

# FACTORS AFFECTING THE SUCCESS OF SLAUGHTERHOUSE MANAGEMENT INNOVATIONS IN THAILAND

Punthanun PIPUTCHOTE<sup>1</sup> and Yananda SIRAPHATTHADA<sup>1</sup>

<sup>1</sup> Management Innovation, Suan Sunandha Rajabhat University, Thailand;  
puth2511@gmail.com (P. P.); yananda.si@ssru.ac.th (Y. S.)

## ARTICLE HISTORY

**Received:** 12 January 2024

**Revised:** 26 January 2024

**Published:** 9 February 2024

## ABSTRACT

The objectives of this research are 1) to study the success level of slaughterhouse management innovations in Thailand. 2) to study factors affecting the success of slaughterhouse management innovations in Thailand. A questionnaire was used to collect data from there were 345 slaughterhouse operators in Thailand, using statistics to analyze data such as frequency, percentage, mean, standard deviation, and multiple regression analysis. The results of the research found that 1) the success of innovation in slaughterhouse management in Thailand Overall, each aspect is at a high level. In terms of product and service innovation, marketing innovation, process innovation, and organizational innovation, respectively. 2) Factors of transformational leadership, organizational management, and technology acceptance influence the success of innovation in slaughterhouse management in Thailand.

**Keywords:** Success, Management innovation, Slaughterhouse

**CITATION INFORMATION:** Piputchote, P., & Siraphatthada, Y. (2024). Factors Affecting the Success of Slaughterhouse Management Innovations in Thailand. *Procedia of Multidisciplinary Research*, 2(2), 10.

## INTRODUCTION

Development of the Thailand 4.0 model using economic philosophy concepts sufficiency from the royal advice of His Majesty King Rama IX in the Chaipattana Journal, His Majesty the King stated that "Sufficiency Economy It is like the foundation of life". The foundation for the stability of the land It's like a pile being driven in to support a house. The building (Division of Research Administration and Educational Quality Assurance, 2019). It can be seen that the Thailand Land 4.0 model places importance on developing enterprises with innovation. Raising the level the ability of the business to be at the international level. It emphasizes the importance. of innovation development in creating innovations that are products, services, or processes that occur. To be new to the market organization It may have a completely different form. or developing something that already exists for the better. There are benefits to innovation owners and stakeholders and is a tool for success as well as commercial success. Resulting from the use of knowledge and creative abilities. Using technology to carry out the process. To increase efficiency, improve quality of life, and create sustainability (Nawanit Songkhram, 2019). Therefore, management innovation that creates the ability to successfully operate a business has 3 aspects: 1) product and service innovation 2) process innovation 3) marketing innovation, and 3) organizational innovation (Nantarat Namburi, 2019).

Business management innovation is the invention of new methods for managing successful organizational operations. To develop new forms or techniques, mechanisms, and management mechanisms that will result in the development of efficiency, effectiveness, and quality in the organization. A business management innovation process is a management system or process for creating innovation within an organization to develop new things or upgrade production capabilities, low-cost management, respond to market needs, collect data, etc. (Chanongkorn Kundalbut, 2020) A business management innovation model is a new management model or method that uses technology to operate efficiently systems to increase business efficiency. It can be classified into 3 dimensions, consisting of: 1) the goal dimension of innovation, including product innovation and process innovation; 2) the change dimension of innovation, including innovation that is acute (radical innovation) and innovation that has its nature is gradual (incremental innovation), and 3) the dimension affecting the scope of operations is technological innovation. (technological innovation) and administrative innovation (administrative innovation) (Somnuek Uejirapongphan et al., 2020)

The slaughterhouse business is one that focuses on standards and food safety. The government sector is considering the (draft) Act on Controlling Animal Slaughter for Meat Sales. The intent and essence are to develop the slaughterhouse to meet standards and create food safety. So that consumers can consume hygienic meat. There are no diseases or residues in the meat to raise food safety standards for consumers, aiming to reduce the use of illegal slaughterhouses. and turn to standard slaughterhouses with good hygiene. But the duty and fee for the sale of such meat are collected. It is a conflict in itself because the collection of duties and fees results in more illegal killings to avoid paying duties. As it can be seen from the current problem, meat contains dangerous contaminants in the production of animals for use as food from animal raising systems, animal slaughtering processes, butchering, and meat processing. Including the transportation, distribution, and sale of meat at meat butchers. There is a risk or possibility of contamination, especially bacterial contamination that is harmful to the health of consumers, that occurs in the slaughtering process in slaughterhouses (Wasan Silachai, 2017). Standards of Practice Good manufacturing practice (GMP) is a set of requirements to be used as a guideline for controlling meat production in slaughterhouses to be able to produce meat that is safe for both domestic consumption and export. The slaughterhouse that will be certified with good practice standards for slaughterhouses must have a location, structure, animal shelter, tools, machinery, and equipment used in production that are appropriate and modern. There is

a hygienic animal slaughter process with animal welfare in mind and under specified standards. (National Bureau of Agricultural Commodity and Food Standards, 2019)

For slaughterhouses in Thailand that are permitted to establish slaughterhouses, most slaughterhouse operations today still encounter many problems in meat production. Since we are unable to specify the origin of slaughtered animals, the slaughter process is not yet hygienic, there are few animals slaughtered, and the slaughterhouse operators lack knowledge and understanding of the principles of good practice for slaughterhouses. Lack of preparation of operational manual documents limited the budget. This has caused some slaughterhouse operators to request that they stop operating animal slaughter operations. This creates the problem of illegally slaughtering animals outside of unauthorized slaughterhouses without officials having to inspect the hygiene of the slaughtering animals. It may be a source for the spread of germs. In addition, there is the problem of slaughterhouse conditions that are not yet certified. Good practices for slaughterhouses also cause contamination with various pathogens, as indicated by the results of the sample analysis. Meat was collected from licensed slaughterhouses in Thailand and from research and development centers. Northeastern veterinarians in fiscal year 2019 (Regional Veterinary Research and Development Center Upper Northeast, 2019) found that there was a relatively high amount of *Salmonella* spp. contamination. One of the reasons for this may be the process of killing animals, and butchering meat on unclean surfaces, and there was no hanging rack system, which did not meet good practice standards for slaughterhouses. (National Bureau of Agricultural Commodity and Food Standards, 2020)

From the problems of the slaughterhouse business above, the researcher saw the importance of the problem that the slaughterhouse lacks management standards. Therefore, management innovations should be applied to make the slaughterhouse business successful. But for innovation in slaughterhouse management to be successful, organizational executives must have changed skills. By being aware of the importance of change, accepting new ideas, promoting the exchange of ideas, and creating a good working environment and new techniques and methods have been applied to management. Today is an era of rapid and continuous change in every aspect, whether it be the economy, society, technology, or the environment. Changes from these various factors inevitably affect the organization. Organizations need to adapt to survive and gain a competitive advantage (Brown & Eisenhardt, 2017). In addition, organizational executives must give importance to organizational management processes to be a guideline for working employees to be effective (Somyot Naweeekarn, 2019). Also, the organization must have the potential for innovative creativity. Innovation is created from creativity, which is the basic element. Organizational innovation is the application of creativity within an organization that makes the organization successful. In general, innovation is differentiated from creativity in that it focuses on applying creativity in an economic environment. The relationship between creativity and innovation. Can be viewed from two perspectives: The first view sees creativity as the creation of ideas while innovation is the application of ideas to benefits. The second perspective combines the two concepts. They view creativity as the initial step of the innovation process. Therefore, creativity is the cognitive component of innovation and innovation covers the application of new ideas in the 21st century, creativity, and innovation. It has been emphasized as an essential skill. That can promote the potential of human resources (Nakano and Wechsler, 2018: 238). Individual creativity is therefore an organizational resource that, if used appropriately, will create potential that can create a competitive advantage. Organizations must therefore realize the potential of individuals. Action must be taken to stimulate employee creativity and innovation. Executives must find efficient and effective ways to enable employees to continuously learn and develop their skills to create a competitive advantage (Doran and Ryan, 2017: 32-33), the use of management innovation in business will be related to technology. Therefore, corporate

executives and employees must accept technology. By accepting technology as a basic concept, people are motivated to recognize its usefulness. Including acknowledging that information technology can be used easily. It will affect the formation of a good attitude toward using (attitude toward using), which will create behavioral intention in using and result in the actual use of technology (actual use), finally (Davis, 2018). In addition, the application of innovation in management must be related to the creativity of human resources, which requires designing management innovations to be consistent with the organization's operations too. (National Innovation Agency, 2019)

Due to the importance of the problems mentioned above, most slaughterhouse businesses face problems with slaughterhouse management not meeting standards. There are slaughterhouse conditions that have not yet been certified. Moreover, businesses currently face problems with rapid changes in technology causing the organization to be unable to adapt, and many businesses closed down. Therefore, the slaughterhouse business operating executives need to apply innovation in management for the slaughterhouse business to achieve its goals even more. From the problems mentioned above, the researcher is therefore aware of the importance of the above problem, and are interested in studying "Factors affecting the success of innovation in slaughterhouse management in Thailand" to use the information obtained from the study as a guideline for managing the slaughterhouse business in Thailand to be more successful according to the organization's goals.

## LITERATURE REVIEWS

### **Concepts and theories regarding to the success of management innovation**

The success of an organization is determined by the implementation of the plan and achieving the goals set. Nitt Samamaphan (2017: 10) said that the success of the organization refers to the ability of the organization to set the operational plan, and carry out the plan efficiently until achieving the goals. Puangrat Kasornphaet (2017: 10-21) said that the success of the organization refers to the ability to achieve the goals set by management, operating efficiently and effectively, Nonthakorn Atwichai (2018) said that success means being able to plan operations, setting goals and objectives to achieve the results as set. Therefore, it can be concluded that organizational success means the ability to carry out business operations according to management planning, effective implementation of plans and efficient use of resources until achieving the goals. From studying the success of organizational development, there must be principles for organizational development to be successful. Managers must be people with a vision for change, both analyzing the internal and external environment of the organization. There is good management, changes are planned and the organization's structure is organized to be consistent with the organization's policies or goals. In this study, it is the success of management innovation in the organization. Therefore, we studied management innovation as follows.

Innovation is the process of introducing something truly new to society by completely changing the values, beliefs, and value systems of society. For example, the Internet is considered an innovation. In the information age, the introduction of the internet system has made the old values that were believed to be information limited to a specific area in terms of time and the place has changed. The internet allows unlimited access to information. Both in terms of time and distance, this change has caused the value system of information to change. Some people believe that the Internet will replace the old information transmission system completely soon, such as the postal system, and also explained that by nature, humans tend to improve and change and try to solve problems to find a solution. That is beneficial to oneself all the time; therefore, innovation is gradual. Therefore, it has the characteristics of a normal human routine (routine), which is completely different from new innovation (Nord & Tucker, 2017).

The National Innovation Agency (2020: 9) has divided innovation into 5 types as follows:

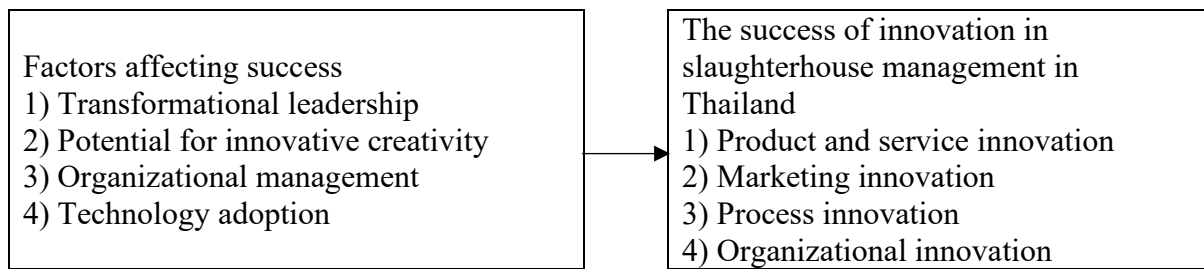
- 1) Product innovation is a category of new products or small-scale modifications of existing products to benefit customers. Product innovation is innovation in the form of goods or products. Especially consumer products. Product innovation is a visible form of innovation.
- 2) Service innovation is the concept and development of an organization's services. The development of new services is important and necessary for the competitiveness of various businesses. This is especially true in the service industry. The service will be focused on the customer or service recipient as important. Service innovation is a form of innovation that cannot be clearly seen. It has intangible characteristics.
- 3) Process innovation (process innovation): Process innovation is a new operational process or improvement of an existing process. Including changes in technical equipment or software (software) to help reduce costs. Develop processes for producing or delivering new products. Process innovation is a form of innovation implementation that is not visible because it is a change in approach, process, production process, or method in a form that is different from the original.
- 4) Marketing innovation (marketing innovation) refers to innovation related to the development of new marketing methods to compete with the same group of competitors in the market. and expanding the market to new customer groups. By seeing the importance of packaging distribution channels, marketing communications, giving products or goods to sample consumers, and
- 5) Organizational innovation (organization innovation): Organizations must use knowledge. In terms of management, come to improve the organization's structure by dividing departments and agencies to have more clarity and by giving employees the freedom to work, operations rely on more frequent small-group meetings. Giving employees a garden to share leads to new ideas, with the belief that creativity comes from every part of the organization and can meet customer needs. It can generate income and create profits for the organization. Including changing the management style, thinking, and operating procedures in the organization from the old form to the new form that will result in maximum efficiency and effectiveness at work.

Greg Yezersky (2018) mentioned the factors that affect management innovation as follows:

- 1) Transformational leadership refers to behaviors that leaders demonstrate their ability to manage. The management process by which leaders influence followers. The interaction between leaders and followers creates change on both sides, influencing with an ideology, inspiration, intellectual stimulation, and consideration of individuality.
- 2) Innovation and creativity potential means using creative ideas within the organization to make the organization successful. In general, innovation is different from creativity. The emphasis is placed on applying creativity in the economic environment. The relationship between creativity and innovation
- 3) Organizational management refers to the process of moving towards organizational goals by working together, consisting of planning, directing, budgeting, coordinating, evaluating; and
- 4) Potential innovative creativity means using creative ideas within the organization to make the organization successful. In general, innovation is different from creativity. The emphasis is placed on applying creativity in the economic environment. The relationship between creativity and innovation includes: continuous learning Creative exchange of knowledge, technological integration, and the development of creative thinking processes

From the literature review, the following research hypotheses can be formulated.

H1 Transformational leadership factors, innovative creativity potential, organizational management, and technology adoption influence the success of innovation in slaughterhouse management in Thailand to use the information obtained from the study as a guideline for management. Slaughterhouse business. From the literature review, the conceptual framework can be drawn as shown in Figure 1.



**Figure 1** Conceptual Framework

## RESEARCH METHODOLOGY

The population in this study includes: slaughterhouse operators in Thailand totaling 2,500 people (Bureau of Livestock Product Standards Development and Certification, 2022) and a sample size of 345 people obtained from Yamane's sample calculation formula (Taro Yamane, 1973). 95 percent level using the stratified sampling method.

The research tool is a questionnaire consisting of Part 1: personal factors of the respondents, including gender, age, education level, and average monthly income level. The nature of the questionnaire is multiple-choice. Section 2: Factors affecting the success of the organization. The nature of the questionnaire is a Likert scale with 5 levels of scoring criteria, including the highest equal to 5 points, the high equal to 4 points, the moderate equal to 3 points, the slightest equal to 2 points, and the least equal to 1 point. Part 3: The success of innovation in slaughterhouse management in Thailand. The nature of the questionnaire is a Likert scale with 5 levels of rating criteria, including the highest equal to 5 points, the high equal to 4 points, the moderate equal to 3 points, the slightest equal to 2 points, and the least equal to 1 point.

Before using the tool to collect data. The objective consistency (IOC) test and reliability test of the questionnaire through Cronbach's alpha were systematically carried out. From the examination, it was found that the IOC was equal to 0.845 and the Cronbach's alpha was equal to 0.910, indicating that the research tools were of sufficient quality (Polit & Beck, 2006; Hair et al., 2012) to get information. This study sent questionnaires to slaughterhouse operators in Thailand. Data analysis used descriptive statistics such as frequency, percentage, mean, standard deviation and multiple regression analysis.

## RESEARCH RESULTS

- 1) Most of the respondents were male 68%, aged between 41-50 years 53.33%, graduated with a bachelor's degree 60%, had an average monthly income of 200,001-300,000 baht 50.65%.
- 2) The success of innovation in slaughterhouse management in Thailand overall and in each aspect is at a high level. In terms of product and service innovation, marketing innovation, process innovation, and organizational innovation, in order of synthesis and their respective uses as shown in Table 1

**Table 1** Mean and standard deviation of success of slaughterhouse management innovations in Thailand.

| Aspect       | Description                    | $\bar{X}$   | S.D.        | Result      |
|--------------|--------------------------------|-------------|-------------|-------------|
| 1            | Product and service innovation | 3.81        | 0.60        | Much        |
| 2            | Marketing innovation           | 3.68        | 0.50        | Much        |
| 3            | Process innovation             | 3.62        | 0.45        | Much        |
| 4            | Organizational innovation      | 3.52        | 0.58        | Much        |
| <b>Total</b> |                                | <b>3.66</b> | <b>0.53</b> | <b>Much</b> |

3) The transformational leadership factor has a  $\beta$  value of 0.232, organizational management has a  $\beta$  value of 0.317, and technology acceptance has a  $\beta$  value of 0.231, which indicates that it has a positive influence on the success of innovation in slaughterhouse management in Thailand. Statistically significant at the 0.05 level with Sig. values equal to 0.001, 0.000, and 0.000, which is consistent with the set assumptions. When analyzing the correlation coefficient (R), the value was equal to 0.856, which indicates that the group of independent variables is highly related to the dependent variable. The prediction coefficient is equal to 0.641, which indicates that the group of independent variables affects the success of slaughterhouse management innovation in Thailand by 64.1 percent.

In order, the equation can be written as follows.

$$Y = 0.947 + 0.317X_2 + 0.232X_1 + 0.231X_4$$

From the analysis of the regression coefficients, it was found that the factors have the ability to together predict the success of innovations in slaughterhouse management in Thailand. Transformational leadership factors have the greatest effect on forecasting (Beta = 0.123), followed by technology acceptance (Beta = 0.121), and organizational management (Beta = 0.043), with details as shown in Table 2.

**Table 2** Multiple regression analysis of factors influencing the success of slaughterhouse management innovations in Thailand.

| Factors                             | Unstandardized (b) | SE                              | Standardized ( $\beta$ ) | t       | Sig.  |
|-------------------------------------|--------------------|---------------------------------|--------------------------|---------|-------|
| (Fixed value)                       | 1.121              | 0.106                           |                          | 10.632  | 0.000 |
| Transformational leadership         | 0.123              | 0.023                           | 0.232                    | 8.662*  | 0.001 |
| Organizational management           | 0.043              | 0.021                           | 0.317                    | 7.865*  | 0.000 |
| Potential for innovative creativity | 0.092              | 0.042                           | 0.142                    | 1.002   | 0.723 |
| Technology adoption                 | 0.121              | 0.106                           | 0.231                    | 10.632* | 0.000 |
| R = 0.856                           |                    | Adjusted R <sup>2</sup> = 0.641 |                          |         |       |
| R <sup>2</sup> = 0.730              |                    | SE = 0.142                      |                          |         |       |

\* Statistical significance at the 0.05 level

## DISCUSSION & CONCLUSION

A study of factors influencing the success of slaughterhouse management innovations in Thailand. The researcher has brought important points to discuss the results according to the research objectives, as follows:

1) The success of innovation in slaughterhouse management in Thailand. Overall, each aspect is at a high level. In terms of product and service innovation, marketing innovation, process innovation, and organizational innovation, respectively. This is because slaughterhouse operators have transformational leadership that brings in new ideas. Let's apply As well as having management and acceptance of technology. This has resulted in the success of innovation in slaughterhouse management in Thailand. The results of this research are consistent with the research results of Sudarat Pimonrattanakarn (2018), who studied the ability to manage innovation for sustainable organizational performance in the agricultural industry in Thailand. The research results found that the ability to manage innovation for sustainable organizational performance of the agricultural industry in Thailand is at a high level.

2) Transformational leadership, organizational management, and technology adoption factors influence the success of slaughterhouse management innovations in Thailand. This is because transformational leadership factors are important to the success of an organization's management innovation. Executives must have leadership in bringing new things to manage in the organization. Moreover, executives must accept the benefits, difficult work and have a good

attitude towards applied management innovations. The research results are consistent with the research results of Chowdhury, Alam, and Arif (2018). The research results found that technology adoption is positively related to organizational success. Research results of Tuan, T. A., Liem, D. T., Long, H. D., Minh, T. A., Trieu, P. T. H., and Hai, D. T. (2019). The research results found that leadership changes and management affect the success of the organization.

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**Data Availability Statement:** The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

**Conflicts of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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