

# Strategic Capabilities, Innovation Strategy and the Performance of Manufacturing SMES in Vietnam

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The main objective of this study is to examine the mediating role of innovation strategy on the relationship between strategic capabilities and the performance of manufacturing SMEs (Small & Medium Enterprises) in Vietnam. Strategic capabilities, as a construct in this study, consist of top management capability, technological capability, learning capability and relational capability. Equally in the construct are innovation strategy and manufacturing SMEs' performance. A conceptual framework was developed based on the Resource Based View (RBV) and Dynamic Capability Theory (DCT). Based on the model developed, a questionnaire was constructed and personally administered at random to collect the data from 229 respondents. The Partial Least Squared Structural Equation Model was used to test the developed hypotheses of the study. Top management and technological capabilities positively and significantly relates to manufacturing SMEs performance. Similarly, top management, technological, learning and relational capabilities are significantly and positively related to manufacturing SMEs' innovation strategy. Innovation strategy positively impacted on performance. However, no significant relationship between learning capability, relational capability and manufacturing SMEs' performance was established. Moreover, significant mediation effect was established for all the four hypotheses. Consequently, the significant positive impacts of top management, technological, learning and relational capabilities, postulate that the variables are valuable in influencing performance directly and indirectly through innovation strategy. On this note, manufacturing SMEs managers are encouraged to develop and maintain these strategic capabilities for outstanding performance. The results of this research have contributed significantly to the body of existing literature, provided a guide to managers and policies makers, and proffered suggestion for future research based on limitations of the study.

**Key words:** *Strategic capabilities, innovation strategy, manufacturing SMEs, Vietnam.*

## Introduction

Innovation has been considered a necessary requirement for the existence and thriving in today's changing business environment (Turulja & Bajgoric, 2019). Therefore, innovation is crucial today, more than any other factors for survival and growth (Muddaha & Kheng, 2016) and competitive advantage (Aziz & Samad, 2016). This has also been underscored by the literature on diffusion of innovation (Rogers, 2004; Rogers, 2002). However, manufacturing SMEs in Vietnam have generally recognised the role of innovation but lack the strategy to successfully accomplish their innovative goals (Tin Doan, 2015). Innovation strategy empowers firms to develop uniqueness from their competitors and generates wealth (Zahra & George, 2002). This demonstrates the importance of developing an effective strategy for the successful and sustainable innovation process in manufacturing SMEs' (Hilman & Kaliappen, 2015). Arabshahi and Fazlollahtabar (2019), underscore the view that without an effective innovation strategy, enhancing innovation capability and achieving innovation success are impossible. Through innovation strategy, enterprises identify, acquire, operate and transform a given technology to suit particular operational, managerial and business activities that help the firm to innovate (Alexe & Alexe, 2016).

## Theory and Hypotheses

The advocates of strategic organisational capabilities maintained that instead of physical resources, it is the strategic capabilities that enhance the effective and efficient deployment of resources which enable firms to achieve outstanding performance (Teece, et al., 1997). Therefore, a firm's ability to strategically identify, organise, reconfigure and combine these capabilities, determines its chances to achieve a desired competitive position (Pucci, Nosi, & Zanni, 2017).

Top management capability (MC) has been identified as a critical resource in the development of SME firm's technological infrastructure and service (Worch, Kabinga, Eberhard, and Truffer, 2012) and sustainability in a changing environment (Alcalde-heras, et al., 2019). Innovation decision making at the strategic level is a function that requires specific knowledge and skills (Kesting & Ulhøi, 2010). Acar and Zehir (2009) described MC as consisting of the top management's ability to lead, visionary and planning.

Technological capability (TC) comprises the firm's ability in coordinating physical, learning, activities, skills, knowledge bases and values that create efficient operational capabilities to

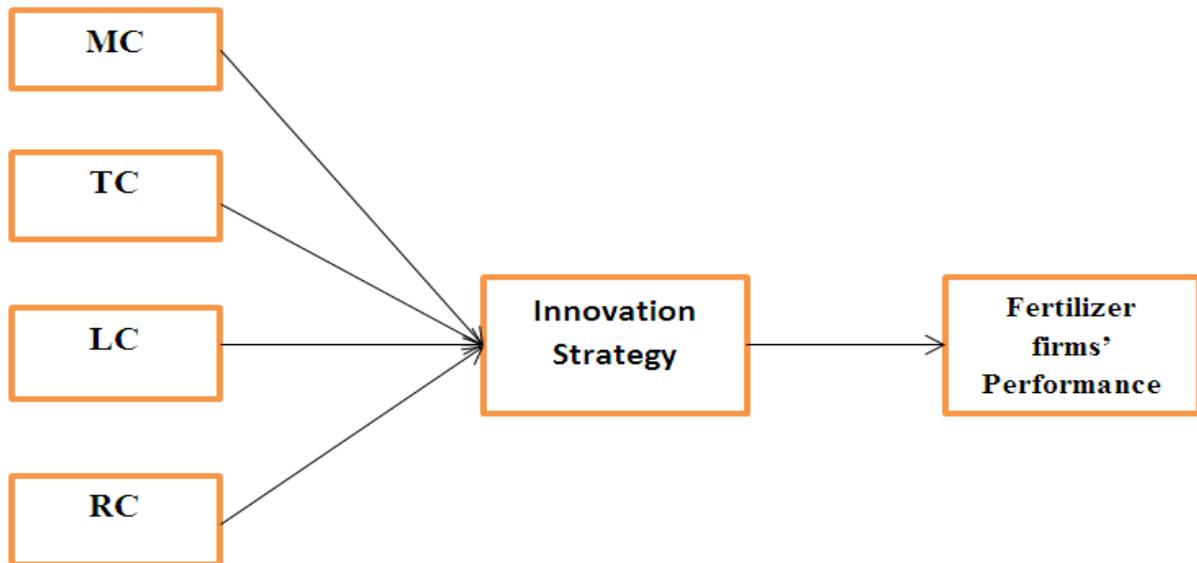
enhance productivity. Generally, with effective TC, SMEs can be capable of identifying, adapting, operating, assimilating and maintaining operating capabilities (Ahmad et al., 2014). A firm's learning capability (LC) expedites the process of its marketing intelligence gathering, assimilation and sharing of entrepreneurial and customer's information to perfectly become a firm driven by market and entrepreneurial orientation (Huang and Wang, 2011). Thus, Mat and Razak, (2011) urged that an SME that wisely develops the ability to learn, enhances the success of its technological development and innovation process.

Relational capability (RC) has been described as a specific capability of developing long-term inter-firm collaboration with two or more market participants to share resource, capabilities and knowledge, in an effort to develop capacity to enhance competitive position (Kiprotich, Kemboi, & Kiprop, 2015). Hence, RC allows SMEs to access technologies, resource, information, knowledge and capabilities that can improve market competitive position and performance (Ireland, Hitt, & Vaidyanath, 2002), and expedite the exchange of tacit knowledge (Collins & Hitt, 2006). This is definitely crucial to SMEs with inadequate capabilities and scarce resources.

Innovation has been described as an art of identifying and implementing or adopting a new procedure, process, product or service within a group, a firm or wider society, in order to improve performance (Abu Bakar & Ahmad, 2012). Therefore, according to Edwards, Delbridge & Munday (2001), innovation is not just about a craft; it is about systems, competence and at times luck and unexpected discovery. Thus, firm's creativity and innovation lead to improvement in the quality, and enhance quantity of product, cost efficiency, reduce material losses, enhance sale volume and employee's motivation and facilitate efficient production (Farrokhian & Soleimani, 2015).

Developing a comprehensive and clear set of hypotheses makes the outline of the research design much easier and optimal (Hamlin, 2000). Based on the research framework developed and presented in figure 1.1, ten (10) hypotheses were established for this study. To statistically achieve objectives one to four of these ten (10) hypotheses were established for this study. To statistically achieve objectives one to four of this study, which aimed at examining the relationship of the independent variables and the dependent variables, hypotheses (H1-H4) were developed.

**Figure 1.1.** Conceptual framework



While hypotheses (H5-H8) were developed to empirically evaluate and achieve objectives five to eight, which are devoted to measuring the relationship between the four independent variables (MC, TC, LC, RC) and the mediating variable (IS). Similarly, hypotheses (H9) were developed to statistically examine the links between the mediating variable (IS) and the dependent variable. In a nutshell, the study tested the following hypotheses:

- H1: MC positively relates to the performance of manufacturing SMEs in Vietnam.
- H2: TC positively relates to the performance of manufacturing SMEs in Vietnam.
- H3: LC positively relates to the performance of manufacturing SMEs in Vietnam.
- H4: RC positively relates to the performance of manufacturing SMEs in Vietnam.
- H5: MC positively relates to the innovation strategy of manufacturing SMEs in Vietnam.
- H6: TC positively relates to the innovation strategy of manufacturing SMEs in Vietnam.
- H7: LC positively relates to the innovation strategy of manufacturing SMEs in Vietnam.
- H8: RC positively relates to the innovation strategy of manufacturing SMEs in Vietnam.
- H9: Innovation strategy positively relates to the performance of manufacturing SMEs in Vietnam.
- H10: Innovation strategy mediates the relationships between MC, TC, LC RC and the performance of manufacturing SMEs in Vietnam.

## Methodology

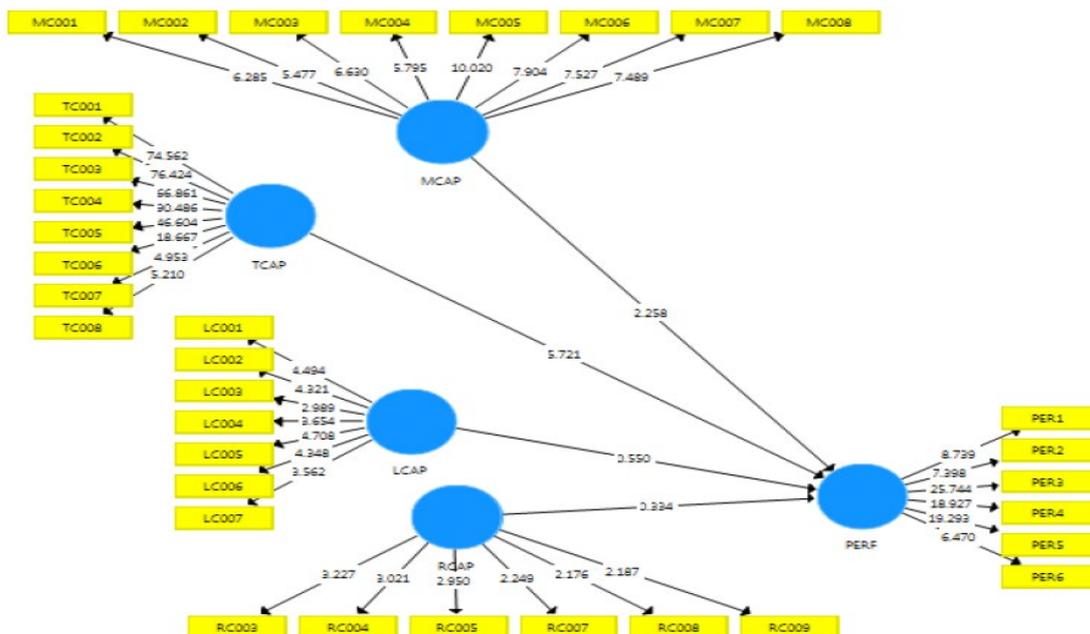
### *Sampling and Data Collection Procedure*

This research adopted a systematic probability technique in selecting 411 manufacturing SMEs in Vietnam. Based on this, 411 survey questionnaires were personally distributed to 411 owners/managers of the manufacturing SMEs in Vietnam. Through these methods, a valid response rate of 55.71 per cent was achieved; accounting for 229 respondents who successfully completed and returned the questionnaires. Specifically, to accomplish this task, a statistical package for social sciences (SPSS) and the partial least squares-structural equation modelling (PLS-SEM) technique were employed in the data analysis.

## Results

This section presents the main direct effects of the top management capability, technological capability, learning capability and relational capability (independent variables) on the performance of SMEs (dependent variable) as hypothesised above. The direct arrows linking the constructs depict the direct hypotheses as stated earlier. Table 1.1 below demonstrates the t-values, standard error, standardised path coefficient and the decision taken. Correspondingly, the standardised coefficient and the t-values of the established hypotheses were graphically depicted in figure 1.2.

**Figure 1.2.** PLS Algorithm for IVs-DV Direct Relationship



**Table 1.1:** Hypotheses Test of the Direct Relationship of the Study Variables

Path Coefficient	Std. Error	Beta ( $\beta$ )	T-statistic	P-Value	Decision
INNOV-< <i>PERF</i>	0.058	0.503	8.931	0.001***	Supported
MC-< <i>PERF</i>	0.083	0.218	2.258	0.012**	Supported
TC-< <i>PERF</i>	0.074	0.421	5.721	0.001***	Supported
LC-< <i>PERF</i>	0.092	-0.034	0.550	0.291	Not Supported
RC-< <i>PERF</i>	0.065	-0.057	0.334	0.369	Not Supported
MC-< <i>INNOV</i>	0.062	0.104	1.661	0.048**	Supported
TC-< <i>INNOV</i>	0.058	0.371	6.536	0.001***	Supported
LC-< <i>INNOV</i>	0.090	0.184	2.136	0.016**	Supported
RC-< <i>INNOV</i>	0.048	0.363	7.523	0.001***	Supported

Note: \*\*\*, \*\* shows the relationship is significant at  $p < .01$  and  $p < .05$  respectively

As shown in table 1.1 and figure 1.2 above, three (3) significant positive direct effects were established out of five (5) direct relationships tested between the independent variables and performance. Equally, two non-significant relationships were also found, i.e. RC and LC paths reveal no significant direct effects. Specifically, H1 is supported which indicates that top management capability (MC) and manufacturing SMEs' performance (PERF) positively and significantly relate with one another ( $\beta=0.218$ ,  $t=2.258$ ). The statistical result demonstrated that a two (2) per cent change in top management capability brings about a 22 per cent increase in manufacturing SMEs' performance.

Similarly, H2 was supported as the result shows that technological capability (TC) significantly and positively relates to the fertiliser firms' performance (PERF) ( $\beta=0.421$ ,  $t=5.721$ ). From this statistical value, it can be observed that a one (1) per cent variation in technological capability improves the fertiliser firms' performance by 42 per cent. However, H3 was not supported, that is learning capability has no significant relationship with manufacturing SMEs' performance (PERF) ( $\beta=-0.081$ ,  $t= 0.550$ ). Equally, H4 was not supported, because the statistical result reveals that relational capability did not significantly relate to manufacturing SMEs' performance (PERF) ( $\beta= -0.057$ ,  $t = 0.334$ ). The table 1.1 above also presents the main direct effects of the top management capability, technological capability, learning capability and relational capability (independent variables) on the manufacturing SMEs' innovation strategy (mediating variable) as hypothesised above. Significant positive direct effects were established for all four (4) direct relationships between the independent variables and the mediating variable. Specifically, top management capability (MC) and manufacturing SMEs' performance innovation strategy (INNOV) significantly and positively relate ( $\beta=0.104$ ,  $t=1.661$ ). This means that H5 is supported. However, the variation in manufacturing SMEs' innovation strategy brought by the changes in top management capability is not high with five (5) per cent changes in MC only improving the innovation strategy by 10 per cent. H6 was also supported, this demonstrates that technological capability (TC) and SMEs innovation strategy (INNOV) have a significant positive relationship ( $\beta=0.371$ ,  $t=6.536$ ). Technological capability is a significant factor in

explaining innovation strategy in manufacturing SMEs' performance. The result of this study indicates that one (1) per cent changes in TC accounts for 37 per cent improvement in the fertiliser firms' innovation strategy. Furthermore, learning capability and the fertiliser firms' innovation strategy (INNOV) also positively and significantly relate ( $\beta=0.184$ ,  $t=2.136$ ), thus H7 was supported. This statistical finding shows that a two (2) per cent improvement in manufacturing SMEs' learning process increases the innovation strategy by 19 per cent. Learning capability is therefore essential in explaining innovation strategy in Vietnam's manufacturing SMEs. Similarly, the empirical result supported the H8, which indicates that relational capability positively and significantly relates to manufacturing SMEs' innovation strategy (INNOV) ( $\beta=0.363$ ,  $t=7.523$ ). This result indicates that one (1) per cent changes in RC creates a 37 per cent improvement in manufacturing SMEs' innovation strategy.

Accordingly, as we have observed from the table 1.1 and figure 1.2 above, innovation strategy (INNOV) has a significant positive and direct relationship with manufacturing SMEs' performance (PERF) ( $\beta=0.503$ ,  $t=8.931$ ). This confirmed that H9 was also supported. Innovation strategy is critical to the survival and growth of manufacturing SMEs in Vietnam. It can be acknowledged from this statistical result that one (1) per cent changes in innovation strategy creates a 50 per cent enhancement in manufacturing SMEs' performance.

## Discussion

Top management capability is an essential factor that influences effective utilisation of a firm's resource and growth (Mazzarol, Reboud, & Soutar, 2009) and helps combine human capital and physical resource to achieve a sustainable competitive advantage (Garcés-Galdeano, García-Olaverri, & Emilio, 2016). This study therefore advocates that top management capability is essential for fertiliser firms to understand the trends in their operating environment and develop a strategy to integrate internal and external resources to achieve and uphold a competitive position. Hence, Vietnam manufacturing SMEs' need to develop and improve the effectiveness of MC to maintain and enhance their performance through effective strategic planning, coordination, leadership, inter-personal, communication and monitoring capabilities.

The result suggests that Vietnam manufacturing SMEs' need to develop efficient technological capability through training and research and development (R&D). This can greatly assist managers to proficiently explore, acquire, refine and operate new technologies, skills and techniques to effectively develop a distinctive innovation strategy based on the market demand to improve performance. Hence, Vietnam manufacturing SMEs' ability to invest in R&D, develop and explore new technologies and skills are crucial to their survival and sustenance of superior performance in this changing environment. Thus, TC is regarded in this study as one of the firm's dynamic capabilities.

The explanation of the nonsignificant findings may possibly depend on the assertion that LC, as a strategic organisational capability, is contextually sensitive. The extant literature maintained that learning does occur unexpectedly; rather some environmental and managerial actions are required to ensure the firm is rightly designed to achieve an effective learning capability (Zahra, et al., 2011).

Furthermore, Verma, et al., (2014) demonstrated that the ability and efficiency at which a firm learns, is determined by its culture as they interact with market information, behaviours and actions. The transformation and exploitation capacity of Vietnam manufacturing SMEs may be another factor affecting the influence of learning capability on their performance. Acquisition, transformation and exploitation capacities are essentials in firm's learning. It has been demonstrated that the success and effectiveness of knowledge transfer and acquisition depend on organisational transformation and exploitation capability, the environment for learning and the willingness to transfer the knowledge (Awang, et al., 2013).

RC in this study demonstrated the ability of Vietnam manufacturing SMEs' to nurture and establish relationships with relevant partners, in an effort to access valuable resources the business cannot independently provide, to enhance operation and performance. However, the insignificant effect does not indicate that RC is not a significant strategic capability, rather it designates that RC did not directly enhance performance but can influence other capabilities and strategies as indicated by the indirect relationship (H10d) in this study. RC meaningfully and positively impacted on the innovation strategy, which in turn mediates the insignificant relationship of RC and Vietnam manufacturing SMEs' performance to a momentous positive relationship. Equally, the nonsignificant influence of RC on Vietnam manufacturing SMEs performance may be as a result of the inability of Vietnam manufacturing SMEs management to effectively analyse, understand the terms, conditions and determine the appropriate partners for a relationship. Entering into bilateral trade relationships without due consideration for comparative advantage may not be healthy for businesses, particularly manufacturing SMEs in Vietnam. This is largely because of peculiar challenges such as environmental constraints, a lack of economic of scales and global outlooks.

Innovation strategy is therefore confirmed as one of the most essential Vietnam manufacturing SMEs' strategies which enhances effectiveness, facilitates the process and serves as a mechanism through which firms respond to the market challenges, improves competitive advantage and determines the firm's success in the future. Hence, innovation strategy is considered as the best strategy for achieving continuous product and process innovation in Vietnam manufacturing SMEs. It enables business firms to achieve high profit and growth and provides the bases to develop the right innovations at the right price and quality in the face of a changing market and competitive conditions. It equally, influences

firm financial and non-financial performance through improving the capability to create new products and processes, which leads the firm to innovate more efficiently than the competitor. Therefore, without innovation strategy, failure is inevitable in this dynamic environment. 280 innovation strategies is a dynamic strategy that effectively guides the Vietnam manufacturing SMEs in the process of new product development and enhances the production of high-quality product, efficient and effective delivery time and discovery of a new market and ensures effective responses to the competitive environment. Accordingly, through the innovation strategy of Vietnam manufacturing SMEs involved in R&D, technical design, organisational structuring and profitable marketing activities of new or modified products. Therefore, effective innovation strategy helps Vietnam manufacturing SMEs to achieve, sustain and increase the market share of their product, improve profitability, customers and employee's satisfaction, as well as social and environmental responsibilities. Achieving sustainable innovation performance is more than producing a new product. It requires planning of the manufacturing process, factory layout, the distribution channels and sales activities. Hence, through the innovation strategy of Vietnam manufacturing SMEs, they re-engineer their business processes by upgrading the internal capacities, structure and operational equipment. Innovation strategy enables the firm to improve and maintain their performance by reacting effectively to the pressure from the operating environment (Sisaye & Birnberg, 2010).

## **Conclusion**

The primary objective of this study was to evaluate the level of innovativeness in Vietnam manufacturing SMEs and examine the role of innovation strategy on the relationship between the top management capability (MC), technological capability (TC), learning capability (LC), relational capability (RC) and their performance. Grounded on RBV and DCT, 10 research questions and 10 objectives were established with MC, TC, LC, RC, innovation strategy and SMEs performance as the variables under study. However, 13 specific hypotheses were stated and tested. The results of the statistical test established a significant positive relationship between MC, TC and the performance of Vietnam manufacturing SMEs. However, no significant relationship was established between LC, RC and Vietnam manufacturing SMEs' performance. Environmental and managerial constraints are identified as the possible reason for these insignificant relationships. On the other hand, MC, TC, LC, and RC positively relate to the innovation strategy of Vietnam manufacturing SMEs. Accordingly, innovation strategy positively and significantly relates to the Vietnam manufacturing SMEs' performance, and mediates the relationship between MC, TC, LC, and RC and the performance of Vietnam manufacturing SMEs. From the results analysed, this study deduced that MC, TC, LC and RC are valuable resources and dynamic capabilities that significantly and positively influence Vietnam manufacturing SMEs' performance directly and indirectly through innovative strategy. Accordingly, MC, TC, LC and RC are VRIN resources that significantly enhance



firms' innovation strategy, which in turn affects performance positively. This means that innovation strategy is a crucial strategy in achieving and sustaining superior performance of Vietnam manufacturing SMEs. Consequently, the study contributed practically, theoretically and methodologically to the understanding of the factors influencing Vietnam manufacturing SMEs' innovation strategy and performance.



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