A conceptional element of the relationship between organizational innovation and organizational performance from the perspective of pet market

.

ABSTRACT

|  |
| --- |
| The purpose of this study aimed to explore the relationship between organizational innovation and organizational performance which has been a critical topic of interest in both academia and practice. Organizational innovation encompasses product, process, technological, and managerial innovations, all of which contribute to resource efficiency, enhanced market competitiveness, and long-term organizational value creation. The impact of innovation on performance is moderated by various internal and external factors. Additionally, the relationship between innovation and performance often exhibits nonlinear characteristics, including staged changes and delayed effects. The research methods of this study is literature review and the main concepts of organizational innovation and performance are revealed by literature review and the relationship in between is discussed. The findings indicate that organizations can maximize performance outcomes when innovation aligns with strategic goals and is supported by a strong culture of innovation. The conclusion is that understanding this interplay is more and more valuable for organizations’ future and the ability to organize innovation is the key to develop effective innovation management strategies to achieve sustainable development and exceptional performance. |

*Keywords: organization innovation, organizational performance, innovation ability, pets*

1. INTRODUCTION

In recent decades, Taiwan's rapid economic growth has led to the vigorous development of enterprises. More and more young people tend to have pets at home rather than have children and they are more willing to raise pets than the next generation with good care. Ministry of Agriculture (2024) claimed that 28.3% homes in Taiwan have pets in 2022, and it is increasing year by year. There is a big increase for pet dogs (19%) and pet cats (50%) compared to 2021. Under the trend, relevant pet store owners or enterprises that used to be dominated by traditional labor have gradually accumulated capital and operating strength and moved towards a global competitive market. However, enterprises in Taiwan have been facing a loss of potential competitive advantages due to the unstable political and economic situation, the rising awareness of environmental protection, the yearly rise of minimum wages, and the fierce competition in the international market. The phenomenon shows that these enterprises which are facing the above crisis urgently need to quickly improve their competitiveness to cope with the dilemma that may affect their current benefits. Some studies tend to focus on pet food market (Corsato Alvarenga, Dainton, and Aldrich, 2022; Kumar, Goswami and Pathak, 2024; Kwak, and Cha, 2021), while other studies prefer to talk about pet customized products such as clothes and necklaces (Apaolaza, et al., 2022).

Organizational performance is an important issue in business management because good organizational performance can enhance the competitiveness and profitability of the organization, thereby promoting the sustainable operation and development of the enterprise. When it comes to organizational performance, organizational innovation has become one of the most important factors in promoting organizational performance in the highly volatile environment in Taiwan. Furthermore, when an organization has the ability to innovate organizationally, it can respond to the rapidly changing environment faster than its competitors, maintain its competitive advantage, and avoid the fate of failure or death. It can be seen that organizational innovation is an important factor to improve organizational performance and maintain organizational development sustainably. Therefore, this study aimed to explore the connotations of organizational innovation as well as organizational performance, and based on the connotations, the relationship between them is necessarily analyzed and discussed to develop a conceptional essential element of the above relationship.

2. Literature review

**2.1 The definition of innovation**

The definition of innovation varies by point to view. Schumpeter (1950) proposed the concept of “creative destruction” and claimed that creative destruction will bring a better new economic system after a breakdown of the old economic system. He emphasized the important role of innovation in the economic system. Thompson (1965) claimed that innovation refers to the generation, acceptance, and implementation of new ideas, processes, products, and services, while Fremman (1982) proposes that innovation is the use of new technology or market knowledge to provide a new product or service that a customer needs. Drucker (1985) argues that innovation is a process, an organized, systematic and rational work, whereas Robbins (1996) argues that innovation is a new idea that can be applied to improve a product, process, or service, but not all changes involve innovation (Robbins, 2001). McAdam et al (2000) claimed that innovation is a process in which an individual or worker responds to the environment with his or her creative ability in response to changes in the environment.

To sum up, innovation is the adoption of a new idea or behavior by an organization, and is about the application to the organization's products, services, management, and processes to generate new ideas or revisions, and to produce expected benefits of the companies.

**2.1.1 The types of innovations**

There are a variety of classifications of innovation. According to Knight (1967), there are four types of innovation which are product and service innovation, organizational structure innovation, staff innovation, and producing process innovation. Product and service innovation refers to the production and sales of new products or services, while organizational structure innovation is about the arrangement of tasks, authority, internal communication, and rewards systems. Staff innovation cares about the transfer and change of organization members, or the change of belief or behavior of organization members. Producing process innovation refers to the innovation of tasks, decision-making, information systems, or the adoption of new elements or methods in product-producing or in technologies.

Marguish (1982) proposed three types of innovation. Radical innovations refer to the effect of the discovery of new scientific phenomena on the change or creativity in an entire industry. Systems innovations emphasize combining some useful elements in a new way to produce new functions and the way it takes place normally takes a longer time and bigger cost. Incremental innovations is to use consequent and fluent techniques to improve and expand the above two innovations for seeking better quality of products.

Gobeli and Brown (1987) categorized four types from the view of producers and consumers that they could be understood by a clear matrix shown in Figure 1.



Figure 1 Gobeli and Brown’s innovation matrix (Gobeli and Brown, 1987)

 In the above matrix, there are four types of product innovation which are incremental innovations, technical innovations, application innovation, radical innovations in each dimension. For incremental innovations and technical innovations, they have less benefits for consumers. It means higher costs and lower profits. However, application innovation tends to be more efficient by involving more innovation and it could have less or even non techniques in producing process with happier consumers. Different from application innovation, radical innovation is to introduce newly techniques in producing products or providing services, and the consumer benefits are greater.

Henderson and Clark (1990) developed another matrix where four types of innovations are based on whether to change the relationship between the core concept and elements, and whether to change the core design. The matrix is shown in Figure 2.



Figure 2 Henderson and Clark’s innovation matrix (Henderson and Clark, 1990)

In Figure 2, incremental innovation refers to minor changes to the elements of the current product to strengthen and expand the functions of the existing product, process or services. Module innovation means developing core components or core module of the current products that can be easily changed to create different configurations. Lego is an example of it. Lego offers modular innovation by building blocks where individuals can combine and interchange certain blocks to create, allowing children to train their creativity and imagination. The third innovation is architectural innovation. It means that the product components or structure has not changed, but the product architecture has been re-established, and the functions and components of the current components have been strengthened with the new architecture, or the performance has been changed. The last one is radical innovation, which refers to the involvement of new products, processes, or business models that disrupt existing markets. It often link with the new developments. Take World Wide Web as an example. The introduction of World Wide Web has changed the way people communicate with each other to do business.

From the above definitions, it can be seen that to categorize the types of innovation, it can be divided into management and technological innovation in terms of scope, gradual and drastic in the degree of change, and products and services in application.

**2.1.2 The connotation of organizational innovation**

The development of the concept of organizational innovation can generally be summarized into the following four perspectives, product, process, product and process, and multiple (Tsai, 1997). First, from the perspective of product, innovation means organizing the output or design of new products or technologies. It is also the emphasis of an organizational innovation perspective. Secondly, from the perspective of process, it refers to the new activities adopted by the organization in the process of innovation. That is, it defines organizational innovation according to the process of innovation. Thirdly, innovation defines from the perspective of product and process is to emphasize two parts of organizational innovation, which are product innovation and process innovation. The last point of view is multiple. It claimed that the lack of the product or process view of organizational innovation mainly is the focus of the level of technological innovation, and it ignores the part of management innovation. Therefore, organizational innovation should be a combination of both that multiple is one of the important perspectives from the development of the concept of organization innovation. Furthermore, from a multiple perspective, organizational innovation should be a new concept and behavior adopted in response to changes in the environment. Its content should include the organization's equipment, technology, products and other technological innovations and systems, culture, services, beliefs and other management innovations, which is also the dual-core model that it is the most acceptable model in the area.

To sum up, there are a variety of definitions of organizational innovation development, and most of them are evaluated by a single indicator. It has no certain and unique insight in the area currently. However, innovation should be a multiple perspective of concepts and behaviors. It is more appropriate to use multiple perspectives to measure organization innovation.

**2.2 The connotation of organizational performance**

Performance refers to the degree to which an enterprise or organization achieves a specific goal, and the various activities and strategies of enterprise management are aimed at improving the performance of the organization's operation. The measurement of performance has an indicative reference significance for enterprises and organizations, and its importance includes four important concepts. First, evaluation of past business results refers to analyzing and evaluating the company's activities to understand the results of past operations. The second is forecast future development. It considers various possible variables through current performance to revise future development and operation plans. The third is tools for management control. It establishes procedures for controlling systems to respond to changes in the business environment, including the establishment of performance standards, measurement of current actual performance, and correction of behaviors. The last but not least, reference for business decision-making is the most important concept that the results of performance evaluation are used as a reference for future business decision-making, and decide whether to continue the activity.

Venkatraman and Ramanujam (1986) proposed three indicators for organizational performance. That is financial performance, business performance, and organizational effectiveness. On the other hand, Delaney and Huselid (1996) used a two-component approach to measuring organizational performance relative to competitors in the same industry. The first part is perceived organizational performance, which includes the quality of products or services, the development of new products or services, the ability to retain employees, customer satisfaction, employee relations, and supervisor-employee relations. The second part is perceived market performance, including marketing capabilities, sales growth, market share, profitability, etc.

Evans (1996) argues that performance appraisal is a part of management control, and that performance appraisal and management can help organizations effectively manage resources, measure and control goals, so the performance appraisal system is a measurement method combined with the reward system. In terms of short-term measurement, it has the function of operating the control system and target correction, but in terms of long-term measurement, it is a tool for strategic management, planning and goal achievement.

From the above connotations of organizational performance, most researchers have a similar definition of performance, but different criteria for the way performance is measured. It means that there are different and diverse performance measures depending on the research topic or aspect. With organizational performance, it tends to divide into two categories, objective measurement and subjective measurement. The former one is often measured using financial data such as ROA, ROE, revenue growth rate, etc. Subramanian and Nilakanta (1996) used ROA and customer share of deposits as a measure of performance and Baer and Frese (2003) also used ROA as an objective measure of organizational performance. The latter one is about using questionnaires or interviews as the main measure tools to measure organizational performance. Damanpour and Evan (1984) used overall performance, service breadth and service quality as subjective measures of performance. Gopalakrishnan (2000) used operational efficiency, and the quality of services provided.

To sum up, it can be seen that performance measures, other than the measure of financial performance, are also suitable for performance evaluation. The main reason for it is that financial performance may be affected by prior-period financial conditions and is also affected by factors other than innovation which means financial performance is not a stable and suitable factor when it comes to performance measures. Therefore, it would be a great idea to use not only financial indicators but to take other indicators into account.

**2.3 The relationship between organizational innovation and organizational performance**

When evaluating organizational performance, organizational effectiveness is often a priority because innovation has been the primary measure of organizational performance (Clark and Staunton, 1989). Innovation has triggered many different organizational concepts, and successful innovation may have a great impact on the organization and even the overall industry, so innovation ability has gradually become one of the indicators to evaluate the competitiveness of enterprises. There are many benefits that innovation can bring to an organization, such as cost savings, improving work efficiency, improving employee relationships, and strengthening core competencies through different innovations. In addition, innovation can help organizations adapt to the rapid changes in the market, develop a competitive advantage, avoid stagnation, and increase their chances of survival. Different innovations can improve different aspects of organizational performance. Technological innovation can help organizations improve or upgrade the technical hierarchy and reduce unit costs (Yamin, Gunasekaren and Mavondo, 1999). Procedural innovation can contribute to the achievement of organizational goals (Bare and Frese, 2003). Gopalakrishnan (2003) pointed out that product innovation is the easiest to obtain large and attractive mayors, so the main purpose of corporate innovation is to improve the efficiency of the organization and promote the achievement of organizational goals, thereby improving and enhancing organizational performance.

Some studies of the relationship between organizational innovation and organizational performance show that it can be found that organizational innovation can improve organizational performance, and the earlier the organization adopts innovation, the more efficient the organization will be. Yamin, Gunasekaren and Mavondo (1999) proposed that process innovation will improve performance by reducing unit costs through technological improvements, and the work productivity and overall performance of organizations will also be significantly improved by the impact of innovative technology systems. Subramanian and Nilakanta (1996) found that management innovation can improve organizational coordination, so a high level of management innovation leads to a high degree of organizational efficiency. Technological innovation is designed to make the organization more competitive in the market, so a high degree of technological innovation makes the organizational effectiveness more improved. In particular, when an organization adopts consistent organizational innovation, it improves the overall efficiency of the organization. Damanpour and Evan (1984) found that organizations that adopted management and technological innovation did perform better than those who did not.

To sum up, organizational innovation is one of the important factors affecting organizational performance. Organizational innovation can make organizations and enterprises more competitive in the market and adapt to the ever-changing social and economic environment; In addition, because of the formation of organizational innovation, the organization is more able to improve organizational performance. Therefore, the effect relationship between organizational innovation and organizational performance for an organization is greater than individuals.

3. MethodS

Initial findings were developed using a comprehensive literature review and the review process is discussed and drew on theoretical studies of organizational innovation and organizational performance and the relationship in between to the relevant studies to reviewing and synthesizing qualitative research. Through the literature review, the core concept of the above relationship is gradually visible. For a deeper understanding of the relationship to the research objective, the research questions are solved by reviewing literature.

4. Results AND DISCUSSIONS

The sustainable operation of an enterprise depends on the wisdom of managers, so it is a challenge for managers to make the organization grow and adapt to changes in the environment. Choosing the appropriate business strategy is a test of the ability of the organization as a whole and the managers. The achievement of organizational goals represents the level of organizational performance, and the more people can achieve organizational goals, the higher their organizational performance and the more competitive they are. In the context of such rapid social change, it also brings constant challenges to enterprises. To avoid being eliminated, enterprises must constantly innovate and change in order to beat competitors in the same industry and stand out. Therefore, the ability to organize innovation is an essential element that every business should have.

5. Conclusions

The organizational innovation of enterprises is not only limited to technological innovation, but also management innovation. Even with innovative technology, if the organizational structure, culture, employee relations, processes and other management aspects are not coordinated, the organizational performance may not be improved to the desired goal. Therefore, whether an enterprise is in terms of technology or management innovation, it must have its unique competitive advantage and be sustainable. It is important and vital to have the ability to organize innovation for a company to avoid not to being replaced or eliminated by other enterprises so that the enterprise can maintain competitiveness and sustainable operation.

Consent

Informed consent was obtained from legal guardians, and assent from participants, prior to any study procedures.

Ethical approval

All authors hereby declare that all experiments have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards.

Disclaimer (Artificial intelligence)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

References

Apaolaza, V., Hartmann, P., Paredes, M. R., Trujillo, A., & D'Souza, C. (2022). What motivates consumers to buy fashion pet clothing? The role of attachment, pet anthropomorphism, and self-expansion. Journal of Business Research, 141, 367-379.

Baer, M. and Frese, M. (2003). Innovation is not enough: climates for initiatives and psychological safety, process innovations, and firm performance. Journal of Organizational Behavior, 24(1), 45-68.

Corsato Alvarenga, I., Dainton, A. N., & Aldrich, C. G. (2022). A review: nutrition and process attributes of corn in pet foods. Critical Reviews in Food Science and Nutrition, 62(31), 8567-8576.

Damanpour, F. and Evan, W. M. (1984). Organizational innovation and performance: The problem of organizational lag. Administrative Science Quarterly, 29, 392-409.

Delaney, J.T. and Huselid, M. A. (1996). The impact of human resource management practices on perceptions of organizational performance. Academy of Management Journal, 39(4), 949-969.

Drucker, P.F. (1985). Innovation and entrepreneurship: practice and principles. London: Heinemann.

Evans, H., Ashworth, G., Gooch, J., and Davies, R. (1996). Who needs performance management? Management Accounting, 20-25.

Gobeli, D. H. and Brown, D. J. (1987). Analyzing product innovations. Research Management, 30(4), 25-31.

Gopalakrishnan, S. (2000). Unraveling the links between dimensions of innovation and organizational performance. The Journal of High Technology Management Research, 11(1), 137-153.

Henderson, R. M., & Clark, K. B. (1990). Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms. Administrative Science Quarterly, 35, 9-30.

Knight, K.E. (1967). A descriptive model of the intra-firm innovation process. Journal of Business, 4, 478-496.

Kumar, R., Goswami, M., & Pathak, V. (2024). Innovations in pet nutrition: investigating diverse formulations and varieties of pet food: mini review. MOJ Food Process Technols, 12(1), 86-89.

Kwak, M. K., & Cha, S. S. (2021). A study on the selection attributes affecting pet food purchase: After COVID-19 Pandemic. International Journal of Food Properties, 24(1), 291-303.

Marquis, D. G. (1982). The anatomy of successful innovations. Tushman and Moore, eds., Pitman, Boston, Mass.

Ministry of Agriculture (2024). The latest estimated results of the number of dog and cat breeding in Taiwan. Retrieved from https://www.moa.gov.tw/theme\_data.php?theme=news&sub\_theme=agri&id=9418

Robbins, S.P. (1996). Organizational behavior: concepts, controversies, and applications. Englewood cliffs, N.J.: Prentice-Hall.

Robbins, S.P. (2001). Organizational behavior: concepts, controversies, and applications. Upper Saddle River, N.J.: Prentice-Hall.

Schumpeter, J. A. (1950). Capitalism, Socialism and Democracy. New York: Harper-Collins.

Subramanian, A. and Nilakanta, S. (1996). Organizational determinants of innovation, types of innovation, and measures of organizational performance. Omega, 24(6), 631-647.

Tsai, Chi-Tung (1997). Organizational Factors, Creativity of Organizational Members and Organizational Innovation (Unpublished doctoral dissertation). National Taiwan University, Taipei City.

Venkatraman, N. and Ramanujam, V. (1986). Measurement of business performance in strategy research: a comparison of approaches. Academy of Management Review, 11, 810-814.

Yamin, S., A. Gunasekaren, and Mavondo, F. T. (1999). Innovation index audits implications on organizational performance: A study of Australian manufacturing companies. International Journal of Technology Management, 17(5), 495-503.