

## Impact of Innovations on SME Performance in Ho Chi Minh City (Vietnam)



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**ABSTRACT:** This study aims to refine the broad idea of innovation by focusing on four specific types: product innovation, organizational innovation, process innovation, and R&D. These four categories will be used to measure the extent of innovation. The statistical model is used to examine the association between such innovations and business performance. The model is based on a sample size of 7,788 enterprises, with data provided by the Vietnamese General Statistics Offices. The findings validate the presence of product innovation, organizational innovation, and R&D as factors influencing SME success. Among these factors, organizational innovation has the highest influence, followed by product innovation and R&D. The causal link between process innovation and SME performance remains unestablished, as SMEs, comprising 95% or more of the market, primarily allocate their investments towards organizational innovation, product or service innovation, and R&D. This discovery serves as a valuable point of reference for both businesses and policymakers. It highlights the importance of considering potential forms of support for SMEs in order to foster innovation and achieve success.

**KEYWORDS:** Product innovation, organizational innovation, process innovation, R&D

### 1. INTRODUCTION

Because of high pressures from competition and the changing behavior of customers, small and medium enterprises (SMEs) pay more attention to innovation to maintain their marketplace. In fact, innovations in enterprises have a big contribution to be survival for SMEs (Falahat et al., 2020). One of disadvantages that SMEs have limitations of financial capability and human resources, so they often face unpredictable risks (Ndesaulwa & Kikula, 2016). To minimize threats caused by competitors and customers' change, SMEs must think of innovation.

In a study conducted by Falahat et al. (2020), it was discovered that product innovation and the capacity to disseminate information about innovation to clients play a crucial influence in the success of SMEs. Falahat et al. (2020) present additional reasons regarding the influence of product innovation information on generating a competitive advantage for SMEs in both developed nations like the United States and developing countries like Malaysia. Although innovations are conceptualized in SMEs, their implementations are seemingly limited.

This study aims to refine the broad idea of innovation by focusing on four specific types: product innovation, organizational innovation, process innovation, and R&D. These four categories will be used to measure the extent of innovation. Their impacts on firm performance are investigated.

### 2. LITERATURE REVIEWS

As defined by (Pittaway et al., 2004), innovation refers to the systematic implementation of novel ideas or the adoption of new technologies by an organization to enhance its management performance, thereby gaining a competitive edge in terms of efficiency, cost-effectiveness, and service quality. In the field of economics, innovation has a crucial role in facilitating growth, enhancing productivity, and boosting competitiveness of firms.

As stated by Ancona & Caldwell (1987), innovation is crucial in prolonging the longevity of a business. Innovation inside a company can improve problem-solving methods and increase the efficiency of the organization by creating novel ideas, solutions, processes, and products that align with societal trends. Damanpour, Walker, & Avellaneda (2009) state that innovation can manifest in various ways. For instance, organizational innovation, specifically technological innovation, is a highly prominent area of study that focuses on management and development. Damanpour & Evan (1984) defined technological innovation consists of

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the act of putting an idea into practice to create a new product or service, incorporating new aspects into the production process or service operation of an organization.

The Organization for Economic Cooperation and Development (OECD, 2005) defines inventiveness as the introduction of a novel or substantially enhanced product or process, a fresh marketing technique, or a new approach to business practice, organization, or external relations. Innovation can be categorized into four distinct groups: (i) product/service innovation, (ii) operating process innovations, (iii) organizational innovation, and (iv) marketing innovations.

### ***Organizational innovation***

Organizational innovation refers to the systematic process of reconstructing, enhancing, or modifying the operational and managerial practices of a corporation in order to foster creativity, improve performance, and increase flexibility to the business environment (Baláž et al., 2023). Implementing organizational innovation will provide strategic benefits in meeting and exceeding customer expectations. In contrast to technological innovation, the concept of organizational innovation is characterized by a multitude of definitions. Azar & Ciabuschi (2017) provide a definition of organizational innovation as the development and application of novel approaches, procedures, frameworks, or management strategies utilizing advanced technology to improve the objectives of the organization. According to Damanpour & Evan (1984), administrative innovation refers to innovation that takes place within the social system of an organization, such as the introduction of new rules, roles, procedures, and structures. Hamel (2006) defines organizational innovation as a distinct departure from conventional management concepts, methods, and practices, or as a deviation from alternative organizational structures. It frequently has a substantial impact on managerial practices.

Modifying the structure of a company does not exclude modifying the cultural aspects of the organization. This endeavor contributes to enhancing a harmonious work environment where everyone shares a unified perspective in fostering economic growth (Azar & Ciabuschi, 2017). In summary, organizational innovation is an ongoing and sometimes challenging process, particularly when the firm encounters rapid changes in business and technology. Nevertheless, it plays a crucial role in the expansion and achievement of a corporation against a turbulent commercial environment.

### ***Technological innovation***

Technological innovation refers to the development of new equipment, machinery, and technology that supports the improvement or creation of entirely new products. It is closely tied to innovation in production processes (Rosenbusch et al., 2011). Technological innovation in a company is influenced by three primary elements: technological considerations, organizational factors, and environmental factors (Alraja et al., 2022). Technological variables in SMEs manifest both internally and outside, encompassing aspects like the enterprise's internal information technology infrastructure and its external relationship infrastructure. Meanwhile, the organizational elements pertain to managerial support, company scale, and the level of innovation in the information technology system. Teece (2010) argues that in order to achieve profitability from technological advances, firms must adopt new organizational structures, novel organizational practices, and innovative business models.

### ***Product innovation***

Innovation is defined as the implementation of novel or enhanced methods, goods, or services that are derived from fresh scientific or technological knowledge and/or organizational expertise (Ndesaulwa & Kikula, 2016). Invention refers to the first emergence of an idea for a novel product or method, whereas innovation involves the implementation and realization of that idea. In business, innovation encompasses various forms, including the introduction of novel products or services and the implementation of fresh production procedures.

Product innovation, as defined by Ancona & Caldwell (1987), refers to the process of developing or enhancing products or services in order to better match the demands of the market or provide additional value to customers. Product innovation is a crucial component of a corporation's growth strategy and can aid in the maintenance and enhancement of competitiveness in the business environment. Product innovation can be achieved through the following activities: (i) New product development refers to the process of innovating and introducing entirely novel items or services that the business has not previously manufactured or offered. This may entail the development of wholly novel items or the expansion of current product offerings; (ii) Product innovation: Product innovation may encompass enhancing, advancing, or maximizing current products or services. These enhancements may pertain to the quality, functionality, performance, design, or other aspects that make the product more appealing to customers. (iii) Engaging in the development of new versions: Occasionally, the act of developing fresh iterations of current products or services can be considered a type of product innovation. This may involve modifying dimensions, hues, characteristics, or additional benefits to allure new clientele or enhance the satisfaction of current patrons; (iv) Innovative design:

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Utilizing creative design to modify items can play a crucial role in product innovation. This may involve revamping packaging, logos, user interfaces, or other design components to enhance the product's distinctiveness and attractiveness.

### **Research and development (R&D)**

R&D in a business refers to the systematic process of generating and utilizing novel knowledge to create and enhance products, services, or techniques, while also improving existing performance (Novkovic, 2015). The primary goal of R&D is to generate more value through innovation and research. The primary areas of concentration for R&D will encompass fundamental research, practical research, quality testing and inspection, streamlining production processes, and safeguarding inventions and intellectual property rights.

During the process of doing R&D, firms frequently incur expenses in order to achieve significant advancements in discovering novel concepts. This fosters a culture of innovation. Manu & Sriram (1996) state that enterprises entering the market typically have a vested interest in investing in R&D. Presently, this aspect is receiving increased attention and is being utilized more frequently by organizations to foster innovation within both the organization and the market. Some authors have developed a classification system for the strategic choices that organizations have when dealing with changes in the technology landscape. The level of R&D spending is directly correlated with a company's commitment to innovation. Every organization has its own unique approach when determining its R&D expenditure, which can be categorized as "offensive", "defensive", "dependent", "traditional", or "opportunistic" (Manu & Sriram, 1996).

### **Firm performance**

Firm performance serves as a metric to measure the degree of success achieved by a corporation. The performance and effectiveness of an enterprise's business and management activities are reflected in it. The assessment of performance relies on numerous variables, which can be categorized into two primary groups: financial efficiency and market efficiency (Binh et al., 2021). Financial success includes key metrics such as ROI (Return on Investment), ROE (Return on Equity), net profit, profit margin, and labor force expansion. Boso et al. (2013) utilize profit as a metric to assess business success, whereas Binh & Tien (2019) employ the ROE index to measure the financial outcomes of the organization. Market efficiency can be assessed using indicators such as revenue, revenue growth, and market share.

### **The relationship between innovations and firm performance**

Several researchers have undertaken studies on innovation and have demonstrated that it has a beneficial effect on corporate success (Tsai & Tsai, 2010). According to Xie et al. (2013), small-scale enterprises tend to exhibit greater flexibility, innovation, and adaptability compared to large-scale businesses. Despite the severe resource constraints that SMEs sometimes encounter, they frequently demonstrate success in innovation (Rosenbusch et al., 2011). Baláž et al. (2023) contend that innovation presents a chance for startups to acquire profits by establishing temporary monopolies. They view ongoing innovation as a crucial factor for achieving long-term company success. Due to their greater agility, SMEs can achieve projected outcomes by moving at a faster pace compared to larger businesses. For organizations, introducing novel products, services, processes, or business models that align with appealing market segments is a valuable opportunity to differentiate themselves from their rivals.

## **3. RESEARCH METHODOLOGY**

The innovation discussed in this study focuses on four key points: (i) production innovation, (ii) organizational innovation, (iii) process innovation, and (iv) research and development (R&D). The citations for these four things are condensed in table 1. Furthermore, the statistical model incorporates control variables such as the gender, age, education, and company size of the owner.

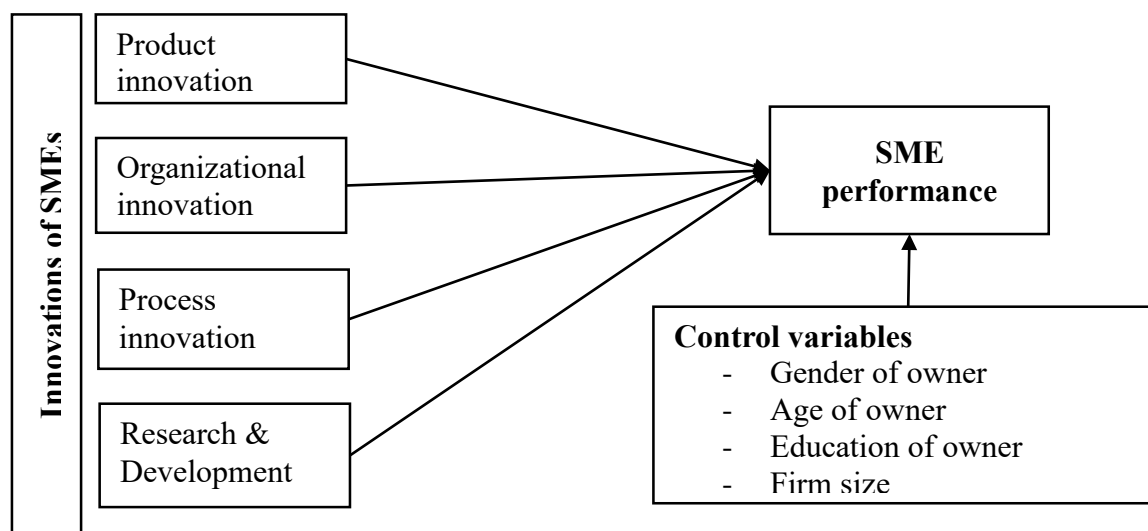
**Table 1: Measure of variables employed in the statistical model**

<b>Variables</b>	<b>Previous studies</b>	<b>Authors</b>
Product innovation	Defined as a new product based on innovation, improvement, new version of product and design.	Ancona & Caldwell (1987); Ndesaulwa & Kikula (2016)
Organizational innovation	Defined as restructure of organization	Baláž et al. (2023); Teece (2010)
Process innovation	Defined as innovation based on technology to support production improvement	Rosenbusch et al. (2011)

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Research and development (R&D)	New creation in ideas toward new product/service development to optimize firm performance	Manu & Sriram (1996); Novkovic (2015)
Firm performance	Firm performance grouped into two indicators: market performance, e.g., sales, market share and financial indicator, e.g. ROE, ROA, profit, and labor growth	Binh et al. (2021); Boso et al. (2013)
Gender of owner	The consensus association between owner gender and business performance has yet to be acknowledged.	Binh et al. (2022); Kuzey et al. (2022)
Age of owner	The relationship between age of owner and firm performance is verified in some previous studies	Mujeyi et al. (2016)
Education of owner	There is a significant relationship between the education of owners and firm performance. The higher education, the higher firm performance.	Otrachshenko et al. (2022)
Firm size	Defined as number of employees working in enterprises	Ferreras-Méndez et al. (2021)

The research approach proposed is illustrated in Figure 1, where two independent groups are utilized, including main effects and control variables. The main variables include production innovation, organizational innovation, process innovation, and research and development (R&D). Additionally, the control variables encompass the gender, age, education, and size of the owners of the firm. The variable that is being measured and analyzed is the performance of the firm.



**Figure 1: Research model proposed**

To measure how firm performance is impacted by innovations. The statistical model of regression is employed. Accordingly, the general model of regression is as below.

$$FP = b_0 + b_1 \cdot IN1 + b_2 \cdot IN2 + b_3 \cdot IN3 + b_4 \cdot IN4 + b_5 \cdot \text{Gender} + b_6 \cdot \text{Age} + b_7 \cdot \text{Edu} + b_8 \cdot \text{Size} \quad (1)$$

FP: là biến phụ thuộc, được xem là biến hiệu quả hoạt động của doanh nghiệp. Giá trị được dựa vào doanh số của doanh nghiệp đạt được trong năm có giá trị là triệu đồng. Giá trị này được chuyển thành giá trị log.

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Các biến độc lập:

IN1: Product innovation

IN2: Organizational innovation

IN3: Process innovation

IN4: Research and Development (R&D)

Gen: Gender of owner

Age: Age of owner

Edu: Education of owner

Size: Firm size of enterprises

*Control variables*

*Gender of owner:* The role of owner's gender is considered in previous studies. Accordingly, Binh et al. (2022) employed the gender of owner as a control variable in the statistical model. Unluckily, they don't find a significant influence of gender to firm performance. Nevertheless, Kuzey et al. (2022) verify that the role of female leaders cause an increase in firm performance.

*Age of owner:* Prior research has indicated that age can have an impact on corporate performance. In a study conducted by Mujeyi et al. (2016), it was shown that there is a direct correlation between the age of the business owner and the technical efficiency of the business. The authors assert that aging old age will diminish technical efficiency. When a business owner is youthful, they will actively produce a beneficial impact on the technical efficiency of their business.

*Education of owner:* Otrachshenko et al. (2022) found that the proficiency of a business owner has a direct impact on the formulation of business plans, which in turn affects the overall success of the business. The qualifications of a business owner are assessed based on their knowledge and competence. The findings of the study conducted by Otrachshenko et al. (2022) indicate that business leaders with advanced levels of education are more inclined to develop their commercial activities by employing business-oriented techniques.

*Firm size:* It is quantitatively determined by the total number of employees engaged within the organization. Ferreras-Méndez et al. (2021) employed labor groupings, such as firm size, as a metric to assess the degree of business model innovation in companies based on their workforce size. Nevertheless, Ferreras-Méndez et al. (2021) failed to gather sufficient evidence to establish a definitive correlation between the size of a corporation and the outcomes of new product development.

### **Data collection**

The study utilizes a database sourced from the General Statistics Office (GSO) of Vietnam. The GSO annually performs a survey of firms in Vietnam. The survey procedure is conducted online. In order to accomplish this, each firm was provided with a hyperlink to the questionnaire and a corresponding access password. While the survey encompasses the entire country, the sample of firms specifically extracted is located in Ho Chi Minh City. After cleaning data, the final sample of 7,788 enterprises are qualified and employed in the study.

As proposed previously, the research model consists of firm performance as the dependent variables and independent variables with two groups of main effects and control variables. Measures of these variables are described in table 2.

**Table 2: Variables and their measure**

No.	Variable	Label	Measure
	FP	Firm performance	Value of sales revenue, and converted into logarithm.
	IN1	Production innovation	Dummy variable: 1 = Yes of production innovation used; 0 = Othwersie
	IN2	Organizational innovation	Dummy variable: 1 = Yes of organizational innovation implemented; 0 = Othwersie
	IN3	Process innovation of production	Dummy variable: 1 = Yes of process innovation implemented; 0 = Othwersie
	IN4	Research and Development (R&D)	Dummy variable: 1 = Yes of R&D implemented; 0 = Otherwise
	Gen	Gender of owner	Dummy variable: 1= male and 0 = female
	Age	Age of owners	Continuous variable
	Edu	Education of owners	Ordinal variable
	Size	Firm size measured by the number of employee engaged in enterprises	Continuous variable

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### 4. DATA ANALYSIS

The story of data analysis is a continual process of discovering innovations within small and medium-sized firms (SMEs) using a sample of 7,788 enterprises in Ho Chi Minh City. The data presented in Table 3 indicates that the level of innovation in firms is rather low. Only 10% of production innovation (IN1) and organization innovation (IN2) were implemented each year. The following one is to consider process innovation in production, which accounts for 8%. Research and development (R&D) has the lowest investment, accounting for only 3%.

The gender disparity in firm ownership is evident, with female owners comprising 33% and male owners comprising 67%. This report highlights the elevated role of females in society. In along with taking care of the family, women are also responsible for managing its commercial activities. The owner's education is much appreciated. The education level of the owner, including both undergraduate and graduate degrees, is 86%. Owners can gain a substantial advantage by being aware of developments in the competitive environment and leveraging their personal experience to enhance their firm. Furthermore, the owners, who are approximately 43 years old, possess valuable expertise that fosters confidence in their business operations. This is especially beneficial for owners who run family-owned or small businesses.

**Table 3: Descriptive statistics of variables**

Variable	Mean	Standard deviation	Min	Max
FP- Firm performance (converted into log)	7.571	2.568	-1.609	17.758
IN1 (Yes= 90%; No = 10%)	0.105	0.306	0	1
IN2 (Yes= 90%; No = 10%)	0.099	0.299	0	1
IN3 (Yes = 92%; No = 8%)	0.079	0.269	0	1
IN4 (Yes = 97%; No = 3%)	0.029	0.169	0	1
Gender (Male= 67%; Female= 33%)	0.669	0.471	0	1
Age	43.714	9.708	20	65
Edu (1 = trained below 3 months 2%; 2 = Primary level (1%); 3 = High school (5%); 4 = Secondary school (6%); 5= Under graduate (81%); 6= Graduate (5%))	4.970	1.317	1	6
Size	21.836	156.863	1	7,438

With the regression proposed in (1), it is run through the sample size of 7,788 observation. The estimated result is shown in table 4, which the value of R-square is 0.592. This confirms that 59.2% variations in firm performance is explained by main effects and control variables. The estimated result of regression is below

$$FP = 0.367 + 0.031*Gen + 0.109*Age + 0.054*Edu + 2.380*Size + 0.068*IN1 + 0.112*IN2 + 0.030*IN3 + 0.085*IN4$$

As a result, all independent variables have a variance inflation factor (VIF) value of less than 10. This confirms that there is no presence of multicollinearity among the independent variables. All the dependent variables included in the regression are sufficient.

The existence of production innovation (IN1) is supported by a P-value of 0.090, which is statistically significant at the 10% level. The coefficient of the variable is 0.068, and it is positive. Based on the data, it can be concluded that there is a statistically significant positive correlation between production innovation and the performance of small and medium-sized enterprises (SMEs).

The existence of organizational innovation (IN2) is confirmed by a P-value of 0.003, which is statistically significant at the 1% level. This study establishes a substantial correlation between organizational innovation and business performance. The positive coefficient of organizational innovation (0.112) indicates that when organizational innovation is effectively implemented, it leads to an improvement in the performance of small and medium-sized enterprises (SMEs). Unfortunately, the strong correlation between process innovation (IN3) and firm performance is not observed in small and medium-sized enterprises (SMEs). This can be attributed to the large presence of family-owned and small businesses. Furthermore, process innovation in manufacturing is not widely adopted by micro and small enterprises.

The P-value of IN1 is 0.070, which is statistically significant at a 10% level according to R&D (IN4). The verification of the impact of research and development (R&D) on firm performance has been conducted. Given that the coefficient of R&D is positive (0.085), it can be concluded that R&D has a positive impact on firm performance.



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As a result, production innovation, organizational innovation, and R&D have positive impacts on SME performance, in which organizational innovation is ranked as the best one to influence firm performance, because its standardized coefficient is 0.027. Next is production innovation and final one is R&D.

Production innovation, organizational innovation, and R&D all have beneficial effects on the performance of SMEs. Among these, organizational innovation has the greatest influence on firm performance, with a standardized coefficient of 0.027. The subsequent stage involves implementing production innovation (0.015), and the ultimate stage entails conducting R&D (0.013).

With the exception of gender, there are control variables such as age, education, and firm size that exist and have a beneficial influence on business performance. Consequently, the older the owner, the better the firm's performance. This discovery aligns with the research conducted by Otrachshenko et al. (2022). Moreover, a higher level of education for the owner directly leads to an improvement in the performance of the organization. This can be attributed to the attainment of higher education, as individuals who possess it tend to possess superior information. Furthermore, the findings further validate that the presence of company size has a positive impact on business performance.

**Table 4: Result of estimation**

Variables	Unstandardized Coefficients	Standardized coefficient	Std. Err.	P>t	VIF	1/VIF
<b>Control variables</b>						
Gen	0.031	0.008	0.017	0.223	1.02	0.985
Age	0.109	0.080	0.009	0.000	1.05	0.952
Edu	0.054	0.035	0.008	0.000	1.02	0.981
Size	2.380	0.728	0.021	0.000	1.07	0.938
<b>Main effects</b>						
IN1	0.068	0.015	0.034	0.090	1.70	0.590
IN2	0.112	0.027	0.041	0.003	2.29	0.437
IN3	0.030	0.005	0.045	0.660	2.28	0.439
IN4	0.085	0.013	0.053	0.070	1.12	0.891
_cons	0.367		0.052	0.000		

Note: IN1 = Product innovation; IN2= Organizational innovation; IN3= Process innovation of production; IN4= R&D.

## 5. DISCUSSION

The study focuses on some types of innovations, including production innovation, organizational innovation, process innovation, and R&D. Nonetheless, the presence of three types of innovation, namely production innovation, organizational innovation, and R&D, has been verified to have an impact on the performance of SMEs. There is a positive relationship between production innovation and firm performance, which is supported by the research of Ndesaulwa & Kikula (2016). Similarly, organizational innovation has a beneficial impact on firm performance, as found by Baláž et al. (2023) and Teece (2010). Organizational innovation, namely the restructuring of SMEs, is not a complex process. SMEs frequently alter their organizational structure in response to market shocks. While major corporations generally make significant investments in R&D, SMEs are not barred from engaging in R&D activities. The presence of R&D activities in SMEs has a positive impact on their performance. This discovery aligns with the findings of Manu & Sriram (1996) and Novkovic (2015).

Shortly, the finding brings a message that SMEs must embrace innovation to stay competitive in today's rapidly evolving business landscape. Product innovation allows SMEs to stay competitive and meet evolving customer demands. Investing in process innovation streamlines operations and boosts efficiency. And dedicated R&D efforts fuel the pipeline of new products and services.

While product innovation, process innovation, and R&D can have a positive influence on SME performance, businesses must approach these areas with caution. Investing heavily in innovation without a clear strategy and understanding of the market can lead to costly missteps. SMEs need to carefully evaluate their capabilities, resources, and target customers before embarking on major innovation initiatives. A balanced approach that blends incremental improvements with selective, well-researched innovations is often the wisest path forward for small and medium enterprises. Businesses should proceed with innovation but do so thoughtfully and with an eye towards sustainable, profitable growth.

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### 6. CONCLUSION

According to prior research, four types of innovation have been included in the statistical model. Conducting a comprehensive analysis of various types of innovations, the study utilizes a sample size of 7,788 firms. The data for this study is obtained from Vietnam GSO. The results confirm that product innovation, organizational innovation, and research and development (R&D) are elements that have an impact on the success of SMEs. Organizational innovation exerts the greatest influence among these elements, with product innovation and R&D following closely behind. The relationship between process innovation and SME success has not been shown, as most SMEs, which account for 95%, tend to invest their resources in organizational innovation, product or service innovation, and R&D. This discovery is a significant benchmark for both corporations and policymakers. It emphasizes the significance of taking into account possible means of assistance for SMEs in order to promote innovation and attain success.

### REFERENCES

- 1) Alraja, M. N., Imran, R., Khashab, B. M., & Shah, M. (2022). Technological Innovation, Sustainable Green Practices and SMEs Sustainable Performance in Times of Crisis (COVID-19 pandemic). *Information Systems Frontiers*, 24(4), 1081–1105. <https://doi.org/10.1007/s10796-022-10250-z>
- 2) Ancona, D. G., & Caldwell, D. F. (1987). Management issues facing new-product teams in high-technology companies. In *Advances in Industrial and Labor Relations, A Research Annual*.
- 3) Azar, G., & Ciabuschi, F. (2017). Organizational innovation, technological innovation, and export performance: The effects of innovation radicalness and extensiveness. *International Business Review*, 26(2), 324–336. <https://doi.org/10.1016/j.ibusrev.2016.09.002>
- 4) Baláž, V., Jeck, T., & Balog, M. (2023). Firm performance over innovation cycle: evidence from a small European economy. *Journal of Innovation and Entrepreneurship*, 12(1), 2–23. <https://doi.org/10.1186/s13731-023-00298-9>
- 5) Binh, T. Van, Duong, L. N. K., Tien, H. V., & Swainson, M. (2021). How do CSR and EO relate to the efficiency of food processing enterprises? Endogenous production inefficiency stochastic frontier analysis. In *International Journal of Management and Enterprise Development* (Vol. 20, Issue 2, pp. 99–112). <https://doi.org/10.1504/IJMED.2021.117861>
- 6) Binh, T. Van, Thy, N. G., Khoa, H. D., Vu, P. M., & Thong, N. D. (2022). Association of innovation and entrepreneurial orientation on SMEs' performance: The case of Soc Trang province (Vietnam). *International Journal of Management and Sustainability*, 11(2), 92–102. <https://doi.org/10.18488/11.v11i2.3051>
- 7) Binh, T. Van, & Tien, H. V. (2019). Corporate social responsibility and performance of SMEs in Ho Chi Minh City (Vietnam). *International Journal of Management and Enterprise Development*, 18(4), 277–292. <https://doi.org/10.1504/ijmed.2019.10022922>
- 8) Boso, N., Story, V. M., & Cadogan, J. W. (2013). Entrepreneurial orientation, market orientation, network ties, and performance: Study of entrepreneurial firms in a developing economy. *Journal of Business Venturing*, 28(6), 708–727. <https://doi.org/10.1016/j.jbusvent.2013.04.001>
- 9) Damanpour, F., & Evan, W. M. (1984). Organizational Innovation and Performance: The Problem of "Organizational Lag." *Administrative Science Quarterly*, 29(3), 392–409.
- 10) Damanpour, F., Walker, R. M., & Avellaneda, C. N. (2009). Combinative effects of innovation types and organizational Performance: A longitudinal study of service organizations. *Journal of Management Studies*, 46(4), 650–675. <https://doi.org/10.1111/j.1467-6486.2008.00814.x>
- 11) Falahat, M., Ramayah, T., Soto-Acosta, P., & Lee, Y. Y. (2020). SMEs internationalization: The role of product innovation, market intelligence, pricing and marketing communication capabilities as drivers of SMEs' international performance. *Technological Forecasting and Social Change*, 152, 119908. <https://doi.org/10.1016/j.techfore.2020.119908>
- 12) Ferreras-Méndez, J. L., Olmos-Peñuela, J., Salas-Vallina, A., & Alegre, J. (2021). Entrepreneurial orientation and new product development performance in SMEs: The mediating role of business model innovation. *Technovation*, 108, 102325. <https://doi.org/10.1016/j.technovation.2021.102325>
- 13) Hamel, G. (2006). The why, what, and how of management innovation. *Harvard Business Review*, 84(2), 1–18.
- 14) Kuzey, C., Fritz, M. M. C., Uyar, A., & Karaman, A. S. (2022). Board gender diversity, CSR strategy, and eco-friendly initiatives in the transportation and logistics sector. *International Journal of Production Economics*, 247(December 2021), 108436. <https://doi.org/10.1016/j.ijpe.2022.108436>
- 15) Manu, F. A., & Sriram, V. (1996). Innovation, marketing strategy, environment, and performance. *Journal of Business Research*, 35(1), 79–91. [https://doi.org/10.1016/0148-2963\(95\)00056-9](https://doi.org/10.1016/0148-2963(95)00056-9)
- 16) Mujeyi, K., Siziba, S., Sadomba, W. Z., & Mutambara, J. (2016). Technical efficiency of informal manufacturing sector



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- enterprises: Evidence from the informal metal industry of Zimbabwe. *African Journal of Science, Technology, Innovation and Development*, 8(1), 12–17. <https://doi.org/10.1080/20421338.2015.1128040>
- 17) Ndesaulwa, A. P., & Kikula, J. (2016). The Impact of Innovation on Performance of Small and Medium Enterprises (SMEs) in Tanzania: A Review of Empirical Evidence. *Journal of Business and Management Sciences*, 4(1), 1–6. <http://www.sciepub.com/JBMS/abstract/5562>
- 18) Novkovic, S. (2015). Cooperative Firms in Global Markets Article information : *Advances in the Economic Analysis of Participatory & Labor-Managed Firms*, 10, 205–232.
- 19) Otrachshenko, V., Popova, O., Nikolova, M., & Tyurina, E. (2022). COVID-19 and entrepreneurship entry and exit: Opportunity amidst adversity. *Technology in Society*, 71, 102093. <https://doi.org/10.1016/j.techsoc.2022.102093>
- 20) Pittaway, L., Robertson, M., Munir, K., Denyer, D., & Neely, A. (2004). Networking and innovation: A systematic review of the evidence. *International Journal of Management Reviews*, 5–6(3–4), 137–168. <https://doi.org/10.1111/j.1460-8545.2004.00101.x>
- 21) Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing*, 26(4), 441–457. <https://doi.org/10.1016/j.jbusvent.2009.12.002>
- 22) Teece, D. J. (2010). Technological innovation and the theory of the firm: The role of enterprise-level knowledge, complementarities, and (dynamic) capabilities. In *Handbook of the Economics of Innovation* (1st ed., Vol. 1, Issue 1 C). Elsevier B.V. [https://doi.org/10.1016/S0169-7218\(10\)01016-6](https://doi.org/10.1016/S0169-7218(10)01016-6)
- 23) Tsai, M.-T., & Tsai, C. (2010). Innovation Capability and Performance in Taiwanese Science Parks: Exploring the Moderating Effects of Industrial Cluster Fabric. *International Journal Of Organizational Innovation*, 2(4), 80–103.
- 24) Xie, X., Zeng, S., Peng, Y., & Tam, C. (2013). What affects the innovation performance of small and medium-sized enterprises in China? *Innovation: Management, Policy and Practice*, 15(3), 271–286. <https://doi.org/10.5172/impp.2013.15.3.271>



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