

The Causal Factors Of Innovation Management Capability Affecting The Organizational Performance Of The Agricultural Industry In Thailand

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Abstract

The purposes of this research were 1) to study the influence of change management on diversity, the building potential of creative business alliances on the innovation management capability of the agricultural industry in Thailand; and 2) to study the approaches to innovation management capability affecting the organizational performance of the agricultural industry in Thailand. The research tool was a questionnaire to collect data from three-hundred and fifty-eight executives of the agricultural industry who are senior executives in the agricultural industry in Thailand with innovative agricultural industries and executives of diversified business sizes that vary by the number of employees: 50-100 people, 101-300 people, and more than 300 people. Data were analyzed with the Structural Equation Model (SEM) to develop a model as well as verify the consistency between the model with empirical data and study the influence among factors.

The hypothesis-based research results showed that 1) the change management on diversity had a positive direct effect on innovation management capability; 2) the change management on diversity had a positive direct effect on the organizational performance through innovation management capability; 3) the building potential of creative business had a positive direct effect on innovation management capability; 4) the building potential of creative business alliances had a positive direct effect on organizational performance through innovation management capability, and 5) the innovation management capability had a positive direct effect on the organizational performance. Confirmatory factor analysis revealed that the hypothetical model is consistent with the empirical data at a good grade or the model is highly accurate considering from the chi-square value was 65.01, it was statistically significant at 0.42 (p -value = 0.42), the relative co-square was 1.17. The Comparative Fit Index (CFI) was 1.00, the Goodness Fit Index (GFI) was 0.95, the Adjusted Goodness Fit Index (AGFI) was 0.92, and the Root Mean Square Error of Approximation (RMSEA) was 0.01. Benefits from this research can be able to explain the causal factors and outcome of innovation management capability for the organizational performance of the agricultural industry in Thailand. The results of the study can be used as a guideline for building innovation management capability that leads to better results for the organization.

Keywords: Innovation management capability, Change Management Base on Diversity Organizational performance, Potential for Creating Creative Business Alliances

Introduction

The agricultural industry has long been the cornerstone of the world's economic growth. Even today, it is the industry with the highest

percentage of total domestic product in many countries, especially in developing countries. In addition, other industrial sectors are often associated with the agricultural industry, whether it is the use of agricultural products as raw

materials for processing to create new products or even services in the tourism industry, which often has agricultural learning resources as a place where people are interested. The agricultural industry is one of the main industries of Thailand that has long roots and it continuously creates economic value for the country. It is also an upstream industry that can convert agricultural products to be further processed into diverse products in other industries. When considering overall, agriculture is an industry that is at the beginning of the supply chain by acting as the initial production to obtain agricultural products that can be sold in the form of agricultural products or processed into the food industry into food products or beverages. It includes the processing of the bio-economy industry into bio-consumable products such as cosmetics, bio-chemicals, bio-plastics, etc. It can be said that the culture industry is closely and directly related to the food industry and the bio-economy industry. From this change, Thailand is aware and pays more attention to innovation. In this regard, innovation has been taken as part of the national economic and social development plan, which is a strategic plan that will guide the direction of national development. This can be reflected in the determination of objectives in the 12th National Economic and Social Development Plan (2017-2021), which has given more importance to innovation development with the introduction of innovation as an important part of Strategies for national development based on the principles of knowledge, technology, innovation and creative ideas as a tool to support the country's development. This policy can drive every government and private sector to emphasize creating innovation to happen in the organization more concretely. The management innovation capability in the agricultural industry is the ideas, knowledge, intentions, inventions, and decisions to accept new things, as well as new practices of agricultural academics and farmers. Some people consider Agricultural-industrial innovation includes such things as well as agricultural technologies that will be used to support farmers.

Innovation is an idea, method, or practice that each people perceive as something new or it is a new idea, and may not necessarily be new knowledge, some people may know it but not yet develop an attitude, good or bad for that

knowledge, and has no tendency to accept or deny it, unless that knowledge can improve the work performance that is better than before (Rogers, 1983). In the past and present, innovation is related to humans inseparably, resulting in changes in the manufacturing structures and service industries, as well as social structure. It is also the driving force of the economy and it can create economic growth, and empower industrial organizations (Lado & Maydeu-Olivares, 2001), so it creates a competitive advantage (Hult, Hurley, & Knight, 2004). Innovation is the result of research and development that has been created and improved to lead to the development of products with economic value according to the innovation development strategy planned by corporate executives (Tidd & Bessant, 2009). In addition, the innovation of one group of people may not be the innovation of others which innovation is the process of transforming valuable ideas into value-added forms for industrial enterprises (Merx-Chermin & Nijhof, 2005), where entrepreneurs' innovation management capabilities have management principles to create shared values based on competitive excellence.

For the reasons mentioned above, the researcher; therefore, recognizes the importance of studying the causal factors of innovation management capability affecting the organizational performance of the agricultural industry in Thailand. This is to prepare and drive the agricultural industry to have innovation management capability that will be used in the formulation of policies and programs for the organization to have suitable innovation management and provide best practices as well as a way to improve and develop various factors as long-term planning for the labor of the organization. Innovative creation in the agricultural industry encourages personnel to have the potential of creating efficient innovations in the organization and creating competitive advantages in the agricultural industry for driving the economy of Thailand.

Research Objectives

1. To study the influence of change management on diversity, and the building potential of creative

business alliances on the innovation management capability of the agricultural industry in Thailand. 2) To study the approaches to innovation management capability affecting the organizational performance of the agricultural industry in Thailand.

Literature Review

This research has applied the Resource Base View (RBV) theory to explain the viewpoint of this theory for creating competitive advantages from internal resources. The organization must manage and arrange resources that aim at responding to changes and needs of the external environment (Wernerfelt, 1984). The resource-based view theory describes internal resources as a means of defining processes and creating competitive advantages in using resources to create value according to the concept of Bney (1991) proposes the idea that resources consist of four characteristics: valuable, rare, inimitable, and unreplaced. At present, the resource-based view theory becomes a popular strategy management concept because organizations with resources and capabilities that are special over competitors will be able to lead the organization to success. Capability is an integral part of creating value for resources (Barney et al., 2011). Therefore, the resource-based view theory describes the innovation management capability of the agricultural industry based on the resources of the enterprise, it can be concluded that the entity's resources respond to changes in the environment to create value of resources to drive and build strengths for the organization leading to innovation which also causes a contingency theory. In a competitive and changing environment speed of technology, the old management strategy does not work, today's executives need to make decisions under contingency conditions or facts that occur and change over time to be used in modern management by giving opinions that the best management choice depends on the situation dictates that there is no alternative or good management method. The best that lasts forever or under every situation (Galbraith, 1973). Leaders need to analyze the situation and assess every situation that may or may not occur (Schoech, 2006) and decide on a business strategy or choose management options based on

a different context, environment, or situation (Vroom & Yetton, 1973).

The change management of diversity affects the innovation management capability of the agricultural industry

The change management of diversity is the plan and implementation of corporate practices and systems to manage people in the organization to maximize the advantages of diversity and reduce the disadvantages caused by diversity to a minimum. Efficient diversity management of personnel in the organization gives organizations adaptability and creativity, which are key factors increasing the competitiveness of the organization (Taylor, 1994). Executives must know how to deal with diversified by they must be committed to doing the right thing. In addition, they must respect the differences of each person, and most importantly, executives must be able to recommend good diversity solutions for the organization. If an organization manages diversity, it will make diversity become something that benefits the organization (Bank, 2013). Diversity also makes executive decision-making more effective. Executives have creativity, innovation, and better organizational solutions (Australian Center for International Business, 2000). The benefits of diversity, such as enabling executives to make better decisions, organizations become more creative and innovative organizations that make the organization more creative and innovative (Meyerson & Fletcher, 2000). The changes on diversity in the issue of building culture participation found that making employees feel entrepreneurs. Organizations must encourage employees to work and perform to the best of their ability. Employees always have opportunities to work together to improve their knowledge and competence, and employees can create innovation and improve their work (Metha & Gupta, 2014). The change management of diversity affects the innovation management capability of the agricultural industry because of the nature involved in managing change on diversity, there is a focus on flexibility of the organizational structure, managing diversity of technology usage, and the ability to apply technology in production. Creating a culture of participation is an influencing factor to

innovation management capability where actions to reduce the impact of the change as well as supporting adaptation and acceptance and creating new potentials to accommodate change occur to achieve the goals outlined in terms of flexibility of the organizational structure, variety of use of technology, application of technology in production including a culture of participation to achieve efficiency. These lead to the maximum advantage, so the organization wants to manage change on diversity by focusing on the flexibility of the organizational structure and managing a variety of technology used capability to apply technology in production, building a culture of participation from these connections. Therefore, the researcher formulated the first and second research hypotheses as follows:

Research Hypothesis 1: Influence of change management on diversity affecting innovation management capability;

Research Hypothesis 2: Change Management on diversity has a positive correlation with organizational performance through innovation management capability.

The potential to build creative business alliances affects the influences of innovation management capability.

Building alliances in international business by creating alliances support the emergence of sharing the resources of multinational and international businesses which is an international business. This results in lower operating costs and fewer errors and creates a greater understanding of the market (Harimukti, Harm-Jan, & Aard, 2018) including business cooperation in the field of information technology for business support that information technology. Therefore, there must be alliances to exchange resources and knowledge including customer groups in business expansion and for the survival of the organization (Jeongeun, Tae-Eung & Hyun-Woo, 2018).

Creating alliances in international business operations by creating alliances can support sharing the resources of multinational, international, and global businesses by doing international businesses. Building partnerships in this sector results in lower costs, fewer mistakes, and creates more insights from having business alliances with local businesses, and supply chains

to open up market opportunities to create profit from lower cost and more competitive business (Harimukti, et al., 2018). Business cooperation in the field of information technology for business support information requires a lot of equipment and related technology systems if a business doesn't have a strategy to build business alliances that can deprive the business of resources because the resources in the business require a huge investment. This impact will be affected both small and medium-sized technology support businesses that are growing and expanding the market making it possible to rely on partners to exchange resources and knowledge together with customers of great importance in business expansion and survival (Jeongeun et al., 2018). A business alliance is defined as a clear knowledge processing knowledge, knowledge sharing, and learning exchange process when a business has a learning process from a good business partner, it can bring knowledge gained from the partners that can enhance the efficiency of partnering operations (Kale & Singh, 2007). Entrepreneurship collaboration allows entrepreneurs to participate in the process of thinking, creativity, and development by collaborating in development can create new products that are focused on meeting the needs of customers (Lin et al., 2010). Continuous cooperation can increase competitiveness, and the development of new products to be distinctive, different, and new to meet the needs of customers and be accepted with collaboration from many parties, both from outside and within the organization (Tan and Tracey, 2007). The same party or cross-function team is important to develop new products and innovations due to the coordination of communication between the parties that cause exchanges of learning information from one another and speed up the decision-making process (Troy et al., 2008).

Therefore, the organization must have the potential to build creative business alliances with flexibility in collaborating business resources. With the potential for new creative knowledge management from this link, the researcher has therefore formulated the third and fourth hypotheses as follows.

Hypothesis 3: Influence of the potential of creative business alliances on the ability of innovation management.

Hypothesis 4: The potential for building creative business alliances has a positive correlation with organizational operations through innovation management capability.

The management innovation capability affects organizational performance

Innovation is the result of research and development that has been created and improved to lead to the development of products of economic value according to the strategic plan for innovation development that the organization's executives have planned (Tide & Bessant, 2020). It is also the ability to continually transform ideas, and transform knowledge into the creation of products, systems, and processes that benefit organizations and stakeholders on an ongoing basis (Lawson and Samson, 2011). Innovation management capability can describe the strategies of innovation, organizational behavior, work process, product and vision for new markets, and strategic aspects that support innovation talent and creative management resources (Zhou & Li, 2010). Innovation management capability refers to the organizational promotion of working systems and processes within the organization, there is a creative development of various new marketing channels that are innovative marketing. It enhances the product value of creating business content through modern marketing channels. Creating a new way of working enhances the quality of products in the changes in the organization related to developing a product

model. For the effective measurement of organizational performance, an organization can measure two aspects, including economic measures that are measurable, such as market share growth, financial ratios, profitability; and the satisfaction of the stakeholders of the organization (Santos & Brito, 2012). For the study of the organizational performance, there is a process for creating an idea on the organizational performance, corporate stakeholder consideration, and responding to make stakeholders satisfied. The two measurements of organizational performance are the financial performance measure and the non-financial performance measure (Santos & Brito, 2012). Organizational performance arises from the productive process of the work of employees in the organization in terms of measuring both monetary and non-monetary performance holistically. Financial performance represents economic performance as a measure, including non-financial performance.

Therefore, the organization must create organizational performance through economic performance and working results on creating value for stakeholders from these connections. The researcher; therefore, formulated the fifth research hypothesis.

Hypothesis 5: Innovation management capability has a positive direct influence on organizational performance.

From the review of concepts, theories, documents, and related research to create a research conceptual framework as follows:

Research Conceptual Framework

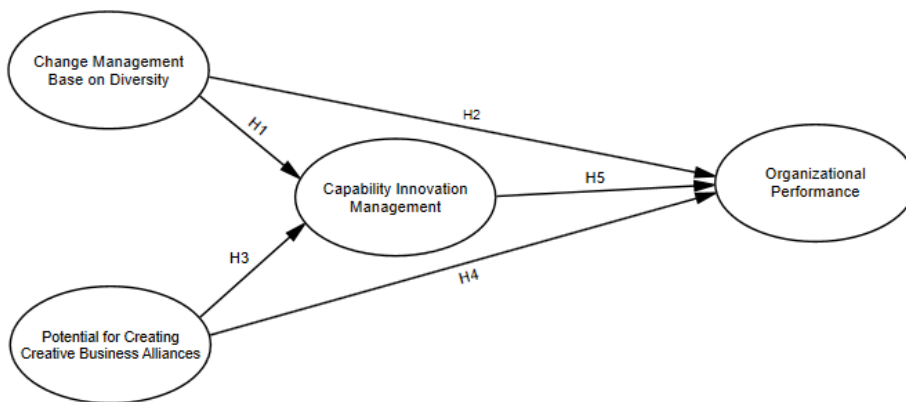


Figure 1: Research Conceptual Framework

Research Methodology

Population

The population used in this research was the agricultural industry in Thailand. The unit of analysis of this research is the organizational level, entrepreneurs of the Department of Industrial Works (<https://www.diy.go.th/webdiy/s-data/>). The classification of company will be classified by using the industrial factory account according to the Ministerial Regulation (1992) issued under the Factory Act 1992. Data Collection will be collected from the assembled factories that are factories engaged in the business of rubber and palm oil products, canned fruit factories, rice products factories, and food processing factories. Information to operators of the department, there are 5,645 industrial factories of the Ministry of Industry throughout Thailand (data as of January 20, 2022). It must have a sample size of 160-320 samples. A total of 320 samples were; therefore, met using purposive sampling with senior executives of the agricultural industry.

Data Collection

Data collection for this study was conducted by the postal mailing of questionnaires, to which researchers expected a small percentage of responses. Therefore, to achieve a certain response rate, the researcher used the population as a sample in the research. The researcher sent a letter to a sample of four businesses, including the required number of 1,500, covering the agricultural industry by type of business, all four businesses, 375 copies each, namely industrial affairs in rubber and palm oil products, canned fruit industry, rice products industry, and food processing industry and to follow conditions of this research by considering the sample size that must be consistent with the statistics used in the data analysis by Jackson (2001).

Research Tools

The research was divided into five questionnaires as follows.

Part 1 is general information about the research respondents. They consisted of gender, age, level

of education, and work experience. It is a multiple-choice question (Check List).

Part 2 General information of the business consists of the nature of business registration, nature of the business operation, an industry group of business, registered capital of the business, the number of personnel in the business at present, and the duration of business operations up to the present. It is a multiple-choice question (Check List).

Part 3 The causal factors of innovation management capability consist of the change management on diversity and the potential to build creative business alliances. It is a multiple-choice question (Check List).

Part 4: Innovation Management Capabilities consist of the creation of new and diversified market developments, creativity in changing new ways of working, and the ability to create added value for the products. It is a multiple-choice question (Check List)

Part 5: Organizational Performances consist of creating shared values based on competitive excellence and organizational performance. It is a multiple-choice question (Check List).

Tool Validity and Reliability

1) Content Validity test by bringing the questionnaire to three experts in the field of business administration to check the questionnaire's validity or to find the Index of item Objective Congruence (IOC). It found that the IOC value is between 0.67 -1.00 which is within acceptable criteria (Nunnally and Bernstein, 1994). 2) Construct Validity was checked from the sample group who answered the questionnaire to confirm that each question was a measure arranged in the same factor. It found that the factor loading is between 0.64-0.81 and a value greater than 0.40 was considered acceptable criteria (Hair, Black, Babin, Anderson and Tatham, 2006), 3). Reliability using the Alpha Coefficient found that the Cronbach method (1970), the reliability of the entire questionnaire

was found to be 0.89, with values greater than 0.70 considered acceptable criteria (Hair, Black, Babin, Anderson and Tatham, 2006). 4) Power of Discrimination is to consider whether the question or variable used in the research classifies the respondents by finding the correlation between the questions and the corrected item-total correlation found that the discrimination power value was between 0.46-0.69, which is greater than 0.30 is considered an acceptable value (Pallant, 2010).

Statistics and data analysis 1) The researcher analyzed the data by using descriptive statistics and using the collected data to analyze the statistical values consisting of frequency, percentage, and standard deviation by statistical and analytical software packages and the Structural Equation Model (SEM). 2) Causal Factor Analysis by Path Analysis using Program statistically finished and analysis of structural equation model (SEM) and considering that χ^2/df is less than 2, the CFI index is close to 1, the RMSEA index and the RMR index is less than 0.05, which is within the acceptable range. Hair et al. (2006) considered the model to be consistent with the empirical data.

Research Results

There was a total of 358 respondents in this research, 182 males, aged between 30-40 years, 262 people, representing 50.84 percent, 155 persons with bachelor's degrees, representing 73.19 percent, the work experience 10-20 years of 167 people, representing 46.65 percent and the current job position of the respondents had 195 job titles as production managers, representing 54.47 percent.

General information of the business, the nature of business registration as a limited company, amounting to 200 people, representing 58.36 percent, the nature of the business is a Thai business of 312 people, accounting for 87.15 percent. The industrial group of the business is an industrial group of the factory business in the canned fruit industry, with 116 people, representing 32.40 percent. The registered capital of the business is 10-50 million, amounting to 265 people, representing 74.02 percent. The total number of personnel in the business, there is 100-300 personnel totaling 162 people, representing

45.25 percent, and the duration of business operations is 10-20 years, 216 people, accounting for 60.34 percent.

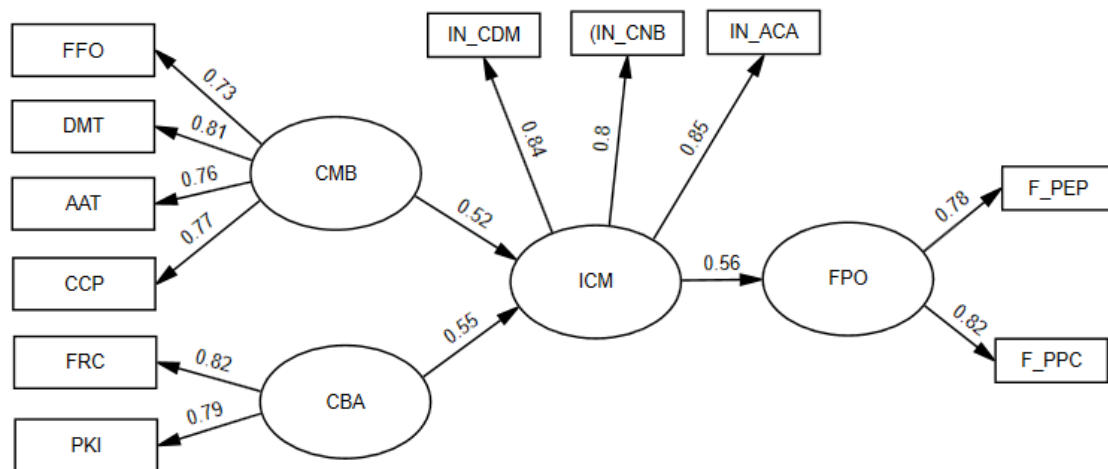
The sample respondents had a high level of overall opinion in all five aspects, namely, change management on diversity, the potential of building creative business alliances, innovation management capability, and the performance of the organization was at a high level. The researcher used multivariate analysis: Path Analysis for testing. Research hypothesis to verify based on basic terms of Structural Equation Analysis to see the relationship between the variables used in the study that it is a linear relationship or not and have a relationship. The direction of the relationship between variables is at any level.

From the test, it found that the correlation coefficient of the eleven observed variables, 110 pairs were correlated and all pairs of variables were in the same direction with the correlation coefficient between the variables that are in a positive relationship. The coefficients between 0.18 - 0.68 were statistically significant at the 0.01 level, where the correlation coefficient of the variables must not exceed 0.90, indicating that the variables studied had no problem with multicollinearity (Pallant, 2010; Rubin, 2012), including the test for the independence of the variables with KMO (Kaiser-Meyer-Olkin) and Bartlett's test of Sphericity to verify the suitability of the group of variables, it found that the KMO value was 0.910, which was greater than 0.8, suitable for factor analysis and Bartlett's Test of Sphericity was statistically significant (Bartlett's Test = 4126 .512, df = 120, Sig = 0.000). These variables had no multicollinearity problem and therefore were suitable for analysis to develop measurement and research models (Hair et al., 2006).

The results of the causal relationship structure model analysis of innovation management capability of the agricultural industry in Thailand after the model adjustment. The results showed that the chi-square value (χ^2) was 65.01, with a statistically significant level of 0.42 (p-value = 0.42). The chi-square value (χ^2/df) was 1.17. The Comparative Fit Index (CFI) was 1.00, the Goodness Fit Index (GFI) was 0.95, the Adjusted Goodness Fit Index

(AGFI) was 0.92, and the Root Mean Square Error of Approximation (RMSEA) was 0.01. all indexes pass. Criteria indicating that the model is

consistent with the empirical data are shown in Figure 2.



Chi-Square = 65.01 df = 58, p-value=0.42121, RMSEA=0.011

Figure 2: The analytical results of the causal relationship structure model analysis of innovation management capability of the agricultural industry in Thailand after the model adjustment

factors of the cause-and-effect variables of the organization’s innovation management capability of the agricultural industry in Thailand have a direct effect, indirect effect, and total effect divided by research hypothesis as shown in Table 1.

The analytical results of direct, indirect, and total effects found that the variables that were

Table 1 direct effect (DE), indirect effect (IE), and total effect (TE)

Causal Variables	Interpretations					
	Capability of Innovation Management (CINM)			Sustainable Organizational Performance (SOPF)		
	DE	IE	TE	DE	IE	TE
Change Management on Diversity (CMBD)	0.52*	-	0.52	-	0.43*	0.43*
Potential of Creative Business Alliances (PCBA)	0.55*	-	0.55*	-	0.49*	0.49*
Capability of Innovation Management (CINM)	-	-	-	0.56*	-	0.56*

**p<0.01, *p<0.05

From Figure 2 and Table 1, the results of the analysis revealed that

with a direct effect of 0.52 and change management on diversity had a positive direct effect on sustainable organizational performance (SOPF) through innovation management

The change management on diversity (CMBD) had a positive direct effect on the capability of innovation management (CINM)

capability with an indirect effect was at 0.43 and with statistical significance at the 0.05 level.

The potential of creative business alliances has a positive direct effect on the sustainable organizational performance of the organization, with the direct effect at 0.55 and the potential of creative business alliances had a positive effect on the sustainable organizational performance through innovation management capability with an indirect effect at 0.49 and with statistical significance at the 0.05 level.

The Capability of Innovation management had a positive direct effect on organizational performance found innovation management capability had a positive direct effect on organizational performance with a direct effect at 0.56 and with a statistical significance at the 0.05 level.

Conclusion and Discussion of Results

The change management on diversity had a statistically significant positive direct effect on innovation management capacity at 0.01 level because the competitive environment of business makes the agricultural industry adapt to cope with changes in its focus on structural flexibility. The flexibility of the organizational structure that needs to be adjusted is in terms of improvement plans to increase work efficiency, and reduce delays, which executives focus on managing a variety of the importance of creating a culture of participation which if the organization can manage the change on diversity will result in the organization's ability to manage innovation as well. The finding of this research is consistent with a study by Merchant & Van der Stede (2007), who stated that the organizational structure is flexible, people work as a team and can perform various functions within the organization. This shows that the organization has the implementation of the work for the development of innovation in the organization and will lead to good innovation management of the organization.

The change management on diversity had a direct and indirect effect on organizational performance. Entrepreneurs use modern technology in their business for product development and innovation is very important to make businesses succeed because they have good technology and innovations that will help them to

have a competitive advantage and, most importantly, the ability to develop innovations come up in the organization. With this change, organizations become more diverse, which affects the management process. This is in accordance with the research of Pimonrattanakan and Jadesadalug (2020), Change Management On diversity had a positive direct effect on the innovation management capability because the competitive environment of the business has made the agricultural industry adapt to keep up with the change in focus on structural flexibility. The flexibility of the organizational structure needs to be adjusted in terms of improving work plans to increase work efficiency, reduce delays, and executives pay attention to creating a culture of participation if the organization can manage change in diversity.

The potential of creative business alliances had a positive direct effect on the innovation management capability at a statistically significant level of 0.01. Executives should be flexible in collaborating with the resources of the business to develop and improve their production processes more efficiency and the reduction of waste to a minimum. It also brings new knowledge sharing to increase work potential. There are also a systematic collection of new creative ideas and a central database for accessing information between organizations or between partners thoroughly. The results of such research are consistent with a study by Jeongeun, Tae-Eung, & Hyun-Woo (2018). It showed that the organization's operational cooperation in the information technology for an organization to provide IT support in an organization requires related technological equipment and systems. Therefore, having partners to exchange resources and exchange knowledge among different customer groups is very important to expand the business and for the survival of the organization.

The building of creative business alliances had direct and indirect effects on the organizational performance of the agricultural industry. Executives should be flexible in co-operating the resources of the business to develop and improve their production processes to be more efficient and minimize waste. This reduces production costs and makes the organization profitable to increase. In addition, new creative knowledge management by having to know and

build relationships with new partners is consistent with research by Lin, Chen, & Chiu (2010), which found that entrepreneurial collaboration engages entrepreneurs in the thought process, creativity, and development by collaborating on development can create new products that focus on responsiveness the actual needs of the customers. The continuous cooperation will increase the competitiveness of developing new products to be distinctive, different, and new to meet the needs of customers and to be accepted by having to work together from many parties, both from outside and within the organization.

The innovation management capability had a positive direct effect on organizational performance with statistically significant at 0,05 level because a new conceptual approach can meet the needs of service users or customers as much as possible to increase the value of the product or service to stand out from the competition through the introduction of technology to be used as a tool to create added value in products or services, methods, and improvements to existing products for better quality and efficiency. It may be in the form of a product or service or is a new method or process that results in the productivity and overall work efficiency and productivity being higher as a matter of change in the organization. This is consistent with a study by Shu, Zhou, Xiao & Gao (2014) because entrepreneurs or business owners have to apply technology and innovation by bringing digital technology applied in data management for forecasting and planning, using process knowledge, and making the industry competitive, and generating better results. It has creative packaging because of the differences, and uniqueness, which will allow the organization to create competitive advantages and bring better performance. It is consistent with the research of Pimonrattanakan and Jadesadalug (2020), who studied the sample group of 320 agricultural industries in Thailand. The research instrument was a questionnaire. The innovation management capability had a positive direct effect on the sustainable organization of the agriculture industry in Thailand.

Recommendations for future research

1. In this research, the causal factors of innovation management capability affecting the results of innovation management of the agricultural industry in Thailand which has an analytical unit at the educational organization level, there should be further studies at the individual level and the outcomes of innovation management capability should be done in the perspective of employees.

2. In future research, the conceptual framework of this research may be used to study the control variables with clear separations are factory standards, or even other variables such as the number of employees, type of industry, and size of the industry.

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