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Approaches to Developing the Manufacturing Industry of Small and Medium Enterprises for Readiness Towards Large Businesses in Thailand

Nilawan Sawangrat
Faculty of Business Administration,
King Mongkut's University of Technology North Bangkok, Rayong Campus, Thailand
E-mail: nilawan.s@fba.kmutnb.ac.th
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Abstract

This research aims to 1) study the structure and operational characteristics of the manufacturing industry in small and medium-sized enterprises (SMEs) in Thailand for readiness towards becoming large-scale businesses; 2) investigate the components of development approaches for the manufacturing industry in SMEs for readiness towards becoming large-scale businesses; and 3) develop a structural equation model (SEM) for the development approaches of the manufacturing industry in SMEs for readiness towards becoming large-scale businesses. The study employed a mixed-methodology approach, incorporating both quantitative and qualitative research. The qualitative research involved in-depth interviews with a sample of 9 experts from 3 different groups: 3 entrepreneurs or executives in the manufacturing industry, three from the government sector, and three academics. For quantitative research, data was collected via surveys from 500 entrepreneurs or executives and analyzed using frequency, percentage, average, standard deviation, and structural equation modeling (SEM) with the advanced statistical analysis software AMOS.

The research on the general characteristics of organizations found that they have been operating for 10-15 years, are predominantly Thai-owned, use financial institutions for funding, are established as limited companies, and mostly have offices located in Thailand. In terms of structure and operational characteristics, the research revealed that the most suitable business strategy for these organizations is creating a product advantage, emphasizing mentorship systems from knowledgeable employees, and key leadership qualities, including treating colleagues with kindness and generosity and developing leadership at various levels focusing on experience, comprehensive knowledge, and business expertise.

The study on the importance of different components indicated that all aspects were highly important, with the order of importance from highest to lowest being digital technology, entrepreneurial leadership, knowledge management, and innovative organization. The results of the analysis of the structural equation model for small and medium-sized enterprises management for sustainable strength found that the chi-squared probability (CMIN-ρ) was 0.128, the relative chi-squared (CMIN/DF) was 1.126, the GFI was 0.955, and the root mean squared index of error estimation (RMSEA) was 0.015. It can be concluded that the model is consistent with the empirical data.

Keywords: Digital technology, Knowledge management, Entrepreneurial leader and innovative organization

Introduction

Small and medium-sized enterprises are important engines in driving the economy of Thailand. The Ministry of Industry has given importance to the development of small and medium-sized enterprises by raising awareness and by encouraging small and medium-sized enterprises to explore a research and innovation-driven enterprises. In addition to making the business survive, it paves the way for success with the combination of using technology and creativity to achieve exponential business growth. The development approaches for small and medium-sized enterprises (SMEs) by the Ministry of Industry align with Thailand's Twenty-Year National Strategic Plan (2018-2037) in building competitiveness for modern SMEs. This includes prioritizing foundational education for the youth to equip them with skills and an entrepreneurial spirit, developing essential and diverse labor skills, and nurturing entrepreneurs at all levels, especially in SMEs, to foster an entrepreneurial mindset. Businesses must be driven by technological innovation and creativity to add value and promote grouping and networking among entrepreneurs. There are five overall development strategies: 1) Develop entrepreneurial skills, 2) Create and develop entrepreneurs at all levels with an entrepreneurial spirit, 3) Develop start-ups by promoting the extension of ideas, 4) Encourage SMEs to adapt to new business models, and 5) Promote grouping and strong domestic and international networks of entrepreneurs (Ministry of Digital Economy and Society, 2021).

For small and medium-sized enterprises in Thailand, investments in innovation and research are increasingly important. When compared to the proportion of the number of small and medium-sized enterprises in Thailand, of more than 3 million, it was found that less than 1 percent, or less than 30,000, used research and innovation to transform their business. The main reason is the lack of knowledge, the inability to access information both within and outside the country, and the lack of funding due to the high cost of producing research or innovation. Therefore, there is no opportunity to jointly develop innovations or use research results commercially; there is lack of manpower whether it is personnel with knowledge in the workplace; lack of modern tools, digital systems and technology. As a result, Thailand is unable to enhance its global competitiveness. According to the rankings from the International Institute of Management in 2021, Thailand's economic competitiveness has decreased, ranking 28th out of 64 countries around the world. This is partly due to the fact that the Thai economy focuses on cost and price competition rather than qualitative development or value creation. As a result, Thailand is unable to fully respond to global needs (Mreport, 2019). Simultaneously, SMEs are highly sensitive and significantly impacted by economic recessions, recovering slower than larger enterprises, especially in international markets. Although SMEs adapt and improve the quality of production factors, they struggle to compete due to limited market access and increased financial fragility due to liquidity risks and rising debts. In contrast, large businesses have more resources and business potential, allowing them to develop diverse production models and invest more in research and development (Ministry of Industry, 2021).

Based on such importance, the researcher focuses on studying Approaches to Developing the Manufacturing Industry of Small and Medium Enterprises for Readiness Towards Large Businesses in Thailand by bringing the factors of digital technology, factors of knowledge management, factors of entrepreneurial leader and factors of innovative organization to build sustainable strength.

Objective

1. Study the structure and operational characteristics of the manufacturing industry in small and medium-sized enterprises (SMEs) in Thailand for readiness towards becoming large-scale businesses.
2. Investigate the components of development approaches for the manufacturing industry in SMEs for readiness towards becoming large-scale businesses.
3. Develop a structural equation model (SEM) for the development approaches of the manufacturing industry in SMEs for readiness towards becoming large-scale businesses.

Literature review

Digital technology

Digital technology is a tool to develop competitiveness that creates economic value for small and medium- sized enterprises. With the advancement in digital technology, entrepreneurs are able to receive news quickly and reach target groups around the world. The use of digital technology creates opportunities for small and medium-sized enterprises to make business modern and efficient. From the study of the theoretical concepts, it was found that digital technology is related to knowledge management. Ting et al. (2021) revealed that digital technology is a tool for storing knowledge to support the work of the entire organization. You can search, evaluate and retrieve information quickly. In addition, technology supports the collaboration of all parties. This helps to effectively communicate both internally and externally. Consistent with the study of Nwankpa et al. (2022), it was found that the emergence of digital technology helps organizations deal with big data. Data is analyzed via social media. There are various platforms arising from the good knowledge management capabilities of the organization. In addition, an organization should focus on learning results in employees having new knowledge and analytical thinking skills. The above relationship leads to research hypothesis as follows:

H1: Digital technology has a direct influence on knowledge management.

Studies of Erhan et al. (2022) have shown that due to changes in the internal and external environment of the organization, the organization must adapt to that change, for example, employees can work from anywhere without having to travel to work at the organization always. Such behavior results in creativity. Employees exhibit innovative behaviors. Skills are developed and adapted to accept the use of innovation in the organization. The organization has used digital technology to effectively reduce costs. Consistent with the study of Ardito et al. (2022), it showed that digital technology is rapidly changing, so organizations use knowledge management factors to deal with information systems by organizing information to be ready for use in the organization. As a result, it is an innovative organization with high economic growth value and one that uses state-of-the-art technology in manufacturing development, design and big data analytics to reflect the entrepreneurial vision. The above relationship leads to research hypothesis as follows:

H2: Digital technology has a direct influence on innovative organizations.

Entrepreneurial Leadership

Leadership is a fundamental quality that entrepreneurs must have. A good leader must be committed, always willing to learn new things, brave enough to make decisions, responsible for one's decisions, intelligent, has social competence, has an intrinsic motivation to succeed and has good human relations. Effective leaders must help subordinates to achieve their goals and can use the art to motivate others to follow for the organization to achieve success. From

the theoretical study, it was found that entrepreneurial leadership was related to knowledge management. For example, a study by Shahzadi et al. (2021) found that entrepreneurial leadership plays a role in promoting the knowledge management process in the organization so that employees can use knowledge to create success for the organization. Organizations with proactive leaders have the characteristics of working together as a team. The knowledge is shared. There is a high likelihood of success. Good leadership adapts to change. A good leader must have a visionary strategic mindset, must have the ability to adapt and be ready to deal with future crises. Knowledge management will help entrepreneurs increase their potential at all levels, from the operational level to the entrepreneurial level. This ensures that all employees have equal access to the knowledge available. The study of Latif et al. (2021) found that good leadership will make the organization achieve a good knowledge management process, which guides to the success of the organization. The above relationship leads to research hypothesis as follows:

H3: Entrepreneurial leadership has a direct influence on knowledge management.

In addition, entrepreneurial leadership has a direct influence on innovative organizations. For example, a study by Hoang et al. (2023) found that leadership is important for bottom-up innovation. Innovation promotes continuous development and modernization. Employees are more collaborative in their work which leads to higher work efficiency. Thus, entrepreneurial leadership is essential for small and medium-sized enterprises. On the other hand, a study by Sipahi & Artantas, (2023) found that entrepreneurial leadership influences the performance of small and medium-sized enterprises. It creates guidelines for good performance, clear understanding and trusts among group members. Good relationship is established making work smooth flowing for everyone. A joint plan of action is created to close the gap that hinders business operations; generating new creativity leading to organizational innovation. The study of Djalil et al. (2023) found that entrepreneurial leadership brings out employee creativity. Creative solutions from a person with a vision of the future for the business. Challenges encourage employees to design ways of working creatively. Thus, new innovation is introduced in the organization. The above relationship leads to research hypothesis as follows:

H4: Entrepreneurial leadership has a direct influence on innovative organizations.

Knowledge Management

Knowledge management is as a tool to help small and medium-sized enterprises create a competitive advantage among employees. It is knowledge that arises from experience or learning until they have skills and expertise to increase the potential for work or decision-making by transferring or sharing knowledge together. From the theoretical study, it was found that knowledge management was related to innovation organization. For example, the study of Khalil et al. (2022) found that knowledge management is knowledge sharing, developing and improving the learning of employees in the organization. They solve problems systematically. As a result, employees are committed and the organization has the ability to create innovation. If the knowledge management organization continues, this results in innovation throughout the organization. Consistent with the study of Samie & Jazghani, (2022), it was found that leaders can effectively use knowledge management to solve problems that arise in the organization and encourage employees to acquire new knowledge with the necessary thematic training to acquire new methods and processes for innovation. At the same time, information should be recorded or shared from successful and unsuccessful experiences in order to solve future problems leading to an organization of effective innovation. The above relationship leads to research hypothesis as follows:

H:5 Knowledge Management has a direct influence on innovation organizations

Innovative Organization

Innovation is the key to effective organizational growth. An innovative organization can be created by relying on quality human resources. There are also several important factors that contribute to the formation of an innovative organization. For example, entrepreneurs allow employees to be free to work; giving employees the freedom to try and make errors. No strict rules set to allow employees to participate in creating innovations to occur in a sustainable organization (Andersson et. al., 2023). Organizational innovation can arise from employees who focus on continuous learning, resulting in the organization being able to compete with the provision of new technologies for product research and development, resulting in better new products that are accepted by the market. Thus, knowledge management within the organization should be managed by training employees in the organization to have high performance and cope with new innovations to make the organization grow leaps and bounds by using a policy to motivate employees to try to create new innovations like no other. According to Nguyen (2023), knowledge management, digital technology and entrepreneurial leadership result in organizational innovation, making the organization competitive. They help employees to work quickly and solve problems that might arise appropriately. It also helps the organization to survive even in the face of a rapidly changing environment (Hwang et. al., 2023).

Conceptual Framework

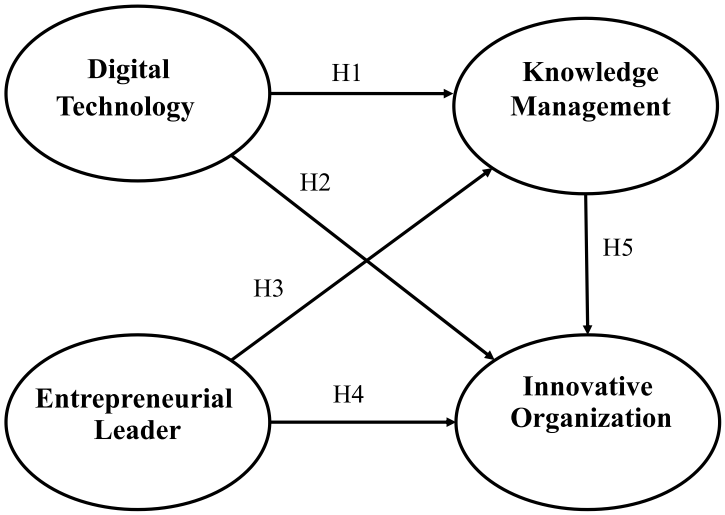

Figure 1 Conceptual Framework (Source: Researcher, 2023)

Methodology

Research Methodology

This research is an inductive research, utilizing a mixed-methodology approach, incorporating both qualitative and quantitative research methods. The steps are as follows:

1. Qualitative Research: This involves conducting in-depth interviews with a sample group of 9 experts from 3 different categories. These include three entrepreneurs or executives in the manufacturing industry, three individuals from the government sector, and three academics.

Research tools: Structured interviews with open-ended aspects, where the researcher has prepared an interview guide with four main components: digital technology, knowledge management, entrepreneurial leadership, and innovative organization.

2. Quantitative Research: This involves survey research. The population for this study is defined as the 79,424 legal entities registered with the Department of Business Development, Ministry of Commerce (Department of Business Development, 2021). The sample size is determined based on structural equation modeling analysis, with a very good level of 500 samples (Silpcharu, 2020). The sampling is done using probability sampling, where every individual in the entire population has an equal chance of being selected, employing simple random sampling techniques.

Research tools: The Questionnaire divided into three parts, as follows:

Part 1: of the questionnaire focuses on the general characteristics of the manufacturing industry of small and medium-sized enterprises. It is structured as a checklist with five items.

Part 2: of the questionnaire deals with the structure and operational characteristics of the manufacturing industry of small and medium-sized enterprises. It is structured as a checklist with five items.

Part 3: of the questionnaire focuses on components of the approach to developing the manufacturing industry for small and medium enterprises. It includes four components: 15 items on digital technology, 15 on knowledge management, 15 on entrepreneurial leadership, and 15 on innovative organization. The questionnaire is designed as a rating scale, with a 5-level weighting criterion following the Likert scale. The researcher's approach to creating the questionnaire involves seven steps:

1.1 Study the principles of questionnaire creation, following the conceptual framework of the research.

1.2 Review literature, documents, articles, and related research works to guide the formulation of questions.

1.3 Define the topics and scope of the questions to align with the research objectives and benefits.

1.4 Draft the questionnaire.

1.5 Assess the tool's quality by checking content validity. The draft questionnaire is reviewed by five experts to assess its quality using the Index of Item–Objective Congruence (IOC), achieving a congruence index of 0.96, which exceeds the 0.50 threshold, indicating that the questions align with the research objectives according to the criteria of Rovinelli & Hambleton (1977).

1.6 Check for reliability by testing the content-validated questionnaire on a try-out session involving a group of 30 people (not part of the sample group) and calculating the Cronbach's Alpha Coefficient, resulting in a questionnaire score of 0.95, exceeding the 0.70 standard and indicating high reliability according to the criteria of Nunnally (1978).

1.7 Improving and correcting the questionnaire based on the results of discrimination index and questionnaire reliability analysis before implementation.

Data Collection: The data was collected by sending questionnaires to the manufacturing industry via mail. A total of 510 questionnaires were distributed, with 506 responses received. Out of these, 500 were complete, representing a 98.04% response rate from the sample group. This rate is acceptable according to the theory of Arbuckle (2001), who suggest that the response rate for a questionnaire should not be less than 20% of the sample group.

Statistics used to analyze data

Qualitative Research: In-depth interviews were conducted, and content analysis was used to synthesize the findings into guidelines for developing the manufacturing industry of small and medium-sized enterprises in Thailand, preparing them for transition to large businesses.

Quantitative Research: The data was analyzed using descriptive statistics, including frequency distribution and percentage calculation. For the 5-level rating scale, the mean and standard deviation were calculated. Additionally, multivariate statistics were used for structural equation modeling (SEM), utilizing the AMOS software for advanced statistical data analysis.

Results

Analysis of the General Characteristics of the Manufacturing Industry: It was found that businesses have been operating for 10-15 years (42.10%), are predominantly Thai-owned (58.90%), rely on financial institutions for funding (47.20%), are established as limited companies (63.40%), and have their offices located in Thailand (75.00%).

Analysis of the Structure and Operational Characteristics of the Manufacturing Industry: The most suitable business strategy is creating a product advantage (40.40%). The most emphasized aspect of organizational learning is mentorship from employees with specialized knowledge (34.80%). A key quality of leaders in these organizations is treating colleagues with kindness and generosity (38.60%), and leadership development at various levels focuses on creating experiences, comprehensive knowledge, and expertise in business (43.00%).

Qualitative Research

Digital Technology: To prepare small and medium-sized enterprises (SMEs) in Thailand's manufacturing industry for expansion into larger businesses, entrepreneurs must have knowledge of digital technology. This facilitates the production or provision of new services that meet constantly changing needs, creating a competitive advantage. Digital technology allows SMEs to diversify their online market channels, adopt new technologies to improve product quality, increase purchasing power, and sustainably grow their businesses. It also serves as a tool for SMEs to communicate with their customer base through various channels, creating market opportunities, enhancing business efficiency, and supporting competition in new forms. Moreover, SMEs must possess essential knowledge in artificial intelligence, automation systems, and Big Data to develop their businesses and enhance their existing skills through lifelong learning, accessible anytime and anywhere. Importantly, digital technology helps businesses reduce costs, increase production efficiency, improve the quality of goods and services, create employment opportunities, expand markets, and elevate the level of products and services.

Knowledge Management: To develop the manufacturing industry in small and medium-sized enterprises (SMEs) in Thailand and prepare them for larger businesses, it's crucial to foster an organizational atmosphere where daring thoughts and unique opinions are encouraged among all members. This approach helps understand needs, recognize problems that impede work, and open opportunities for everyone's proactive participation in organizational development, from executives to operational staff. Knowledge management for SMEs should start by identifying the knowledge necessary for the organization and analyzing its location within different departments, focusing on the most critical knowledge and its custodians to allocate resources efficiently. Additionally, if SMEs lack sufficient resources, they should support employees in exchanging and learning from each other, fostering new knowledge, and ensuring all organizational levels have equal access to knowledge and self-development opportunities. This leads to efficient performance and enables SMEs to compete at the highest level. Moreover, SMEs should integrate modern information technology systems to allow personnel to swiftly seek new knowledge externally.

Entrepreneurial Leader: For the development of the manufacturing industry in small and medium-sized enterprises (SMEs) in Thailand and their readiness for larger businesses, entrepreneurs must possess a visionary approach to management that is adaptable to change. They should listen to others' opinions, collaborate, and jointly solve problems with organizational staff to enhance work efficiency. Additionally, they should support and assist their colleagues, possess communication skills, and have the ability to persuade and motivate employees to participate in work activities. Emotional intelligence is also crucial, enabling the effective management of one’s own and others’ emotions. Entrepreneurs should have intellectual intelligence, analytical thinking skills, and continuous self-development to become knowledgeable individuals who can effectively impart their knowledge to others. They should never stop developing themselves, be open to learning new things, and develop the necessary skills to a level of expertise, preparing for future challenges. Moreover, entrepreneurs should have knowledge of technology, understand it, and learn to solve problems associated with its implementation. They should also be knowledgeable about social media and digital marketing to enhance business opportunities and respond appropriately to current consumer behavior.

Innovative Organization: For the development of the manufacturing industry in small and medium-sized enterprises (SMEs) in Thailand and their evolution into larger businesses, organizational innovation is a crucial factor that enhances the value of SMEs. It enables organizations to be profitable and increases their competitive capabilities. Furthermore, an organization's innovation stems from its employees' creativity and long-cultivated experiences. A key development approach is that SMEs must actively innovate or invent new things, such as new services, products, or work processes, which are valuable and beneficial quickly. Simultaneously, SMEs must continually seek new knowledge, develop it, and share it equitably among employees, fostering collective organizational innovation. If SMEs want to create innovation, it is vital to continuously develop production and service processes to cope efficiently with current changing conditions. At the same time, creativity and innovation in the organization can effectively solve emerging problems, as past problem-solving methods may not be applicable to current situations.

Quantitative research

The results of the analysis of the importance of the components: Approaches to Developing the Manufacturing Industry of Small and Medium Enterprises for Readiness Towards Large Businesses in Thailand as a whole, the overall significance was at a high level ($\bar{x}$ = 4.01; S.D.=0.51). All aspects are important at a high level. In order of importance from the most to the least as follows: digital technology was significant at a high level ($\bar{x}$ =4.68; S.D.= 0.33), entrepreneurial leadership was at high level ($\bar{x}$=4.65; S.D.=0.38), knowledge management was at high level ($\bar{x}$=4.64; S.D.=0.40), and innovation organization was very important and at the high level ($\bar{x}$=4.50; S.D.=0.35).

The results of the structural equation modeling analysis: Approaches to Developing the Manufacturing Industry of Small and Medium Enterprises for Readiness Towards Large Businesses in Thailand found that the probability of chi-squared (CMIN-ρ) was 0.128, greater than 0.05, indicating that this model did not exist. Statistical significance which was relative chi-squared value (CMIN/DF) was 1.126, was less than 2.00, the GFI was 0.955, was greater than 0.90, and the root mean squared index of error estimation (RMSEA) was 0.955, was greater than 0.90, equal to 0.015, less than 0.08, passes the assessment criteria is consistent with empirical data. as depicted in Figure 2.

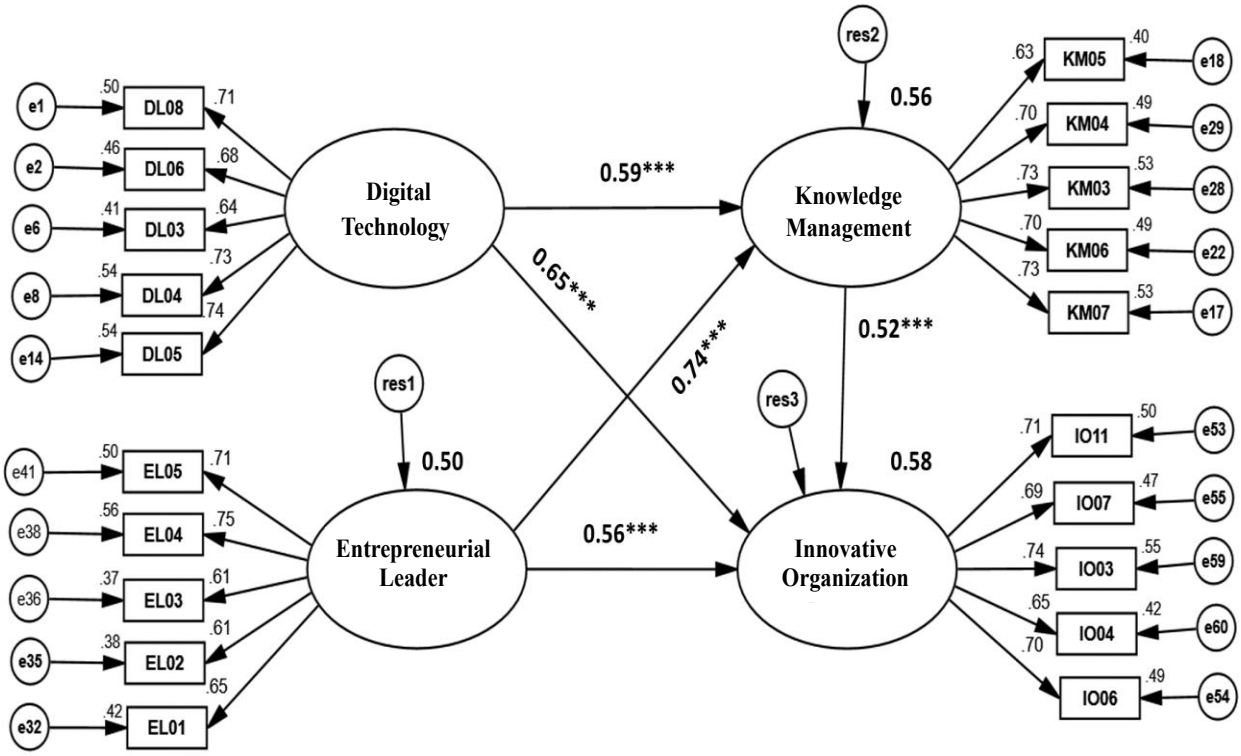

Figure 2 The results of the structural equation modeling analysis
(Source: Researcher, 2023)

Table 3 The results of the structural equation modeling analysis

Evaluating the Data–Model Fit	Criteria	Results
CMIN–p (The chi-square probability level value)	More than 0.05	0.128
CMIN/DF (Relative chi-square value)	Less than 2.00	1.126
GFI (Conformity Index)	More than 0.90	0.955
RMSEA (Root Mean Square Error of Approximation)	Less than 0.08	0.015

Remark: *** Significant Level at 0.001

The results of direct influence analysis: revealed that digital technology had a direct influence on knowledge management (TE=0.59). The digital technology had a direct influence on innovation organization (TE=0.65) and entrepreneur leadership. There was a direct influence on knowledge management (TE=0.74. The entrepreneurial leadership had a direct influence on innovation organization (TE=0.56). The knowledge management had a direct influence on innovation organization (TE=0.56). TE=0.56).

The Results of indirect influence analysis: it was found that digital technology affects innovation organization through knowledge management, (IE=0.31) and entrepreneurial leadership affecting the organization of innovation through knowledge management components, (IE=0.38) shown in Table 4.

Table 4 Analytical statistics of direct and indirect

Latent Variables	Variance (R^2)	Effect	Digital Technology	Entrepreneurial Leader	Knowledge Management
Innovative Organization	0.58	DE	0.65***	0.56***	0.52***
		IE	0.31***	0.38***	0.00***
		TE	0.96***	0.94***	0.52***
Knowledge Management	0.56	DE	0.59***	0.74***	-
		IE	0.00***	0.00***	-
		TE	0.59***	0.74***	-
Entrepreneurial Leader	0.50	DE	-	-	-
		IE	-	-	-
		TE	-	-	-

Remark: *** P < .01, DE=direct effect, IE=indirect effect, TE=total effect

Hypothesis test results

Approaches to Developing the Manufacturing Industry of Small and Medium Enterprises for Readiness Towards Large Businesses in Thailand, 5 hypotheses were found to be in accordance with the assumptions set. The results are shown in Table 5.

Table 5 Hypothesis test results

Hypothesis test results	Test results
H1: Digital technology has a direct influence on knowledge management.	accept
H2: Digital technology has a direct influence on innovative organizations.	accept
H4: Entrepreneurial leadership has a direct influence on knowledge management.	accept
H4: Entrepreneurial leadership has a direct influence on innovative organizations.	accept
H:5 Knowledge management has a direct influence on innovative organizations.	accept

Discussions

The results of H(1) Digital technology had a direct influence on knowledge management: because digital technology supports collaboration among all parties quickly; facilitates communication both internally and externally which helps to spread knowledge in the organization both vertically and horizontally, inside and outside the organization effectively and the use of effective technology combined with good knowledge. The management will increase the efficiency of innovation, resulting in the organization to develop and design a variety of new products. Consistent with the study of Ting et al. (2021), it was found that digital technology is the basis for collecting knowledge from inside and outside the organization to support the entire organizational system. The use of digital technology in the organization creates good operational guidelines that are clear, employees can work smoothly, which leads to organizational innovation (Hoang et. al., 2023).

The results of H(2) Digital technology has a direct influence on innovation organization: because the organization has a policy to encourage and train employees to be creative in order to develop the organization. There is a clear operational procedure that promotes learning and jointly solving various problems that arise in the organization from the executive level to the operational level in order to create a healthy atmosphere that is conducive to work and pays attention to the needs of employees. This is in line with the study of Ardito et al. (2022) about personnel development. The development of digital technology into new forms can be used in practice resulting in the organization having big data and various platforms for the dissemination of information and communication within the organization (Nwankpa et al., 2022). Digital technology is used to change the way of working. The development of production processes to be modern in order to be a strong innovative organization.

The results of H(3) Entrepreneurial leadership has a direct influence on knowledge management: because the organization has leaders with sufficient knowledge of the business environment. Focus on knowledge management and encourage employees to learn continuously. To apply the existing knowledge to help formulate a joint strategy for developing new products and services to be modern. In addition, the organization has stored knowledge

along with the appropriate consulting services for implementation for maximum benefit consistent with the study of Mehmood et al. (2022), it was found that entrepreneurial leadership should be creative. They have the courage to share knowledge with team members to help create organizational innovation together. From the study of Latif et al. (2021), it was found that entrepreneurs have prepared training course plans according to individual aptitudes. They can provide training and develop specific skills for personnel. There is team work. The knowledge is shared to have the ability to adapt, to be ready to deal with future crises and help increase work potential at all levels. According to the study of Shahzadi et al. (2021), entrepreneurial leadership has a role in promoting knowledge management process in the organization so that employees can use knowledge to create success for the organization.

The results of H(4) Entrepreneurial leadership has a directly influenced on innovation organization: because the organization has leaders who can analyze market trends. They understand market volatility and adjust the way of working to effectively accommodate the changes that occur. They listen to opinions and suggestions from employees at all levels. They are empowered to make decisions, to manage work in each department and to achieve the goals as planned. They will be leaders who act on visions and goals. They set an example for employees in the organization and focus on working as a team rather than focusing on individuals. According to research results, entrepreneurial leadership results in organizational innovation. A study by Djalil et al. (2023), found that entrepreneurial leadership must be creative, must know how to take risks, and must have creative solutions at hand. A person with a vision of the future of the business likes the challenge to lead to an innovative organization. A study by Najar & Dhaouadi (2020) found that innovation is a key factor that will add value to business growth or create higher competitiveness. If employees are always seeking new knowledge and sharing the knowledge within the organization, everyone will be participating in an organizational innovation together.

The results of H(5) Knowledge management has a direct influence on innovative organizations: because the organization has stored knowledge from experience. The specific expertise of the personnel is clearly marked with a mentoring system. They transfer work experience to new employees. The suggestions are collected. They will be open to new ideas. As a result, the organization is innovative. They have competitive abilities and help maintain the structure of the organization as a whole. Consistent with the study of Andersson et al. (2023), it was found that entrepreneurs will achieve higher success if knowledge management is consistently put into practice to achieve the discovery of creativity to make the organization competitive. The study of Samie & Jazghani, (2022) found that organizational innovation can occur through knowledge management and knowledge sharing. They solve problems that will arise appropriately. It also helps the organization to survive even when faced with a rapidly changing environment. The organizations that focus on knowledge management will be able to respond to changes that occur in the future as well, helping the organization to manage effectively.

Conclusion and suggestions

Conclusion

Business strategy for these organizations is creating a product advantage, emphasizing mentorship systems from knowledgeable employees, and key leadership qualities, including treating colleagues with kindness and generosity and developing leadership at various levels focusing on experience, comprehensive knowledge, and business expertise. The results of the analysis of the structural equation model for small and medium-sized enterprises management for sustainable strength found that the model is consistent with the empirical data.

Suggestions for research

1. To guide entrepreneurs to see the importance of each component for Approaches to Developing the Manufacturing Industry of Small and Medium Enterprises for Readiness Towards Large Businesses in Thailand from the results of this research. There are important elements that lead to the creation of sustainable strength, namely: digital technology elements, elements of entrepreneurial leadership, knowledge management components and organizational elements of innovation that are from the research results. All sectors, including government, private and business sectors, should support the development of small and medium-sized enterprises throughout the system, forming a strategic plan for developing small and medium- sized enterprises by integrating cooperation from all departments to create opportunities for highly efficient development. For example, the government sector acknowledges the problem and finds a solution; the private sector participates in the development and the business sector improves the management of small and medium- sized enterprises to meet standards as well as follow- up and do evaluation to build sustainable strength.

2. In addition to this research, factors that create sustainable strength for the organization should be studied to guide the development of small and medium-sized enterprises to have the potential to compete and are ready to adapt to changes that will occur in the future that will lead to sustainability.

3. The conceptual framework from this research should be studied separately according to the size of the business such as small-sized enterprises, medium-sized enterprises and large-sized enterprises in order to obtain suitable research results for each size of enterprise. as shown in Figure 3.

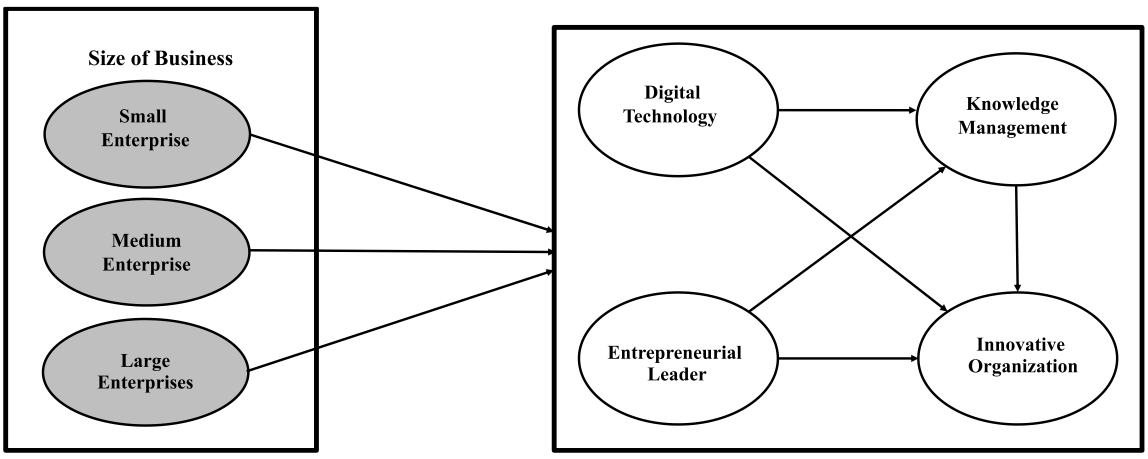

Figure 3 Suggestions for research (Source: Researcher, 2023)

New knowledge and the effects on society and communities

Approaches to Developing the Manufacturing Industry of Small and Medium Enterprises for Readiness Towards Large Businesses in Thailand. Various developments must be made as follows:

1. Automation System: To enable manufacturers to have greater control over operations, which helps increase productivity and reduce costs.

2. Digital Marketing: Implementing digital marketing through various channels accessible anywhere, anytime, 24 hours a day.

3. Branding :Creating a brand that becomes well-known and widely accepted.

4. Distribution: Channels Distribution channels should be a mix of both online and offline.

5.Teamwork: Building a team with expertise in social media.

6. Convenience: Providing quick and efficient services, transportation, or payment processing.

7. Products and Services: Developing products and services to be efficient and distinct from competitors. as depicted in Figure 4.

Figure 4 New finding (Source: Researcher, 2023)

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