioukas, S., *Dynamic capabilities and their indirect impact on firm performance*. Industrial and Corporate Change, 2011. **21**(3): p. 615-647.
36. Su, Y.-S., E.W.K. Tsang, and M.W. Peng, *How do internal capabilities and external partnerships affect innovativeness?* Asia Pacific Journal of Management, 2009. **26**(2): p. 309-331 DOI: <https://doi.org/10.1007/s10490-008-9114-3>.
37. Filatotchev, I. and J. Piesse, *R&D, internationalization and growth of newly listed firms: European evidence*. Journal of International Business Studies, 2009. **40**(8): p. 1260-1276 DOI: <https://doi.org/10.1057/jibs.2009.18>.
38. Golovko, E. and G. Valentini, *Exploring the complementarity between innovation and export for SMEs' growth*. Journal of International Business Studies, 2011. **42**(3): p. 362-380 DOI: [https://doi.org/10.1016/S0305-0483\(96\)00043-6](https://doi.org/10.1016/S0305-0483(96)00043-6).
39. Knight, G.A. and S.T. Cavusgil, *Innovation, organizational capabilities, and the born-global firm*. Journal of International Business Studies, 2004. **35**(2): p. 124- 141 DOI: <https://doi.org/10.1057/palgrave.jibs.8400071>.
40. Krasnikov, A. and S. Jayachandran, *The relative impact of marketing, research- and-development, and operations capabilities on firm performance*. Journal of Marketing, 2008. **72**(4): p. 1-11 DOI: <https://doi.org/10.1509/jmkg.72.4.001>.
41. Shah, D., et al., *The path to customer centricity*. Journal of Service Research, 2006. **9**(2): p. 113-124 DOI: <https://doi.org/10.1177/1094670506294666>.
42. Tsai, H.-T. and A.B. Eisingerich, *Internationalization strategies of emerging markets firms*. California Management Review, 2010. **53**(1): p. 114-135 DOI: <https://doi.org/10.1525/cmr.2010.53.1.114>.
43. Rust, R.T., K.N. Lemon, and V.A. Zeithaml, *Return on marketing: Using customer equity to focus marketing strategy*. Journal of Marketing, 2004. **68**(1): p. 109-127.
44. Prahalad, C.K. and V. Ramaswamy, *Co-opting customer competence*. Harvard Business Review, 2000. **78**(1): p. 79-90.
45. Zahra, S.A. and A.P. Nielsen, *Sources of capabilities, integration and technology commercialization*. Strategic Management Journal, 2002. **23**(5): p. 377-398 DOI: <https://doi.org/10.1002/smj.229>.
46. López-Cabarcos, M.Á., Göttling-Oliveira-Monteiro S., and Vázquez-Rodríguez P., *Organizational capabilities and profitability: The mediating role of business strategy*. SAGE Open, 2015 October. DOI:[10.1177/2158244015616852](https://doi.org/10.1177/2158244015616852)
47. Whittington, R., Regner, P., Angwin, D., Johnson, G., and Scholes, K., (2020). *Exploring strategy*. 12th. 2020, Pearson. UK.
48. Amit, R. and P.J.H. Schoemaker, *Strategic assets and organizational rent*. Strategic Management Journal, 1993. **14**(1): p. 33-46 DOI: <https://doi.org/10.1002/smj.4250140105>.

49. Porter, M.E., *Competitive strategy: Techniques for analyzing industries and competitors*. 1980, Free Press:New York.
50. Laosirihongthong, T., Prajogo, D. I., and Adebanjo, D., *The relationships between firms strategy, resources and innovation performance: Resources- based view perspective*. Production Planning and Control, 2014. **25**(15): p. 1231–1246. DOI: <https://doi.org/10.1080/09537287.2013.819593>
51. Joyce, P., *Strategic management in the public sector*: 2015, Routledge.
52. Kong, Y., et al., *In Pursuit of Public Sector Efficiency and Value Innovation; the Blue Ocean Strategy*. Journal of Public Administration and Governance, 2018. 8(1): p. 227. DOI: <https://doi.org/10.5296/jpag.v8i1.12781>
53. Arundel, A., Casali, L., and Hollanders, H., *How European public sector agencies innovate: The use of bottom-up, policy-dependent and knowledge- scanning innovation methods*. Research Policy, 2015. **44**(7): p.1271–1282. DOI: <https://doi.org/https://doi.org/10.1016/j.respol.2015.04.007>
54. Boe, O., and Kvalvik, Ø., *Effective Use of Resources in the Public Management Sector in Norway*. Procedia Economics and Finance, 2015. **26**: p.869–874. DOI: [https://doi.org/https://doi.org/10.1016/S2212-5671\(15\)00896-5](https://doi.org/https://doi.org/10.1016/S2212-5671(15)00896-5).
55. Kim, W.C. and R. Mauborgne, *Blue ocean strategy, expanded edition: How to create uncontested market space and make the competition irrelevant*. 2014: Harvard Business Review Press.
56. O'Regan, N., Ghobadian, A., and Sims, M., *Fast tracking innovation in manufacturing SMEs*. Technovation, 2006. **26**(2): p. 251-261.
57. Xie, X., et al., *What affects the innovation performance of small and medium- sized enterprises in China?* Innovation, 2013. **15**(3): p. 271-286.
58. Kamasa, R., *Determinants of innovation performance: A resource-based study*. Procedia-Social and Behavioral Sciences, 2015. **195**: p. 1330-1337.
59. Wolfe, R.A., *Organizational innovation: Review, critique and suggested research directions*. Journal of Management Studies, 1994. **31**(3): p. 405-431 DOI: <https://doi.org/10.1111/j.1467-6486.1994.tb00624.x>.
60. Khan, K.U., et al., *Impact of intangible resources (dominant logic) on SMEs innovation performance, the mediating role of dynamic managerial capabilities: Evidence from China*. European Journal of Innovation Management, 2020. Vol. ahead-of-print No. ahead-of-print. DOI: <https://doi.org/10.1108/EJIM-07-2020-0276>
61. Kusunoki, K., I. Nonaka, and A. Nagata, *Organizational capabilities in product development of Japanese firms: a conceptual framework and empirical findings*. Organization Science, 1998. **9**(6): p. 699-718 DOI: <https://doi.org/10.1287/orsc.9.6.699>.
62. Lefebvre, V.M., H. De Steur, and X. Gellynck, *External sources for innovation in food SMEs*. British Food Journal, 2015 DOI: <https://doi.org/10.1108/BFJ-09-2013-0276>.
63. Zawislak, P.A., et al., *The different innovation capabilities of the firm: further remarks upon the Brazilian experience*. Journal of Innovation Economics Management, 2014(1): p. 129-150 DOI: <https://doi.org/10.3917/jie.013.0129>.
64. Sekaran, U., and Bougie, R., *Research methods for business: A skill-building approach*. 5th. 2010, Haddington: John Wiley & Sons.
65. Altinay, L., and Paraskevas, A., *Planning Research in Hospitality and Tourism*. 2008, Routledge.
66. Kline, R.B., *Principles and practice of structural equation modeling 2nd ed*. New York: Guilford, 2005. **3**.
67. Bentler, P. M., *Comparative fit indexes in structural models*. Phsycological Bulletin, 1990. **107**(2): p. 238–246. DOI: <https://doi.org/http://dx.doi.org/10.1037/0033-2909.107.2.238>.
68. Fareed, M., et al., *High performance work system and human resource professionals' effectiveness: A lesson from techno-based firms of Pakistan*. International Journal of Innovation, Creativity and Change, 2020. **13**(4): p. 989-1003.
69. Fornell, C. and D.F. Larcker, *Evaluating structural equation models with unobservable variables and measurement error*. Journal of Marketing Research, 1981. **18**(1): p. 39-50 DOI: <https://doi.org/10.1177/002224378101800104>.
70. Hair, J. F., et al., *A primer on partial least squares structural equation modeling (PLS-SEM)*. 2014. Thousand Oaks: Sage Publications.
71. Chin, W. W., *How to write up and report PLS analyses Handbook of Partial Least Squares*. Springer, 2010. p. 655-690.
72. Hair, J.F., C.M. Ringle, and M. Sarstedt, *PLS-SEM: Indeed a silver bullet*. Journal of Marketing Theory and Practice, 2011. **19**(2): p. 139-152.
73. Becker, J.-M., K. Klein, and M. Wetzel, *Hierarchical latent variable models in PLS-SEM: guidelines for using reflective-formative type models*. Long Range Planning,2012. **45**(5-6): p. 359-394
DOI: <https://doi.org/10.1016/j.lrp.2012.10.001>.

74. Henseler, J., C.M. Ringle, and M. Sarstedt, *A new criterion for assessing discriminant validity in variance-based structural equation modeling*. Journal of the Academy of Marketing Science, 2015. **43**(1): p. 115-135 DOI: <https://doi.org/10.1007/s11747-014-0403-8>.
75. Rehman, S.U., et al., *The role of environmental management control systems for ecological sustainability and sustainable performance*. Management Decision, 2020 DOI: <https://doi.org/10.1108/MD-06-2020-0800>.
76. Cohen, J., Statistical Power Analysis for the Behavioral Sciences. 2nd, 1988. Hillsdale, NJ: Erlbaum.
77. Falk, R. F., and Miller, N. B., *A Primer for Soft Modeling*. 1992. University of Akron Press.
78. Stone, M., *Cross-validators choice and assessment of statistical predictions*. Journal of the Royal Statistical Society: Series B (Methodological), 1974. **36**(2):p. 111-133.
79. Mohd Salleh, S.S.M., et al., *Internal and external top management team (TMT) networking for advancing firm innovativeness*. Polish Journal of Management Studies, 2018. **18**(1): p. 311-325.
80. Al-Ansari, Y., S. Pervan, and J. Xu, *Innovation and business performance of SMEs: the case of Dubai*. Education, Business and Society: Contemporary Middle Eastern Issues, 2013. DOI: <https://doi.org/10.1108/EBS-04-2013-0012>.
81. Zakaria, N., Abdullah, N.A.C., and Yusoff, R. Z., *The Innovation - Performance Linkage: Empirical Evidence of Malaysian Manufacturing SMEs. The European Proceedings of Social and Behavioural Sciences*. 2016. Retrieved from DOI: <http://dx.doi.org/10.15405/epsbs.2016.08.59>
82. Yunus, M. and F.N. Sijabat, *A Review on Blue Ocean Strategy Effect on Competitive Advantage and Firm Performance*. Academy of Strategic Management Journal, 2021. **20**(1): p. 1-10.