

Exploring Factors Influencing Product Innovation Excellence: Performance Indicators in Small Business Enterprises

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Received: 4 November 2024 | Revised: 30 January 2025 | Accepted: 25 April 2025

DOI: 10.60101/rmuttgber.2025.283193

Abstract

The objective of this study is to examine the factors contributing to product innovation excellence and the performance indicators in small businesses. The sample consists of 30 small businesses enterprises in Kalasin Province, Thailand, registered with the Department of Agricultural Extension. This research employs a qualitative methodology, utilizing interviews with leaders of small businesses. The findings indicate that the factors of product innovation excellence include imaginative development, improvement existing, team happiness, and innovative management. Additionally, the product performance indicators identified are profit evolution and production excellence. The results suggest that the factors contributing to product innovation excellence can enhance the competitiveness of small businesses by enabling the development of products that meet customer needs and by promoting continuous improvements in the production process. Furthermore, performance indicators not only aid in evaluating the success of the business but also foster sustainable improvements and developments across various aspects of small businesses enterprises.

Keywords: Product innovation excellence, Performance indicators, Profit evolution, Production excellence, Team happiness

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Introduction

Currently, small business serves as a vital component of the grassroots economy, generating returns for local communities and society at large. Fostering an environment conducive to entrepreneurship and innovation is crucial (Somwethee et al., 2023). In the fast-evolving economic landscape, small business enterprises must effectively communicate changes in their products, whether it is a shift in format, an overall rebranding, or innovations in product development. Such communication is vital for achieving success and meeting organizational goals (Hatak et al., 2016). Therefore, organizations must understand how to develop strategies that facilitate product purchases (Cavite et al., 2021). Today, many small businesses struggle with managing the production of products that do not meet market demand and lack adequate market support. Additionally, their sales diversification is hindered by a failure to target specific customer segments, and they often lack modern management planning, particularly in terms of customer engagement and new product innovation. Therefore, small business must evolve their products and be prepared to compete to achieve their goals. According to a study by Hyytinen et al. (2015), small businesses enterprises should prioritize building product management processes to ensure continuity and produce quality products. This includes expanding sales promotion and public relations channels and utilizing modern management strategies (Ng et al., 2019). Research by Marion et al. (2012), and Sethir et al. (2012), suggests that the management of prototype products should be designed to promote consistency. Effective management of resources and raw materials is crucial in the initial validation process before launching a new product to the market.

Previous studies have highlighted the lack of interest in studying product-related innovation management that affects operations, especially in the context of small businesses. Therefore, researchers must collect empirical data to have a clear understanding of this topic (Rajapathirana & Hui, 2018). Research focusing on small businesses enterprises in Thailand is an important area of study, as these businesses significantly contribute to income generation through small business enterprises development. Information derived from these studies plays a crucial role in driving the local economy, serving as the foundation for business development and expansion. Therefore, this research aims to examine insights into Product Innovation Excellence in small businesses enterprises

and its profound impact on performance and future direction. To achieve this goal, the following research questions are posed:

RQ1. What factors affect the adoption of product innovation excellence in small business enterprises?

RQ2. What performance indicators influence small business enterprises?

The objective was to explore factors influencing product innovation excellence and performance indicators in small businesses. By understanding these factors, small businesses enterprises can effectively apply product Innovation Excellence and utilize performance indicators to achieve better outcomes.

Literature review

Managing innovation to improve and optimize products in small business enterprises is based on the theory of dynamic capabilities. This theory emphasizes an organization's ability to adapt and gain a competitive advantage in a rapidly changing environment (Teece et al., 1997). It consists of integrating, building, and configuring internal and external capabilities. Different organizations may take various approaches to implementing dynamic capabilities consistent with external changes. This involves acquiring new resources and defining new methods (Eisenhardt & Martin, 2000; Zahra et al., 2006). Capability theory is an approach used to bridge the gap between organizational capabilities and environmental change (Albort-Morant et al., 2018). An organization's ability to continuously adapt to internal resources and environmental changes determines its competitiveness and performance (Helfat & Peteraf, 2009). Research has demonstrated differences in these components across various contexts (Hermawati, 2020). This study focuses on exploring the product innovation excellence used by small business enterprises to improve and optimize products, considering the relationship between dynamic capabilities theory and the success and growth of organizations.

Product innovation excellence

Product innovation management is a critical factor that provides direction for developing, maintaining, and improving systematic practices in managing innovation. These practices are derived from a review of the literature on fundamental theoretical concepts related to innovation within an organization. Understanding the product profile and effectively managing it is crucial (Rusch et al., 2022). It is suitable for organizations that can survive and create value from their existing resources.

Competitive advantages can be attained even in an era of rapid social change. Additionally, there are ideas concerning innovation at the organizational level and innovation management at the organizational level. Rogers (2002), and Peres, Muller, and Mahajan (2010), identified the evolution of modern product models, communication, distribution management, and innovation in new products and services as channels that strengthen the driving force toward positive social development. Focusing on creating products that meet customer needs and modern management practices (Ato Sarsah et al., 2020; Scott & Bruce, 1994). Furthermore, they also identify the ability to thoroughly conduct research as an important aspect of innovation management.

Innovation is defined through a continuous review of its relation to the development of economically and socially significant products. Current research emphasizes linking products and creating strategies to achieve goals (Wang & Su, 2022). Attracting talent is an important aspect to consider, as the ability of personnel directly affects the success of product development. Preparing and developing the skills of the team will help increase efficiency in responding to market demands (Schulte & Knuts, 2022). In general, Product development is an important element to consider, as it leads to increased returns for the organization (Vermeulen, 2005). Bhaskaran et al. (2006), state that product innovation management consists of creating new products, developing new production processes, entering new markets, utilizing new sources of raw materials, and establishing new organizational structures. Chang and Lee (2008), outline the components of product innovation management, which include new product development, creating new production processes, establishing new organizations, implementing new management techniques, and improving existing products.

Performance organization

The performance indicators of an organization are derived from the collaboration of all its members, as indicated by a review of literature and theories. It has been demonstrated that concepts related to performance aim to enhance outcomes in various contexts and under different conditions, according to administrative theory (Ven et al., 1984). Additionally, new ideas about organizational management, such as learning organizations, have been proposed (Burgoyne, 1995). Nevertheless, previous research by Ato Sarsah et al. (2020), has mentioned that leaders' potential must include a thoughtful approach to managing overall images and product production. Tian et al. (2020), also noted that learning management positively impacts organizational innovation and

efficiency. Therefore, operators must carefully consider the implications of theories and ideas about performance.

Kaplan and Norton (2000), define performance as the overall picture of an organization's operational processes, management activities, various goals for resource allocation, and the ability to enhance production capabilities. Furthermore, Schulte and Knuts (2022) and Garvin (1998), define performance as the ability of a business to disseminating knowledge and skills while improving the fundamentals of the business to aim for new knowledge creation for product and process development. The components of measuring performance include the financial perspective, customer perspective, internal business processes, and learning and growth (Robert S. & Norton, 2000). Chatchai and Ussahawanitchakit (2016) other studies aimed to measure objectives in monetary terms and the evaluation process suggests that larger organizations provide more accurate and detailed information to address broad objectives than smaller organizations, which tend to offer less financing (Charles & Dzvukey, 2015).

Research methodology

Sample and data collection

The sample of interviewees consisted of representatives from 30 small enterprise groups, 1 person per group, 30 small business leaders, small enterprise leaders in Kalasin Province, Thailand, and had been registered and certified by the Provincial Department of Agricultural Extension. These small enterprises were divided into production and service groups (Group, 2022), Referring to the research of Hagaman and Wutich (2017), to obtain saturated data which was between 20 and 40 interviews to obtain saturated data for the content covered by purposive sampling. The characteristics of the selected groups were in accordance with the research objectives (Division, 2022). The researchers selected groups that had achieved a strength level of 3-5 over the past three years and contacted them for interviews via telephone. The small business enterprises leaders agreed to participate in the study and provide additional information (Tuan et al., 2016). Basic demographic information about the 30 participating leaders indicated that 66.67% were female and 33.33% were male, with ages ranging from 40 to 66 years. The majority had completed primary school (66.67%), followed by high school (6.67%), vocational certificates (13.33%), and bachelor's degrees (13.33%). The participants had between 3 and 24 years of experience in small enterprise operations.

Measurement

Product innovation excellence, in the context of studying the operations of small business enterprises, may provide valuable insights into the relationship between product innovation management and business performance through empirical research (Blumenthal & Jensen, 2019). Collecting data through in-depth interviews allows researchers to obtain accurate information based on the thoughts of interviewees (Pervez et al., 2020). Semi-structured interviews were utilized to explore various aspects of product innovation management excellence, including performance indicators that served as data for analysis. The data were collected through these semi-structured interviews, which included open-ended questions designed based on previous research, as illustrated in to adapt questions from the Interview Question Framework Structure regarding product innovation excellence and performance indicator issues, the following questions are formulated based on the works of these questions aim to assess the innovation practices and performance metrics within organizations. Gunday et al. (2011), Makanyeza et al. (2023), Apanasovich et al. (2016), Zahay et al. (2018). Leaders of small businesses enterprises were interviewed because they could provide comprehensive information on product innovation management and performance indicators. The interviews were conducted during field visits to small businesses enterprises, with each interview lasting approximately 20–30 minutes. All interviews were recorded with the consent of the interviewees. The analysis employed learning techniques, incorporating both content analysis and thematic analysis.

Results and Discussion

Research in small business enterprises has identified several factors that affect product innovation excellence. These include the development of differentiated products or services aimed at new markets, which is a crucial aspect of innovation. Research and development are important strategies that enable businesses to improve and create new products efficiently. Professional management and strategic planning are essential for the successful introduction of innovations to the market, including considerations of product identity and appropriate packaging, both of which are vital for enhancing the value and appeal of products. To achieve this, organizations must foster effective teams and encourage collaborative efforts that benefit the business. Developing efficient work processes by minimizing unnecessary steps and introducing

new technology can significantly reduce costs and increase productivity. It can be concluded that these factors are critical in promoting product Innovation Excellence in small businesses, as illustrated in Table 1.

This summary highlights the factors affecting product innovation excellence. The first factor is imaginative development (ID), which involves creating products or services that are unique and innovative. This approach helps businesses stand out in the market by addressing customer needs in unprecedented ways, such as developing new technologies that add value to products. The second factor is improvement existing (IE), which focuses on enhancing and updating current products to increase their market value and popularity. This includes adding new features or improving performance to better meet customer needs. Third, team happiness (TH) emphasizes the importance of a collaborative work environment, where team members support and guide one another to develop their potential for mutual benefit.

Finally, innovative management (IM) refers to the creation of management equipped with the knowledge and skills to bring innovations to market. This involves having a group with expertise and a commitment to developing cutting-edge products or services that respond to market demands. Effective planning and management should prioritize integrating innovation within the organization, fostering an environment that supports creativity. This includes creating incentives and establishing a system that promotes innovation in a way that is beneficial for employees. These factors can be summarized as shown in Figure 1.

Table 1 Factors Affecting Product Innovation Excellence

			N=30
Factors	Subtheme	Exemplary comments	Number of respondents
Imaginative Development (ID)	- Different products development	Make a difference, innovate, make new things beyond what has already been done	15
	- Ideas and designing research	Seeking knowledge, renewing, reworking, rebuilding	13

Table 1 Factors Affecting Product Innovation Excellence (Continued)

Factors	Subtheme	Exemplary comments	N=30
			Number of respondents
Imaginative Development (ID) (Continued)	- Product development guidelines	panning, a market analysis, professional consulting, a network, readiness, and manpower	12
	- Improve existing products	Market demands, more alternatives	14
	- Value enhancement of existing products	uniqueness, value, popularity, sufficient resources	10
Improvement Existing (IE)	- Modifications in appearance packaging	Suitable, convenient, consistent, beautiful, clean, and safe	6
	- Teamwork	Motivate, encourage, promote, assist, advise, work together for joint benefit	14
	- joint benefit		
Team Happiness (TH)	- Motivate	Increasing-reducing steps, using new tools and new technologies	13
	- Developing new innovative processes		
	- Work allocation	consulting, assisting, seeking opportunities, solving problems,	10
Innovative Management (IM)	- Process management and presentation	Process, supervision, control, drive, and service	15

* Frequency data for 20 percent of those interviewed.

Research on small businesses enterprise has identified several key performance indicators that are crucial for success. Effective product delivery planning and control reduce product returns and enhance customer satisfaction. Maintaining product quality standards through thorough inspections enables businesses to generate reasonable profits. Additionally, continuous product improvement and value addition lead to increased sales and orders. The utilization of local resources, along with human labor, helps reduce costs and increases production efficiency. Efficient operations result in the production of quality products that meet specified standards. All these factors contribute to the performance indicators of small businesses, as summarized in Table 2.

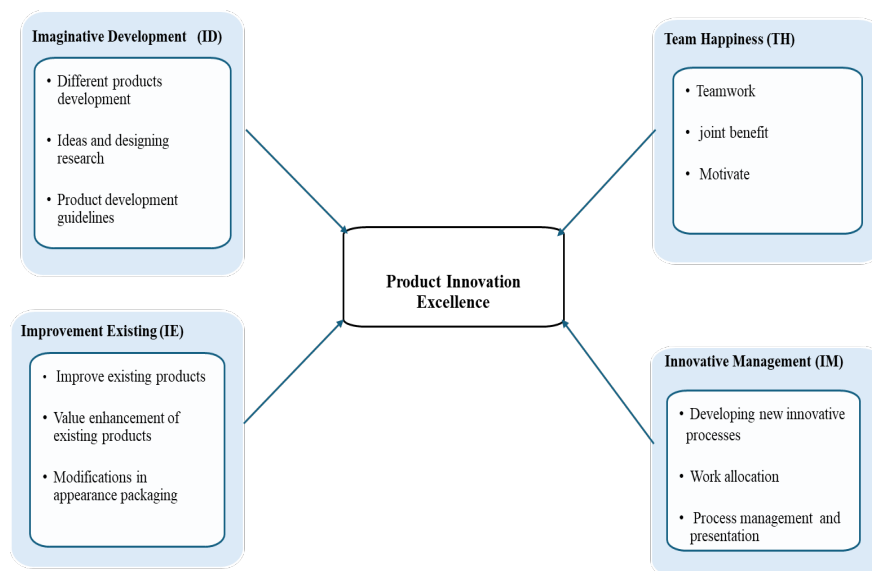


Figure 1 Factors Product Innovation Excellence.

Table 2 Small Business Enterprise Performance Indicators

			N=30
Factors	Subtheme	Exemplary comments	Number of respondents
Profit Evolution (PEv)	- Sales returns.	Better return rate, reasonable profit generated proportion.	15
	- Positive change in net profit from new product creation.	More sales, more orders	6

Table 2 Small Business Enterprise Performance Indicators (Continued)

			N=30
Factors	Subtheme	Exemplary comments	Number of respondents
	-Positive change in net profit from improving existing products.	Orders, reservations, sales.	14
Production Excellence (PEx)	-Decline on product rejection rates.	Maintain quality with standards, check list.	15
	-Improve product delivery on time.	Delivery planning and control.	15
	-Improve the tools, materials, and equipment.	Inspection, repair, safety.	9
	-Reduce production loss.	Revise, reformulate, and add value.	7
	-Reduce production cost.	Local resources with manual labor.	15

* Frequency data for 20 percent of those interviewed.

This summary highlights the factors affecting performance indicators. First, profit evolution demonstrates that the business has experienced a better return rate on sales, leading to a reasonable profit margin. Additionally, the positive change in net profit resulting from the creation of new products has led to increased sales and a higher volume of orders. Similarly, the improvement of existing products has also contributed to higher orders, reservations, and overall sales, further enhancing our financial performance. Finally, production excellence ensures a decline in product rejection rates through our commitment to maintaining quality standards via a comprehensive checklist. Furthermore, we are enhancing our product delivery times by implementing effective delivery planning and control measures. Our focus on improving tools, materials, and equipment includes conducting regular inspections, repairs, and safety checks. Additionally, we are working to reduce production loss by revising processes, reformulating

products, and adding value wherever possible. By utilizing local resources and manual labor, we aim to significantly reduce production costs while maintaining efficiency. This can be summarized as shown in Figure 2.

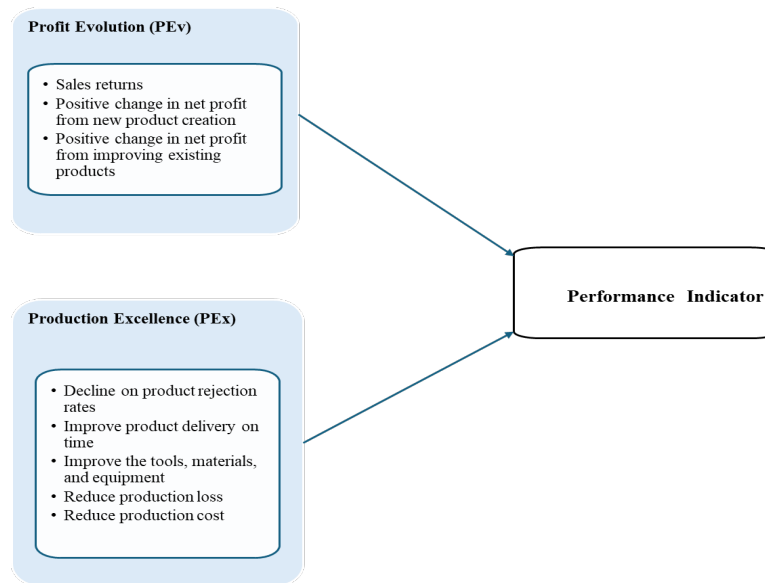


Figure 2 Small Business Enterprise Performance Indicators.

Discussion

The research found that the results of this research emphasized product innovation excellence. However, the ability to adapt to market and customer needs can be gained in products. Increasing product quality and differentiation, increasing customer confidence are very important in Thailand, which is a developing country in terms of both local development and the use of local resources to be outstanding. And importantly, it must be excellent at the same time to be able to generate sustainable income for the country. This research underscores the importance of product innovation excellence for small enterprises, particularly in Thailand. It highlights the need for adaptability to market and customer demands through enhanced product quality and differentiation. Utilizing local resources effectively can create competitive advantages and drive sustainable income while promoting process standardization to increase overall organizational value (Cavite et al., 2021). Key factors influencing product innovation include imaginative development, which fosters unique products and addresses consumer needs, and continuous research that aligns offerings with market trends (Makanyeza et al., 2023). Improving

existing products through effective design and packaging can further enhance customer appeal (Yasir et al., 2021). Teamwork happiness is essential in small businesses, as it promotes a collaborative environment conducive to innovation and agile problem-solving (Calderon et al., 2021). Innovation management plays a crucial role in improving operational efficiency by streamlining processes and adopting new technologies, which are vital for competing in today's market (Hanifah et al., 2019). Moreover, organizational culture significantly impacts product innovation and creates an environment that supports development (Zahay et al., 2018). Furthermore, organizational culture and innovation significantly impact transportation efficiency, along with entrepreneurship, number of employees, and investment levels (Wongpun & Inmor, 2023).

The research also emphasizes the importance of government and educational institution support for small enterprises, helping them thrive as key contributors to the economy (Abhari et al., 2021). Performance indicators, particularly profit evolution, net profit, sales growth, and liquidity, are essential for assessing business health and long-term sustainability (Charles & Dzvuke, 2015). By focusing on production excellence and minimizing rejection rates, small businesses can enhance quality and build customer loyalty, Ding and Ding (2022), ultimately driving growth and community development (Deku et al., 2021; Ng et al., 2019). Leveraging local resources further reduces costs and strengthens community ties, fostering sustainable economic growth (Charles & Dzvuke, 2015).

Conclusion

This study identifies key factors driving product innovation excellence in small enterprises. By prioritizing creative development and continuous research, businesses can effectively address consumer needs in Thailand's unique market. Enhancing existing products helps maintain market relevance, while fostering teamwork supports operational success in developing countries. Effective innovation management optimizes processes and leverages new technologies, empowering small enterprises to achieve sustainable growth and adapt to market demands. Key performance indicators (KPIs), especially profit evolution, are crucial for assessing small business health and growth potential. Metrics such as net profit, sales growth, and order growth evaluate business strength, while liquidity is vital for long-term sustainability and innovation investment. Emphasizing

quality, timely delivery, and community engagement strengthens the competitive edge of Thai small businesses. Production excellence is particularly important in Thailand, where budget constraints demand strict adherence to quality standards. Strategies to reduce product rejection rates and improve resource utilization foster customer trust and loyalty. Leveraging local resources not only lowers costs but also enhances operational efficiency and community ties, promoting sustainable economic growth.

Future research should explore factors driving product innovation excellence and sustainable growth in Thai small businesses. Key areas include adapting development to emerging consumer trends, the impact of teamwork on productivity, and assessing innovation management approaches. Expanding KPIs beyond profitability and examining the economic benefits of local resources will improve liquidity assessments. Long-term studies are needed to evaluate the impact of these strategies. Prioritizing these factors will provide practical strategies for small enterprises navigating dynamic markets. This study acknowledges limitations, including the focus on internal organizational factors and the need to consider external influences such as government support and access to resources. Promoting an innovative culture remains essential for fostering creativity and sustainable growth. Future research should examine KPIs in the context of development in Thailand, including exploring their impact on innovation management and operational performance.

Acknowledgements

The author would like to express gratitude to the Science, Research, and Innovation Promotion Fund, Office of the National Research, and Innovation Commission (TSRI), Thailand, for providing funding to conduct research. To create valuable information to guide the development and expansion of businesses and small businesses.

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