

**THAI SMES' RESPONSE IN THE DIGITAL ECONOMY AGE:
A CASE STUDY OF THE SERVICE SECTOR OF
COMMUNITY - BASED TOURISM IN THE
UPPER NORTHERN PROVINCES
GROUP 2**



Wannapa Tongdaeng

**A Dissertation Submitted in Partial
Fulfillment of the Requirements for the Degree of
Doctor of Public Administration
School of Public Administration
National Institute of Development Administration
2021**

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ABSTRACT

Title of Dissertation	THAI SMES' RESPONSE IN THE DIGITAL ECONOMY AGE: A CASE STUDY OF THE SERVICE SECTOR OF COMMUNITY - BASED TOURISM IN THE UPPER NORTHERN PROVINCES GROUP 2
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The purposes of the study were to identify the factors affecting SMEs' response in the digital economy age, to examine the context of policy implementation and the role of stakeholders in the promotion and development of SMEs in the service sector of community-based tourism (CBT), to analyze the competitiveness of CBT, and to reveal the gap of service quality of SMEs at the CBT attractions. The research design consisted of both the qualitative and quantitative methods in order to fulfill four objectives of the study. The findings of this study are as follows. (1) It was found that five independent variables, i.e., the strategic management factor, the decision-making process factor, the structural contingency factor, the perceptive factor, and the SMEs' potential factor, in the multiple regression model could together predict dependent variables. (2) Policy actors can be divided into three levels. Politicians or the Cabinets at the national policy level, high-level bureaucrats at the implementation level, and stakeholders of CBT in the province and community at the local level. Policy instruments are plans and projects to support SMEs. Stakeholders as the local-level actors played the role in development of SMEs under the concept of Collaborative Public Management. (3) The competitiveness analysis of CBT can be divided into five forces: rivalry of CBT, threat of new entrants, threat of substitute, bargaining power of suppliers, and bargaining power of customers. And (4) the gap of service quality of the CBT business. There are some problems in assurance of service.

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CHAPTER 1

INTRODUCTION

The following chapter provides the details about significance, objectives, scope, and benefits of the study on “Thai SMEs’ response in the digital economy age: A case study of the service sector of community-based tourism in the upper northern provinces group 2”.

1.1 Significance of the Study

Post-industrial economy began in 1950, when the traditional industry was transformed to mass production and then to the knowledge economy in 1990, when the global production systems were based on modern technology which drove the economy. And since the year 2000 until now, the world has entered the 4th industrial revolution or the era of digital economy (Berdykulova, Sailov, Kaliazhdarova, & Berdykulov, 2014), when products, services, assets, finance, labor, and information circulate swiftly, especially in emerging countries. As a result of the extensively growing economy around the world and the widespread usage of digital technology and the internet for communication, entertainment, commerce, education, public healthcare, as well as other public services, the production system of the digital economy era became more complicated and connected at the global level (United Nations, 2018, p. 17).

Instead of human labor in the conventional mode of production, the digital economic development requires knowledge and information technology in the form of interactive media as the basis of production to add value to goods and services. And when the world fully enters the digital economy, the overall economic structure will also change. The structure of digital economy consists of three parts: (1) computing system – hardware, software, and services, (2) communication infrastructure – cable, satellite, and

wireless system, and (3) content – entertainment, print media, and content providers (Tapscott, 2015, pp. 16-19) (Figure 1.1).

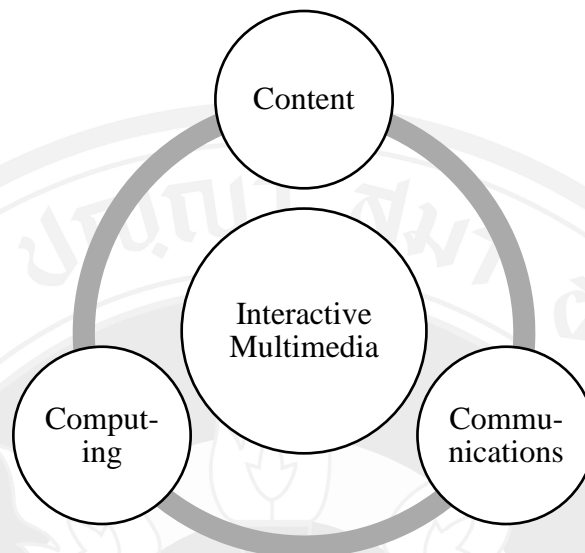


Figure 1.1 The Merge of Information Technology in the Era of Digital Economy

Source: New Paradigm Learning Corporation (1996) as cited in Tapscott (2015, p. 19)

Furthermore, digitalization affects the characteristic of people's job descriptions. According to the report by McKinsey Global Institute, within the year 2020, half of the activities in the society applied robotics technology as well as artificial and machine technologies (Mühleisen, 2018, p. 7), especially in the production sector where the technology could reduce the cost, increase efficiency, and generate income. Therefore, investment in digital technology was linked with the productivity of business units at all levels. This became obvious as the global economy grew stronger throughout the decade after the world's economic crisis in 2008. The increase in global demand was not only the result of economic recovery but also the global production, which replaced human labor with technology, while the rate of employment remained stable (World Economic Forum, 2018, p. 7) (Figure 1.2).

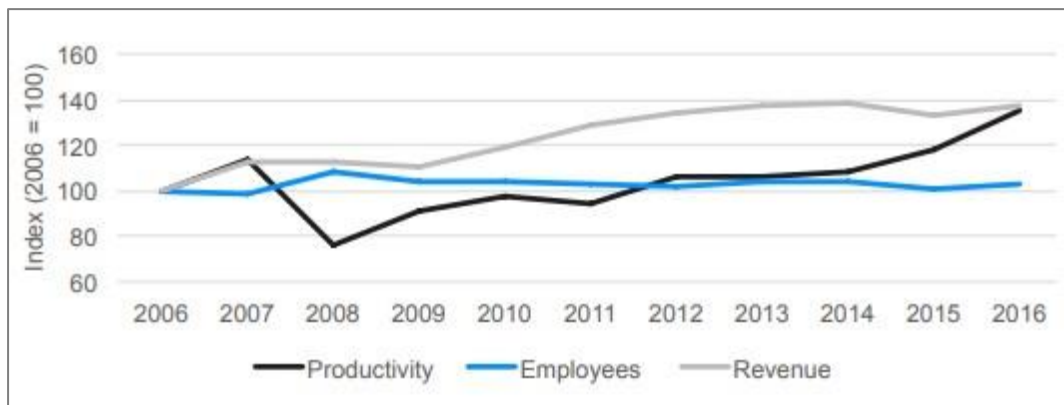


Figure 1.2 The Revenue, Production, and Employment between 2006 and 2016

Source: World Economic Forum (2018, p. 7)

It was predicted that technological investment in 2020 would increase 13% at 2.4 trillion dollars per year, with the largest investment ratio to the Internet of Things: IoT at one trillion dollars or 42% of all technological investment, following by the investment in mobile or social media at 25%, respectively (World Economic Forum, 2018, p. 7) (Figure 1.3).

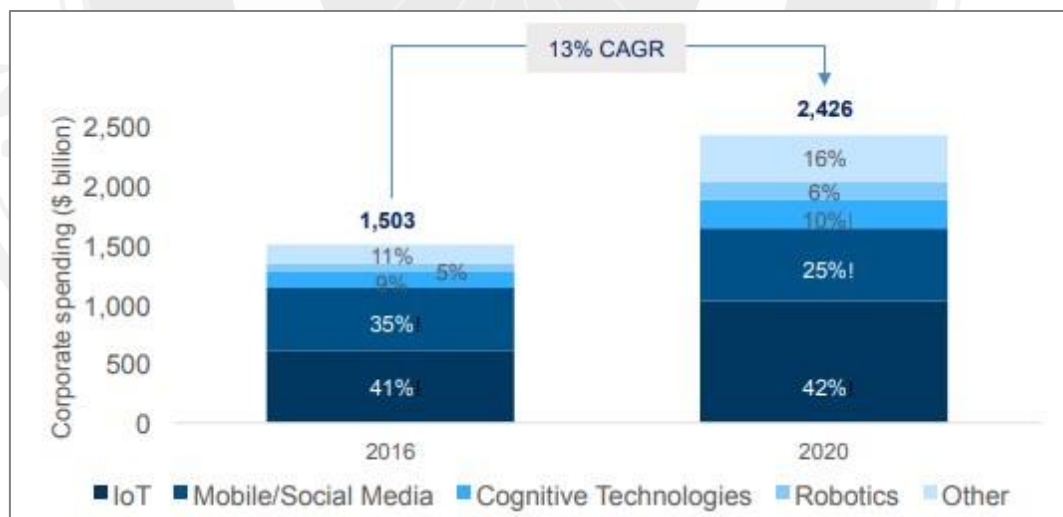


Figure 1.3 Modern Global Technology Investment between 2006 and 2016

Source: World Economic Forum (2018, p. 8)

Because of the fourth digital revolution described above, each country has witnessed the transition to the era of digital economy, and the form of economic activities has been changing immensely. The development of digital system for such economic activities will not only increase the production efficiency and create market opportunity but also add to the global value chains (GVCs). Especially, the e-Commerce has taken a major role in commerce and service nowadays, encouraging consumers to access goods and services conveniently via various digital platforms, such as Alibaba of China, Go-food or Go-jek of Indonesia, Lazada, Zalora and Grab of Singapore, etc. (ASEAN Secretariat, 2018, p. 166). When considering the ASEAN economic growth rate, it is obvious that the overall economy of this region is growing stronger and stronger at the remarkable rate, following just some countries such as the United States, China, Japan, Germany, United Kingdom, and France. And 99% of the region's GDP came from six major countries: Indonesia, Thailand, Malaysia, Singapore, the Philippines, and Vietnam. It was predicted that the growth rate of the ASEAN economy in 2015-2020 could be as high as 8.9%. Moreover, the result of national development as measured by the digital economy index showed that apart from Singapore which was classified as the top 20 countries of the world with national development according to the digital economy index, the five countries, i.e., Indonesia, Thailand, Malaysia, the Philippines, and Vietnam in ASEAN, also had high potential for national development (Kearney, 2016, pp. 6-7) (Figure 1.4).

		UN ICT Index (2013)	Digital economy rank (EIU, 2011)	Digital Evolution Index ¹ (Tufts University, 2013)
ASEAN	Singapore	16	8	I – Stand out
	Brunei	66		
	Malaysia	71	36	II – Break out
	Thailand	81	49	II – Break out
	Vietnam	101	62	II – Break out
	Philippines	103	54	II – Break out
	Indonesia	106	65	IV – Watch out
	Cambodia	127		
	Laos	134		
	Myanmar	150		
Select peers	United States	14	3	I – Stand out
	China	86	56	II – Break out
	India	129	58	II – Break out
Group averages	EU	18	22	
	GCC	38	42	
	NAFTA	44	18	
	MERCOSUR	78	48	
	ASEAN	95	45	

¹ Stand out = High digital development; Break out = Strong potential but low score; Watch out = Both opportunities and challenges and low scores

Figure 1.4 Global Digital Ranking Index

Source: ITU (2013), EIU (2011), and Tufts University (2013) as cited in Kearney (2016, p. 8)

As for Thailand, the government declared the national development policy based on the digital economy concept in 2015, through the implementation of Thailand 4.0 policy, the 13th national economic and social development plan (for 2021-2025), and the 20-year national strategic plan (2017-2036). These policies aim to develop the national economy through the information technology applications in economic activities, from production towards the distribution of goods and services to final consumers (Kiatsanpipop, 2015), especially the boost of digital economy through the group of small and medium enterprises (SMEs). Over 90% of Thai

businesses can be considered SMEs (OSMEP, 2017), which are of important power that will boost the growth in all sectors of the Thai economy, as a mechanism which propels the nation forward and evenly distribute economic benefits to people. Most Thais also depend on the SMEs (Santiprabhob, 2017), as in 2017 the employment by SMEs was as high as 10.7 million persons, or 80% of all the employment. SMEs also generated 20 trillion baht of income, or 42% of GDP (TMB, 2017, p. 22). And in 2018, the growth rate of SMEs was still at 3.3%, with the total value at 43% of GDP. As for the year 2019, the SMEs growth had been predicted to be between 4.8% - 5.2% (MGR Online, 2018) (Figure 1.5).

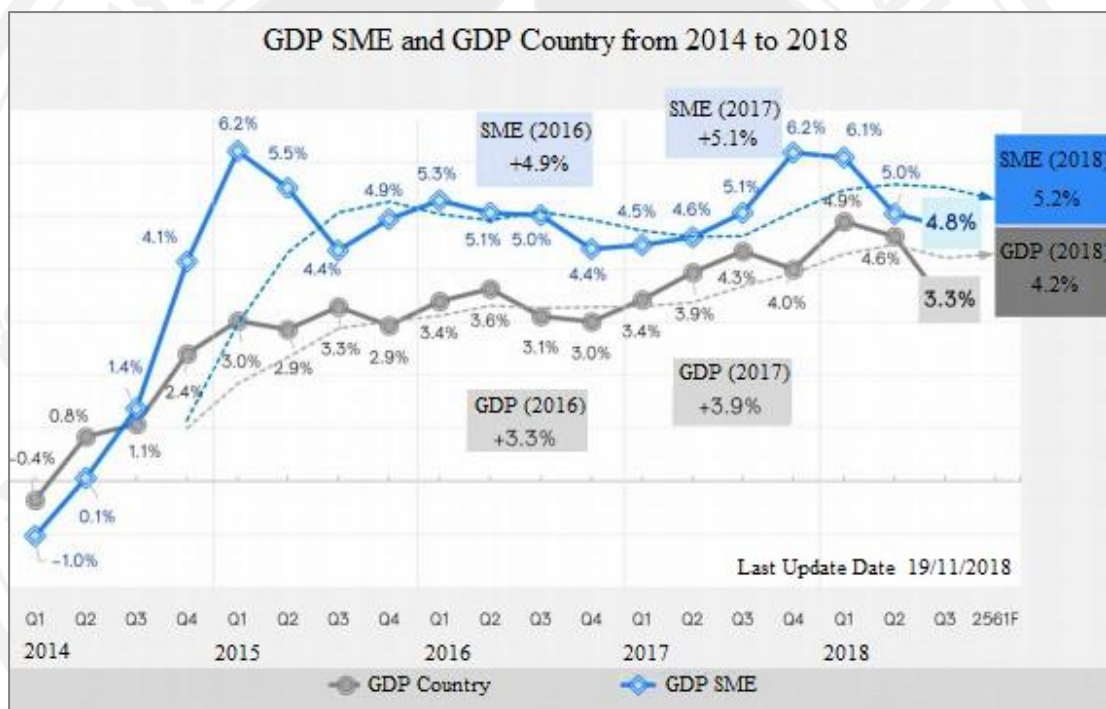


Figure 1.5 GDP SME and GDP Country between 2014 and 2018

Source: OSMEP (2018a)

Despite the continuously decreasing proportion of national GDP from SMEs within the manufacturing sector (OSMEP, 2019b, p. 11), the percentage of GDP from SMEs within the service sector tended to increase, which was evident in the expansion of SMEs within the service sector during 2018. SMEs from the service sector expanded most, at 1.48%, followed by SMEs in trade, agricultural, and

manufacturing sectors at 0.90%, 0.79%, and 0.29%, respectively (OSMEP, 2019a, p. 4-04), which corresponded to the growth in Thai tourism business, a source of paramount income within the past few years. A closer look at the proportion of business within the service sector related to Thai tourism revealed that most businesses, or 99.8% of them, were SMEs in tourism, hotel, restaurant, recreation, logistics, communication, real estate, financial intermediaries, public health services, and work assistant services (CIO World & Business, 2017). Furthermore, the highest GDP from SMEs in the service sector came from hotel and restaurant business, at the total value of 646,210 million baht, followed by logistics and warehouse business at the value of 400,567 million baht, and finance and insurance business at the total value of 398,966 million baht. The percentages of GDP value from the SMEs in these three business groups per the total amount of national GDP from the service sector were 17.9%, 12.9%, and 7.8%, respectively (OSMEP, 2019b, p. 15). Hence, the proportion of employment within the service sector was highest in the overall employment situation in 2019, with the total employment of 6,052,338 persons, or 90.74% from the national employment within the service sector. In 2019, the employment rate within the service sector increased at 6.82% compared with that in 2018 (OSMEP, 2019a, p. 4-09). In addition, the analysis of factors related to Thai tourism industry's growth revealed that due to its geographical advantages, which provide the country with beautiful natural attractions and variety of eco systems, Thailand is also famous in terms of service quality, courtesy of people, hospitality, fresh and delicious food, 24-hours service, affordable price of accommodation and food which respond to all levels of customer's needs, as well as the fine, delicate, unique, and rare arts and cultures (CIO World & Business, 2017). Therefore, it is not surprising why Thailand is praised as one of the best destinations for tourism. As a result, Thailand tourism has expanded continuously, as that the income from tourism in 2018 grew 16.07% from the previous year. Especially, income from foreign tourists grew 17.55%, and income from Thai tourist grew 12.21%. Hence, the total income from tourism has been serving as an important drive behind the economic growth of Thailand (GSB Research, 2018, p. 1).

Since SMEs in the service sector have played an important role in Thai tourism as mentioned above, which affects the total economic growth of the country,

the Thai government finds it necessary to directly distribute income from tourism to people at the local level in the form of community-based tourism (CBT). This type of tourism focuses on the unique local characteristics and the sustainability of environment, society, and culture, based on the participation of community members. The CBT does not only answer the need of tourists but also help create the capacity of each community, without destroying the existing ways of life or community resources. And finally, income from tourism industry will be distributed among the grassroots economy of the country, which corresponds to the government policy that aims to develop the grassroots economy as the driving power of the country (GSB Research, 2018, p. 1). Furthermore, the government focuses on the development of strengths within the service sector, such as the improvement of transportation infrastructure, the quality and standard of SMEs, human resources development related to the service sector of the country, and linking the internal market to the global market through the various online networks, in order to ensure the continuous growth of Thai SMEs in the service sector, and the competitive edge at the international level (CIO World & Business, 2017). Hence, the Thai government has expected that SMEs can boost the economic growth for at least 50% of the GDP in 2025, and SMEs will be a major source of national income, like those in the developed countries such as Germany, France, Italy, and Japan (Theparat & Chantanusornsiri, 2018).

Nevertheless, it is essential for Thai SMEs' entrepreneurs in the service sector to always engage in self-development activities. In order to be Smart SMEs, they must learn to apply technologies and innovation in their business process, in order to increase their business capacity within the global market through various online channels (Theparat & Chantanusornsiri, 2018) among many changes in the digital era when all kinds of business are affected, especially by the acceleration of technology application in management. However, SMEs of the tourism sector in many areas are facing the problem of adjustment due to the digital technology changes, especially the skill of digital marketing which becomes increasingly important to the business competition (Krungthai Compass, 2019, p. 2). Besides, the survey in Thai SMEs during the past 5 years by TMB Analytics found that 38% of Thai SMEs have not been yet ready for new technologies for at least three reasons. First, they were worried

that the new startup would be troublesome. Secondly, they had no time for research and innovation. And finally, they deemed that the existing actions was already good enough (Techsauce, 2018). For this reason, it is obvious that the adjustment of Thai SMEs to cope with swiftly changing environment in the digital economy would highly depend on the SME entrepreneurs' perception of opportunity and threat within the development stream of digital economy. In other words, the entrepreneurs' perception could affect their decisions and actions to ensure that their own SMEs business could respond well to the changing environment, in terms of both opportunity and threat. This corresponds to structural contingency theory by Donaldson (1995), which stated that the organization management team will adjust their organization structure in accordance with the environment, in order to ensure the efficiency, effectiveness, and survival. Hatch and Cunliffe (2006) further explain that as the organization environment is complex, especially the technological development, which is constantly changing, the organization must attempt to respond to its environment mainly with proactive strategy. And the organization members must be creative and focus on the effectiveness to reach the goal. Currently, the actions of Thai SMEs still need a lot of adjustment to cope with the major technological changes in the digital economy environment.

The background of the fourth industrial revolution and the Thai SMEs condition of business actions, especially in the service sector of the tourism industry, within the development stream of digital economy as described above led to this study of "Thai SMEs' response in the digital economy age: A case study of the service sector of community-based tourism in the upper northern provinces group 2". The upper northern provinces were selected as the focus of the study, due to their status as the third destination for tourists, following the southern and eastern provinces which are the seaside attractions. In 2018, the total number of tourists who visited the northern region reached 24,163,245, or 4.42% growth compared with that in the previous year. Each tourist spent 2,840 baht per day on average (MOTS, 2018). Meanwhile, the Thai government urged the tourism promotion policy with the following six approaches: (1) environmental friendly and quality improvement of tourism, (2) rebranding the image of Thai tourism in the eyes of global tourists, (3) using ICT to promote tourism in accordance with the concept of Thailand 4.0, (4)

prioritizing the use of social media for public relation of the country's tourism, (5) improvement of services and facilities to the international standard, and (6) distribution of tourism income to people at the local level, especially in the form of community-based tourism (CBT). Therefore, this research aimed to study the response of SMEs in the service sector to the CBT policy, within the trend of technological changes, in terms of both the response to opportunity and treat in the age of digital economy. The area of the study was limited to the upper northern provinces group 2, which consists of Chiang Rai, Phayao, Nan, and Phrae.

1.2 Objectives of the Study

1.2.1 To identify the factors which affect the response of SMEs in the service sector of community-based tourism in the upper northern provinces group 2 in the digital economy age.

1.2.2 To examine the context of policy implementation and the role of stakeholders in the promotion and development of SMEs in the service sector of community-based tourism under the framework of digital economy development.

1.2.3 To analyze the competitiveness of SMEs in the service sector of community-based tourism in the upper northern provinces group 2.

1.2.4 To reveal the gap of service quality, problems, and obstructions of SMEs in the service sector in the community-based tourism attractions in the upper northern provinces group 2.

1.3 Scope of the Study

1.3.1 Content: The content can be divided into four major parts as follows.

The first part is the study of factors affecting the responses to the era of digital economy of SMEs in the service sector of the community-based tourism, within the upper northern provinces group 2.

The second part is the study of the context of policy implementation and the role of stakeholders in the promotion and development of SMEs in the service sector of community-based tourism under the framework of digital economy development.

The third part is the analysis of the competitiveness of SMEs in the service sector of community-based tourism in the upper northern provinces group 2.

The final part is the examination of the gap in the service quality, the problems, and obstructions of SMEs in the service sector of the community-based tourism, within the upper northern provinces group 2, which would lead to the policy suggestions for the promotion and development of SMEs in the service sector of community-based tourism, so that they could adapt, survive, and grow up among the current of technological change in the era of digital economy.

1.3.2 Geographical area: Focus on the community-based tourism attractions within the upper northern provinces group 2, of Chiang Rai, Nan, Phayao, and Phrae, in line with the survey of community-based tourism attractions of the action plan to promote sustainable and creative community-based tourism of the years 2018-2022, by the Office of the Permanent Secretary, Ministry of Tourism and Sports.

1.3.3 Study time: 1 year and 9 months, starting from March 1, 2019 to December 31, 2020.

1.3.4 Population: Including the stakeholders from the promotion and development of community-based tourism within the upper northern provinces group 2, which divided into six groups as follows (DASTA, 2018, pp. 24-26).

The first group is the business sector, consisting of three major groups: (1) SMEs entrepreneurs in the service sector, (2) the Provincial Federation of Thai Industries, and (3) the Provincial Chamber of Commerce, all of which are the major base of tourism industry. The tourism policy driven by the government requires the coordination and participation from the business sector. On the other hand, the business sector must still be under the government's control, to ensure that the business will be conducted creatively with responsibility to the community, society, and environment.

The second group is related government agencies, which include (1) the Provincial Office of Tourism and Sports, (2) Tourism Authority of Thailand, (3) Designated Areas for Sustainable Tourism Administration (Public Organization), (4) local administrative organizations. This group is mainly responsible for coordination as well as promote people's participation, to ensure the same direction of tourism policy formulation and promotion.

The third group is local people committees, each of which represents the community and responsible for the promotion and development of community-based tourism, from the process of initiation and implementation to the result of tourism development.

The fourth group is scholars with the role of knowledge support and promotion of labor skills and intellectual capital, which are important factors for the entry to the tourism industry.

The fifth group is Non-Governmental Organizations (NGOs), who coordinate with local people aiming to promote and conserve the natural resources, society, and economy, in order to raise the awareness of the society regarding the obligations and responsibilities of all sectors in driving the creative tourism industry in Thailand.

The last group is the group of customers or tourists who visit or use tourism service at the attractions within communities of the upper northern provinces group 2.

1.4 Benefits of the Study

1.4.1 This study will reveal the factors which affect the response of SMEs in the service sector of community-based tourism, in the upper northern provinces group 2 to the digital economy age.

1.4.2 This study will elaborate the context of policy implementation and the role of stakeholders in the promotion and development of SMEs in the service sector of community-based tourism under the framework of digital economy development.

1.4.3 This study will reveal the competitiveness of SMEs in the service sector of community-based tourism in the upper northern provinces group 2.

1.4.4 This study will bring awareness regarding the gap of service quality and the problems and obstructions of conducting business in the service sector of community-based tourism, in the upper northern provinces group 2.

1.4.5 This study will provide some policy suggestions to promote and develop the SMEs in the service sector of community-based tourism, in order to ensure their adjustment, survival, and growth within the technological changes of the digital economy age.

CHAPTER 2

LITERATURE REVIEW

Based on the review of literature related to this study on “Thai SMEs’ response in the digital economy age: A case study of the service sector of community-based tourism in the upper northern provinces group 2”, the following theories and related research are described in this chapter.

2.1 The Concept of Driving Thai SMEs in the Digital Economy Age

The transition to the digital economy era has caused all sectors now to prioritize the application of modern technologies such as Artificial Intelligence (AI), Big data, Nano technology, Smartphone, and Internet of Things. Moreover, most people in the world can access various databases through their mobile devices which can be connected to the internet with ease. Meanwhile, the investment sectors in Europe, Asia, and America are adjusting themselves and focusing on the technological investment in response to the development of digital economy as well (Edge Foundation, 2016, pp. 6-7). Furthermore, many industries are utilizing the digital technology, including the public health, government administration, financial management, and especially in the manufacturing of goods and services. It was found that the digital technology raised the United States’ GDP growth for over 75% (Carlsson, 2004, p. 262). Regarding the ASEAN digital economy, the overall market is still preparing for the transition to the digital economy age. It is expected that the countries in ASEAN region will cease to be those with low labor cost by introducing new technology to improve their production processes and to become developed countries one day. Nevertheless, the development of digital connectivity system within the region is urgently required, especially the countries which would be the connectivity hubs and the pilot area for the new technologies such as Singapore and Thailand, together with the development of best practices in both the organizational

level and the national level, in order to propel the major business sector or SMEs (PwC Growth Markets Centre, 2018, p. 25).

2.1.1 Definition of the Digital Economy

The Digital Economy is defined as the networked intelligence, which includes not only the technological and machine networks but also the connectivity of human networks through technology. The networks will join the wisdom, knowledge, and creativity of innovations to generate wealth and improve the overall society (Tapscott, 1996). The socio-economic activities in the digital age will be driven through computers, information technologies, and the internet (ISOC & TRPC, 2015, p. 6; Ruud, Stijn, Simon, & Pim, 2017, p. 10; Unold, 2003, p. 48; Yu, 2017, p. 3) for the manufacturing, commerce, service, and consumer sectors. All of the economic activities will be linked with the infrastructure for information technologies, all of which will be the digital value chain, including the digital payment, logistics, as well as the support of digital economy's growth, such as the digital industry development, increasing manufacturing productivity, and supporting SMEs to enter the global market, etc. (ASEAN Secretariat, 2018, p. 164). However, the efficient and effective propulsion of digital economy requires related factors, such as innovation, research, education, supports, sustainability, policies, laws, regulations, trust-building, as well as assets and capitals. Moreover, the transition to the digital economy would require all sectors to adjust themselves in response to the inevitably changing socio-economic condition (Ruud et al., 2017, pp. 10, 13). Especially, developing countries should urgently introduce technological innovations to propel their society and boost the economic growth on the basis of increased partnership from the government sector, the private sector, the civil society, and the educational sector (Rumana & Richard, 2017, p. 20). Apart from the development of community enterprises or SMEs, there must be adjustment and readiness to innovate as well as utilize new technology in businesses, in order to increase their competency, strength, and growth in the digital economy (Braun, 2002, p. 43).

In general, three components of digital economy are: (1) e-Business infrastructure or the overall economic infrastructure which supports the process of e-Business and the e-Commerce operation, including the hardware, software,

telecommunication network, supporting services, and human capitals for such a business and e-Commerce, (2) e-Business (electronic business) is the process which the business sector operates on the network mediated by the computer, such as online trading, manufacturing management, logistic system, communication and customer services through electronic system, etc., and (3) e-Commerce (electronic commerce) refers to the value of goods and services distributed through computer networks. The e-Commerce transaction will be completed after the product and service ownership is transferred from the seller to the buyer through the online channel (Mesenbourg, 2001, pp. 3-4). Hence, it is obvious that in the digital economy the data will be utilized and the economic activities operated on online platforms, which covered the agricultural sector, the research and development (R&D) (International Monetary Fund, 2018), activities supporting business operation, improvement of the working process, and increasing competitiveness of emerging new business, various kinds of competitions, and connectivity in the age of globalization. Therefore, when the digital system increasingly become a new mediator between the seller and buyer, the change in the economic mediator's role will definitely impact the form of relationship within the supply chain while reducing time, cost, and human labor simultaneously (Unold, 2003, p. 48).

Technological investment can be clarified into four types (Figure 2.1). The first type of technological investment is in the field of cognitive technologies, such as artificial intelligence (AI) and big data analytics (BDA). The second type is in the field of the internet of things (IoT) or connected devices. The third type is in the field of robotics technology, i.e., design, utilization, and work through the moving robot. The fourth type is in the field of mobile and social media, which includes mobile phone innovations--e.g., peripheral components, software, telecommunication infrastructure, and online data services, etc.--as well as investment in various social technologies which encourage coordination among organizational members, shareholders, sellers, and consumers (World Economic Forum, 2018, pp. 5-6). The business sector can be impacted by digital technologies in 3 ways: (1) improving direct marketing, (2) transforming organizations, and (3) defining organizations (Unold, 2003, p. 41).

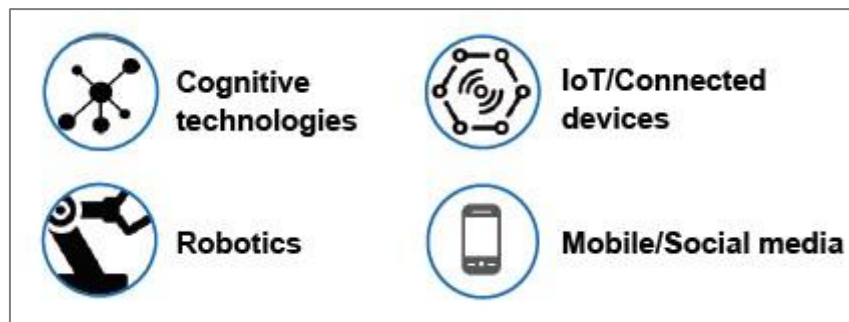


Figure 2.1 Types of Investments in Digital Technology

Source: World Economic Forum (2018, p. 5)

According to the above definition of digital economy, the digital revolution and the internet have radically changed the form of economic activities, as the age of digital economy seems to condense the world and allow people from everywhere to connect or communicate swiftly. Products, services, and information can be readily access with more efficiency. Moreover, digital economy is suitable for the development of innovations, such as AI and IoT (Gloria, Andre, Ting-Wei, & Adrian, 2017, p. 14), and for connectivity of partnership in social services, e.g., e-Health, e-Education, e-Government, ICTs for disaster risk, and empowerment of marginalized groups, etc. (ISOC & TRPC, 2015, p. 42).

In summary, digital economy refers to the era of economy which depends on smart networks, knowledge management, and modern technologies, such as the computer, information and communication technologies, and the internet system, as the basis to drive economic activities to improve the systems of manufacturing, trading, and service for better efficiency and effectiveness. Hence, driving the digital economy in all industries requires factors of innovation, research, education, policy, and capital, as well as partnership from all sectors, -- the government sector, the private sector, and the civil society. Then the development of digital economy will be beneficial for the nation, especially increasing competitiveness and sustainable economic growth in a long term. Digital economy consists of three components: (1) the overall infrastructure which supports the digital business operation, such as the electronic system, hardware, software, telecommunication network, supporting services, and human capital, (2) the overall process of business operations from the

beginning to the end which are mediated through the internet, such as e-Commerce, manufacturing management, connectivity, and logistics, and (3) the value of goods and services of all industries distributed on the internet.

2.1.2 Measuring Digital Economy

Measuring digital economy can be rather complex and multi-dimensional. However, due to technological change which serves as the basis of digital economy development, constant change can be expected. As a result, policymakers, researchers, or related enterprises must regularly update their process of data collection and the measurement of digital economy impact, in order to ensure that the measurement will be up-to-date and can honestly reflect its impact. In the following section is methods of digital economy measurement adopted by directly responsible organizations and described along with related literature.

APEC (2018, pp. 14-15) states that the GDP of agricultural sector and that of the manufacturing industrial sector are used in the currently accepted method of digital economy measurement. In the future, however, the measurement of a new type of digital economy may require the development of new measurement to accommodate the service sector in the concentrated digital economy. The service sector is considered one of the important sectors in the manufacturing process, as many countries also focus on this sector. However, to correctly measure the productivity in the service sector in the digital economy can be challenging. For example, in the measurement of productivity from smartphone apps services or the cloud-based data and search engines offered free of charge, the decreasing price of digital product due to technological advancement which reduces the cost while increasing the quality may be taken into consideration. Meanwhile, the measurement of growth in the manufacturing and consumption sector by using the GDP will be even more complicated, as new markets from various digital platforms are emerging, causing manufacturers and consumers to be no longer divided. Moreover, the digital market also includes many borrowings and second-hand goods which are not calculated in the GDP.

European Commission (2018) formulated the digital economy and society index (DESI) for the measurement of progress in the digital economy and society

among the member nations of the European Union, which has been used since 2014. The index is classified in five types (with 34 sub-index) consists of (1) internet connectivity, such as the fixed broadband, mobile broadband, high-speed broadband, and the price of broadband, (2) human index, such as the basic skills and usage, the advanced skills, and development, (3) utilization of the internet such as the content of usage, communication, and online transactions, (4) integration of digital technology in business operation process and e-Commerce, and (5) digital public services such as e-Government, e-Health, etc.

Ahmad and Ribarsky (2018, p. 28) have summarized five dimensions of digital economy measurement, which are: (1) the number of e-Commerce transactions, (2) the added value from major industries of digital economy, such as enabling industries, platforms industries, (e-Tailor), related digital industries, and industries operated with e-Commerce, (3) the overall ICT merchandise consumption in the manufacturing process and the enabling infrastructure of digital economy, (4) the total usage of digital services, including all ICT services, and (5) the value of the digital information including free services and charged services, for appropriate development of practice.

2.1.3 Drive of Thai SMEs under the Framework of Digital Economy Development

The Ministry of Digital Economy and Society (MDES) is accelerating the development of society and economy of the nation in conformity with the digital economy policy of the government, to support and prepare the foundation for all economic sectors in Thailand as that they can progress together in the changing global condition, and so that they can be competitive in the modern world. MDES specifically supports SMEs' entrepreneurs to apply technology in all business processes to increase competitiveness to compete with their competitors in both the AEC and global market (MDES, 2017). Currently, MDES is supporting the SMEs' entrepreneurs with the following four objectives: (1) to increase the business sector's competitiveness in order to add the economic value through the digital technology reformation in business, (2) to increase job opportunities in agriculture and the sale of community goods through digital technology and through partnership among the

public sector, the private sector, and the people, (3) to accelerate the development of digital technology startup, which will be a mechanism for driving digital economy, and (4) to develop the digital economy's strength and competitiveness. There are several related projects, in which MDES partnered with its affiliated organizations to support the entrepreneurs in various ways. For example, there is the Village Broadband Internet Project (Net Pracharat), which aims to support community entrepreneurs, the SMEs Go Online project run by a public organization, and the electronic transactions development agency (ETDA), which aims to increase the number of new e-Commerce entrepreneurs. Another project is affiliated with the Office of Small and Medium Enterprise Promotion (OSMEP), which also aims to support the measure to facilitate the operation and to create an opportunity for online transactions and develop SMEs' entrepreneurs of at least 21,600 enterprises in both the central and the regional areas. Furthermore, there is also a community digital center project called "Village E-Commerce" run by the Office of the National Digital Economy and Society Commission (ONDE), which aims to increase knowledge of the target group and encourage them to implement digital technology in their business. The consulting center will provide service related to e-Commerce and other services as the community digital center. Finally, there is another digital community project in e-Commerce, which is called the point of sale (POS) system run by the Thailand Post aiming to support the sale of local goods and services through the online platforms. With its potential, Thailand Post can sell the goods through various channels, such as the online store, POS, deliver them through the e-Logistics, using the e-Payment (RYT9, 2018).

It is apparent that MDES has been supporting the SMEs' entrepreneurs under the strategies for economic drive through digital technology in line with the plan of digital development for society and national economy. The plan aims to increase the capacity of Thai entrepreneurs and encourage the SMEs in the agricultural, service, and industrial sectors to increasingly utilize digital technology for the regional and global competition. Moreover, it aims to increase the ratio of the added value of digital technology industry to GDP for at least 25%. Then Thailand will be one of the region's leaders in digital industry (RYT9, 2018).

In addition, the Fourth Promotion Plan for Small and Medium Enterprises (2017-2021) by OSMEP (2016) prioritizes the development of Thai SMEs' competitive growth and also encourages SMEs as an instrument for income distribution and elimination of social inequality. There are three missions within the plan. The first mission is to increase the ease of doing business for SMEs, especially amending related regulations, such as permit application, enhancing the quality of government services, updating some laws, and improving the essential infrastructure for SMEs, etc. The second mission is to boost SMEs' ability so that they can become Smart SMEs through trainings to gain fundamental knowledge in business operation to use information technology to run business, to enhance international trading skill, and to promote the concept of doing business in response to the global context. And the third mission is to develop the new generation of SMEs as high value startups, such as tech startup or creative startup, so that they will be competent in conducting business in the digital age. The factors which will support these groups of entrepreneurs include the form of capital sources and the privilege conducive to business operations, etc.

Regarding the strategies of the fourth Promotion Plan for Small and Medium Enterprises (2017-2021), the details are as follows.

Table 2.1 The Fourth Promotion Plan for Small and Medium Enterprises (2017-2021)

Strategies	Measures
1. Promote and develop SMEs in specific issues	<p>1.1 Enhancing productivity, technology, and innovation, by assisting SMEs in the improvement of efficiency and business productivity. Supporting technology use and innovation development for commercial use. Providing support for the SMEs' innovative products. Improving the system of patent registration as well as the research database and specialization of each organization to ensure that SMEs will use the service more conveniently.</p> <p>1.2 Supporting capital access, loan, strengthening the capital resource, and providing financial training for SMEs.</p>

Strategies	Measures
2. Enhancing SMEs competency in specific groups	<p>1.3 Supporting market access and international market entry through the government market; encouraging the use of e-Commerce and various ways of international market expansion; developing new exporters; and facilitating SMEs investment in foreign countries.</p> <p>1.4 Improving and supporting entrepreneurship by building awareness and creating inspiration in the new generation as well as preparing new entrepreneurs to have essential knowledge and skills.</p> <p>2.1 Developing high value startups through progressive training entrepreneurs who can generate high business value; supporting the development of effective think tank; setting up the creative and design service center, enhancing efficiency in the operation of Startup Accelerator; and providing access to suitable capital resources as well as amending the regulations related to the privilege for this group of entrepreneurs.</p> <p>2.2 Supporting unionization and business networking among SMEs. Strengthening the cluster and co-op groups. Connecting SMEs to the supply chain of large-scale business. And strengthening private organizations.</p> <p>2.3 Strengthening the basic enterprises by providing training on business operation and access to capital resource; supporting local marketing activities; generating added value; and enhancing the standard quality of the goods and services.</p>
3. Improving the mechanism to drive systematic support for SMEs	<p>3.1 Improving the efficiency of supporting instrument for SMEs. Promoting efficient access to information, knowledge, and development through the information center. Supporting the use private service providers. Developing consulting system, coaching, analysts, evaluation, and monitoring system, as</p>

Strategies	Measures
	well as improving the SMEs standard and other inadequate facilities.
	3.2 Revising and updating laws, regulations, and privilege to allow convenience and reduce obstacles for SMEs business operation.

Source: OSMEP (2016)

2.2 The Promotion and Development of SMEs and the Implementation of the Community - Based Tourism Policy in the Digital Economy Age

The promotion and development of SMEs in the service sector in the upper northern provinces group 2 was designated in the provincial group's trading strategic plan of 2017-2021 (for Chiang Rai, Nan, Phayao, and Phrae). The vision of the plan is "to bring progress to the economy and trade of the group through innovation and to connect local commerce to the global market". The plan also sets the strategic position of the provincial group as "Northern Trade and Green Tourism Destination and Gateway to GMS and ASEAN+3", and the strategy for the promotion and development of SMEs in the service sector, by increasing competitiveness and capacity of the entrepreneurs. The three objectives are as follows: (1) to ensure the entrepreneurs' knowledge in business, technological change, innovation, and new business models, (2) to equip the entrepreneurs with the understanding of behavioral change of customers in the digital technology, and (3) to encourage the entrepreneurs to raise the standard and the value of commodities and services through innovation, creativity, and integration with local wisdom to become smart enterprises, and to create the new generation of entrepreneurs and startups with the new business model in order to achieve the international-level capacity and service standards (OPS, 2017). The tourism policy driven by the government in the form of community-based tourism is an alternative which could be administered by the community in a creative and standardized way, resulting in learning, sustainability, local culture, and well-being (The National Tourism Policy Committee, 2016a). This corresponded to the sustainable community-based tourism strategic plan of the years 2016-2020 set by the

community-based tourism subcommittee under the national tourism policy committee, with the approval of the Cabinet on January 31, 2017. The Ministry of Tourism and Sports served as the president, with the Designated Areas for Sustainable Tourism Administration (Public Organization) as secretary to coordinate with all related sectors in driving the community-based tourism strategic plan. This could be considered the first tourism strategic plan of Thailand, which focused mainly on the community-level development. As a result, benefits from tourism would be truly distributed to the grass-root economy. The vision of the plan was that “Thailand’s community-based tourism will be developed to be towards the international standard, on the basis of conservation and sustainable management of community resources, in order to be a community of happiness”. Thus, it was obvious that government was attempting to drive the community-based tourism policy as a tool for the development of micro-community and economy to ensure the income distribution and the protection of natural resources, lifestyle, local culture, and the awareness of environmental conservation in all sectors (TAT Review, 2019).

The sustainable community-based tourism strategic plan, 2016-2020, consists of five major strategies, as follows (RYT9, 2017): (1) Enhancement of quality, skills, and capacity of human resources within the community to ensure the capacity for tourism management by the community itself based on its own knowledge and sufficiency. (2) Addition of value to community resources to produce commodities and services based on the community’s identity and participation all levels of the community to become a model of tourism management and development. (3) Development of community-based tourism marketing management, which aims to balance happiness between the community and the tourists. (4) Development of mechanism to drive the administrative system and network connection, which is united, stable, and sustainable. And (5) formulation of indicators to measure happiness of the community and tourists, as well as development of a learning center in the ASEAN region.

In conclusion, the sustainable development of community-based tourism must originate from the process of participation within the community. And the community’s potential must be enhanced to ensure adequate knowledge and skills for tourism development, such as management principle, value addition for local

resources, being a good host, and awareness of an opportunity to link the community with the stakeholders from related sectors, e.g., government agencies, private organizations, academic institutions, and NGOs. All stakeholders should together think, plan, act, be responsible, and reap the benefit, leading to systematic community-based tourism development and should support economic development for further fair income distribution (TAT Review, 2019) (Figure 2.2).

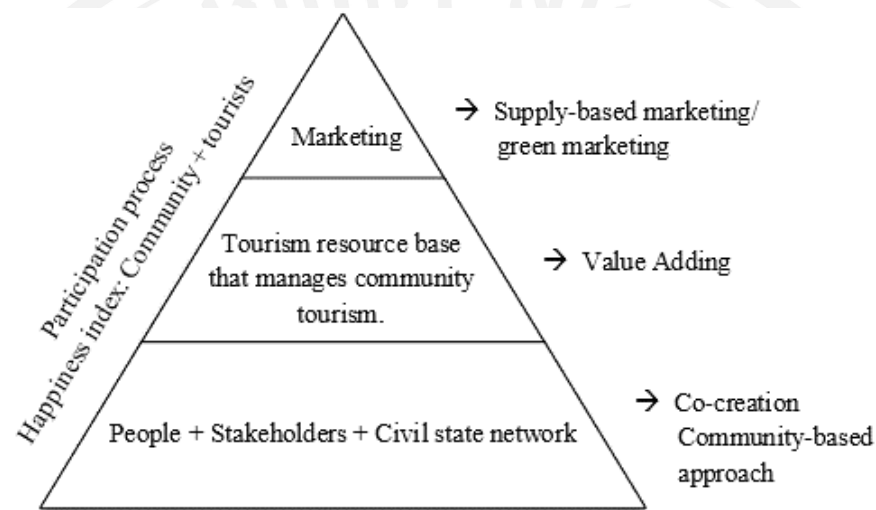


Figure 2.2 Community Participation in Tourism Development

Source: TAT Review (2019)

2.3 Related Theories, Concepts, and Factors

Based on the review of related theories, concepts, and factors, seven related theories and models were found. They are (1) structural contingency theory, (2) the SMEs' management potential, (3) perception theory, (4) decision-making theory, (5) strategic management theory, (6) five forces model, and (7) the gap model of service quality, all of which are described in this section.

2.3.1 Structural Contingency Theory

The contingency theory of organizations is one of the theories within the contingency approach. Originally, research studies related to the contingency theory mostly focused on organization structure (Donaldson, 1995, 1996; Lawrence, 1993; Pfeffer, 1982 as cited in Donaldson, 2001, pp. 4-5). Researchers such as Burns &

Stalker, Emery & Trist, and Lawrence & Lorsch supported the idea that environmental factors are influential to the formulation of organization structure, and that the executives could design their organizations in response to the uncertainty in the environment best (Bowornwathana, 2015, p. 122). The basic concept of the contingency theory is that no single type of organization structure could always yield maximum efficiency for all organizations, as the appropriate structure depends more on the context of the organization. For example, the most suitable structure for small enterprises is the top-down hierarchical structure, while the structure which distributes decision authority is more suitable for large organizations (Child, 1973; Pugh et al. 1969 as cited in Donaldson, 1999, p. 51). Hence, each type of organization structure yields different results, and no structure is always the best (Galbraith, 1977), as the constantly changing environment impacts the organization structure design much more than does the stable environment. And an organization which depends largely on its environment is definitely influenced by such an environment that its structure must also be adjusted (Bowornwathana, 2015, p. 123).

In general, the contingency theory can explain the open organization (Simon, 1999, p. 538) which must adapt itself in accordance with the environment, both in terms of size and strategies of the organization (Donaldson, 2001). As the current external environment, especially the global competition, becomes problematic to the organization and meanwhile the executives are pressured to seek the best option for the organization (Daft, 2001) in order to survive, current organizations which are open are known as organic organizations. There are six elements of an organic organization. First, its structure must be flexible and consists of both horizontal and vertical integration as well as the complex projects of work. Second, there must be decentralization of authority to the executives with knowledge at each level. And third, there must be teamwork which emphasizes adaptation and creativity. Fourth, there must be low formality, which allows the work to be formulated to suit the situation. Fifth, there must not be too much emphasis on the control, as the organization members are skilled and specialized, so they should be free with creativity. Sixth, there must be informal communications within the organization, especially in a horizontal organization each department of which will consult each other (Hatch & Cunliffe, 2006 as cited in Lorsuwannarat, 2015). According to the

contingency theory, these six elements are the characteristics of organization adjustment to suit the external environment.

Furthermore, the effectiveness of the organization management according to the contingency theory depends also on other factors, such as structure, behavior, design, human resources, operations, planning, technologies, culture, and management strategies of each organization (Tosi Jr & Slocum Jr, 1984; Van de Ven & Drazin, 1984), which must be adjusted to fit the environment through selection, interaction, and systems (Van de Ven & Drazin, 1984) as will be described next.

Table 2.2 Interpretation of “Fit” of Structural Contingency Theory

Perspectives	Approaches		
	1. Selection	2. Interaction	3. Systems
Initial Perspectives	Assumption	Bivariate Interaction	Consistency Analysis
	- Fit is an assumed premise fundamentally causal organization context - structure models - Test methods: correlation or regression coefficients of circumstance factors.	- Fit is the interaction of pairs of organizational context and structure factors on performance. - Test methods: MANOVA or regression equations on performance.	- Fit is the internal consistency of multiple contingencies, structural, and performance characteristics.
Future Perspectives	Selection	Residual Analysis	Equifinality
	- Fit at macro level by managerial selection. - Fit at micro level by natural selection. - Essential variables should be highly correlated with context.	- Fit is conformance to a linear relationship of context and design. - Significance of residuals of context-structure relations.	- Fit is a feasible set of equally effective, internally consistent patterns of organization context and structure.

Source: Van de Ven and Drazin (1984)

Additionally, the analysis of organization structure according to the contingency theory also involves the situation and the relationship between the situation and the factors of suitable organization behavior (Otley, 1980); organization objectives; decisions on linking the organization's mission with its members (Keeley, 1978); and change in organizational structure and strategic choices in order to fit in the environment (Donaldson, 1987). Changes in organizational structure and strategic choices in response to the environment in terms of threats and opportunities differ, depending on the ability to adjust and the judgement of each organization's leader in selecting the best and most possible choice (Pennings, 1998, p. 40).

However, global transition to digital economy is one of the factors which impact business owners or entrepreneurs' decision to invest in technologies, especially in the case of SMEs. For example, e-Commerce, e-Business, and e-Marketing become essential, as from now on technology is no longer a choice but rather the survival strategy of all organizations. Even in the case of a small business, the owner or entrepreneur must be able to apply the digital technologies, especially e-Marketing, which can be done with ease through various mobile electronic devices, such as smartphone. Furthermore, there are at least four ways which digital technologies can be beneficial to SMEs: (1) access to a huge number of customers, (2) access to the international-level supply chains, (3) reduction of costs in accessing customers, and (4) improvement of the organization's internal practice system (Mazzarol, 2015).

The main points from the contingency theory as described above led to the conclusion in this study of factors beneficial for the process of selecting determinants as follows (Table 2.3).

Table 2.3 Determinants and Earlier Evidence on Structural Contingency Theory

Determinants Used	Author (Year)
- Behavior, objectives, and judgments of organization	Keeley (1978)
- Task characteristics, environment, and interdependence	Tushman (1979)
- Design of a management system and organizational structure	Otley (1980)

Determinants Used	Author (Year)
- Organization behavior, design, performance, planning, and management strategy	Van de Ven and Drazin (1984)
- Structure, people, technology, strategy, and culture of organization	Tosi Jr and Slocum Jr (1984)
- Information systems and organizational structures	Gordon and Narayanan (1984)
- Organizational structure and strategic choices	Donaldson (1987)
- Information technology	Gutek (1990)
- Context - structure interactions	Kraft, Pula, and Hage (1995)
- Organizational size, industrial sectors, types of innovation, and stages of innovation adoption	Damanpour (1996)
- Organizational structure: departmentation, centralization, and adaptability	Hollenbeck (2000)
- Technology, structure, and organizational effectiveness	Ellis, Almor, and Shenkar (2002); Schoonhoven (1981)
- Strategy, organizational and cultural change, manufacturing, information technology, and human resource management	Chenhall (2003)
- Organizational structure and enterprise resource planning systems	Morton and Hu (2004)
- Organization-technology fit	Khazanchi (2005)
- IT assets, IT resources, and enterprise resource planning (ERP)	Ifinedo and Nahar (2009)
- Open innovation for market-related motives such as meeting customer demands, or keeping up with competitors	Van de Vrande, De Jong, Vanhaverbeke, and De Rochemont (2009)
- Market orientation and organizational structure	Sun and Pan (2011)
- Relational factors: social interaction, trust, and goal congruence	De Clercq, Thongpapanl, and Dimov (2011)
- External environment and social norm	Khuong and An (2016)

2.3.2 The SMEs' Management Potential

To achieve any business goal, entrepreneurs must prioritize the production process, for it could add value and profit for the business. Therefore, production efficiency must be improved. This process could affect the final outcome of increasing customers' satisfaction and ensuring a higher income and profit (Rostamzadeh & Sofian, 2011). Moreover, entrepreneurs must decide about internal operation to achieve their goals by allocating limited resources for the best possible management (Ferrero diRoccaferrera, 1972).

Organization management resource is an important input factor required for successful operation. Scholars, such as Ferrero diRoccaferrera (1972), Rostamzadeh and Sofian (2011), Heizer and Render (2014), Pride, Hughes, and Kapoor (2014), Anyaehie (2016), Wulandari and Rahmah (2020), and Kenaphoom (2014) studied the elements or input factors in the organization management during the last five decades. And most of them identified similar input factors which involved 11 items called "11M". These factors were Man, Money, Management, Material, Machine, Morality, Market, Message, Method, Minute, and Mediation. Nevertheless, it does not mean that all organizations require every input factor in this list. Some organizations or small enterprises may require only "3M", or Man, Money, and Management.

If a large amount of management resource with quality are available to any enterprise, this could reflect that such an enterprise has high capacity (Kenaphoom, 2019). Such capacity includes the tendency to respond well to the external environment such as highly competitive market situation, modern technological change, opportunity to access capital resources, and networks and partners development. However, the study of Vikaliana, Harsanti, Wulandari, and Andayani (2017) pointed out that most SMEs in the developing countries were still limited in resources, especially human resources, assets, and capitals which could increase administrative efficiency. Furthermore, the current of change in the digital age urges every enterprise to increasingly apply technology to its management. Many SMEs entrepreneurs are facing the problem in adjustment to change. In addition, they lack skills in digital marketing utilization, which is an important tool to increase their competency within the business environment of digital economy (Krunghai Compass, 2019, p. 2).

On the other hand, the study of Chattopadhyay, Glick, and Huber (2001) proposed an interesting finding that the SMEs' response to the external environment could be influenced by the characteristics of their regular tasks and reserved resources. The characteristics of their tasks are related to the strategy implemented. And having a large quantity of reserved resources could help increase SMEs competency. In general, entrepreneurs would perceive the current situation in the external environment and tend to habitually operate their business based on the regular tasks and a number of reserved resources. Therefore, the impact of external environment could be reduced with a large number of reserved resources available. Meanwhile, entrepreneurs must select a strategy suitable to the situation they are facing. For example, in the case with a large number of reserved resources, entrepreneurs might select the Prospectors strategy and focus increasingly on external operation to develop new products or seek new markets. On the contrary, an enterprise with fewer reserved resources could select the Defenders strategy by focusing on the internal operation in order to increase efficiency and minimize the consequence from external threats.

The findings by Hatch and Cunliffe (2006) further explained that due to the complexity of external environment, especially the highly dynamic technological development, SMEs must increasingly attempt to respond to such an environment with the prospector's strategy. Meanwhile, the organization members must be creative and immersive in their goals efficiently and effectively.

In conclusion, the operation of SMEs which can ensure the business success within the constantly dynamic environment requires an adequate number of reserved resources with quality, especially the resources in the 8M lists by Ferrero diRoccaferrera (1972), i.e., man, money, material, method/management, machine, market, message, and morale. Entrepreneurs must utilize modern technological tools and equipment especially in the age of digital economy. And they must rely on information and online platforms for the maximum benefit of business, as they are important managerial resources which could increase SMEs competency. These instruments can support the decision of entrepreneurs in selecting an appropriate business strategy for each situation.

The main point from the SMEs' management potential as described above led to the conclusion of factors which will be beneficial for the process of selecting determinants in this study, as follows (Table 2.4).

Table 2.4 Determinants and Earlier Evidence on the SMEs' Management Potential

Determinants Used	Author (Year)
- Man, money, material, method/management, machine, market, message, and morale	Ferrero diRoccaferrera (1972)
- Slack Resources and Strategic Type	Chattopadhyay et al. (2001)
- Marketing, innovation, productivity, knowledge-based development, capital supply, management, structure, cost-efficiency, and compliance	Kadocsa (2006)
- Management, manpower, marketing, method, machine, material, and money	Rostamzadeh and Sofian (2011)
- Technology, culture and organizational structure	M. R. Lee and Lan (2011)
- Man, materials, information, and money	Heizer and Render (2014), Pride et al. (2014)
- Men, money, management, material, machine, morality, market, message, method, minute, and mediation	Kenaphoom (2014)
- Men, land, machine, money, etc.	Arabiun (2014)
- Men, Money, Machine and Methods	Gautam (2014)
- Men, materials, and money	Anyaehe (2016)
- Knowledge and skills of human resource	Sembiring (2016), Shafeek (2016)
	Nolan and Garavan (2016)
- Human resources, assets, capital and others	Vikaliana et al. (2017)
- Money, human resources, management, manufacture, materials, marketing	Phisarnchananan, Saengthong, and Ketavan (2018)
- Information and innovation	Imran, Salisu, Aslam, Iqbal, and Hameed (2019)
- Human resources, materials, machines, business capital, market, and method	Wulandari and Rahmah (2020)

2.3.3 Perception Theory

In general, people can perceive attitudes, emotions, and conditions through interpretation by observing people's behaviors and the environment (Bem, 1972). Similarly, organization executives must perceive and interpret the uncertain environment (Sutcliffe, 1994) which may affect the organization. Hence, perception of executives can be highly influential to the restructuring so that the organization can adjust itself to fit to the changing environment (Yasai-Ardekani, 1986). Therefore, the executives' perception can significantly affect the organization's output (Waller, Huber, & Glick, 1995), as the level of executives' awareness of the organization environment, such as threats, is related to the level of priority in the strategic planning process, which will in turn, link to the overall output of the organization (O'Regan, Sims, & Gallear, 2007). Especially in the age of technological change, the top executives are increasingly required to possess knowledge about technologies as well as the connection in technological development which could reduce the risk in business (Tyler & Steensma, 1998).

According to Rogers' innovation diffusion theoretical framework, the perception of executives regarding the innovation involves five attributes, as follows. (1) Relative advantage refers to the perception of expected benefits from applying innovation in the enterprise's operation. (2) Compatibility means the perception of compatibility between the innovation and the types of tasks in the organization. (3) Complexity means the perception of innovation's complexity. Innovation which is completed and ready for application with ease tend to be more accepted than innovation in progress. (4) Trialability is the perception of the innovation's ability through the actual test within the organization. The faster the executives can perceive the ability of an innovation, the better result it will be for the application of such an innovation to benefit the enterprise. And (5) observability means the perception of outcome from using innovation that impacts the society (Rogers, 2010, pp. 15-16). Another attribute of innovation which is prioritized by the executives, is the security of innovation, or the perception of data protection system or security of the innovation, such as using e-Commerce in business, etc. (Shim, Qureshi, & Siegel, 2013).

Regarding the organizational perception in knowledge management (KM), which is the foundation of innovation, large organizations are in general more progressive in knowledge management than SMEs, as most SMEs' perception of knowledge management is rather low. Furthermore, SMEs usually lack investment in the system and mechanism which support the organization's KM (McAdam & Reid, 2001), especially the perception and application of e-Commerce among SMEs in developing countries. Most SMEs deem that their business will not benefit much from e-Commerce and it takes longer time than large organizations if there is any benefit at all. Such perception of SMEs' entrepreneurs has become an obstacle of the national economic development (MacGregor & Kartiwi, 2010). Additionally, most SMEs' entrepreneurs lack knowledge and awareness of the consequences of technology, and have no experience in the internal technology application (Sutanonpaiboon & Pearson, 2006). And they cannot make any Cloud computing solution to create a competitive opportunity in the economy (Tutunea, 2014). Furthermore, SMEs' entrepreneurs are reluctant to accept e-Business and technology in their operation due to the inability to access the information system and lack of knowledge, training, and skills in using e-Business of both the entrepreneurs and their employees (Arendt, 2008). Therefore, their overall level of skills in using technology is low, resulting in rather narrow and slow SMEs development on the basis of technology (Hashim, 2007).

The main point from the perception theory as described above led to the conclusion of factors which will be beneficial for the process of selecting determinants in this study, as follows (Table 2.5).

Table 2.5 Determinants and Earlier Evidence on Perception Theory

Determinants Used	Author (Year)
- Managers' perceptions	Yasai-Ardekani (1986)
- Perceived managerial self-efficiency	Wood and Bandura (1989)
- Top managers' cognitive perspectives	Wiersema and Bantel (1992)
- Accurate perceptions in top management teams	Sutcliffe (1994)
- Executives' functional background	Waller et al. (1995)
- Attitude (perceived positive and negative	Harrison, Mykytyn Jr, and

Determinants Used	Author (Year)
consequences for the firm), subjective norm (social expectations), and perceived control (resources to overcome obstacles) regarding IT adoption	Riemenschneider (1997)
- Perceptions of managerial discretion and a stable personality difference	Carpenter and Golden (1997)
- Internationally experienced management teams	Reuber and Fischer (1997)
- Executives' personal experiences and their perceptions toward technology, risk, and collaborative technological development	Tyler and Steensma (1998)
- Entrepreneurial self-efficacy	Chen, Greene, and Crick (1998)
- Managers' perception: Resource availability, Supportive organizational structure, and Risk taking and tolerance for failure	Hornsby, Kuratko, and Zahra (2002)
- Perceived characteristics of innovation	Limthongchai and Speece (2003)
- The different dimensions of absorptive capacity, external knowledge acquisition and intrafirm knowledge dissemination	Liao, Welsch, and Stoica (2003)
- Managers' attitudes	Lin and Lee (2004)
- Perceived implementation/output relationships of individual and organization	Kuratko, Hornsby, and Goldsby (2004)
- Managers' perceptions of the organizational environment and the number of entrepreneurial ideas implemented	Hornsby, Kuratko, Shepherd, and Bott (2009)
- Attitudes that inform managerial decision-making	Thomas and Lamm (2012)
- Personal traits, prior entrepreneurial experience, and perceived feasibility on entrepreneurship intention	Khuong and An (2016)

2.3.4 Decision - Making Theory

This theory focuses on the process and activities related to decision and includes three sub-theories, as follows (Anderson, 2014, pp. 134-139).

First, the rational-comprehensive theory aims to explain the process of decision through the rationale which concerns the top goal of an individual or an organization. There are six attributes including (1) the precise problem identification, (2) the clear goal, value, or objectives, (3) the exploration of options which can lead to success, (4) the analysis of cost and benefit, or pros and cons in each option, (5) the comparison among options to ensure the best selection, and (6) the selection of the choice which will yield the maximum outcome. However, this rational-comprehensive theory was criticized by Charles Lindblom that the decision-maker cannot identify or define a problem clearly, as one problem may be related to many other problems. The decision-maker may also have a limited budget in compiling all the options and therefore it is impossible to precisely predict the outcome of each choice. And in many times, the decision relating problems in society also face the situation of conflicting social values, which is hard to draw a conclusion. Even more, the rational decision on the complex and difficult problem might require time and budget due to too many options.

Second, the incremental theory aims to explain decision making process that can respond to the actual situation better than the rational-comprehensive theory. Lindblom supported this theory and deemed that the actual decision should be changed in some part. Therefore, this theory summarized six attributes. (1) It is the goal-oriented decision which most consider both the suitable options and the integrated analysis of empirical data. (2) The policy alternatives will not differ much from the existing policy with which the policy authority is already familiar. (3) Each alternative is practical and measurable. (4) It is possible to adjust the method, framework, tools, or operation as needed. (5) No alternative is best, but only the option which is decided by the consensus as an appropriate one or an option with most possibility to reach the goal. And (6) it is the decision which results in the correction of the defects or the boost of strengths gradually rather than the total makeover. Nevertheless, the incremental theory was criticized in four issues. (1) Being too conservative, thus obstructing an innovative solution. (2) Being too limited

in the face of challenging and different problem. (3) Being confined to the conventional solutions which will limit a new alternative which might lead to a better result. And (4) being the theory based on decision-making process and hence not a new theoretical structure but only the additional content in decision theory which lacks an apparent solution that could lead to change.

Third, the mixed scanning theory originated from the belief that both previous theories have some weakness. According to Amitai Etzioni, the mixed scanning theory combines the strength of the rational-comprehensive theory and the incremental theory together. Decision will be made based on the complexity and difficulty of the problem situation. Some problems can be solved using the incremental approach, while others require the rational-comprehensive approach.

It can be generally said that the organization executives tend to be rational persons and therefore could manage their organizations to fit the external environment in order to survive and achieve success (Lorsuwannarat, 2015, p. 121) based on the process of decision which depends on three factors: (1) the executive's attitude or perception of both positive and negative consequences on the organization, (2) social expectations towards the organization which will be higher especially when the organization is larger, and (3) the ability to control internal resources to overcome obstacles (Harrison et al., 1997). Therefore, the executives always carry the burden of making the best rational decision as possible, which is consistent to the related decision theory such as the expected utility theory and the game theory, etc. (Rowe, Boulgarides, & McGrath, 1984).

Furthermore, the executives have a duty in decision-making in designing the organization structure, an instrument that will minimize the consequence from fluctuation in the organization environment as much as possible, as the dynamic environment always poses the uncertainty. In contrast, since the static environment will result in the certainty for operation (Bowornwathana, 2015, p. 116), the executives must fully interpret the organization environment and select the most suitable approach of management. However, it should be noted that the application of computer technology in planning and strategic decision has mostly occurred in large business enterprises rather than in SMEs, as the former have enough potential to invest the resources and time especially for strategic decision. On the contrary, SMEs

apply computer technology to only the management and operation. This indicates that the factor of organization size and strategic operation all influence the application of computer technology in the strategic decision-making process of the organization (Temtime, Chinyoka, & Shunda, 2003). Other factors which influence SMEs' entrepreneurs in the application of technology and innovation include the organizational readiness, managerial productivity, external pressure, decision aids, compatibility, perceived usefulness (Grandon & Pearson, 2004), education, information system planning, (Wielicki & Arendt, 2010) funds, and skills in technology and innovation (Demirbas, Hussain, & Matlay, 2011).

The main point from decision - making theory as described above led to the conclusion of factors which will be beneficial for the process of selecting determinants in this study, as follows (Table 2.6).

Table 2.6 Determinants and Earlier Evidence on Decision-Making Theory

Determinants Used	Author (Year)
- Decision-making in an organization under different conditions of market competition	Azma and Mansfield (1981)
- Decision analysis: options theoretic models and prospect theory	Rowe et al. (1984)
- Decision-making process in an organization	Ivancevich, Matteson, and Konopaske (1990)
- Technology-prompted changes in organizational design that affect the quality and timeliness of intelligence and decision making	Huber (1990)
- Decision-making structure and control structure of managers and planners	Kim and Umanath (1992)
- Strategic decision-making procedures	Dean Jr and Sharfman (1993)
- Strategic decision models and characteristics, biases in decision making, individual and organizational minds	Schwenk (1995)
- Strategic decision-making processes	Dean Jr and Sharfman (1996)

Determinants Used	Author (Year)
- Decision-maker risk perceptions and propensities	Pablo, Sitkin, and Jemison (1996)
- Business executives' decisions to adopt information technology	Harrison et al. (1997)
- Decision-specific characteristics on the strategic decision-making process	Papadakis, Lioukas, and Chambers (1998)
- Organizational commitment	Pool and Pool (2007)
- Top management decisions	De Clercq et al. (2011)
- Entrepreneurial decision making	Shepherd (2011)

2.3.5 Strategic Management Theory

Most organizations are required to adjust their strategy and internal structure to fit the changing environment. In the past, the organization environment was static without any fluctuation as nowadays. Therefore, the executives in the past used the incremental approach for organization management, problem solving, and seeking new opportunities. But currently, the organization environment is complex and dynamic. The executive must adjust the strategy, structure, and management process in response to the new business opportunities (Miles, Coleman Jr, & Creed, 1995). And due to the increased marketing competition, the executive must be committed to development of innovation to improve the goods and services. Therefore, quality management is considered a potential internal strategy which can lead to the innovation in management, working process, and product, as the efficient strategic management has a positive relationship with the organization innovation (Schniederjans & Schniederjans, 2015).

The strategic management of most organizations can be divided into two models: (1) the rational model or the closed-system strategy, and (2) the natural-system model or the open-system strategy (Gouldner, 1959 as cited in Thompson, 2003). As this study focuses on the open organization with flexible structure within the complex and dynamic environment, especially the technological change which requires SMEs' entrepreneurs to face the challenge creatively and focus on the business effectiveness, the suitable strategy is the proactive one which seeks new opportunities and markets (Hatch & Cunliffe, 2006).

Regarding the strategic planning, three issues are involved, as follows: (1) consideration of risks related to the various strategies of the organization, (2) aim towards the future outcome from the current decision, and (3) full consideration of various factors which might lead to conflicts. Generally, the top executives may have conflicting opinions and thus the organization should have an approach in strategic planning in the form of decision-conferencing approach). In this case, the following three issues should be prioritized: (1) group exchange and learn, (2) being one team based on the diversity, and (3) priority in technology and information (Quaddus, Atkinson, & Levy, 1992, p. 70). Moreover, the strategic planning must follow the same direction with the organization goal and be based on the analysis of organization capacity and the external environment, including both opportunities and threats. Hence, if the organization has enough information regarding environmental change in the past and future, it can result in efficient and effective strategic planning (Freeman, 2010, p. 34).

According to Miles, Snow, Meyer, and Coleman Jr (1978), there are four types of strategies, as follows. (1) Being defenders is a strategy used by the organization to maintain production stability in a few products and focus on a niche market to prevent the competitor to enter, as the production of specific product requires time and efficiency in product development. Unlike the horizontal structure, the structure of the organization which uses this strategy is centralization, formality, and closed control. (2) Being prospectors is a strategy used by the organization which seeks a new product and market opportunity, by focusing on the development of ability to analyze the trend of the dynamic external environment. Therefore, the structure of the organization with this strategy is flexibility, informality, and decentralization, with distribution of authority in each department. (3) Being analyzers is the combination of the pros from both previous strategies to decrease risks and increase the chance to make profits by producing a new product or seeking new markets. And when the scale of such a product can grow well, the organization with the strategy of Analyzers will try to maintain the stable growth by copying the successful approach from the Prospectors. Therefore, there are two possible structures for the organization with this strategy: the centralized and formal structure, and the horizontal structure for new product investment. And (4) being the Reactors is a strategy used when the previous

three strategies all have failed, mostly by the organization which lacks the ability to response to the environment. And as the organization cannot formulate a clear strategy, it must mainly use the strategy of the Reactors.

Due to the highly competitive business environment nowadays, SMEs' entrepreneurs are required to be increasingly aware of the importance of thinking, planning, and strategic management (Harindranath, Dyerson, & Barnes, 2008). The strategic management in response to the environment begins with the thorough survey of related environment before starting the process of strategy formulation. After the strategy is clear, the next step is implementation of the strategy (Analoui & Karami, 2002), especially the focus on the innovative strategy rather than the strategy of controlling the internal cost so that SMEs can respond to the highly competitive environment (Tang & Hull, 2012). This includes technology application in SMEs' operation, such as the internet and e-Commerce as the center of operation which leads SMEs to respond to both the opportunities and threats in the changing environment (Drew, 2003). And if a startup implements technology, information, and the internet in its strategic management, such as marketing, products, and service in both national and international markets, there can be some advantage for the company (Martin & Matlay, 2003).

The main point from strategic management theory as described above led to the conclusion of factors which will be beneficial for the process of selecting determinants in this study, as follows (Table 2.7).

Table 2.7 Determinants and Earlier Evidence on Strategic Management Theory

Determinants Used	Author (Year)
- Management strategy	Van de Ven and Drazin (1984); Tosi Jr and Slocum Jr (1984)
- Managerial background characteristics	Hambrick and Mason (1984)
- Strategic choices	Schreyögg (1980); Donaldson (1987)
- Innovative and marketing differentiation strategies in uncertain environments and cost	J. Lee and Miller (1996)

Determinants Used	Author (Year)
leadership strategies in stable contexts	
- External control and strategic choice of strategic management	Papadakis et al. (1998)
- Organizational behavior and strategic management	Tidd (2001)
- Organizational actions: strategic type and slack resources	Chattopadhyay et al. (2001)
- An effective strategy: alliances with partners with local knowledge	Lu and Beamish (2001)
- Degree of long-term planning and strategic learning	Stonehouse and Pemberton (2002)
- Firm size and strategic orientation	Temtime et al. (2003)
- Human resource management: employee discretionary behavior, knowledge sharing, and organizational learning	Hayton (2003)
- Different organization types, the evaluation process by SMEs, strategic vision, and strategic benefits	Love and Irani (2004)
- A resource-based perspective and the strategic orientation in SMEs: prospector and defender	Aragón-Sánchez and Sánchez-Marín (2005)
- Prospector-type firms and defender-type firms	O'Regan and Ghobadian (2005)
- Operations management	Raymond (2005)
- Strategy development by SMEs for improving competitiveness	Singh, Garg, and Deshmukh (2008)
- Strategic management: entrepreneurial (opportunity-seeking) and strategic (advantage-seeking) perspectives	Kraus and Kauranen (2009)
- Competitive strategy	Pertusa-Ortega, Molina-Azorín, and Claver-Cortés (2010)
- Entrepreneurial orientation, a commitment to internationalization, and the ability to leverage human capital	Javalgi and Todd (2011)

Determinants Used	Author (Year)
- An appropriate, balanced use of strategic and operational practices and relevant measures	Ates, Garengo, Cocca, and Bititci (2013)

2.3.6 Five Forces Model

The five forces model is highly influential to the study of business (Grundy, 2006), and it is also a powerful framework to understand the situation of competition faced by many organizations, in order to formulate strategy to cope with a competition (Porter, 1997). The competition in any industry are controlled by the following five forces (Porter, 2004) (Figure 2.3).

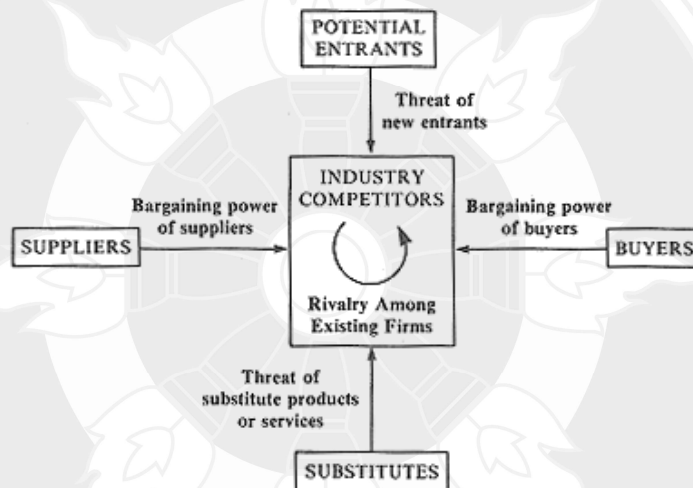


Figure 2.3 Five Forces Driving Industry Competition

Source: Porter (2004, p. 4)

The first force includes seven barriers to entry as follows: (1) the economy of scale, which a company with high purchasing power can use to cost per unit through bargaining, therefore entrepreneurs with higher economy of scale have more advantages than those with lower economy of scale. (2) Product differentiation, which can ensure strong branding for an entrepreneur, but can be a barrier to enter the industry for an entrepreneur with undifferentiated or less unique services or commodities. (3) A large amount of capital requirement for investment, which is an inevitable barrier to enter any industry. (4) Switching costs for change to a new

service or product. Such costs can be high or low, depending on the customers' loyalty to the previous brand, which results from product differentiation of each product or service (5) Access to distribution channels. Without an access to a distribution channel, entrepreneur will be of less advantage than their competitors as they can distribute a smaller volume of products. (6) Cost disadvantages independent of scale. Entrepreneurs who enter the industry first will have better chance and experience in development and effective cost management, by using technology to reduce the cost and learning the curve. Therefore, the first entrepreneur to enter an industry has more advantage over the newcomer. And (7), the government policy, i.e., the government control or support given to the entrepreneurs, such as concessions, etc.

The second force is called the "intensity of rivalry among existing competitors", which consists of eight factors. (1) The numerous or equally balanced competitors, which can lead to high competition, as each entrepreneur is equally capable. (2) Slow industry growth, which will cause higher competition for the market share. (3) High fixed storage costs or too much increase in production capacity of any business, which can lead to a price-cutting war. (4) Lack of differentiation of switch costs. When the quality of product and service in the industry are very similar or hardly different, the customers will make their decision based on the price first. (5) Capacity augmented in large increment, which can lead to the oversupply of goods and services, resulting in the price-cutting situation at the end. (6) Diverse competitors in the industry, which often adjust their strategies, making it difficult to predict the degree of competition in such industry. (7) High strategic stakes, which occur when there are many successful competitors in the industry. And (8) high exit barriers, or hardship in withdrawing from the industry after investing a large amount of capital, as the withdrawal is not worth doing. Therefore, business in this category is required to fight for survival in a strongly competitive condition.

The third force is called the "pressure from substitute", occurring when new product emerges to replace the existing one. The competition in such an industry tends to become highly intense.

The fourth force is called the “bargaining power of buyers”, occurring when customers can bargain for a lower price while demanding higher quality of service and product.

The fifth force is called the “bargaining power of suppliers”, occurring when suppliers can either increase the raw-material cost or decrease the quality of raw materials.

In conclusion, the Porter’s five forces model for the analysis of threat and the formulation of business strategy involves five factors. The first factor is threat for new entrants, or newcomers in the same industry, which can weaken the entrepreneur’s competitiveness while leading to many obstacles, such as economy of scale, customer loyalty, cost advantage, cost of finding new distributors, initial capital, and the government’s regulation. The second factor is bargaining power of suppliers, who can increase the cost or reduce the quality of the factor of production if they have production capacity, large capital, unique products demanded by the market, a small number of competitors, and good adjustment to the external environment. Such the suppliers have high bargaining power and a powerful threat. The third factor is bargaining power of buyers. When powerful customers become a threat, it is necessary for the enterprise to increase the cost of production or quality of service to meet their demands. Hence, the powerful buyer reflects the powerful supplier. The fourth factor is threat of substitutes, enabling the customers to switch to a similar product or service. This threat can be indicated by the number and the similarity of substitute products or services as well as other technological developments. The last factor is rivalry among existing competitors, which is a powerful threat to the profitability of the enterprise. Thus, competitor analysis is necessary by considering related factors, such as competitive structure of the industry, production ability and requirements of the industry to meet the customers’ demands, uniqueness or differentiation of business within the same industry, and the hardship of withdrawal from such an industry (C. W. Hill, Jones, & Schilling, 2014; Porter, 2004).

Based on the concept of Porter’s five forces model above, the related determinants could be concluded for the process of variable selection in this research, as follows (Table 2.8).

Table 2.8 Determinants and Earlier Evidence on Five Forces Model

Determinants Used	Author (Year)
- Competitive advantage in tourism: the destination's position (factor endowments), demand for goods and services, supplier industries and related industries, strategic tourism plan, and government and chance.	Porter (1990)
- Destination competitiveness and sustainability: (i) qualifying and amplifying determinants (location, interdependencies, security, image, and cost), (ii) destination policy, planning, and development (system definition, philosophy, vision, audit, positioning, development, collaborative analysis, and monitoring and evaluation), (iii) destination management (resource stewardship, marketing, finance and venture capital, organization, human resource development, information/research, quality of service, and visitor management), (iv) core resources and attractors (physiography and climate, culture and history, market ties, mix of activities, special events, entertainment, and superstructure, and (v) supporting factors and resources (infrastructure, accessibility, facilitating resources, hospitality, and enterprise.	Crouch and Ritchie (1999)
- Competitive advantages of destinations: (i) factor conditions, (ii) demand conditions, (iii) related and supporting activities, market structure, rivalry, organization, and strategy, and (iv) local government.	Vanhove (2002)
- The competitive advantage of tourism destination: (i) competitive destination's factors, innovation, (ii) quality, and the role of tourism, and (iii) strategic planning (tourism policy), attractions, supply and demand factors, and accessibility.	Vanhove (2006)
- Domestic market and competition: conditions for attracting investors, potential investors, customers of tourist services, and competition from other host countries.	Dobrivojevic (2013)

Determinants Used	Author (Year)
- Scarce rivalry among competitor: treat of new entrants unlikely, high bargaining power in the main supplies, low bargaining power, and strong substitute modes but not broadly represent a threat.	Ortega, Jalón, and Menéndez (2014)
- Driven cluster development model: (i) Consumer behavior: product component, need awareness, and participates in the buying, (ii) Encourage: factor conditions, demand conditions, related supporting industries, and context for firm strategy structure and rivalry, and (iii) Government policy and role.	Srimuk and Choibamroong (2014)

2.3.7 The Gap Model of Service Quality

The gap model started with the hypothesis that all organizations want to operate as best as possible in order to fulfill the organization's previously formulated objectives (Rosene, 2003) within the competitive environment. And for the service industry, quality of service is an important mechanism to create advantages (Douglas & Connor, 2003). Service quality refers to the ability of an organization to meet the customer's expectation. The customers will desire and want to receive a service which should be as have expected (Parasuraman, Zeithaml, & Berry, 1994). Accordingly, the service businesses need to make the gap model analysis in order to know the level of service quality by measurement of satisfaction in each step of service, to achieve the maximum efficiency to reach the future standard (Rosene, 2003). Businesses in the service sector whose fame is strong tend to emerge from the alignment between the customer's expectation and the consistent service quality (Mola & Jusoh, 2011). The elements of service quality can be divided into three dimensions: physical facilities, operating process, and service staff's behavior (Haywood-Farmer, 1988, p. 28). And the general method of evaluating service quality is usually the evaluation of the gap between the customers' expectation and their perception of actual service. In the gap model, service quality is measured by the so called "SERVQUAL", which utilize the ten groups of factors of customers' expectation and satisfaction with the overall service process to reflect the gap (Parasuraman, Zeithaml, & Berry, 1985). Later these

factors were clarified into five groups: reliability, assurance, tangibles, empathy and responsiveness, or RATER (Marathe, 2017, p. 82).

Although the service sector becomes increasingly important to the economic growth, but at the same time, service businesses still face same obstacles to the development of good quality product and service. This is a key to win new customer and maintain the customer base (Ghobadian, Speller, & Jones, 1994, p. 62). The customers compare not only the perception of service quality and their own expectation, but also with the total quality and their satisfaction in the past (Valarie, Bitner, & Dwayne, 2003). Thus, service quality can be reflected by the customer's loyalty in the form of satisfaction (Caruana, 2002). However, the measurement of service quality is rather difficult due to many obstacles. For example, (1) the nature of service quality is abstract, so it is hard to measure concretely. (2) The interaction or participation of both service providers and service receivers is required. (3) There are many forms of service processes. (4) Some service process may lack consistency and therefore cannot be exactly repeated. (5) Different customers might have different levels of satisfaction with the same service. (6) The gap in service quality may be hard to identified. (7) There is also hardship in identifying the source of problems for service quality. And (8) it is not possible to identify the exact time to improve the service. Nevertheless, these obstacles are manageable by the entrepreneurs who seek to improve the factors which directly shape the service quality. These factors include (1) penetration to the market and customer segment, (2) staff training and support, (3) well-designed service process, (4) delegation of authority, obligation, and responsibility to various departments, (5) clear definition of the organization's service quality, and (6) effective internal and external communication, and (7) evaluation (Ghobadian et al., 1994, pp. 62-64).

In addition, competitiveness of the small tourism business or community-based tourism can be seen by considering three important elements: satisfaction of community members, tourists' satisfaction, and efficiency of tourism service provided (Kumra, 2008, p. 430), all of which together reflect the quality of community. And such quality can shape satisfaction and trust among the community members as well (Elliot, Li, & Choi, 2013). Still, service businesses, such as small-sized tourist companies and hotels, rely heavily on labor despite the disruption trend of digital era.

Therefore, it is necessary for entrepreneurs to give priority to the recruitment, process, training of knowledge and service skills based on the employees' participation, and conservation of skilled labors (Dewhurst, Dewhurst, & Livesey, 2007), together with technological adjustment and creation of a good organization image to increase the customer's satisfaction. It should be noted that other related factors, such as the design of website, reliability, responsiveness, and trust, can affect the service quality required to satisfy the customers. (G. G. Lee & Lin, 2005) Furthermore, enterprises should ensure that connection with their customers is possible through various channels, in order to maintain a good relationship with them, which will be the very important foundation for business operation (Dimitriadis & Stevens, 2008).

According to the concept of the gap model of service quality described above, the determinants, which will be beneficial for the variable selection process, can be concluded from the literature review, as follows (Table 2.9).

Table 2.9 Determinants and Earlier Evidence on the Gap Model of Service Quality

Determinants Used	Author (Year)
- Service performance gap: co-operation, perceived control, and employee-job fit	Parasuraman, Berry, and Zeithaml (1990)
- Customer expectations of service: desired service, adequate service, and predicted service	Zeithaml, Berry, and Parasuraman (1993)
- An antecedent of satisfaction: perceived service quality	H. Lee, Lee, and Yoo (2000)
- A gap between managers' perceptions of consumers' expectations and actual consumers' expectations	Douglas and Connor (2003)
- Type of service setting, situation, time, and other need factors	Seth, Deshmukh, and Vrat (2005)
- The functional quality: interactions between customers, and employees	McCain, Jang, and Hu (2005)
- Perceptions of the actual service and the internal customers' expectations of the service quality	Large and König (2009)

Determinants Used	Author (Year)
- Perceived service quality and expected service quality of customers	Ham, Johnson, Weinstein, Plank, and Johnson (2003) Tsai, Hsu, and Chou (2011)
- Expectation, management perception, experience specification, delivery system and perception	Husin and Ibrahim (2014)
- Management perceptions vs. customer expectations, service provider perceptions of management perceptions vs. service delivery	Y.-C. Lee et al. (2016)

2.4 Related Research

The related research for this study which can be applied to develop the updated and efficient conceptual framework as well as the research design include the following:

In the study “The digital economy, multinational enterprises and international investment policy” Gestrin and Julia (2018, p. 19) found that the digital economy was growing fast during the past decade and its transition affected the global economy in terms of both digital economy policies and international investment. Apart from an essential foundation of competency at both organizational and national levels, digital economy can also create confidence in the investors which helps to increase international investment in the long run. Moreover, the expansion of global digital technology affects the implementation of infrastructure policy, as digital technology is an important means of circulation for products, services, capital funds, and intellectual properties. These findings correspond to those in “An empirical investigation of the relationship between e-government development and the digital economy: the case of Asian countries” by Ali, Hoque, and Alam (2018). The study found that becoming digital economy not only affected the economic growth but also the development of e-Government. And, the development of e-Government in turn affected the digital economy development as well. The important factors of digital economy consist of connectivity, business environment, social and cultural environment, laws, policy and

vision, and consumer and business adoption. And the elements of e-Government development are ICT infrastructure, online services, and human capital.

Hence, the impact of ICT technology development on the Thai economy can be explained on the basis of the findings in the study “The economic impacts of information and communication technology development on macroeconomic variables in the ASEAN countries”, conducted during 2008-2015 by Neamhom, Chaiboonsri, and Saosaovaphak (2018, p. 185). It was found that the ICT development would increase investment, employment, overall productivity, and consumption. The ICT development impacted the business sector’s investment in technological adoption and meanwhile the entrepreneurs demand labor with higher ICT skills to increase efficiency and profitability of business. Furthermore, introducing the e-Commerce system in business also affected the consumers’ decisions. Therefore, it could be said that the digital economy system influenced the growth of all industries. The findings supported those from “Digital economy and tourism impacts, influences and challenges” by Hojeghan and Esfangareh (2011), which pointed out that the characteristics of digital economy, where the computer and the internet were widely used, had effected on the ways of production and distribution of goods and services. It also affected labor skills, as employees had to be trained to acquire skills and adapt themselves to the changing needs of the market. For example, adaptation to fit the competitive environment is highly essential in tourism industry, where innovative development and modern technology must be in line with the digital economy development by, for example, application of e-Commerce, building tourism networks with airlines, hotels, car rentals, restaurants, travel operators, tour operators, and travel agents through the e-Business system. As a result, the usage of computers and the internet in the digital economy age became widespread. In the study of “Cross-country diffusion of the internet” during 1995-2000, Kiiski and Pohjola (2002) pointed out that the factors influencing the expansion of the internet use were GDP per capita and internet access cost. The study “Statistical analyses of digital divide factors” by Várallyai, Herdon, and Botos (2015) revealed that most internet users used the high-speed internet in order to access various online services. The number of ICT users was increasing and thus directly impacted the GDP per capita.

It is then apparent that SMEs business operation in the digital economy age requires entrepreneurs to adopt modern technology, such as electronic data interchange and e-Commerce in business development to increase the profit. The findings corresponded to the findings in “Information technology (IT) appropriateness: The contingency theory of ‘fit’ and IT implementation in small and medium enterprises” by Khazanchi (2005). The study concluded that application of modern technology in business operation was highly important, and that it was essential to analyze the relationship between IT appropriateness and the benefit for SMEs. Similarly, the study of “The effect of perceived characteristics of innovation on e-Commerce adoption by SMEs in Thailand” by Limthongchai and Speece (2003) found that the executives’ perception of the characteristics of innovation led to the adoption of innovation, such as e-Commerce, in their business. The attributes of innovation perception of SMEs’ executives included (1) relative advantage, or the perception of expected advantage from adopting the innovation, (2) compatibility, or the perception of compatibility between the innovation and the tasks within the enterprise, (3) security or confidentiality, or the perception of the data protection system or security of the innovation, and (4) observability, or the perception of outcome from the innovation that affected the society. According to the contingency theory, there are four factors which influence the adoption of technology in SMEs’ operation: (1) the internal and external environment, especially the compatibility of technology, which can impact the effectiveness of SMEs business operation most; (2) the organization’s readiness and the support from partners; (3) the financial impact; and (4) the efficiency of production process. In the same direction, “E-commerce adoption: Perceptions of managers or owners of small-and medium-sized enterprises (SMEs) in Thailand” by Sutanonpaiboon and Pearson (2006) found that the world’s developed countries already used e-Commerce in business operation to ensure the competitive edge. However, developing countries are facing the problem of unreadiness in adapting themselves to the trend of technological changes. For example, over two-thirds of Thai SMEs still faced the problem of adopting e-Commerce while also lacking the capital and encountering the logistics problem.

Nevertheless, the findings of the study “Market orientation, intrapreneurship behavior, and organizational performance: Test of a structural contingency model” by

Sun and Pan (2011) shed some light to the market direction and business organization structure. That is, the more an organization adjusts its working structure to fit the market change, the better its work efficiency will be. Similarly, the findings from “Operations management and advanced manufacturing technologies in SMEs: A contingency approach” by Raymond (2005) found that the internal articulation of SMEs’ operation and the adoption of high-tech production process would ensure the reduction of costs for SMEs. Meanwhile, it would also increase the efficiency, flexibility, quality, and integration of work. And as SMEs are increasingly facing the uncertain external environment, they must also increasingly systemize their internal operations in response to the uncertainty in the environment, especially the change of competition strategy which would directly impact the organization’s efficiency. The findings corresponded to the findings in “Competitive strategy, structure and firm performance: A comparison of the resource-based view and the contingency approach” by Pertusa-Ortega et al. (2010). They found that apart from being required to prepare enough resources and re-engineer the organization structure in response to the environment, the organization had to adjust its competition strategy, as re-engineering of organization structure could impact its efficiency.

In addition, the study on “Organizational actions in response to threats and opportunities” by Chattopadhyay et al. (2001) revealed the characteristics of business executives and strategic decision in response to the external environment. It stated that most business enterprises responded to threats more than opportunities, that organizations with conservative executives who implemented a defending strategy rather than an active strategy, and that they would increasingly focus on the internal operation, such as re-engineering and cost reduction to prevent the threats. On the contrary, the organizations with progressive executives dared to face the threats or risks and were likely to implement an active strategy rather than a defending one. And they increasingly focused on external operations, such as new market development, maintaining customer relationship, and presentation of new products or services in response to threats which might affect the organizations.

On the other hand, the study of “Strategy development by SMEs for competitiveness: a review” by Singh et al. (2008) found that previously SMEs did not pay enough attention to the development of efficient strategy; therefore, they had to

face a lot of limitations in exporting, such as lack of resources and creativity (Desouza & Awazu, 2006; Singh et al., 2008). Therefore, to sustainably increase their competitiveness, SMEs had to assess themselves in terms of asset, operation process, and output, in comparison with the benchmark within their respective industries. Furthermore, they were required to develop a holistic operation framework to increase competitiveness in the long term. Another study which yielded the similar results was “Organizational absorptive capacity and responsiveness: An empirical investigation of growth-oriented SMEs” by Liao et al. (2003). The study found that whether SMEs would be able to respond to the complex external environment and grow depended on the three actions: (1) development of the organization’s capacity to perceive the external environment and the internal distribution of knowledge, (2) development of the organization’s capacity to access the external knowledge and increase the active strategy, and (3) coping with the complex external environment with the ability to disperse knowledge internally as well as preparation in research and coping with consequences.

The responses of tourism service enterprises to the external environment can be found in the “Analysis of the competitive environment of tourist destinations aiming at attracting FDI by applying Porter’s five forces model” by Dobrivojevic (2013), who found that the analysis of tourism industry competitiveness according to Porter’s five forces model could reveal the destination of tourists better. And it could lead to the development of local tourism market in the country for the international competitiveness, and to the ability to consider the scope and trend of investment from all over the world, to prepare the content and structure of service to match the international investment trend. This corresponded to the approach of Thai SMEs promotion of the Office of Small and Medium Enterprise Promotion (OSMEP), which acted as the responsible agency in analyzing the competitiveness among the tourism industry. The OSMEP also employed the five forces model and the SWOT analysis for the analysis in order to reveal the situation of SMEs in the tourism industry (OSMEP, 2018b). Furthermore, the findings from the study of Applying revised gap analysis model in measuring hotel service quality by Y.-C. Lee et al. (2016) proposed highly useful suggestions for the SME entrepreneurs in the service sector, including tourism companies and hotels. It suggested that it was essential to check the internal

readiness in order to assess if the staff operated in accordance with the service standard and to analyze the gap of service quality to ensure the right solution. Moreover, entrepreneurs had be able to perceive the customers' expectations so that they could prepare adequate staffs for providing services and prioritizing the services which required improvement under the condition of limited resources. And the gap analysis should equip the entrepreneurs with the understanding of qualifications which significantly affected the service quality and thus enabling them to solve problems, to increase the customer's satisfaction, business profitability, employment, and the overall economic growth, respectively. As for the government's role in handling challenges to the CBT service quality, suggestions were proposed by Kumra (2008), in the study of "Service quality in rural tourism: A prescriptive approach", as follows. There should be (1) publicity of knowledge and information, (2) training of target human resources, both in the medium term and long term, (3) integration of sustainable tourism and the environmental policy, and (4) policy drive through the hearings from all stakeholders. Furthermore, the government should encourage people's participation in service quality improvement, promotion of innovation-based business environment to increase competitiveness, and active operation to raise the standard of new business systems.

The issues from the related literature as described above thus led to this study of "Thai SMEs' response in the digital economy age: A case study of the service sector of community-based tourism in the upper northern provinces group 2". The researcher will describe the selection of determinants from the review of related literature and research to formulate the conceptual framework in the next chapter.

CHAPTER 3

METHODOLOGY

This chapter describes the methodology of the study “Thai SMEs’ response in the digital economy age: A case study of the service sector of community-based tourism in the upper northern provinces group 2” under seven topics, i.e., research design, variables, conceptual framework, hypothesis, population and sampling, data collection, and data analysis.

3.1 Research Design

The research design consisted of both the qualitative and quantitative methods in order to fulfill four objectives of the study: (1) to find out the factors which affected the response of SMEs in the service sector of the community-based tourism in the digital economy age, (2) to examine the context of policy implementation and the role of stakeholders in the promotion and development of SMEs in the service sector of community-based tourism under the framework of digital economy development, (3) to analyze the competitiveness of SMEs in the service sector of community-based tourism in the upper northern provinces group 2, and (4) to point out the gap of service quality, problems, and obstruction of the business operation within the community-based tourism industry of the upper northern provinces group 2. The study also provided policy suggestions for the promotion and development of SMEs in the service sector of community-based tourism in order for them to adapt themselves to survive, and strongly grow in technological disruption in the digital economy age.

The details of methodology are described below.

The qualitative research method was used to study (1) the context of policy implementation and the role of stakeholders in the promotion and development of SMEs in the service sector of community-based tourism under the framework of

digital economy development, (2) the role of stakeholders in policy implementation, (3) SMEs' adaptation in the digital economy age, (4) factors of success of SMEs, (5) the future direction of the public policy to promote and develop SMEs of community-based tourism, (6) SMEs' competitiveness, (7) problems and obstacles faced by SMEs, in order to formulate policy suggestions to ensure the SMEs adaptation, survival, and growth during the age of digital disruption. The data were of two types. The first type was the primary data collected from the structured interview with six groups of stakeholders of community-based tourism promotion and development in the upper northern provinces group 2. The stakeholders included those the business sector, related government agencies, local people committees, scholars, NGOs, and tourists. And the second type was the secondary data, which included the background, situation, and direction of Thai SMEs' response in the digital economy age. The data were collected from related documents, government reports, research reports, and related statistical information on the website of related agencies at the local and international levels.

The quantitative research method was used to collect the primary data. First, a questionnaire was employed to study the influence of factors which shapes the community-based tourism service sector SMEs' response in the digital economy age. It was administrated to SMEs in the service sector and the data were analyzed to find out the factors which influenced the response in order to prove the hypothesis. Second, the gap analysis of service quality and the study of problems and obstacles of the service enterprise's operation were made. The primary data collected from a survey questionnaire to find out the opinions of customers or tourists who visited or used tourism service at the community-based tourism attractions. The data would reveal the problems and obstacles of SMEs in the service sector in the digital economy age.

After that the data were analyzed and synthesized into the policy suggestions which would enable the Thai SMEs to sum their businesses effectively and efficiently to cope with the current situation and the future trend, both in terms of opportunities and threats of the digital economy age.

3.2 Variables

In this study, there were two types of variables: independent variables and a dependent variable. Each variable was defined, as follows.

3.2.1 Independent variables involved the following factors.

3.2.1.1 The structural contingency factors: referring to the factors of the open organization structure of SMEs. The entrepreneurs used this organization structure to allow flexibility, decentralization of authority, teamwork, low formality with no emphasis the control, and informal internal communication. Furthermore, they also considered the efficiency of other related factors such as planning, employees' skills, technology, organization culture, and management strategy, which would allow the organization to adapt itself in response to the uncertainty of its environment as best as possible.

3.2.1.2 The SMEs' potential factors: referring to the factors which reflected that SMEs had enough management resources, taking into consideration the inputs of Thai SMEs operation based on the principle of the 8M's (Ferrero diRoccaferrera, 1972): man, money, material, method/management, machine, market, message, and morale.

3.2.1.3 The entrepreneur's perception factors: referring to SMEs entrepreneurs' perception of three aspects of digital technology: (1) e-Business infrastructure, or the whole economic infrastructure which supported the electronic business process and e-Commerce operation, including hardware, software, telecommunication network, supporting services, and human capital for the business and e-Commerce. (2) e-Business (electronic business) refers to the process which the business sector operated on the computer network, such as online trading, production management, logistic system, communication, and customer services through digital platforms, etc., and (3) e-Commerce (electronic commerce) referring to the trading of goods and services on the computer network. And the Thai SMEs entrepreneurs' perception can be classified on basis of the characteristics of e-Business Infrastructure, e-Business, and e-Commerce into six dimensions. First, relative advantage was the perception of expected advantage from implementing the innovation in the enterprise. Second, compatibility was the perception of

compatibility between the chosen innovation and tasks within the enterprise. Third, complexity was the perception of the complexity level of the chosen innovation. Forth, trialability was the perception of the potential of the chosen innovation by experimenting technology implementation in the operation. Fifth, observability was the perception of possible outcome of technology implementation that affected the society. And sixth, security of innovation means the perception of the data protection system or the security provided by the chosen innovation.

3.2.1.4 The decision-making process factors: referring to the factors related to the process of SMEs entrepreneurs' decision in choosing or avoiding the implementation of technology or innovation in the digital economy age. The following three fundamental factors were taken into account. First, the executives' attitude or the perception of the positive and negative effects on the enterprises. Second, social expectations from the enterprise. Especially when the enterprise grew or became larger, it would receive higher social expectations. And third, the ability to control internal resource to eliminate threats. The SMEs entrepreneurs had to be able to interpret the organization environment thoroughly to choose the most suitable approach of organization management.

3.2.1.5 The strategic management factors: referring to strategies chosen by SMEs entrepreneurs to gain opportunities and to handle threats from technology or digital economy age in order to achieve the business outcome. The strategies chosen by SMEs' entrepreneurs could be classified in four types as follows. First, the Prospectors strategy, which focused on the improvement of competency in analyzing the situation and the trend in the changing environment to create commercial advantage and ensure continuous growth. Second, the Defenders strategy, which emphasized the production stability, niche market, prevention of competitors' entrance, and avoiding risks. Third, the Analyzers strategy, which aimed to create new products and seek new markets. When the new product could grow well, the enterprise would use the Analyzers strategy to maintain the growth stability through copying the successful approach of the prospectors. And fourth, the Reactors strategy, which mainly emphasized the internal operation, it was not possible for the enterprise to adjust itself in response to the external environment if it could not formulate a clear strategy.

3.2.2 Dependent variable was the Thai SMEs' response in the digital economy age, specifically in the service sector of community-based tourism in the upper northern provinces group 2. The Thai SMEs' response referred to the operational guideline which reflected the perception and the decision-making process of the SME entrepreneurs, under the policy implementation of community-based tourism which involved multiple stakeholders who contributed to promotion and development of community-based tourism in the digital age when technology constantly changes.

Furthermore, this study investigated three related factors as follows. First, the context of policy implementation and the role of stakeholders in the promotion and development of SMEs in the service sector of community-based tourism under the framework of digital economy development, and SMEs' adjustment after implementing the policy as mentioned above, in order to understand the policy itself, operational mechanisms, stakeholders, and tools to reach policy goals effectively. Second, the competitiveness of SMEs in the service sector of community-based tourism to reflect potentials, situations, effects, and adjustments of SMEs, which were supported by the government's policy. And finally, the gap of service quality, problems, and obstacles of SMEs at community-based tourism attractions in the upper northern provinces group 2, to be aware of all problems that SMEs are facing, and to make suggestions for both policy and practice to boost SMEs to adapt themselves to survive and grow sustainably during the age of digital economy.

3.3 Conceptual Framework

Based on the realization of Thai SMEs' importance in the age of digital economy in Chapter 1 and literature review in Chapter 2, the conceptual framework of this study was formulated, as follows (Figure 3.1).

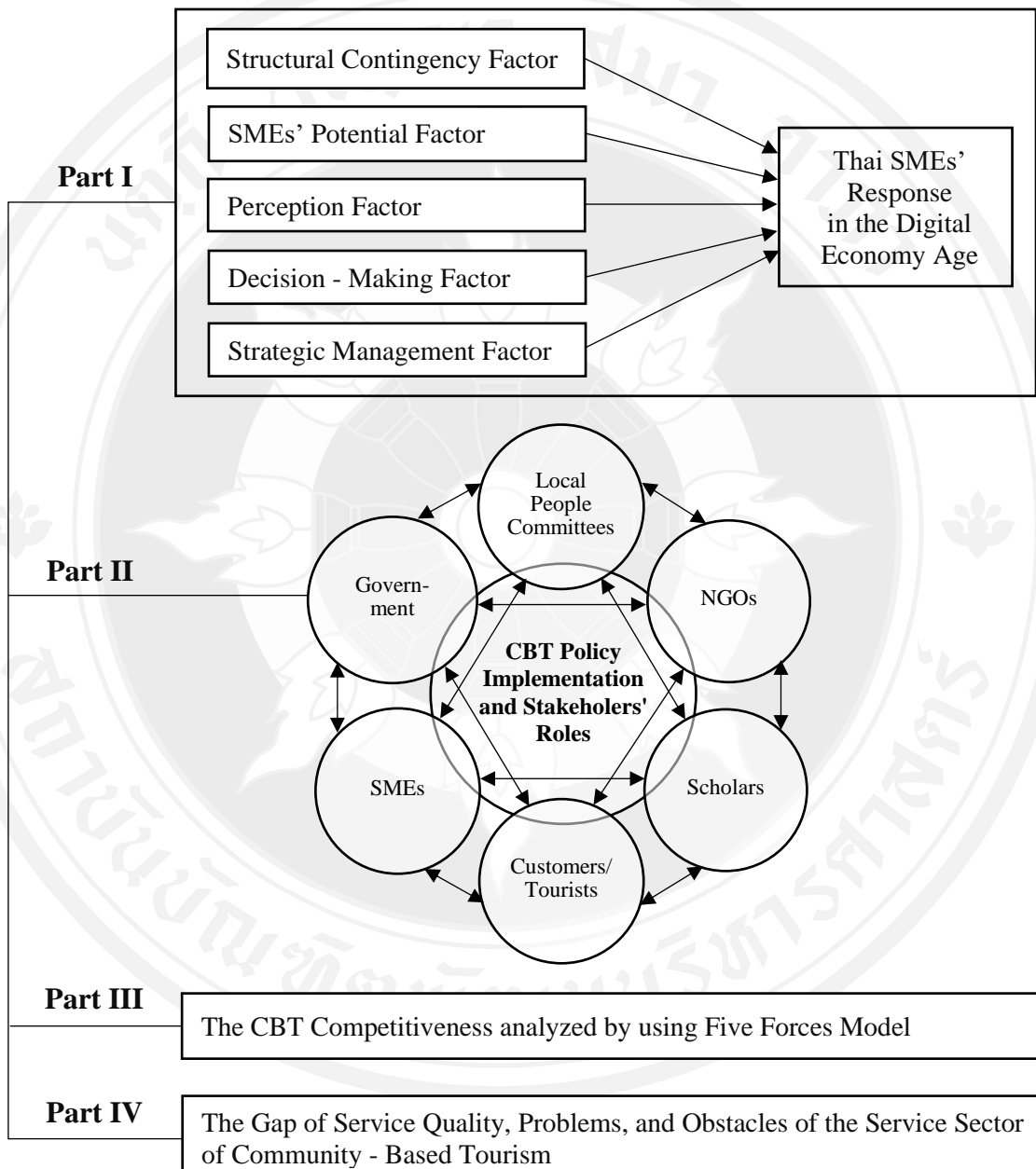


Figure 3.1 Conceptual Framework of “Thai SMEs’ Response in the Digital Economy Age: A Case Study of the Service Sector of Community - Based Tourism in the Upper Northern Provinces Group 2”

The conceptual framework of this study (Figure 3.1) is divided into four parts as follows.

Part I is the study of factors influencing the response of SMEs, which reflect the process of perception and decision-making of SMEs' entrepreneurs under the implementation of the community-based tourism policy in order to ensure their own adaptation, survival, and growth during the era of digital economy.

Part II is the study of policy implementation, SMEs adjustment, and stakeholders' roles in the promotion and development of community-based tourism in the upper northern provinces group 2 under the framework of digital economy development in order to understand the policy, the operational mechanisms, the parties concerned, and the tools for implementing the CBT policy to reach the goals.

Part III is the study of the competitiveness analysis of SMEs in the service sector of the community-based tourism in order to reflect potentials, situations, effects and adjustments of SMEs, which are supported by the government policy. The five forces model is applied in this part of study (Figure 3.2).

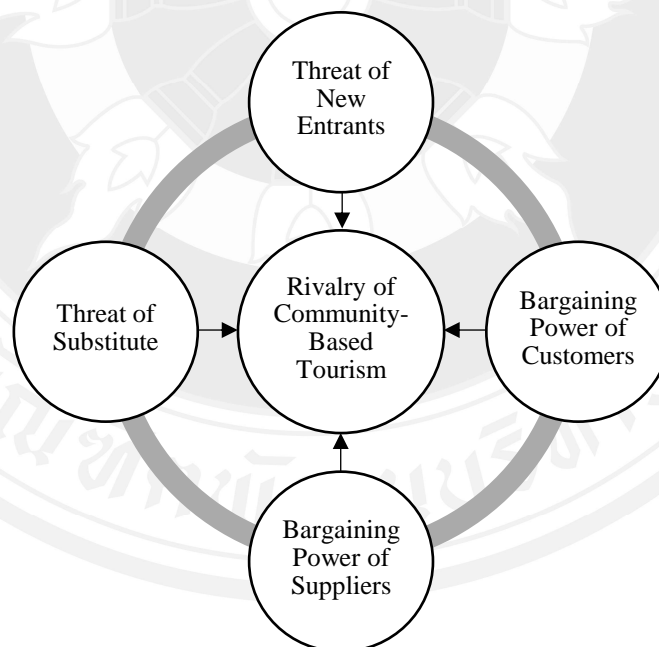


Figure 3.2 Five Forces Model for Analyzing Competitiveness of Community - Based Tourism in the Upper Northern Provinces Group 2

Part IV is the study of the gap of service quality of SMEs operation at community-based tourism attractions to be aware of all problems faced by SMEs in order to make suggestions for both policy and practice to enable SMEs to adapt themselves to survive and grow sustainably in response to technological changes of the digital economy age. The gap model of service quality was applied in this study. The service quality was measured by the satisfaction of customers or tourists who visited and used the tourism-related services from the SMEs in the service sector at the community-based tourism attractions. The scope of satisfaction measurement included five dimensions: reliability, assurance, tangibles, empathy, and responsiveness, or “RATER” (Marathe, 2017, p. 82) (Figure 3.3).

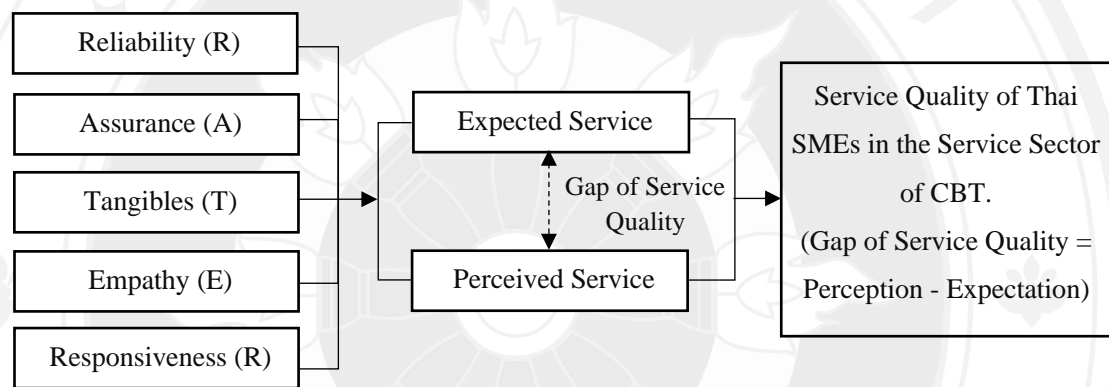


Figure 3.3 Service Quality of Thai SMEs in the Service Sector of Community - Based Tourism in the Upper Northern Provinces Group 2

3.4 Hypothesis

The following hypothesis of this study was formulated from the conceptual framework Part I of Figure 3.1.

H_0 : All independent variables in the multiple regression equation cannot together affect the response of SMEs in the digital economy age ($H_0: \rho=0$).

H_A : All independent variables in the multiple regression equation can together affect the response of SMEs in the digital economy age ($H_A: \rho \neq 0$).

The variables set:

The independent variables included five factors related to the SMEs' operation, all of which were based on the review of literature of this study. They were

(1) the structural contingency, (2) the SMEs' potential, (3) the perception, (4) the decision-making process, and (5) the strategic management.

The dependent variable was the SMEs' response to opportunities and threats in the digital economy age.

3.5 Population and Sampling

The population in this study included six groups of stakeholders of the promotion and development of community-based tourism in the upper northern provinces group 2 in the era of digital economy. (1) The business sector, which consists of three major groups: SMEs entrepreneurs in the service sector, the Provincial Federation of Thai Industries, and the Provincial Chamber of Commerce, all of which are the major foundations of the tourism industry. The implementation of the government's tourism policy requires coordination and participation from the business sector, while the business sector is still under the government's control to ensure the creative operation, with responsibility for the community, the society, and the environment. (2) Related government agencies, which are the Provincial Office of Tourism and Sports, Tourism Authority of Thailand (TAT), Designated Areas for Sustainable Tourism Administration (Public Organization) or DASTA, and local administrative organizations. These agencies are responsible for coordination among themselves and other organizations, together with the promotion of the people's participation to ensure the similar direction of policy formulation and tourism promotion. (3) Local people committees, which represent the community and contribute to the promotion and development of community-based tourism based on the planning and implementation to reap benefits from tourism development. (4) Scholars, who provide academic supports, promotion of labors' skills, and intellectual capital, all of which are important factors for entering the tourism industry. (5) The non-governmental organizations (NGOs), which play a role of building cooperation from local people by focusing on conservation of natural resources, on the society, and on the economic growth, so that all sectors of the society will realize their duties and responsibility for driving Thai tourism industry. And (6) customers or tourists,

who visit or use services related to tourism at community-based attractions. This group thus can reflect the quality of SMEs' services in each community's attractions.

The areas of study in this research were selected from the upper northern provinces group 2, which were Chiang Rai, Nan, Phayao, and Phrae. And there was total 16 attractions based on the survey by the Office of the Permanent Secretary, Ministry of Tourism and Sports to act an action plan to promote sustainable and creative community-based tourism of the years 2018-2022 (Table 3.1).

Table 3.1 List of Community - Based Tourism Attractions in the Upper Northern Provinces Group 2

Provinces	Community - Based Tourism Attractions
Chiang Rai (8 communities)	<ul style="list-style-type: none"> - Nang Lae subdistrict community, Muang district. - Pong Nam Ron community, Doi Hang subdistrict, Muang district. - Baan Pa Saang Nue community, Pong Phrae subdistrict, Mae Lao district. - Baan Suan Pa community, Mae Fah Luang subdistrict, Mae Fah Luang district - Huay Krai Mai community, Huay Krai subdistrict, Mae Sai district. - Paang Haa Home stay community, Koh Chang subdistrict, Mae Sai district. - Home stay group of Baan Tha Kan Thong, Baan Saew subdistrict, Chiang Saen district. - Mai Thai Chalerm Prakiart village, Baan San Thaat, Yonok subdistrict, Chiang Saen district.
Nan (4 communities)	<ul style="list-style-type: none"> - Boh Suak subdistrict community, Muang district - Muang Thued community, Phu Piang district - Nai Viang subdistrict community, Muang district - Baan Soh community, Pue subdistrict, Chiang Klang district.
Phayao (3 communities)	<ul style="list-style-type: none"> - Baan Rong Hai community, Moo 11, Mae Sai subdistrict, Muang district - Baan San Paa Muang water hyacinth product group, Muang district - Wat Sri Khom Kham community, Viang subdistrict, Muang district

Provinces	Community - Based Tourism Attractions
Phrae (1 community)	- Mo Hom Thung Charoen community enterprise of natural dye, Thung Hong subdistrict, Muang district

Source: Office of the Permanent Secretary of Ministry of Tourism and Sports (2017)

In this study, only one of the CBT attractions per province was selected as the target areas based on the following criteria (Table 3.2).

Table 3.2 Target Area of Study

Province	CBT Attractions	Criteria of Selection
Chiang Rai	Nang Lae subdistrict community, Muang district.	This community has provided services for tourists since 2010, with approximately 50 members. The SMEs in the service sector in this area is rather unique, such as Lanna massage service, etc. Thus, this community is appropriate as the target of study, in terms of period of time in community-based tourism management, the adaptation of the community and the SMEs in the service sector to ensure survival, growth, and response to changes in the digital economy age.
Nan	Nai Viang subdistrict community, Muang district	This community is unique in terms of history, lifestyle, and culture. It has been open to tourists longer than any other area since the year 2013. Thus, this community is suitable for the study of adaptation by the community and SMEs in the service sector in response to changes in the digital economy era.
Phayao	Wat Sri Khom Kham community, Viang subdistrict, Muang district	This community is unique in its history, especially the lifestyle of the locals, beliefs, and various ceremonies. The community-based tourism started in 2012, with quite many

Province	CBT Attractions	Criteria of Selection
		enterprises in the service sector. Therefore, this community is highly suitable for the study, in terms of convenience of access to information, period of establishment, and adaptation of the community and entrepreneurs to ensure survival, growth and response to changes in the digital economy age.
Phrae	Mo Hom Thung Charoen community enterprise of natural dye, Thung Hong subdistrict, Muang district	This community has provided tourist services since 2005, with the total of 30 members at present. As this community is unique in its homestays and local lifestyle, it is another interesting and suitable target area.

Source: Office of the Permanent Secretary of Ministry of Tourism and Sports (2017)

The next step was the sampling process for data collection, consists of (1) purposive sampling was used to select the samples from five groups: the business sector, related government agencies, local people committee, scholars, and non-governmental organizations, and (2) accidental sampling was used to select customers or tourists from four areas of community-based tourism. For the sample size of each group, see Table 3.3.

Table 3.3 Sample Groups

Sample Groups	Number
1. Business Sector	
1.1 SMEs' entrepreneurs in the service sector in four communities:	
- Three entrepreneurs from each community to form a focus group	12
- At least 40 entrepreneurs from each community for the survey.	160*
In the preliminary survey, each community had approximately 40-50 service businesses	

Sample Groups	Number
1.2 Representatives of the Provincial Federation of Thai Industries, one representative from one community for the in-depth interview	4
1.3 Representatives of the Provincial Chamber of Commerce, one representative from one community for the in-depth interview	4
2. Related government agencies for the in-depth interview	
2.1 Provincial Tourism and Sports Office's representatives	4
2.2 Tourism Authority of Thailand's representatives of three branches: Chiang Rai - Phayao, Nan, and Phrae	3
2.3 A representative of the designated areas for sustainable tourism administration in the upper northern provinces group 2	1
2.4 The local administrative organization's representatives of four communities, one representative from one community	4
3. Representatives of local people committees from four communities, three representatives of each community, for the in-depth interview	12
4. Representative scholars of the local-educational institutions in four communities, one representative from each community, for the in-depth interview	4
5. Representatives of the local NGOs in four communities, one representative from each community, for the in-depth interview	4
6. Representatives of customers or tourists who visited or used the tourism services at the community-based tourism attractions in four communities:	
- Three Thai representatives of Thai tourists from each community for the focus group	12
- 100 representatives of Thai or foreign tourists from each community for the questionnaire survey	400**
Total	624

Note: * Sample size of entrepreneurs calculated by using G*Power (Version 3.1.9.4).

** Sample size of customers or tourists calculated by using Cochran's formula.

In the table 3.3 above, the samples, groups 1-5, were those who had more than one year of experiences in promotion and development of service businesses of the

community-based tourism in their own areas to obtain reliable data for correct analysis.

Thai SMEs in the service sector from each of the four communities, consisted of 160 enterprises, 40 enterprises. The total number was not smaller than 138 units, and was derived by using G*Power program (Version 3.1.9.4) (Table 3.4). The significant statistical values for multiple regression analysis were shown below.

Table 3.4 Calculation of Sample Size with G*Power (Version 3.1.9.4)

Options	Effect Size Index
F tests - Linear multiple regression: Fixed model, R² deviation from zero	
Analysis:	A priori: Compute required sample size
Input:	
	Effect size f ² = 0.15
	α err prob = 0.05
	Power (1-β err prob) = 0.95
	Number of predictors = 5
Output:	
	Noncentrality parameter λ = 20.7000000
	Critical F = 2.2828562
	Numerator df = 5
	Denominator df = 132
	Total sample size = 138 (≈ 160)
	Actual power = 0.9507643

Source: The G*Power Team (2017)

The sample size of customers or tourists was calculated by the Cochran's formula (Cochran, 1977), which is used to estimate the sample size of infinite population, as follows.

$$n = \frac{P(1 - P)Z^2}{e^2}$$

Where: n = sample size
P = the estimated proportion of an attribute that is present in the population (P=0.50)

Z = level of confidence under the normal curve
(Z=1.96)

e = the acceptable sampling error (e=0.05)

Substitute values into the formula:

$$\begin{aligned} n &= \frac{0.5(1 - 0.5)1.96^2}{0.05^2} \\ &= \frac{0.9604}{0.0025} \\ &= 384.16 (\approx 400) \end{aligned}$$

Therefore, the sample size of customers or tourists in this study was 400 units.

3.6 Data Collection and Instruments

The data were classified in two types based on the data sources.

The first type was the secondary data, which included the background, the situation, and the direction of the response in the digital economy age of the Thai SMEs in the service sector of community-based tourism in the upper northern provinces group 2. The data were also collected from related document, government reports, research reports, and statistical data from relevant organizations, namely the World Bank, the National Statistical Office, the Office of Small and Medium Enterprises Promotion, The Tourism Council of Thailand, the Department of Business Development, the Tourism Authority of Thailand, and the Designated Areas for Sustainable Tourism Administration (Public Organization).

The second source included the primary data collected by using questionnaire and structured interview of the representatives of the stakeholders of the promotion and development of community-based tourism in the upper northern provinces group 2 in the age of digital economy. See Table 3.5.

Table 3.5 Research Instruments

Instrument	Scope of content	Sample group	Data collection
1. Questionnaire for the study in Part I (Figure 3.1)	<ul style="list-style-type: none"> - General information of the target group - Factors which influence SMEs' responses in the digital economy age. - Problems and obstacles in the operation of SMEs 	SME entrepreneurs in the service sector	Questionnaire survey
2. In-depth interview and focus group for the study Part II & III (Figure 3.1 & 3.2)	<ul style="list-style-type: none"> - General information of the sample group - Perception of the government's policy implementation in the promotion and development of CBT - The past role in driving SMEs of CBT - Perception of the adjustment of SMEs of CBT - Perception of the factors of success of the CBT policy - Perception of the future direction of the public policy to promote and develop SMEs - Perception of the competitiveness of the service sector of CBT 	1. Business sector representatives <ul style="list-style-type: none"> - SMEs entrepreneurs - Provincial Federation of Thai Industries - Provincial Chamber of Commerce 2. Related government agencies <ul style="list-style-type: none"> - Provincial Tourism and Sports Office - Tourism Authority of Thailand - Designated areas for sustainable tourism administration - Local administrative organizations 	Focus group In-depth interview In-depth interview In-depth interview In-depth interview In-depth interview

Instrument	Scope of content	Sample group	Data collection
		3. Local people committees	Focus group
		4. Scholars	In-depth interview
		5. NGOs	In-depth interview
		6. Customers or tourists	Focus group
3. Questionnaire for the study Part IV (Figure 3.1 & 3.3)	- General information of the sample group - Gap of service quality in the service business - Problems and obstacles in SMEs operation	Customers or tourists	Questionnaire survey

The instruments to collect the data above were described below.

1) The questionnaire, which was used to collect data from entrepreneurs in the service sector of community-based tourism, was divided in four parts.

Part 1 contained the general information of the participants. This part was in the form of check list and blank-filling. The 13 questions consisted of (1) name of the enterprise, (2) gender, (3) age, (4) education level, (5) type of SMEs, (6) number of employees, (7) revenue per month of the enterprise, (8) net fixed asset value, (9) experience as on SMEs entrepreneur, (10) type of technology applied in the enterprise, (11) period of technology use, (12) the frequency of using technology in the operation of SMEs, and (13) divisions or departments which implemented technology in its operation.

Part 2 drew the information related to factors influencing the response of SMEs in the digital economy age. This part was in the form of check list using the seven-point Likert scale (lowest, lower, low, medium, high, higher, highest) (Vagias, 2006). The questions were divided into five groups: (1) eight questions related to the structural contingency factor, (2) eight questions related to the SMEs' potential factor,

(3) eight questions related to the perception factor, (4) five questions related to the decision-making factor, and (5) six questions related to the strategic management factor.

Part 3 concerned the response of SMEs to the opportunities and threats in the age of digital economy. This part was in the form of check list with the seven-point Likert scale (lowest, lower, low, moderate high, higher, highest) (Vagias, 2006). The questions were divided into two groups: (1) 11 questions related to the prospector perspective, and (2) 10 questions related to the defender perspective.

The scores for the assessment (part 2 and part 3) were divided into seven levels as follows:

Highest	=	7 marks
Higher	=	6 marks
High	=	5 marks
Moderate	=	4 marks
Low	=	3 marks
Lower	=	2 marks
Lowest	=	1 mark

Then seven score ranges were set as follows:

Highest	=	6.17 – 7.00
Higher	=	5.31 – 6.16
High	=	4.45 – 5.30
Moderate	=	3.59 – 4.44
Low	=	2.73 – 3.58
Lower	=	1.87 – 2.72
Lowest	=	1.00 – 1.86

Part 4 concerned the problems, obstacles, and suggestions for the promotion and development of Thai SMEs during the age of digital economy. This part was in the form of open-ended questions. There were two sub-questions: (1) problems and obstacles, and (2) suggestions.

2) In-depth interview and focus group, were used to collect the data from the stakeholders of community-based tourism development and promotion. The interview guide was into two parts.

Part 1 sought the general information of the interviewee, including name-surname, organization, position, telephone, and email.

Part 2 concerned in-depth interview and focus group to find out about the roles and experiences in the promotion and development of service businesses of community-based tourism in the digital economy age. The six topics to be explored were (1) the perception of policy implementation in the promotion and development of community-based tourism, (2) the previous role in driving SMEs in the service sector at the community-based tourism attractions, (3) the perception of the adjustments of SMEs in the service sector in the digital economy age, (4) the perception of factors contributing to success of community-based tourism in the digital economy age, (5) the perception of the future direction of the public policy to promote and develop SMEs in the service sector of community-based tourism, and (6) the perception of competitiveness (destinations, demand for products and services, related suppliers, the CBT's strategic plan, and government's promotion) of the service sector.

3) The questionnaire, which was used to collect the data from customers or tourists in the community-based tourism attractions, was divided into three parts, as follows.

Part 1 dealt with the general background of the participants. The questionnaire was in the form of check list and short answers. It contained nine questions: (1) gender, (2) age, (3) education level, (4) income per month, (5) frequency of visiting the community-based tourism attraction, (6) nature of visiting, (7) number days spent in the community-based tourism attractions, (8) likelihood of returning there, and (9) channel of information about the community-based tourism attraction.

Part 2 sought information related to the expectation and perception of service quality by the service businesses at the community-based tourism attraction. This part was also in the form of a check list with the five-point Likert scale (lowest, low, moderate, high, highest) (Vagias, 2006). The questions concerned the gap of service quality and were divided into five dimensions: (1) five questions related to reliability, (2) five questions related to assurance to the customers, (3) five questions related to tangibles of services, (4) five questions related to empathy with customers, and (5) five questions related to responsiveness to them. There were 25 questions in total.

The scores for the assessment of the expectation and the perception of service quality were divided into five ranges as follows.

Highest	=	5 marks
High	=	4 marks
Moderate	=	3 marks
Low	=	2 marks
Lowest	=	1 mark

Then the interval designated to assess the average scores of expectation and perception of service quality in five ranges were as follows.

Highest	=	4.21 – 5.00
High	=	3.41 – 4.20
Moderate	=	2.61 – 3.40
Low	=	1.81 – 2.60
Lowest	=	1.00 – 1.80

Part 3 was related to the problems, obstacles, and suggestions regarding the service quality of the service businesses in the community-based tourism attractions. It was in the form of open-ended questions. There were also sub questions regarding (1) problems and obstacles, and (2) suggestions.

After the questionnaires and the interview guide of in-depth interview and focus group had been constructed, they were checked for the content validity and reliability, as well as human research ethics. All of the instruments were assessed by specialists to ensure that they could be used. After that, they were presented to the Ethics Committee in Human Research, National Institute of Development Administration for approval. The three instruments above got a certificate of approval with COA number: 2020/0023.

The questionnaires were also required to be tested to their reliability. They were administered to those with similar characteristics to the population of the study: 65 SMEs' entrepreneurs and 65 customers or tourists. (1) 16 cases in Pong Nam Ron community, Doi Hang subdistrict, Mueang district, Chiang Rai province, (2) 17 cases in Muang Thut community, Phu Piang district, Nan province, (3) 16 cases in Ban Rong Hai community, Mae Sai subdistrict, Muang district, Phayao province, and (4) 16 cases in Mae Lai community, Mae Lai subdistrict, Muang district, Phrae province.

Afterwards, the collected data were calculated with the Cronbach's alpha coefficient (Bonett & Wright, 2015) in order to find the level of reliability of the questionnaire, which should be between 0.50 - 1.00.

The Cronbach's alpha coefficient was shown as follows:

1) The questionnaire for SMEs entrepreneurs	Cronbach's alpha	
1.1) The structural contingency factor	0.900	
1.2) The SMEs' potential factor	0.895	
1.3) The perception factor	0.871	
1.4) The decision-making process factor	0.835	
1.5) The strategic management factor	0.819	
1.6) SMEs' response to opportunities and threats	0.922	
1.7) SMEs' response to opportunities	0.887	
1.8) SMEs' response to threats	0.867	
2) The questionnaire for customers or tourists	Cronbach's alpha	
	Expectation	Perception
2.1) Reliability	0.921	0.937
2.2) Assurance	0.930	0.951
2.3) Tangibles	0.930	0.933
2.4) Empathy	0.962	0.954
2.5) Responsiveness	0.962	0.952

3.7 Data Analysis

The data analysis in this study was divided into two parts, as follows.

Part 1 concerned the qualitative analysis. Content analysis was made to reveal:

(1) the context of policy implementation in terms of promotion and development of SMEs in the service sector of community-based tourism, (2) stakeholders' roles in driving SMEs, (3) SMEs' adjustments in the digital economy age, (4) factors contributing to success of community-based tourism in the digital economy age, (5) the future direction of the public policy to promote and develop SMEs of community-based tourism, (6) competitiveness, e.g., destinations, demand for products and services, related suppliers, the CBT's strategic plan, and government's promotion of

the community-based tourism, and (7) problems and obstacles to the service sector of community-based tourism.

Part 2 dealt with the quantitative analysis, which included two types of statistics: (1) descriptive statistics, namely frequency, percentage, arithmetic mean, and standard deviation, in order to reveal the sample's personal information, and the gap of service quality of SMEs in the community-based tourism attractions, and (2) inferential statistics, i.e., multiple regression analysis, in order to identify the factors influencing the response of SMEs in the service sector in the upper northern provinces group 2 under the implementation of community-based tourism policy in the digital economy age.

To analyze the factors influencing the response of SMEs in the service sector, multiple regression analysis was used to examine the relationship between the dependent variable (SMEs' Res) and each of the independent variables: X_1, X_2, \dots , which need to be a linear relationship. Two equations for the multiple regression analysis by the unstandardized and standardized coefficients were as follows:

1) The equation for the multiple regression analysis by unstandardized coefficients: $Y_{SMEs' Res} = a + b_1X_1 + b_2X_2 + \dots + b_nX_n$

2) The equation for the multiple regression analysis by standardized coefficients: $Y_{Z' SMEs' Res} = \beta_1 X_{z1} + \beta_2 X_{z2} + \dots + \beta_n X_{zn}$

It should be noted that prior to the analysis of the influence of independent variables on the dependent variable, it is necessary to find out the correlations, or the r value (between 0.00 - 1.00) among the independent variables to prevent the problem of multicollinearity, when two or more independent variables are correlated with each other. The r value between independent variables should not be too high, or too close to 1.00 (Farrar & Glauber, 1967).

CHAPTER 4

FINDINGS

This chapter presents the results of the study on “Thai SMEs’ response in the digital economy age: A case study of the service sector of community-based tourism in the upper northern provinces group 2”. The content in this chapter is divided into four parts as follows.

4.1 The factors influencing the response of SMEs in the service sector in the digital economy age

4.2 The context of policy implementation and the role of stakeholders in the promotion and development of SMEs in the service sector of community-based tourism under the framework of digital economy development

4.3 The competitiveness of SMEs in the service sector of community-based tourism in the upper northern provinces group 2

4.4 The gap of service quality, problems, and obstacles of SMEs in the service sector in the community-based tourism attractions

4.1 The Factors Influencing the Response of SMEs in the Service Sector in the Digital Economy Age

This part showed the results of study derived from the questionnaire administered to 160 entrepreneurs in the service sector. The contents were divided into five subtopics: (1) general information of the sample, (2) mean, standard deviation, and opinions of the entrepreneurs on SMEs’ operation, (3) mean, standard deviation, and SMEs’ response in the digital economy age, (4) factors influencing the response of SMEs, (5) problems, obstacles, and suggestions on how to promote and develop SMEs in the service sector of community-based tourism (CBT) in the upper northern provinces group 2.

4.1.1 General Information of the Sample

The general information of the sample consists of 13 items. The details were as follows (Table 4.1).

1) Type of business: Most of the participants were in food and beverage business (51.20%), followed by souvenir shops (33.10%), hotels and accommodations (7.5%), other services such as laundry, massage, photography (5.60%), transportation and logistics (1.2%), and supporting businesses in the service sector and mass communication (1.2%), respectively.

2) Gender: Most participants are female (58.10%), followed by male (41.90%).

3) Age: Most participants were in the age range of 31-40 years old (35.60%), followed by less than 30 years old (29.40%), 41-50 years old (18.10%), and over 61 years old (5.00%), respectively.

4) Education level: Most of the participants held a Bachelor's degree (58.8%), followed by a diploma or equivalent (15.00%), high school certificate or equivalent (9.40%), a Master's degree (9.40%), a primary school certificate (5.60%), a doctoral degree (1.20%), and secondary school certificate (0.60%), respectively.

5) Type of SMEs: Most participants registered their businesses as private enterprises (89.40%), followed by juristic persons, and community enterprises (8.80% and 1.90%), respectively.

6) Number of employees: The majority of the participants employed 1-2 employees (63.10%), followed by 3-4 employees (20.00%), 5-6 employees (8.80%), and over 7 employees (8.10%), respectively.

7) Income per month: Most participants earned an average income of less than 50,000 baht (61.90%), followed by 50,001-100,000 baht (19.40%), over 200,001 baht (10.00%), 100,001-150,000 (5.60%), and 150,001-200,00 (3.10%), respectively.

8) Value of fixed assets: Most participants' fixed asset value was less than 500,000 baht (63.10%), followed by over 2,000,001 baht (13.80%), 500,001-1,000,000 baht (11.20%), 1,000,001-1,500,000 baht (6.20%), and 1,500,001-2,000,000 baht (5.60%), respectively.

9) Work experience as a SME entrepreneur: The participants who were in business for over 10 years was more or less the same as those who were in business for 5-6 years (23.80% and 23.10%), followed by 3-4 years (17.50%), 1-2 years (15.00%), 7-8 years (13.10%) and 9-10 years (7.50%), respectively.

10) Types of technology applied in SMEs' operation: Most participants used four types of technology. The most used technology was (1) the internet connecting devices, such as tablets, computers, or smartphones (98.75%), followed by (2) media and online platforms (60.63%), (3) machines and robots (21.25%), and (4) AI and big data (3.75%), respectively.

11) Length of time in applying technology in SMEs' operation: Most participants used technology in their businesses for 1-5 years (53.80%), followed by less than 1 year (28.80%), 6-10 years (12.50%), and over 10 years (5.00%), respectively.

12) Frequency of using technology in SMEs' operation: Most participants used technology every day (46.90%), followed by 1-2 days per week (24.40%), 5-6 days per week (18.80%), and 3-4 days per week (10.00%), respectively.

13) Departments or divisions where technology was utilized: Most participants used technology in seven types of work from the most-often to the least as follows:

13.1) Customer services (86.88%), mostly via tablets, computers, or smartphones (78.75%), followed by online platforms (51.25%).

13.2) Marketing or public relations (81.88%), mostly via tablets, computers, or smartphones (70.00%), followed by online platforms (51.88%). And the least-often technology was AI and big data (0.63%).

13.3) Accounting or procurement (60.00%), mostly via tablets, computers, or smartphones (55.63%), followed by online platforms (16.25%).

13.4) Planning and administration (55.00%), mostly via tablets, computers, or smartphones (49.38%), followed by online platforms (11.88%). And the least-often was AI and big data (3.75%).

13.5) Manufacturing (27.50%), mostly via machines or robots (21.25%), followed by tablets, computers, or smartphones (8.13%). And the least-often was online platforms (3.13%).

13.6) Human resource management (23.13%), mostly via tablets, computers, or smartphones (17.50%), followed by online platforms (6.25%). And the least-often was AI and big data (0.63%).

13.7) Research and development (20.00%), mostly via tablets, computers, or smartphones (16.25%), followed by online platforms (5.00%). And the least-often was machines and robots (0.63%).

Table 4.1 General Information of the Sample

(n=160)		
Items	Frequency	Percent
1. Type of business		
- Food and beverage	82	51.20
- Hotels and accommodations	12	7.50
- Souvenir shops	53	33.10
- Transportation and logistics	2	1.20
- Laundry, massage, or photography	9	5.60
- Supporting businesses in the service sector and mass communication	2	1.20
2. Gender		
- Male	67	41.90
- Female	93	58.10
3. Age		
- Less than 30 years old	47	29.40
- 31-40 years old	57	35.60
- 41-50 years old	29	18.10
- 51-60 years old	19	11.90
- Over 61 years old	8	5.00
* Mean=38.41; Median=36.00; Mode=35.00		
4. Education level		
- Primary school	9	5.60
- Secondary school	1	0.60
- High school/equivalent	15	9.40

(n=160)

Items	Frequency	Percent
- Diploma/equivalent	24	15.00
- Bachelor's degree	94	58.80
- Master's degree	15	9.40
- Doctoral degree	2	1.20
5. Type of SMEs		
- Community enterprise	3	1.90
- Juristic person	14	8.80
- Private business	143	89.40
6. Number of employees		
- 1-2 employees	101	63.10
- 3-4 employees	32	20.00
- 5-6 employees	14	8.80
- More than 7 employees	13	8.10
* Mean=3.06; Median=2.00; Mode=1.00		
7. Income per month		
- Less than 50,000 baht	99	61.90
- 50,001-100,000 baht	31	19.40
- 100,001-150,000 baht	9	5.60
- 150,001-200,000 baht	5	3.10
- Over 200,001 baht	16	10.00
* Mean=82,253.13; Median=37,500.00; Mode=30,000.00		
8. Value of fixed assets		
- Less than 500,000 baht	101	63.10
- 500,001-1,000,000 baht	18	11.20
- 1,000,001-1,500,000 baht	10	6.20
- 1,500,001-2,000,000 baht	9	5.60
- Over 2,000,001 baht	22	13.80
* Mean=1,295,500; Median=275,000.00; Mode=100,000.00		
9. Work experience as a SME entrepreneur		
- 1-2 years	24	15.00
- 3-4 years	28	17.50

(n=160)		
Items	Frequency	Percent
- 5-6 years	37	23.10
- 7-8 years	21	13.10
- 9-10 years	12	7.50
- Over 10 years	38	23.80
10. Types of technology applied in SMEs' operation		
(more than 1 answer selected)		
- AI/Big data	6	3.75
- Online media/platforms	97	60.63
- Machines/robots	34	21.25
- Internet connecting devices: tablets/ computers/ smartphones	158	98.75
11. Length of time in applying technology in SMEs' operation		
- Less than 1 year	46	28.80
- 1-5 years	86	53.80
- 6-10 years	20	12.50
- Over 10 years	8	5.00
12. Frequency of using technology in SMEs' operation		
- 1-2 days/week	39	24.40
- 3-4 days/week	16	10.00
- 5-6 days/week	30	18.80
- Every day	75	46.90
13. Departments or divisions where technology was utilized		
(more than 1 answer selected)		
13.1 Planning/administration	88	55.00
- AI/big data	6	3.75
- Online media/platforms	19	11.88
- Internet connecting devices: tablets/ computers/ smartphones	79	49.38
13.2 Manufacturing	44	27.50
- Online media/platforms	5	3.13
- Machines/robots	34	21.25
- Internet connecting devices: tablets/ computers/ smartphones	13	8.13

(n=160)		
Items	Frequency	Percent
13.3 Accounting/procurement	96	60.00
- Online media/platforms	26	16.25
- Internet connecting devices: tablets/ computers/ smartphones	89	55.63
13.4 Marketing/public relations	131	81.88
- AI/Big data	1	0.63
- Online media/platforms	83	51.88
- Internet connecting devices: tablets/ computers/ smartphones	112	70.00
13.5 Coordination/customer services	139	86.88
- Online media/platforms	82	51.25
- Internet connecting devices: tablets/ computers/ smartphones	126	78.75
13.6 Research & development	32	20.00
- Online media/platforms	8	5.00
- Machines/robots	1	0.63
- Internet connecting devices: tablets/ computers/ smartphones	26	16.25
13.7 Human resource management	37	23.13
- AI/Big data	1	0.63
- Online media/platforms	10	6.25
- Internet connecting devices: tablets/ computers/ smartphones	28	17.50

4.1.2 Mean and Standard Deviation of the Level of Entrepreneurs' Opinion Regarding SMEs' Operation

This part presents mean (\bar{x}) and standard deviation (SD) of the level of opinions of 160 entrepreneurs on five factors as follows (Table 4.2).

1) The structural contingency factor. The respondents considered structural flexibility to be at a moderate level (\bar{x} =4.33; SD=1.12). When the subtopics were considered, it was also found that SMEs operated under the open structure at a moderate level as well. The subtopics included (1) the flexible work structure at both the vertical and the horizontal levels (\bar{x} =4.16; SD=1.26), (2) the decentralization of power to the division heads (\bar{x} =3.92; SD=1.52), (3) teamworking (\bar{x} =4.36; SD=1.63) (4) informal corporate culture (\bar{x} =4.23; SD=1.35), (5) freedom granted to each division (\bar{x} =4.38; SD=1.43), (6) internal and informal communication within the

enterprise ($\bar{x}=4.38$; $SD=1.46$), (7) systematic planning ($\bar{x}=4.52$; $SD=1.33$), and (8) skillful employees in the work for which they were responsible ($\bar{x}=4.66$; $SD=1.24$).

2) The SMEs' potential factor: The respondents considered that the SME's potential was at a moderate level ($\bar{x}=4.39$; $SD=1.08$). When the subtopics were analyzed, the participants' opinions could be divided into two levels: rather high and moderate. The following topics were found to be at a rather high level: (1) having clear and systematic procedures ($\bar{x}=4.48$; $SD=1.25$), (2) having adequate raw materials, products, spare parts, or service system, which efficiently supported the business operation ($\bar{x}=4.54$; $SD=1.30$), (3) having a good communication process of product value to the customers ($\bar{x}=4.59$; $SD=1.29$), and (4) having efficient usage of social networks ($\bar{x}=4.55$; $SD=1.37$), a moderate level belonged to the following topics: (1) having the employees who possessed required technological skills for their work ($\bar{x}=4.07$; $SD=1.35$), (2) having enough capital for business operation ($\bar{x}=4.15$; $SD=1.19$), (3) having efficient and adequate equipment or machinery ($\bar{x}=4.36$; $SD=1.28$), and (4) setting the motivation system for employees ($\bar{x}=4.37$; $SD=1.44$).

3) The perception factor: The respondents stated that overall, the entrepreneurs perceived the external environment at a moderate level ($\bar{x}=4.43$; $SD=1.19$). When the subtopics were considered, two levels of the entrepreneurs' perception were found. A rather high level of perception was found in the following four issues: (1) e-Commerce was influential to the operation ($\bar{x}=4.59$; $SD=1.51$), (2) the importance of hardware, software, and telecommunication networks which supported e-Commerce ($\bar{x}=4.49$; $SD=1.45$), (3) current e-Business/e-Commerce was easy to use ($\bar{x}=4.48$; $SD=1.29$), and (4) the cyber security was necessary for the use of technology to run the business ($\bar{x}=4.56$; $SD=1.40$). The following four issues were found to be at a moderate level: (1) SMEs should focus on business operation via e-Commerce ($\bar{x}=4.33$; $SD=1.43$), (2) the technology used in business had to match the type of work ($\bar{x}=4.37$; $SD=1.39$), (3) new technology should be tried out prior to full application ($\bar{x}=4.39$; $SD=1.29$), and (4) the assessment of the outcome from the application of technology was necessary ($\bar{x}=4.23$; $SD=1.35$).

4) The decision-making process factor: The respondents revealed that the entrepreneurs' decision-making process in selecting or avoiding the technology in their operation was at a moderate level ($\bar{x}=4.41$; $SD=1.16$). However,

the analysis of the six subtopics indicated two levels of decision-making process among the entrepreneurs. That is, a rather high level was found in the following topics: (1) expecting that customers would respond well to the use of e-Business/e-Commerce in the enterprise ($\bar{x}=4.52$; $SD=1.20$), and (2) being confident that the enterprise could be adjusted to survive and grow during the age of digital economy ($\bar{x}=4.54$; $SD=1.28$). On the other hand, a moderate level was found in the following topics: (1) the decision to use e-Business/e-Commerce in SMEs operation ($\bar{x}=4.30$; $SD=1.38$), (2) the perception of strengths and weaknesses of e-Business/e-Commerce in the enterprise ($\bar{x}=4.33$; $SD=1.44$), and (3) the ability of the enterprise in technology investment ($\bar{x}=4.36$; $SD=1.21$).

5) The strategic management factor: The respondents stated that the entrepreneurs' strategic management was at a moderate level ($\bar{x}=4.25$; $SD=1.15$). And in the analysis of the six subtopics, the same level of strategic management was also found: (1) having a systematic plan for strategic management ($\bar{x}=4.18$; $SD=1.31$), (2) emphasizing the proactive marketing strategy ($\bar{x}=4.39$; $SD=1.48$), (3) often following and analyzing both the external and internal economic situation ($\bar{x}=4.08$; $SD=1.33$), (4) focusing on the internal management strategy ($\bar{x}=4.27$; $SD=1.31$), (5) focusing on the prevention of technological effects through cyber security, technological investment, and human capital investment ($\bar{x}=4.23$; $SD=1.41$), and (6) often seeking technology which could be used to enhance the enterprise growth ($\bar{x}=4.38$; $SD=1.41$).

Table 4.2 Mean, Standard Deviation, and the Level of Entrepreneurs' Opinions on SMEs' Operation

(n=160)			
Dimensions	\bar{x}	SD	Level of Opinion
The structural contingency factor	4.33	1.12	Moderate
1. There is structural flexibility (integrate both vertical and horizontal structure) in my enterprise.	4.16	1.26	Moderate
2. In my enterprise, the authoritative power is decentralized among the department/division heads.	3.92	1.52	Moderate

(n=160)

Dimensions	\bar{x}	SD	Level of Opinion
3. There is teamwork in my enterprise.	4.36	1.63	Moderate
4. In my enterprise, the corporate culture is informal.	4.23	1.35	Moderate
5. In my enterprise, each department/division is granted freedom for work.	4.38	1.43	Moderate
6. In my enterprise, the internal communication is informal.	4.38	1.46	Moderate
7. There is systematic planning in my enterprise.	4.52	1.33	Rather high
8. My employees are skillful in the tasks for which they are responsible.	4.66	1.24	Rather high
The SMEs' potential factor	4.39	1.08	Moderate
9. In my enterprise, the employees possess the required technological skills for their tasks.	4.07	1.35	Moderate
10. In my enterprise, the capital is enough for business operation.	4.15	1.19	Moderate
11. In my enterprise, the equipment/ tools/ machinery is efficient and adequate.	4.36	1.28	Moderate
12. In my enterprise, the procedure is clear and systematic.	4.48	1.25	Rather high
13. In my enterprise, the raw materials/ products/ spare parts/ service system which support the business operation are efficient and adequate.	4.54	1.30	Rather high
14. In my enterprise, the process of product value communication to the customers is good.	4.59	1.29	Rather high
15. In my enterprise, there is efficient usage of social networks.	4.55	1.37	Rather high
16. In my enterprise, there is a motivation system for employees.	4.37	1.44	Moderate
The perception factor	4.43	1.19	Moderate
17. Currently, I think e-Commerce is highly influential to the enterprises' operation.	4.59	1.51	Rather high

(n=160)

Dimensions	\bar{x}	SD	Level of Opinion
18. I give importance to the hardware, software, and telecommunication network which support e-Commerce.	4.49	1.45	Rather high
19. I focus on business operation via e-Commerce.	4.33	1.43	Moderate
20. In my opinion, technology used in business must match the type of work.	4.37	1.39	Moderate
21. Currently, I think that it is convenient to put e-Business/e-Commerce into practice.	4.48	1.29	Rather high
22. If there is any new technology, I will try it first prior to the full application.	4.39	1.29	Moderate
23. In my enterprise, I will assess the outcome from the implementation of technology.	4.23	1.35	Moderate
24. In my enterprise, there must be cyber security in the application of technology.	4.56	1.40	Rather high
The decision-making process factor	4.41	1.16	Moderate
25. I have decided to use technology/e-Business innovation in SMEs' operation.	4.30	1.38	Moderate
26. I have perceived the strengths and weaknesses of technology/e-Commerce implementation in the enterprise.	4.33	1.44	Moderate
27. I expect that the customers will respond well to the implementation of e-Business/e-Commerce in the enterprise.	4.52	1.20	Rather high
28. I have a budget for the investment in technology for the enterprise.	4.36	1.21	Moderate
29. I believe that my enterprise can be adjusted to survive and progress in the age of digital economy.	4.54	1.28	Rather high
The strategic management factor	4.25	1.15	Medium
30. I have a systematic plan for strategic management.	4.18	1.31	Moderate
31. I focus on proactive marketing strategies.	4.39	1.48	Moderate

(n=160)

Dimensions	\bar{x}	SD	Level of Opinion
32. I often follow and analyze the economic conditions both inside and outside the country.	4.08	1.33	Moderate
33. I focus on internal management strategies.	4.27	1.31	Moderate
34. I focus on the prevention of technological impacts on cyber security, technological investment, and human capital investment, etc.	4.23	1.41	Moderate
35. I often seek new technology which can be used to drive the enterprise growth.	4.38	1.41	Moderate

4.1.3 Mean, Standard Deviation, and the Level of SMEs' Response to Opportunities and Threats in the Digital Economy Age

This section presents mean (\bar{x}), standard deviation (SD), and the level of SMEs' response of 160 entrepreneurs to opportunities and threats in the digital economy age. The details are described below.

The data analysis revealed that the overall level of response was at a moderate level (\bar{x} =4.26; SD=1.09). Both the prospector response (\bar{x} =4.23; SD=1.17) and the defender response (\bar{x} =4.29; SD=1.10) were found to be at a moderate level. The results of SMEs' response to opportunities and threats could be divided into four dimensions, as follows (Table 4.3).

1) The prospector response to opportunities was found to be a moderate level (\bar{x} =4.43; SD=1.33). However, consideration of the details revealed two levels of response. First, the prospector response was found to be at a rather high level in three subtopics: (1) regularly finding a new business opportunity (\bar{x} =4.51; SD=1.52), (2) focusing on the improvement of service quality to expand the market or the customer base (\bar{x} =4.79; SD=1.45), and (3) regularly following technological progress which supported e-Commerce (\bar{x} =4.57; SD=1.46). Also, the prospector response was found to be at a moderate level in three subtopics: (1) using hardware, software, and telecommunication networks to support the business operation (\bar{x} =4.26; SD=1.44), (2) focusing on the business operation that used electronic systems, such as

online trading, communication, and customer services ($\bar{x}=4.41$; $SD=1.52$), and (3) regularly seeking technological partners for business development ($\bar{x}=4.06$; $SD=1.56$).

2) The prospector response to threats was found to be at a moderate level ($\bar{x}=3.98$; $SD=1.12$). The analysis showed the same level of the participants' response for all subtopics: (1) regular analysis and assessment of the possible consequence if the technology (e-Business/e-Commerce) was not utilized in the business ($\bar{x}=4.06$; $SD=1.39$), (2) conducting public relations and generating customer relationship via social media platforms in order to prevent any interference from competitors ($\bar{x}=4.32$; $SD=1.52$), (3) using the cyber security software to eliminate computer viruses ($\bar{x}=3.73$; $SD=1.35$), (4) following the National Cyber Security Act and the Personal Information Protection Act of B.E., 2562, in order to understand the conditions and penalties prescribed in the Acts ($\bar{x}=3.97$; $SD=1.32$), and (5) seeking partners to strengthen the business through technological networks ($\bar{x}=3.81$; $SD=1.37$).

3) The defender response to opportunities was found to be at a moderate level ($\bar{x}=4.29$; $SD=1.12$). And the analysis also revealed that the participants' defender response was at a moderate level in the following subtopics: (1) focusing on maintaining the stability in business operation rather than seeking a new market ($\bar{x}=4.30$; $SD=1.30$), (2) willingness to invest in technology which could support the business by reducing costs in some tasks ($\bar{x}=4.10$; $SD=1.37$), (3) willingness to invest more capital in technology for business development ($\bar{x}=4.24$; $SD=1.31$), and (4) restructuring the internal process to suit the electronic business process in the digital economy age ($\bar{x}=4.30$; $SD=1.38$). However, the participants still focused more on labor-intensive work process than on machinery and technology at a rather high level ($\bar{x}=4.53$; $SD=1.46$).

4) The defender response to threats was found to be at a moderate level ($\bar{x}=4.29$; $SD=1.21$). The detailed analysis revealed that the participants' response was at a moderate level in the following subtopics: (1) giving importance to the development of technological skills for employees to cope with cyber threats ($\bar{x}=4.24$; $SD=1.39$), (2) willingness to invest in the cyber security software to protect information and assets ($\bar{x}=4.09$; $SD=1.43$), (3) following the news regarding cyber

threats in order to ensure the timely prevention and solution (\bar{x} =4.28; SD=1.38), and (4) regularly changing the strategy that responded to competitors through use of various electronic channels, such as e-Business and e-Commerce (\bar{x} =4.19; SD=1.44). However, the participants tend to avoid online transactions without any security system to protect information and assets at a rather high level (\bar{x} =4.64; SD=1.48).

Table 4.3 Mean, Standard Deviation, and the Level of SMEs' Response to Opportunities and Threats in the Digital Economy Age

(n=160)			
Perspective of Response	\bar{x}	SD	Level of Response
Overall response	4.26	1.09	Moderate
Prospector response	4.23	1.17	Moderate
Prospector response to opportunities	4.43	1.33	Moderate
1. I often seek new business opportunities.	4.51	1.52	Rather high
2. I focus on the improvement of quality of goods/services to expand the market or customer base.	4.79	1.45	Rather high
3. I often follow technological progress which supports e-Commerce.	4.57	1.46	Rather high
4. I use hardware/software/telecommunication networks to support my business operation.	4.26	1.44	Moderate
5. I focus on the business operation through the electronic systems, such as online trading, communication, and customer services.	4.41	1.52	Moderate
6. I seek technological partners for business development.	4.06	1.56	Moderate
Prospector response to threats	3.98	1.12	Moderate
7. I often analyze and assess possible impacts if technology (such as e-Business and e-Commerce) is not utilized in the business.	4.06	1.39	Moderate
8. I conduct the public relations and generate customer relationship via social media platforms to prevent any interference from competitors.	4.32	1.52	Moderate

(n=160)

Perspective of Response	\bar{x}	SD	Level of Response
9. I use the cyber security software in my business to eliminate computer viruses.	3.73	1.35	Moderate
10. I follow the National Cyber Security Act and the Personal Information Protection Act of B.E. 2562, to understand the condition and penalties prescribed in the Acts.	3.97	1.32	Moderate
11. I seek external partners/organizations to strengthen the business through technological networks.	3.81	1.37	Moderate
Defender response	4.29	1.10	Moderate
Defender response to opportunities	4.29	1.12	Moderate
12. I focus on maintaining the stability of business operation rather than seeking new markets/customers.	4.30	1.30	Moderate
13. I focus on the labor-based intensive system/services rather than the machinery/technology.	4.53	1.46	Moderate
14. I will invest in technology which supports the business and reduce the costs in some tasks.	4.10	1.37	Moderate
15. With more capital, I will invest more in the technology for business development.	4.24	1.31	Moderate
16. I will restructure or re-engineer the internal process to suit the electronic business process in the digital economy age.	4.30	1.38	Moderate
Defender response to threats	4.29	1.21	Moderate
17. I give importance to developing my employees' technological skills to cope with cyber threats.	4.24	1.39	Moderate
18. I tend to avoid online transactions without any security system for my information and assets.	4.64	1.48	Rather high
19. I will invest in the cyber security software to protect my information and assets.	4.09	1.43	Moderate
20. I follow the news regarding cyber threats to ensure the timely prevention and coping with them.	4.28	1.38	Moderate

(n=160)

Perspective of Response	\bar{x}	SD	Level of Response
21. I tend to change the strategy for responding to my competitors by using various electronic channels, such as e-Business and e-Commerce.	4.19	1.44	Moderate

4.1.4 Analysis of Factors Influencing the Response of SMEs in the Service Sector in the Digital Economy Age

This section presented: (1) mean, standard deviations, and coefficient correlations, and (2) the factors influencing the response of SMEs in the digital economy age.

1) Means, standard deviations, and coefficient correlations

1.1) The data gathered from 160 entrepreneurs in the service sector were described by using mean (\bar{x}) and standard deviation (SD). The analytical result of each variable was as follows: (1) SMEs' response to opportunities and threats in the digital economy age (SMEs' Res), $\bar{x}=4.26$; SD=1.09. (2) The structural contingency factor (Struc), $\bar{x}=4.33$; SD=1.12. (3) The SMEs' potential factor (Poten), $\bar{x}=4.39$; SD= 1.08. (4) The perception factor (Per), $\bar{x}=4.43$; SD=1.19. (5) The decision-making process factor (Decis), $\bar{x}=4.41$; SD=1.16. (6) The strategic management factor (Stra), $\bar{x}=4.25$; SD=1.15. The coefficient of variation (CV=SD/Mean) of each variable were 0.26, 0.26, 0.25, 0.27, 0.26, and 0.27, respectively. The variable Poten had the lowest coefficient (Table 4.4).

1.2) The coefficient correlations (r) between the dependent variable (SMEs' Res) and seven independent variables from highest to lowest coefficient correlations were: First, the r value between the variable SMEs' Res and the variable Stra was 0.849 ($p<0.01$), which meant that these two variables were positively related at a high level. Secondly, the r value between the variable SMEs' Res and the variable Decis was 0.827 ($p<0.01$), which meant that these two variables were positively related at a high level. Thirdly, the r value between the variable SMEs' Res and the variable Per was 0.810 ($p<0.01$), which meant that these two variables were positively related at a high level. Fourthly, the r value between the variable SMEs' Res and the

variable *Poten* was 0.739 ($p < 0.01$), which meant that these two variables were positively related at a high level. And finally, the r value between the variable *SMEs' Res* and the variable *Struc* was 0.713 ($p < 0.01$), which meant that these two variables were positively related at a high level. Therefore, the five independent variables above could serve as the predictor variables explain the positive influence on the dependent variable, i.e., *SMEs' response* (Table 4.4).

The tolerance values of each of the five predictor variables was as follows: *Struc* = 0.37, *Poten* = 0.30, *Per* = 0.21, *Decis* = 0.23, and *Stra* = 0.20. The values of the variance inflation ratio (VIF) of the five variables were as follows: *Struc* = 2.70, *Poten* = 3.36, *Per* = 4.71, *Decis* = 4.31, and *Stra* = 4.97 (Table 4.4). Since all the predictor variables fulfilled statistical conditions; there was no collinearity problem between these variables. The statistical conditions are (1) the level of tolerance must be higher than 0.19; the formula to calculate the level of “tolerance is $1 - R^2$ ”, when R^2 is the amount of variance within the variable X_1 that can be explained by other predictor variables, namely $X_2, X_3, X_4, \dots, X_n$ within the multiple regression equation, and (2) the variance inflation ratio (VIF) must be lower than 5.3; as calculated by the formula “ $VIF = 1/\text{tolerance}$ ” or “ $VIF = 1/0.19$ ” (Hair, Black, & Babin, 2010).

Table 4.4 Mean, Standard Deviations, and Coefficient Correlations

	Mean	SD	CV	<i>SMEs' Res</i>	<i>Struc</i>	<i>Poten</i>	<i>Per</i>	<i>Decis</i>
<i>SMEs' Res</i>	4.26	1.09	0.26					
<i>Struc</i>	4.33	1.12	0.26	.713**				
<i>Poten</i>	4.39	1.08	0.25	.739**	.762**			
<i>Per</i>	4.43	1.19	0.27	.810**	.670**	.703**		
<i>Decis</i>	4.41	1.16	0.26	.827**	.706**	.754**	.833**	
<i>Stra</i>	4.25	1.15	0.27	.849**	.698**	.765**	.857**	.821**

$n = 160$; ** $p < 0.01$

Tolerance > 0.19 (*Struc* = 0.37, *Poten* = 0.30, *Per* = 0.21, *Decis* = 0.23, *Stra* = 0.20)

VIF < 5.30 (*Struc* = 2.70, *Poten* = 3.36, *Per* = 4.71, *Decis* = 4.31, *Stra* = 4.97)

2) The results of the analysis of the factors influencing SMEs' response to opportunities and threats in the digital economy are presented in two sections as follows.

2.1) Selection of independent variables for the multiple regression equation was done in order to find out the factors that influenced SMEs' response in the digital economy age. The process of selection started with the conceptual-framework-based selection, or the hierarchical stepwise regression through the command "Enter", to analyze and check the beta coefficient and the p-value of each independent variable in the conceptual framework. Afterwards, stepwise regression which combines forward selection and backward deletion was used by putting in the independent variable with the highest correlation coefficient and the dependent variable. This step is the progressive selection which checks the p-value of influence of the independent variable, and deletes the variable backwardly until the analysis process is finished. Finally, the equation will be left with just the independent variables with a significant relationship with the dependent variable. This equation can best explain the variance of the coefficient of multiple determination of the dependent variable so it can be used as the predicted equation in this research.

2.2) An Analysis of the factors influencing SMEs' response to opportunities and threats in the digital economy. In order to study the influence of the predictor variables, and to prove the research hypothesis in the conceptual framework, the multiple regression analysis was made by selecting the independent variables to put into the multiple regression equation, using the hierarchical stepwise regression. The results of analysis were provided below (Table 4.5).

Step 1: When the variable structural contingency factor (Struc) was added into the regression equation, it was found that the variable Struc could explain the coefficient of multiple determination of the SMEs' response (SMEs' Res) at 50.8% ($R^2=0.508$), which was significant at a high level ($F=163.40$; $df=1, 158$; $p=.000$). The regression coefficient (b) of the variable Struc and the variable SMEs' Res was 0.692 with statistical significance ($t=12.783$; $p=0.000$). Thus, when the entrepreneur raised the structural contingency one more level, it could predict that SMEs' response would increase 0.692. The standardized coefficient (beta) revealed that the variable Struc has very high by positive influence at 0.713.

Step 2: When the variable SMEs' potential factor (Poten) was put into the multiple regression equation, it was found that the variables Struc and Poten could together explain the coefficient of multiple determination of the variable SMEs' Res at 60.0% ($R^2=0.600$), which was significant at a high level ($F=117.56$; $df=2, 157$; $p=.000$). When the coefficient of multiple determination was compared with that in Model 1, the ΔR^2 was found to be 0.092, which meant that the variable Poten could help explain the coefficient of multiple determination of the SMEs' Res at 9.2%. In addition, the regression coefficients (b) of the variables Struc and Poten and the variable SMEs' Res were 0.347 ($t=4.578$; $p=.000$) and 0.469 ($t=5.980$; $p=.000$), respectively, which were both statistically significant. It meant that (1) when the entrepreneur raised the structural contingency one more level, it could predict that the SMEs' response would increase at 0.347 with statistical significance, when the variable Poten was controlled; and (2) when the level of SMEs potential for management increased one level, it could predict that SMEs' response would increase at 0.469, when the variable Struc was controlled. And the standardized coefficient (beta) revealed that the variables Struc and Poten were positive by influence SMEs' responses at a moderate level (at 0.357 and 0.467, respectively).

Step 3: When the variable perception (Per) was added into the multiple regression equation, it was found that the variables Struc, Poten, and Per could together explain the coefficient of multiple determination of the variable SMEs' Res at 72.7% ($R^2=0.727$), which was statistically significance at a high level ($F=138.21$; $df=3, 156$; $p=.000$). And when the coefficient of multiple determination was compared with that in Model 2, it was found that the ΔR^2 was 0.127, which meant that the variable Per could help explain 12.7% of the variance of the variable SMEs' Res. The regression coefficients (b) of the variables Struc, Poten, and Per and the variable SMEs' Res were 0.184 ($t=2.801$; $p=.006$), 0.228 ($t=3.204$; $p=.002$), and 0.479 ($t=8.513$; $p=.000$), which are statistically significant for all three variables. Thus, it meant that (1) when the entrepreneur raised structural contingency one more level, it could predict that SMEs' response would increase at the value of 0.184 with statistical significance, when the variables Poten and Per were controlled; (2) when SMEs potential for management was increased one more level, it could be predicted that SMEs' response would increase at the value of 0.228, when the variables Struc

and Per were controlled; and (3) when the entrepreneurs' perception of external situation and strategic management increased one more level, it could be predicted that SME's response would increase at the value of 0.479 with statistical significance, when the variables Struc and Poten were controlled. And the standardized coefficient (beta) showed that the variable Per had a high level of positive influence, almost three time more than the variable Struc and more than twice the variable Poten (0.226 and 0.189, respectively).

Step 4: When the variable decision-making process (Decis) was added into the multiple regression analysis equation, it was found that the variables Struc, Poten, Per, and Decis could together explain the coefficient of multiple determination of the variable SMEs' Res at 75.7% ($R^2=0.757$), which was statistically significant at a high level ($F=120.72$; $df=4, 155$; $p=.000$). When the coefficient of multiple determination was compared with that in Model 3, it was found that the ΔR^2 was 0.030, which meant that the variable Decis could help explain 3.0% of the variance of the variable SMEs' Res. Also, the regression coefficients (b) of the variables Struc, Poten, Per, and Decis and the variable SMEs' Res were 0.138 ($t=2.197$; $p=.030$), 0.136 ($t=1.942$; $p=.054$), 0.296 ($t=4.399$; $p=.000$), and 0.333 ($t=4.403$; $p=.000$). It meant that (1) when the entrepreneur raised structural contingency one more level, it could predict that SMEs' response would increase at 0.138 with statistical significance, when the variables Poten, Per, and Decis were controlled; (2) when SMEs potential for management increased one more level, it could predict that SMEs' response would increase at 0.136, with no statistical significance, when the variables Struc, Per, and Decis were controlled; (3) when the entrepreneurs' perception of external situation increased one more level, it could predict that SME's response would increase at 0.296 with statistical significance, when the variables Struc, Poten, and Decis were controlled; and (4) when the entrepreneurs' decision to use technology in the operation increased one more level, it could predict that SME's response would increase at 0.333, with statistical significance, when the variables Struc, Poten, and Per were controlled. And the standardized coefficient (beta) indicated that the variables Per and Decis positively influenced SMEs response at a moderate level (0.324 and 0.354 respectively), or more than twice the variables Struc and Poten (0.142 and 0.136, respectively).

Step 5: When the variable strategic management (Stra) was added into the multiple regression equation, it was found that the variables Struc, Poten, Per, Decis, and Stra could together help explain the coefficient of multiple determination of the variable SMEs' Res at 78.7% ($R^2=0.787$), which was significant at a high level ($F=113.49$; $df=5, 154$; $p=.000$). When the coefficient of multiple determination was compared with that in Model 4, the ΔR^2 was found to be 0.030, which meant that the variable Stra could help explain 3.0% of the variance of the variable SMEs' Res. The regression coefficient (b) of the variables Struc, Poten, Per, Decis, and Stra and the variable SMEs' Res were 0.119 ($t=1.997$; $p=.048$), 0.050 ($t=0.734$; $p=.464$), 0.122 ($t=1.651$; $p=.101$), 0.261 ($t=3.587$; $p=0.000$), and 0.362 ($t=4.616$; $p=.000$). It meant that (1) when the entrepreneur increased structural contingency one more level, it could predict that SMEs' response would increase at 0.119 with statistical significance, when the variables Poten, Per, Decis and Stra were controlled; (2) when SMEs potential for management was increased one more level, it could predict that SMEs' response would increase at 0.050, with no statistical significance, when the variables Struc, Per, Decis and Stra were controlled; (3) when the entrepreneurs' perception of external situation increased one level, it could predict that SME's response would increase at 0.122 with no statistical significance, when the variables Struc, Poten, Decis, and Stra were controlled; (4) when the entrepreneurs' decision to use technology in the operation increased one more level, it could predict that SME's response would increase at 0.261, with statistical significance, when the variables Struc, Poten, Per, and Stra were controlled; and (5) when the entrepreneurs' strategic management increased one level, it could predict that SME's response would increase at 0.362 with statistical significance, when the variables Struc, Poten, Per, and Decis were controlled. The standardized coefficient (beta) also indicated that all five variables had positive influence in descending order as follows: the variables Stra, Decis, Per, Struc, and Poten (0.383, 0.277, 0.133, 0.122, and 0.050, respectively).

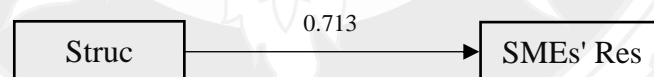
Table 4.5 Multiple Regression Analysis

Variable	Thai SMEs' Response to Opportunity and Threat in the Digital Economy Age (SMEs' Res)																								
	Model 1					Model 2					Model 3					Model 4					Model 5				
	b	beta	t	p		b	beta	t	p		b	beta	t	p		b	beta	t	p		b	beta	t	p	
(Constant)	1.262		5.214	.000	0.696		2.918	.004	0.343		1.696		1.448	.150	0.278		1.448		1.448	.150	0.291		1.612	.109	
Struc	0.692	0.713	12.783	.000	0.347	0.357	4.578	.000	0.184	0.189	2.801	.006	2.197	.030	0.138	0.142	2.197	.030	2.197	.030	0.119	0.122	1.997	.048	
Poten					0.469	0.467	5.980	.000	0.228	0.226	3.204	.002	1.942	.054	0.136	0.136	1.942	.054	1.942	.054	0.050	0.050	0.734	.464	
Per									0.479	0.524	8.513	.000	4.399	.000	0.296	0.324	4.399	.000	4.399	.000	0.122	0.133	1.651	.101	
Decis															0.333	0.354	4.403	.000	4.403	.000	0.261	0.277	3.587	.000	
Stra																					0.362	0.383	4.616	.000	
n	160				160				160						160						160				
R	.713				.774				.852						.870						.887				
R ²	.508				.600				.727						.757						.787				
Adj.R ²	.505				.595				.721						.751						.780				
F	163.40; df=1, 158; p=.000				117.56; df=2, 157; p=.000				138.21; df=3, 156; p=.000						120.72; df=4, 155; p=.000						113.49; df=5, 154; p=.000				
ΔR ²	.508				.092				.127						.030						.030				
ΔF	163.40; df=1, 158; p=.000				35.76; df=1, 157; p=.000				72.47; df=1, 156; p=.000						19.38; df=1, 155; p=.000						21.31; df=1, 154; p=.000				

Based on the results of the analysis of factors influencing the response of SMEs by using five steps of the multiple regression analysis, it could be concluded that the coefficients of multiple determination (R^2) of the Models 1-5 were 50.8%, 60.0%, 72.7%, 75.7% and 78.7%, respectively. Regarding the size of influence of all of the five predictor variables over SMEs' response (SMEs' Res), it was found that: (1) the structural contingency factor (Struc) had a low level of positive influence ($\beta=0.122$), (2) the SMEs' potential factor (Poten) had a very low level of positive influence ($\beta=0.050$), (3) the perception factor (Per) had a low level of positive influence ($\beta=0.133$), (4) the decision-making process factor (Decis) had a moderate level of positive influence ($\beta=0.277$), and (5) the strategic management factor (Stra) had a moderate level of positive influence ($\beta=0.383$). The results of the analysis therefore confirmed the research hypothesis of this study, that H_A : all independent variables in the equation could predict the dependent variable ($H_A: \rho \neq 0$). Meanwhile, it rejected the null hypothesis H_0 : all the independent variables in the equation could not together predict the dependent variable ($H_0: \rho = 0$). All the five models of multiple regression analysis, together with the unstandardized coefficients and the standardized coefficients, were shown below.

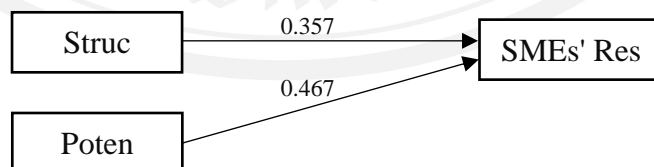
Model 1 $SMEs' Res' = 1.262 + 0.692(Struc)$

$$Z'_{SMEs' Res} = 0.713(Z_{Struc})$$



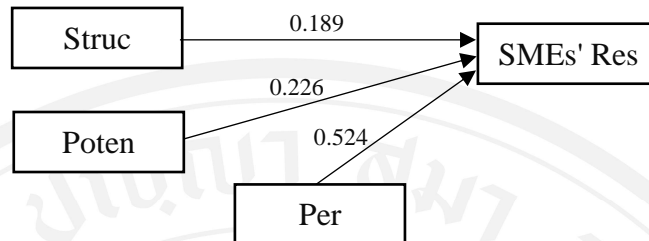
Model 2 $SMEs' Res' = 0.696 + 0.347(Struc) + 0.469(Poten)$

$$Z'_{SMEs' Res} = 0.357(Z_{Struc}) + 0.467(Z_{Poten})$$



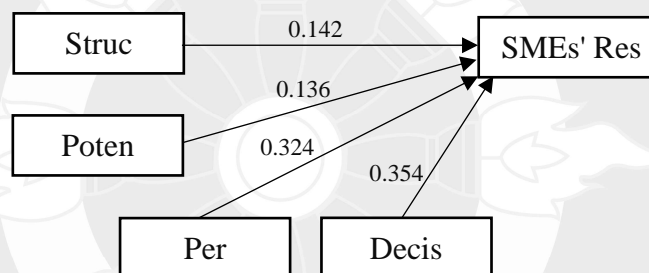
Model 3 $SMEs' Res' = 0.343 + 0.184(Struc) + 0.228(Poten) + 0.479(Per)$

$$Z'_{SMEs' Res} = 0.189(Z_{Struc}) + 0.226(Z_{Poten}) + 0.524(Z_{Per})$$



Model 4 $SMEs' Res' = 0.278 + 0.138(Struc) + 0.136(Poten) + 0.296(Per) + 0.333(Decis)$

$$Z'_{SMEs' Res} = 0.142(Z_{Struc}) + 0.136(Z_{Poten}) + 0.324(Z_{Per}) + 0.354(Z_{Decis})$$



Model 5 $SMEs' Res' = 0.291 + 0.119(Struc) + 0.050(Poten) + 0.122(Per) + 0.261(Decis) + 0.362(Stra)$

$$Z'_{SMEs' Res} = 0.122(Z_{Struc}) + 0.050(Z_{Poten}) + 0.133(Z_{Per}) + 0.277(Z_{Decis}) + 0.383(Z_{Stra})$$

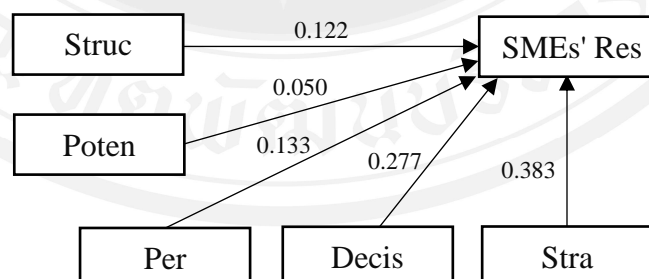


Figure 4.1 The Models 1 - 5 of Multiple Regression Analysis and the Equation of Unstandardized Coefficients and Standardized Coefficients

4.1.5 Problems, Obstacles, and Suggestions Regarding the Promotion and Development of SMEs in the Digital Economy Age

In the study of problems, obstacles, and suggestions regarding the promotion and development of the service businesses, an open-end questionnaire was employed to collect the data from 160 entrepreneurs, the results were as follows.

The data from 45 respondents were collected, accounting for 28.13% of the total population. The problems or obstacles were divided into five groups, from the most problematic to the least (Table 4.6).

1) Digital technology skills: Most entrepreneurs lacked up-to-date knowledge and skills in using digital technology in business operation (f=19; 42.22%).

2) Finance and investment: Lack of financial liquidity resulted in no capital for investment. Entrepreneurs could not access capital resources, and digital technology was costly (f=11; 24.44%).

3) Economy, society, and environment: Economic depression and the widespread pandemic of COVID-19, resulted in no tourist and in lack of income. There was also the problem from wildfire and smoke (f=7; 15.56%).

4) Highly marketing competitions in both the offline and online markets (f=4; 8.89%).

5) Support from government sector: (1) delayed support from the government, which is not responsive to the business sector's situation, (2) lack of access to information about tourism and SMEs promotion by the government, (3) difficulty in understanding information from the government, as it requires too many steps, and some information is not clear enough to be used for marketing analysis, and (4) the lack of continuity of government's support (f=4; 8.89%).

Therefore, the sample provided suggestions on solving problems or obstacles in the five issues above as detailed in Table 4.6.

Table 4.6 Problems, Obstacles, and Suggestions Regarding the Promotion and Development of SMEs in the Service Sector in the Digital Economy Age

		(n=45)
Problems or obstructions	Suggestions	Frequency (%)
1. Digital technology skills		19 (42.22%)
<ul style="list-style-type: none"> - The entrepreneurs lack up-to-date knowledge and skills in using digital technology in business operation 	<ul style="list-style-type: none"> - Entrepreneurs must adjust their organizations in digital technology in order to increase competency. - There should be centers for learning about digital technology for SMEs business operation. - There should be training agencies that provide free-of-charge knowledge about using digital technology and e-Commerce. - There should be the free Wi-Fi in the community for SMEs. 	
2. Finance and investment		11 (24.44%)
<ul style="list-style-type: none"> - Lack of financial liquidity resulting in no capital for investment. - In accessibility to capital resources. - Digital technology is costly. 	<ul style="list-style-type: none"> - SMEs access to financial resources should be supported. - The digital technology infrastructure should be fully developed and the service should be changed at a low price. - Entrepreneurs must cut unnecessary costs. - The government should have a tax/vat reduction measure. 	

(n=45)

Problems or obstructions	Suggestions	Frequency (%)
3. Economy, society, and environment		7 (15.56%)
<ul style="list-style-type: none"> - Economic depression - Lack of income from tourists due to the pandemic of COVID-19 - Problem from wildfires and smoke 	<ul style="list-style-type: none"> - The government should urgently implement policies that stimulate the economy and promote tourism marketing. - There should be preventive strategies for the wildfire problem. 	
4. Marketing competition		4 (8.89%)
<ul style="list-style-type: none"> - Highly competitive marketing in both the offline and online markets 	<ul style="list-style-type: none"> - SMEs must adjust their business strategy for both the development and improvement of the operation, especially the regular utilization of online media. - There should be more sales promotion. 	
5. Support from the government sector		4 (8.89%)
<ul style="list-style-type: none"> - Delayed support from the government made it difficult for SMEs to be responsive to the business situation - Lack of access to the information about tourism and SMEs promotion provided by the government - The information from the government was hard to understand, required too many steps to reach, and some information was so unclear that it could not be used for marketing analysis - The government support lacked continuity 	<ul style="list-style-type: none"> - The government should have a clear, transparent, and swift approach for SMEs promotion and development. - The government should reduce the work process in order to keep up with technological change. - The government should urgently develop the ability of tourism officials for SMEs promotion. 	

4.2 The Context of Policy Implementation and the Role of Stakeholders in the Promotion and Development of SMEs in the Service Sector of Community-Based Tourism under the Framework of Digital Economy Development

This section presents the stakeholders' perception of the context of policy implementation and their role in the promotion and development of SMEs in the service sector of community-based tourism (CBT) under the framework of digital economy development. The data was collected from six groups of stakeholders, including the business sector, related government agencies, local people committees, scholars, non-governmental organizations, and customers or tourists. The method, the date, and the time of data collection for each group were elaborated below.

1) The business sector consisted of the following three groups.

1.1) Representatives of SMEs entrepreneurs (n=12): The data were collected by using focus group discussion with three entrepreneurs per community in each province. The date and the time of data collection in 2020 were as follows: (1) Phayao, on May 3, 10.00-10.45 a.m., (2) Chaing Rai, on May 15, 1.00-1.45 p.m., (3) Nan, on June 2, 1.00-1.45 p.m., and (4) Phrae, on June 14, 10.00-10.45 a.m.

1.2) Representatives of the Provincial Federation of Thai Industries (n=4): The data were collected by using in-depth interview with the chairman of the Federation of Thai industries in each province. The date and the time of data collection in 2020 were as follows: (1) Phayao, on May 5, 10.00-10.30 a.m., (2) Chaing Rai, on May 15, 9.30-10.00 a.m., (3) Nan, on June 4, 1.00-1.30 p.m., and (4) Phrae, on June 15, 2.00-2.30 p.m.

1.3) Representatives of the Provincial Chamber of Commerce (n=4): The data were collected by using in-depth interview with the chairman of chamber of commerce in each province. The date and the time of data collection in 2020 were as follows: (1) Phayao, on May 7, 10.00-10.30 a.m., (2) Chaing Rai, on May 18, 10.00-10.30 a.m., (3) Nan, on June 5, 9.30-10.00 a.m., and (4) Phrae, on June 16, 1.30-2.00 p.m.

2) Related government agencies consisted of the following four groups.

2.1) Representatives of the Provincial Office of Tourism and Sports (n=4):

The data were collected by using in-depth interview with the executive of the Office of Tourism and Sports in each province. The date and the time of data collection in 2020 were as follows: (1) Phayao, on May 7, 1.30-2.00 p.m., (2) Chaing Rai, on May 18, 3.00-3.30 p.m., (3) Nan, on June 5, 2.00-2.30 p.m., and (4) Phrae, on June 17, 10.00-10.30 a.m.

2.2) Representatives of the Tourism Authority of Thailand (TAT), (n=3):

The data were collected by using in-depth interview with the executive of each branch office. The date and the time of data collection in 2020 were as follows: (1) Phayao and Chaing Rai, on May 19, 9.00-9.30 a.m., (2) Nan, on June 8, 9.00-9.30 a.m., and (3) Phrae, on June 17, 1.00-1.30 p.m.

2.3) Representatives of the Designated Areas for Sustainable Tourism Administration (Public Organization) or DASTA (n=1): The data were collected by using in-depth interview with the executive of DASTA in Nan province on June 8, 2020, 1.30-2.00 p.m.

2.4) Representatives of local administrative organizations (n=4): The data were collected by using in-depth interview with the executive of the local administrative organization in each province. The date and the time of data collection in 2020 were as follows: (1) the mayor of the Muang Phayao municipality, on May 8, 8.30-9.00 a.m., (2) the mayor of the Nang Lae subdistrict municipality in Chaing Rai, on May 19, 3.00-3.30 p.m., (3) the mayor of the Muang Nan municipality, on June 9, 1.30-2.00 p.m., and (4) the deputy mayor of the Thung Hong subdistrict municipality in Phrae, on June 18, 10.00-10.30 a.m.

3) Representatives of local people committees (n=12): The data were collected by using focus group discussion with three local people committee members from each community. The date and the time of data collection in 2020 were as follows: (1) Wat Sri Khom Kham community in Phayao, on May 8, 1.00-1.45 p.m., (2) Nang Lae subdistrict community in Chaing Rai, on May 20, 9.00-9.45 a.m., (3) Nai Viang subdistrict community in Nan, on June 10, 2.00-2.45 p.m., and (4) Mo Hom Thung Charoen community in Phrae, on June 18, 1.00-1.45 p.m.

4) Representatives of scholars (n=4): The data were collected by using in-depth interview with scholars from the local-educational institutions involved in driving CBT as follows: (1) a scholar from University of Phayao in Phayao, on May 12, 2020, 10.00-10.30 a.m., (2) a scholar from Chiang Rai Rajabhat University in Chiang Rai, on May 21, 2020, 9.00-9.30 a.m., (3) a scholar from University of Phayao in Nan, on June 11, 2020, 1.00-1.30 p.m., and (4) a scholar from Maejo University, Phrae Campus in Phrae, on June 19, 2020, 1.00-1.30 p.m.

5) Representatives of Non-Government Organizations (NGOs), (n=4): The data were collected by using in-depth interview with representatives of NGOs of each CBT attraction as follows: (1) a staff member of Phayao foundation for development in Phayao, on May 12, 2020, 2.00-2.30 p.m., (2) a staff member of Population and Community Development Association in Chaing Rai, on May 21, 2020, 1.30-2.00 p.m., (3) the manager of Hug Muang Nan foundation in Nan, on June 12, 2020, 9.00-9.30 a.m., and (4) the member of Phrae city descendants network in Phrae, on June 22, 2020, 1.00-1.30 p.m.

6) Representatives of customers or tourists (n=12): The data were collected by using focus group discussion with three representatives of customers or tourists from each CBT attraction. The date and the time of data collection in 2020 were as follows: (1) Phayao, on May 10, 10.30-11.15 a.m., (2) Chaing Rai, on May 17, 10.30-11.15 a.m., (3) Nan, on June 13, 1.30-2.15 p.m., and (4) Phrae, on June 21, 1.30-2.15 p.m.

The study results of stakeholders' perception of six groups above, are divided into five subtopics, including (1) perspective of the context of CBT policy implementation, (2) roles of stakeholders in CBT policy implementation, (3) SMEs' adjustment in the digital economy age, (4) factors contributing to success in CBT policy implementation, and (5) direction of the CBT policy to promote and develop SMEs in the future.

1) Perspective of the context of CBT policy implementation

1.1) The business sector consisted of the following three groups.

1.1.1) Representatives of SMEs entrepreneurs: The informants stated that SMEs in the service sector were aware of the direction of tourism promotion and development, as the Provincial Chamber of Commerce would

disseminate information via the application Line. Regarding the perception about the government sector's role in CBT promotion, they thought that there was still lack of systems and mechanisms to create connection between the community and private entrepreneurs. Furthermore, the CBT development operation was rather different from the business operation in the private sector, especially the consensus about the social value of civil society in tourism development, as private enterprises generally focus on business operation and competition.

1.1.2) Representatives of the Provincial Federation of Thai Industries: The informants stated that the government sector had the policy in CBT promotion and development to encourage income distribution from tourism business to the community, while pushing the community with tourism potential to become a community enterprise. This mission would empower the grassroots economy by converting the local knowledge and resources into products and services while also developing a marketing channel with the link to the e-Commerce system, and by empowering the community to share knowledge and conserve environment, to ensure CBT's sustainable growth.

1.1.3) Representatives of the Provincial Chamber of Commerce: The informants stated that the provincial agency was directly responsible for CBT promotion and development was the Provincial Office of Tourism and Sports, which coordinated with related network partners, namely, the Provincial Chamber of Commerce, in tourism development in the dimension which corresponded to the mission of the Chamber of Commerce.

1.2) Related government agencies consisted of the following four groups.

1.2.1) Representatives of the Provincial Office of Tourism and Sports: The informants said that there were four agencies affiliated to the Ministry of Tourism and Sports with the mission in CBT promotion and development, as follows. (1) The Department of Tourism provided financial support in business operation for the community. (2) The Provincial Office of Tourism and Sports provided training, access to financial resources, gave consultation in tourism project operation of the community. (3) DASTA provided training, communication, to building understanding and awareness and allocated a budget for the community to develop tourism. And (4)

TAT provided promotion in public relations, marketing, and attracting tourists to visit CBT.

1.2.2) Representatives of TAT: The informants stated that government sector had the goal in sustainable and creative promotion and development of CBT in order to distribute income to community directly. In fact, CBT promotion had been ongoing for over 20 years, starting with promoting OTOP product manufacturing in the community by the Office of Community Department, and linking OTOP products with tourism. The related agencies participated in tourism promotion in the same direction in order to achieve the goal in boosting the economy and distributing income to the community all over the country. And the current government aimed to extend the CBT development for more concrete results apart from economic results. The community in turn, had to maintain their original identity while caring for the environment, because the CBT was considered as a source of additional income based on the social capital existing in the community. Totally, this policy administration is a good approach.

1.2.3) Representatives of DASTA: The informants stated that the government was aware of importance of CBT development in special areas which aimed for the balance of economic, socio-cultural, and environmental dimensions. Any CBT with good and balanced development would impress the visitors who might want to return again. DASTA, an affiliation of the Ministry of Tourism and Sports, existed in nine provinces, which were announced as special tourism areas throughout the country. The annual budget allocated to DASTA was about 500 million baht, while the budget allocated to upper northern provinces group 2 with DASTA in Nan province was allocated around 10-40 million baht per year, depending on the situation of Thailand each year.

1.2.4) Representatives of local administrative organizations: The informants stated that in the past five years, the government's promotion and development of CBT became more obvious. The Provincial Office of Tourism and Sports was mainly responsible to providing suggestions and supports for the community, which was told to submit a proposal to request a budget from the Department of Tourism. There was also the promotion of OTOP inno-life tourism-

based communities project by the Department of Community Development, Ministry of Interior. Other related agencies were, for example, TAT, which was responsible for tourism public relations; the Provincial Office of Commerce which was responsible for community-product marketing; the Provincial Federation of Thai Industries which was responsible for community product standard; educational institutions which provided training on knowledge and other academic matters; and NGOs that helped to promote CBT in a balanced and sustainable way.

1.3) Representatives of local people committees: The informants stated that the government had a good approach and principle for CBT development. The local agencies that joined the development and promotion included the Provincial Office of Tourism and Sports, local administrative organizations, DASTA, TAT, and educational institutions. Moreover, the Office of Community Development provided supports in community product development under the OTOP inno-life tourism-based communities' project. And the Provincial Federation of Thai Industries also implemented the creative industry village (CIV) project.

1.4) Representatives of scholars: The informants stated that the government policy administration in CBT promotion and development was becoming clearer, with the Ministry of Tourism and Sports as the major agency that worked with other related agencies. Some provinces which were announced as special tourism areas such as Nan was overseen by DASTA. And their evaluation of CBT promotion and development in the upper northern provinces group 2 during the previous 1-3 years saw better progress in terms of management and service quality, because the policy implementation could bring more concrete results. However, local people in the CBT area felt that CBT promotion had not yet reached the point at which tourism became the main source of income. Overall, the people saw CBT as an additional income, especially in the high season. But during the low season, they would return to their main career of farming or other careers which generated a higher income.

1.5) Representatives of NGOs: The informants stated that they were aware of policy in CBT promotion and development through the local administrative organization, public relations by related government agencies in the provincial level,

and the conference of network partners in CBT development. And they felt that it should be a good policy which could boost grassroots economy.

1.6) Representatives of customers or tourists: The informants stated that they were aware of and follow the CBT promotion and development policy to some extent. This was also the case for other policies related to tourism, such as OTOP inno-life tourism-based communities, a policy for less-visited areas, etc. Most of them received information from online channels, radio, or suggestions by others. The informants mentioned that CBT promotion and development was important, and they felt that the government policy was good. However, there was a question of how to implement the policy to get a concrete result and truly benefit the economy, the society, and the environment.

In conclusion, all the six groups of stakeholders recognized that the government focused on driving the CBT policy in order to achieve the goals of distributing income to communities and reinforcing CBT to be strong and grow sustainably. The main department in charge was the Provincial Tourism and Sports Office, who coordinated with network partners of each province: both the public and the private sectors, and the civil society. However, customers and tourists deemed that CBT policy implementation had not yet seen a concrete result; likewise, scholars viewed that the benefit from CBT industry was just an additionally seasonal income, and it was unstable. Besides, SMEs' entrepreneurs also informed that the promotion and development of CBT by the government lacked systems and mechanisms that link between communities and entrepreneurs.

2) Roles of stakeholders in CBT policy implementation

2.1) The business sector consisted of the following three groups.

2.1.1) Representatives of SMEs entrepreneurs: The informants stated that they were network partners in CBT service businesses promotion and development operation. They coordinated with provincial government agencies by attending meetings to discuss the SMEs promotion and provincial tourism promotion, organizing and participating in provincial tourism promotion activities, and supporting sub-businesses in the CBT sector, such as buying raw materials from the

community, helping with advertising community products for tourists, and hiring local labor.

2.1.2) Representatives of the Provincial Federation of Thai Industries: The informants mentioned that during the previous 3-4 years, their organizations had a role in promotion and development of community products related to tourism, which was called Local Economy Products. Meanwhile, the organization also promoted and developed SMEs entrepreneurs most of whom in food production and agricultural processed products. Because of the abundant number of produces, the entrepreneurs were encouraged to process them. These products included tea, coffee, meat, and health products, such as herbs, and traditional medicine. Their organizations also encouraged the nearby business organization cluster to unite and develop supporting business, with some push in marketing.

2.1.3) Representatives of the Provincial Chamber of Commerce: The informants described that their role involved (1) being the mediator between the community and tourists by conducting public relations and finding tourists to travel into the area to derive local benefit, (2) being the mediator in organizing events and other activities for tourism promotion, which would help income distribution and increase of the well-being for local people, (3) being the consultant in writing a business plan and supporting SMEs entrepreneurs to access capital resources with a low interest rate, and (4) supporting the setting up of community enterprises in the CBT, as well as providing training courses to increase tourism management skills for entrepreneurs.

2.2) Related government agencies consisted of the following four groups.

2.2.1) Representatives of the Provincial Office of Tourism and Sports: The informants stated that their organizations had a role in a providing knowledge to the civil society about tourism management, which concerned the value of the local way of life in various dimensions, skills development for rendering good service. The organization also participated in planning to shape the direction of CBT development to ensure employment, income generation, and conservation of each community's identity.

2.2.2) Representatives of TAT: The informants stated that TAT had the main responsibility for promotion and market analysis to ensure CBT product and service distribution to the target group and income generation for community. The operation of CBT development in each CBT attraction also followed the strategic development plan of each province.

2.2.3) Representatives of DASTA: The informants stated that DASTA's major responsibility was coordinating with related agencies from the government sector, the private sector, local administrative organizations, and local people committees, in order to promote the area announced as a special tourism area to achieve the sustainable development. The mission was related to promotion and support of arts and culture conservation, environment conservation, and local employment. Therefore, DASTA had to integrate the operation with other related agencies. However, the true integration was hard to happen. So DASTA focused on giving knowledge about tourism management rather than becoming the center of integration. And although DASTA had its own budget, but it lacked authority to order other agencies and could only request participation.

2.2.4) Representatives of local administrative organizations: The informants stated that their organizations participated in the promotion and development by provide training and consultation for community enterprises through the local administrative organization's project in tourism promotion and by acting as a coordinator between the community and related agencies, such as the Provincial Office of Tourism and Sports, TAT, educational institutions, and the community development office, etc.

2.3) Representatives of local people committees: The informants stated that in CBT promotion, the committee was responsible for finding outstanding traditional resources of the community to restore and for creating the CBT management process, finding a budget for operation, coordinating with local people, other CBT committees and network partners in monitoring the operation. The local people committee was responsible for disseminating tourism information to attract tourists to visit the community.

2.4) Representatives of scholars: The informants said that they had a role of joint-development, monitoring, and evaluation of the result of CBT promotion. Moreover, the university mission required faculty members to conduct research and provide academic services for local communities. During the beginning of CBT promotion, there was a brainstorming session for the civil society about the direction that local people wanted to develop tourism. After that, support and promotion would provide the related agencies, such as the local administrative organization, the Provincial Office of TAT, the Provincial Office of Tourism and Sports, and other related government agencies.

2.5) Representatives of NGOs: The informants stated that NGOs participated in communities and agricultural forest activities, foundation of the learning center to use it as an educational center for environment study. They also disseminated information via various technological channels to create awareness of the society about the value of CBT, which would help to add more value of tourism. In addition, they also promoted community forest tourism and other developmental projects, such as building a route for natural study and survey and provided training on knowledge management and technological skills to increase the efficiency of CBT management in terms of environment, conservation, maintenance of natural resources and eco-agriculture diversity together with encouraging the community to generate income from agriculture that did not destroy the ecosystem. And although tourism was not their main source of income, but it was way to boost the community economy.

2.6) Representatives of customers or tourists: The informants stated that customers or tourists could help to boost local economy by attending tourism activities, such as shopping, using accommodations, restaurants, transportation, etc. in the CBT. Moreover, tourists would help to spread information about CBT quickly, especially through online social media, as they could provide review of the attractions in websites, check-in, or sharing locations and pictures, etc.

In conclusion, all the six groups of stakeholders played a role in driving the promotion and development of the CBT policy in accordance with the mission of each group. Generally, most of their work concerned in attending CBT meetings, tourism promotion activities, development and design of products and services produced or

rendered by each community, transfer of knowledge on tourism management, and planning and setting the direction of CBT. Only the customers and tourists had no direct formal role, because they were the target group of the CBT, which helped boost grassroots economy through the consumption of various products and services. They also helped spread the CBT information widely, especially via online channels.

3) SMEs' adjustment in the digital economy age

3.1) The business sector consisted of the following three groups.

3.1.1) Representatives of SMEs entrepreneurs: The informants stated that most SMEs adjusted themselves in terms of technological equipment usage, for instance, (1) using computers, tablets, and smartphones in planning, accounting, and human resource management, (2) using online platforms and applications in public relations, buying, selling, contacting customers, and online marketing to increase marketing shares, and (3) using e-Banking for customers' convenience and prevention of the employees' moral hazard problems.

3.1.2) Representatives of the Provincial Federation of Thai Industries: The informants stated that the Office of Federation of Thai Industries in each province attempted to push the SMEs service to adjust themselves in line with the policy Industry 4.0 by applying the internet to add more value to their products and services, along with providing training to increase manufacturing efficiency and create new products, by developing the entrepreneurs' creative thinking, and by providing digital marketing content, all of which would create advantage for SMEs and help them to cope with change, grow, and survive in the paperless society and the digital economy. It should be noted that the COVID-19 pandemic became an important catalyst for SMEs entrepreneurs to swiftly apply the internet in all their business operation.

3.1.3) Representatives of the Provincial Chamber of Commerce: The informants stated that SMEs entrepreneurs should be perseverant, diligent, creative, disciplined, honest, and sincere to customers. They should also adjust their marketing strategy by using technology to increase competency, such as the use of online platforms for public relations of products and services, using applications such as Line Man or Food Panda on the part of the restaurant owners, creating multimedia contents to promote products and services, using applications such as line to contact

customers, investment in advertising with google ads, and participating in the hotel reservation system through online travel agencies (OTA), for instance, Agoda, Booking.com, Expedia, and TripAdvisor.

3.2) Related government agencies consisted of the following four groups.

3.2.1) Representatives of the Provincial Office of Tourism and Sports:

The informants stated that most SMEs could adjust themselves well. Entrepreneurs were interested in the training on related technology and equipment for business management, such as using applications for coordination, using social media for public relations, creating marketing content, and using the electronic transaction system.

3.2.2) Representatives of TAT: The informants stated that most SMEs entrepreneurs in the service sector could adjust themselves well. For example, they could (1) utilize digital marketing to reach a large number of target customers, (2) access Big Data and the tourism database of SMEs promotion and development agencies to utilize such information for marketing analysis, (3) use a variety of online information channels for tourists, for instance Facebook, Line, YouTube, travel bloggers, and influencers. However, the entrepreneurs of the community enterprises still lacked business management skills. (4) The promotion of startups enabled the new generation of entrepreneurs with creativity and digital technology skills to strengthen the network of SMEs in service businesses and develop CBT together.

3.2.3) Representatives of DASTA: The informants stated that in tourism business, the CBT was becoming popular among both Thai and foreign tourists, as CBT was increasingly creating new quality and meaning to tourism, which was more than relaxation, fun, and entertainment. The main concept of CBT was tourism for exchanging knowledge with local residents and to show respect to them. Therefore, it was necessary for CBT entrepreneurs to join, together to form a network in an attempt to add value to local tourism resources to produce products or give tourism experiences to tourists. Meanwhile, entrepreneurs had to adjust their business direction in response to the technological change in the digital age to communicate about CBT through QR code, websites, YouTube, and applications, such as Facebook and Line, etc.

3.2.4) Representatives of local administrative organizations: The informants stated that because of the changing trend of technology and because of the customers' increasingly searching tourism information via online channels, the entrepreneurs had to adjust themselves by participating in training and urgently starting to use technology and social media as channels of communication with customers, such as Facebook, Line, QR Code, for information dissemination, and for online transaction. Moreover, the advertising content to communicate to the target groups through a variety of technological channels had to be able to truly communicate the value of community products and services to the target groups.

3.3) Representatives of local people committees: The informants stated that the current entrepreneurs were realized the importance of technology in their operation and evidently adjusted themselves by participating in training on media and technology, online platforms, and applications for coordination and communication of tourism information via Facebook and Line. They also adjusted themselves to the online transaction, which would increase convenience for customers who did not have to pay in cash.

3.4) Representatives of scholars: The informants stated that the market competition was rather high at the provincial level. However, this level of competition was challenging for the development of product and service quality in each province. And at least the communities would learn and imitate the best practice of tourism management of neighboring communities in order to apply the knowledge in their own areas. Such learning and imitation would expand to a wider area, resulting in the increasing level of CBT management quality of the overall provincial group. However, to access the mass they should adjust their service businesses to reach the international standard. It was important that they had to maintain the original identity of their communities and find the appropriate development to reach the international standard while conserving the value of existing resources in a sustainable way. The sustainable CBT involved attracting tourists who had already visited the CBT to repeat their visit or to recommend others to visit there. Regarding technological usage was a problem among the elderly entrepreneurs in the community enterprise because they might not be able to use digital technology in their work. But the two forms of

solution were training of technology usage, and attracting the new generation or those with technology skills to help with work, especially in media creation for public relations and for finding customers from online social media.

3.5) Representatives of NGOs: The informants stated that SMEs or the private in the CBT could well adjust themselves to modern technology, such as online payment, communication via applications, and online public relations. However, the community enterprise group still lacked technological skills in tourism management and therefore needed assistance from organizations, such as Hak Meung Nan (Love Nan City) foundation, to provide training on technology usage for the community enterprise group. They had to learn to create QR code, to present CBT information, and to use smartphone applications for communication and online transaction.

3.6) Representatives of customers or tourists: The informants stated that the stakeholders of CBT did not truly coordinate with each group. They were responsible to only their organization's missions, especially the government agencies which just followed the budget plan. Furthermore, the structure of public organizations was much less flexible comparing to those in the private sector. Therefore, entrepreneurs in the business sector had to adjust themselves to the dynamic environment and the competitive market situation of the digital age, to ensure business growth and survival because they could not just wait for government assistance. Nevertheless, if the government could drive the CBT promotion policy continuously, it would benefit those in the business sector, making them gain more income from tourism. Likewise, the service businesses in CBT could have more opportunity to increase income due to the new customer base supported by the government's tourism promotion policy. Besides, the entrepreneurs had to be prepared for an increasingly diverse group of tourists. They should have a proactive strategy to create products and services to match each target group or to respond to customers need, in order to increase income.

In conclusion, all the six groups of stakeholders shared the same perception that SMEs' entrepreneurs in the service sector of CBT adjusted their operation to keep pace with technological changes and to handle intense market competition. They should, for example, use online platforms and applications for public relations, purchasing, communication, and marketing, and also e-Banking for payment.

Meanwhile, related government agencies were ready to provide training on digital technology skills for SMEs' entrepreneurs, depending on budget and authority of each agency. In addition, representatives of the Provincial Chamber of Commerce said that although entrepreneurs had digital technology skills, they were required to have more perseverance, creative thinking, discipline, integrity, and sincerity to customers as well.

4) Factors contributing to success in CBT policy implementation

4.1) The business sector consisted of the following three groups.

4.1.1) Representatives of SMEs entrepreneurs: The informants stated that (1) the network of local SMEs was built to strengthen them and to encourage them to join together to promote tourism and economic development, (2) there was conversion of culture and wisdom which reflected the local identity into tourism products and services in order to develop the grassroots economy, and (3) the government sector continuously promoted and developed SMEs in the service sector and the community enterprise group by providing financial access and training to increase digital technology skills for the community.

4.1.2) Representatives of the Provincial Federation of Thai Industries: The informants stated that there were (1) good participation of the community, (2) a strong network of entrepreneurs in the service sector, (3) capacity of the community in terms of natural resources, social capital, and tourism infrastructure, and (4) adjustment of community enterprises and entrepreneurs to cope with socio-economic and technological changes.

4.1.3) Representatives of the Provincial Chamber of Commerce: The informants stated that there were (1) the cooperation among SMEs, government agencies, the private sector, local administrative organizations, and local people, (2) research and quality control of community products and packaging to ensure the quality standard, (3) development of the tourism statistic database for the analysis of tourist behavior in order to set a plan marketing strategy to match the target group, (4) an attempt to create awareness among the target group as much as possible. And overall, the CBT of the upper northern provinces group 2 had potential to accommodate a higher number of tourists. Therefore, they should do both online and

offline marketing to reach a large target group, which would help the business group in tourism in all the four provinces to grow.

4.2) Related government agencies consisted of the following four groups.

4.2.1) Representatives of the Provincial Office of Tourism and Sports: The informants stated that the factors included (1) the awareness of the people who participated in the CBT development process, (2) the readiness of tourism infrastructure which could support tourists in the long term, (3) the efficient tourism management system which maximized the utility of technology, and (4) the guideline for creative and sustainable development and restoration of tourism resources.

4.2.2) Representatives of TAT: The informants stated that it was necessary for (1) all level of tourism staffs to understand the concept of CBT sustainable development, (2) community and tourism development network to be strong and able to develop community potential in connection with tourism, and (3) community enterprises, private businesses, and related government agencies to coordinate and formulate the direction of tourism development together to ensure all dimensions of growth in the province's CBT.

4.2.3) Representatives of DASTA: The informants stated that the factors of success involved (1) participation from all network partners and all sectors, local people, tourists, and visitors, (2) communication and building the stakeholders' knowledge and understanding of true, updated, and easy-to-access information, and (3) use of variety of technologies in communication to build knowledge and understanding among the stakeholders.

4.2.4) Representatives of local administrative organizations: The informants stated that the factors of success involved (1) promoting understanding, access, and participation in development among various sectors. Because of different standpoints and organizational missions, the process to reach consensus to arrive the same direction was necessary. (2) Having scholars as the mediators who brought to local people theoretical knowledge about CBT philosophy to achieve the balance of development in all dimensions, not just earning income. The scholars should also conduct research to develop new knowledge which could extend the development of tourism. (3) Local people and the community had to be strong. And (4) community

enterprise entrepreneurs should seek knowledge and be trained in related skills, such as tourism management, technology usage, and product design.

4.3) Representatives of local people committees: The informants stated that the factors of success involved (1) participation from all sectors, especially the tourism committee and local people in the area, (2) systematic coordination between the sub-activity groups in CBT, (3) well-organized management system, especially the fair distribution of profits, and (4) usage of online media to swiftly communicate tourism information to different groups of customers.

4.4) Representatives of scholars: The informants stated that for tourism development to survive and grow it was necessary to have leaders who could unite and join networks from both inside and outside the community. Moreover, digital technology should be applied for tourism public relations, as current customers' behaviors changed drastically. People could search for information through online channel swiftly. If the impressive tourism content could be put online, it would not be hard for CBT to grow. However, careful analysis of target group's demand on the preferred products and services was necessary. And once tourists who entered CBT were impressed, they would forward information, resulting in the popularity of tourism in the area. An example of CBT area where this process was evident was Nan province, which the tourism image reflected the essences of an ancient cultural city with religious architecture, culture, tradition, and beautiful scenery which were impressive for tourists.

4.5) Representatives of NGOs: The informants stated that the factors of success included (1) consensus among community members, (2) tourism development which was planned to serve the needs of the community, (3) support from consulting agencies for the community to develop a long-term plan for CBT management, (4) adaptation of a business model for the benefit of the community, and (5) continuity of CBT development process.

4.6) Representatives of customers or tourists: The informants stated that the factors of success included: (1) The strength of service business networks, such as the Provincial Chamber of Commerce, the Provincial Office of Commerce, and the Provincial Federation of Thai Industries. These are the mechanism which drove the

CBT of each province, especially the Provincial Chamber of Commerce which originated from the strong unity of entrepreneurs with ability to access financial resources and with potential to adjust themselves to economic, social, and technological better than the government sector and the civil society. Therefore, this group of entrepreneurs could participate in planning the direction of business group development in line with tourism promotion in the age of digital economy. (2) The collaboration among stakeholders, especially the civil society, which was supported by the local administrative organization and related government agencies, such as the Provincial Chamber of Commerce, the Provincial Office of Commerce, the Provincial Federation of Thai Industries, the Provincial Office of Tourism and Sports, and the local business group. And (3) good tourism management, which reflected the readiness of CBT, such as having friendly service providers who could impress customers and attract their next return, tourism infrastructure readiness, convenient transportation, safety, the standard products and services, as well as digital technology application in tourism.

In conclusion, most stakeholders stated that the key success factors were strong participation among all sectors and an establishment of a long-term CBT development network. Representatives of SMEs' entrepreneurs, the Provincial Federation of Thai Industries, and DASTA agreed that the process should start with the community's preparation, especially the process of converting culture and local wisdom into products or tourism activities, and then related stakeholders together drove the CBT development. For example, scholars as an intermediary for transferring knowledge in CBT management, NGOs as the CBT consultant to develop CBT, taking into account the balance of all the economic, social, and environmental dimensions. Moreover, government agencies should continuously implement projects related to the promotion and development of CBT in various aspects. However, representatives of TAT stated that governmental officers at all levels whose work was related to tourism had to truly understand approaches of CBT development.

5) Direction of the CBT policy to promote and develop SMEs in the future

5.1) The business sector consisted of the following three groups.

5.1.1) Representatives of SMEs entrepreneurs: The informants stated that the future direction of the current regarding policy in service business promotion and development of the CBT in the upper northern provinces group 2 was still the same. The Provincial Chamber of Commerce would still participate in the operation. However, SMEs from the private sector might not directly join the operation with the CBT promotion and development committee, but they would have the role of mediator who distributed products to the target group and purchase local raw materials for the manufacturing, as well as transferring customers or tourists to important tourist attractions.

5.1.2) Representatives of the Provincial Federation of Thai Industries: The informants stated that the CBT group would continue to exist and contribute to the growth and survival of SMEs. Nevertheless, SMEs entrepreneurs had to be prepared and develop products and services to match the standard and tourists' demand.

5.1.3) Representatives of the Provincial Chamber of Commerce: Regarding the policy in service business promotion and development in the CBT of the upper northern provinces group 2, the informants stated that tourism could grow well due to the strength in natural resources, social capital, and historical places. Moreover, tourist attractions in the provincial group had potential to accommodate more tourists from both inside and outside Thailand. However, this depended on the economic situation of the country and the continuity of the government's policy implementation in tourism promotion.

5.2) Related government agencies consisted of the following four groups.

5.2.1) Representatives of the Provincial Office of Tourism and Sports: The informants stated that the government would certainly continue to help to promote and develop service businesses in the CBT, as it had the policy to boost the grassroots economy, and to generate employment and income. This policy was also concerned about environmental conservation and sustainable tourism development in the long term. They further stated that the direction of service business development

should correspond more to the approach of creative tourism development. And most businesses should selectively apply modern technology to benefit the operation in a more appropriate way.

5.2.2) Representatives of TAT: The informants stated that CBT's service business promotion and development would continue in order to reach the goal of sustainable tourism development in three dimensions: socio-cultural, economic, and environmental. But the most important thing was participation from the entrepreneurs, related agencies, and customers in tourism development, which is the foundation of economic development in each province.

5.2.3) Representatives of DASTA: The informants stated that in the future the policy of SMEs promotion and development in CBT of the upper northern provinces group 2 would continue, because it would be beneficial for the economy, since it would generate employment and income, for the society, since it would create a strong participatory process, and for the environment, since it would prevent the environment from degradation, in order to achieve the goal of sustainable CBT development.

5.2.4) Representatives of local administrative organizations: The informants stated that the organization would implement the government policy in using tourism to boost the economy. The provincial government agencies would submit a proposal to request a supporting budget in CBT promotion and development. Meanwhile, the provinces with high tourism potential such as Nan was expected to promote tourism to achieve the Global Sustainable Tourism Criteria (GSTC), which involved four dimensions of the sustainable criteria: (1) effective sustainability planning, (2) maximizing social and economic benefits for the local community, (3) enhancing cultural heritage, and (4) reducing negative impacts on the environment.

5.3) Representatives of local people committees: The informants stated that the policy of promotion and development for service businesses in CBT of the upper northern provinces group 2 would continue, as the service business group in CBT still had an opportunity to grow due to abundant local socio-cultural capital which was unseen to tourists. Therefore, new tourism activities could be expected to emerge in

the future, together with the expansion of tourist routes between communities to connect them to ensure distribution of income to all grassroots.

5.4) Representatives of scholars: The informants stated that the development and promotion of service businesses in CBT of the upper northern provinces group 2 would continue to grow, as Thailand received a huge amount of income from tourism. The government would provide tourism promotion and development in all sectors and all levels, for growth in tourism would benefit commercial activities, investment, and income distribution at the macro and micro levels. Furthermore, the representatives stated that the standard level of CBT products should be raised to reach a wider market, such as building a new base of customers who gave importance to healthcare and environment, or export products, etc.

5.5) Representatives of NGOs: The informants stated that the direction of CBT promotion and development policy implementation would continue the same and would be expanded to cover more areas. And the quality of community products and services would be improved to reach the standard and to gain a more contemporary image, which could attract a larger member of customers. Certainly, it would economically benefit all local SMEs in the service sector. In short, the sample group agreed that the growth of tourism and economic development generally followed the same direction.

5.6) Representatives of customers or tourists: The informants stated that the policy in development and promotion of service businesses of CBT in the upper northern provinces group 2 would continue on the basis of conservation and maintenance of the original community identity, as it was the charm of tourism in the upper northern provinces group 2, which would attract tourists to continuously visit the community to experience the atmosphere of a local way of life, art and culture, and tradition of the community.

In conclusion, all the six groups of stakeholders stated that CBT promotion and development policy was still going on; especially the scholars emphasized that Thailand gained an enormous revenue from tourism industry. The government therefore encouraged and developed tourism in all sectors and at all levels. However, representatives of the Provincial Federation of Thai Industries, the Provincial

Chamber of Commerce, and customers also had the same view that SMEs' entrepreneurs had to get ready and strive to develop products and services to be of better quality, by focusing mainly on the strength of local resources. However, representatives of DASTA, TAT, and the local government organizations were still a bit worried about the direction of CBT development to achieve three sustainable goals: economic, social, and environmental.

4.3 The Competitiveness of SMEs in the Service Sector of Community-Based Tourism in the Upper Northern Provinces Group 2

This section deals with the study results of stakeholders' perspectives competitiveness of SMEs in the service sector of community-based tourism in the upper northern provinces group 2. The data was collected from six groups of stakeholders: namely, the business sector, related government agencies, local people committees, scholars, non-governmental organizations, and customers or tourists. The method, the date, and the time of data collection for each group were as follows.

1) The business sector consisted of the following three groups.

1.1) Representatives of SMEs entrepreneurs (n=12): The data were collected by using focus group discussion with three entrepreneurs per community in each province. The date and the time of data collection in 2020 were as follows: (1) Phayao, on May 3, 10.00-10.45 a.m., (2) Chaing Rai, on May 15, 1.00-1.45 p.m., (3) Nan, on June 2, 1.00-1.45 p.m., and (4) Phrae, on June 14, 10.00-10.45 a.m.

1.2) Representatives of the Provincial Federation of Thai Industries (n=4): The data were collected by using in-depth interview with the chairman of the Federation of Thai industries in each province. The date and the time of data collection in 2020 were as follows: (1) Phayao, on May 5, 10.00-10.30 a.m., (2) Chaing Rai, on May 15, 9.30-10.00 a.m., (3) Nan, on June 4, 1.00-1.30 p.m., and (4) Phrae, on June 15, 2.00-2.30 p.m.

1.3) Representatives of the Provincial Chamber of Commerce (n=4): The data were collected by using in-depth interview with the chairman of chamber of commerce in each province. The date and the time of data collection in 2020 were as

follows: (1) Phayao, on May 7, 10.00-10.30 a.m., (2) Chaing Rai, on May 18, 10.00-10.30 a.m., (3) Nan, on June 5, 9.30-10.00 a.m., and (4) Phrae, on June 16, 1.30-2.00 p.m.

2) Related government agencies consisted of the following four groups.

2.1) Representatives of the Provincial Office of Tourism and Sports (n=4): The data were collected by using in-depth interview with the executive of the Office of Tourism and Sports in each province. The date and the time of data collection in 2020 were as follows: (1) Phayao, on May 7, 1.30-2.00 p.m., (2) Chaing Rai, on May 18, 3.00-3.30 p.m., (3) Nan, on June 5, 2.00-2.30 p.m., and (4) Phrae, on June 17, 10.00-10.30 a.m.

2.2) Representatives of the Tourism Authority of Thailand (TAT), (n=3): The data were collected by using in-depth interview with the executive of each branch office. The date and the time of data collection in 2020 were as follows: (1) Phayao and Chaing Rai, on May 19, 9.00-9.30 a.m., (2) Nan, on June 8, 9.00-9.30 a.m., and (3) Phrae, on June 17, 1.00-1.30 p.m.

2.3) Representatives of the Designated Areas for Sustainable Tourism Administration (Public Organization) or DASTA (n=1): The data were collected by using in-depth interview with the executive of DASTA in Nan province on June 8, 2020, 1.30-2.00 p.m.

2.4) Representatives of local administrative organizations (n=4): The data were collected by using in-depth interview with the executive of the local administrative organization in each province. The date and the time of data collection in 2020 were as follows: (1) the mayor of the Muang Phayao municipality, on May 8, 8.30-9.00 a.m., (2) the mayor of the Nang Lae subdistrict municipality in Chaing Rai, on May 19, 3.00-3.30 p.m., (3) the mayor of the Muang Nan municipality, on June 9, 1.30-2.00 p.m., and (4) the deputy mayor of the Thung Hong subdistrict municipality in Phrae, on June 18, 10.00-10.30 a.m.

3) Representatives of local people committees (n=12): The data were collected by using focus group discussion with three local people committee members from each community. The date and the time of data collection in 2020 were as follows: (1) Wat Sri Khom Kham community in Phayao, on May 8, 1.00-1.45 p.m., (2) Nang Lae

subdistrict community in Chaing Rai, on May 20, 9.00-9.45 a.m., (3) Nai Viang subdistrict community in Nan, on June 10, 2.00-2.45 p.m., and (4) Mo Hom Thung Charoen community in Phrae, on June 18, 1.00-1.45 p.m.

4) Representatives of scholars (n=4): The data were collected by using in-depth interview with scholars from the local-educational institutions involved in driving CBT as follows: (1) a scholar from University of Phayao in Phayao, on May 12, 2020, 10.00-10.30 a.m., (2) a scholar from Chiang Rai Rajabhat University in Chiang Rai, on May 21, 2020, 9.00-9.30 a.m., (3) a scholar from University of Phayao in Nan, on June 11, 2020, 1.00-1.30 p.m., and (4) a scholar from Maejo University, Phrae Campus in Phrae, on June 19, 2020, 1.00-1.30 p.m.

5) Representatives of Non-Government Organizations (NGOs), (n=4): The data were collected by using in-depth interview with representatives of NGOs of each CBT attraction as follows: (1) a staff member of Phayao foundation for development in Phayao, on May 12, 2020, 2.00-2.30 p.m., (2) a staff member of Population and Community Development Association in Chaing Rai, on May 21, 2020, 1.30-2.00 p.m., (3) the manager of Hug Muang Nan foundation in Nan, on June 12, 2020, 9.00-9.30 a.m., and (4) the member of Phrae city descendants network in Phrae, on June 22, 2020, 1.00-1.30 p.m.

6) Representatives of customers or tourists (n=12): The data were collected by using focus group discussion with three representatives of customers or tourists from each CBT attraction. The date and the time of data collection in 2020 were as follows: (1) Phayao, on May 10, 10.30-11.15 a.m., (2) Chaing Rai, on May 17, 10.30-11.15 a.m., (3) Nan, on June 13, 1.30-2.15 p.m., and (4) Phrae, on June 21, 1.30-2.15 p.m.

The following part contained the results of the analysis of competitiveness of community-based tourism in the upper northern provinces group 2. The data for analysis were gathered from six groups of stakeholders' perspectives. The results were divided into five subtopics: (1) tourism destination (2) demand of products and services, (3) related suppliers, (4) CBT strategic plan, and (5) opportunity and support from the government sector, as follows.

1) Tourism destination

1.1) The business sector consisted of the following three groups

1.1.1) Representatives of SMEs entrepreneurs: The informants stated that each CBT attraction has its own identity, which could draw a lot of attention from tourists, especially foreigners who were excited and eager to learn about the local way of life. Generally, tourists preferred to visit the attraction in group – some in a private group and others in a tour group. Regarding the perception of CBT information, most tourists would search for the information through online social media network before visiting an attraction. The factors, which influenced the decision to come visit the place, were the opinion of reviewers on the quality of products and services and the experiences of tourists who earlier visited there CBT attractions or used the services.

1.1.2) Representatives of the Provincial Federation of Thai Industries: The informants stated that there were at least three unique dimensions of tourism resources within the upper northern provinces group 2: religious and historical places, beautiful culture and tradition which reflected the unique identity of each community, and beautiful natural environment, such as mountains, forests, waterfalls, rivers, and reservoirs.

1.1.3) Representatives of the Provincial Chamber of Commerce: The informants stated that the provinces, which were highly outstanding in terms of destinations, were Nan and Chiang Rai, followed by Phrae and Phayao, as most tourists from other areas thought that Phrae and Phayao were good as the stopping point during the trip, unless the tourists had earlier planned, or if the CBT provided special events to promote tourism, such as the candlelight procession ceremony in the middle of Kwan Phayao reservoir, and indigo textile (Mo Hom) workshop in Phrae.

1.2) Related government agencies consisted of the following four groups.

1.2.1) Representatives of the Office of Tourism and Sports: The informants stated that the upper northern provinces group 2 had three outstanding characteristics: (1) natural resources, (2) culture, tradition, and ethnicity, and (3) health and food, all of which received attention from both Thai tourists and foreigners, as seen from increasing number of visitors every year.

1.2.2) Representatives of TAT: The informants stated that the upper northern provinces group 2 had clear image and charm of CBT, as people could conserve their way of life, tradition, culture, historical places, and natural environment well. Therefore, the type of tourism in each province depended on the local history.

1.2.3) Representatives of DASTA: The informants stated that the image of Nan province as a tourism destination was very good, especially in terms of arts, crafts and culture, historic places, and architecture which related to the settlement of Lanna community. Therefore, the tourism slogan of Nan province is “A living old town”, as it could still conserve the atmosphere, historic places, arts, and culture, as well as the traditional way of life, in spite of technological change and modernity. Moreover, Nan province is also a destination of which tourists are confident in safety, as seen when the COVID-19 situation became better, the new-normal tourism was introduced, the number of visitors was at least 500 persons per day for each tourist attraction.

1.2.4) Representatives of local administrative organizations: The informants stated that in the upper northern provinces group 2 there were many unique destinations, with beautiful scenery and natural environment, diversity in ethnicity, beautiful culture and tradition, historic places, and kind people. Especially Nan province was named the world’s cultural heritage and old city. Most representatives stated that all the four provinces had destinations which could attract many groups of tourists, depending on what destination type they favored.

1.3) Representatives of local people committees: The informants stated that the CBT was unique in terms of arts and cultures, historic places, and natural resources. There were also many activities related to the local way of life for tourists to learn, such as religious ceremonies, ancient local food, cloth-dyeing, handicrafts, and herbal compress balls. Most tourists made field trips in groups and the rest came with friends of families.

1.4) Representatives of scholars: The informants stated that the upper northern provinces group 2 has a similar tourism context. However, each province has its own identity as follows. First, Nan province was outstanding for culture and

tradition tourism, with people's strong beliefs in Buddhism, as seen from its history. And the promotion of the CBT emerged from internal drive, which reflected the strength and unity of the community. Secondly, Chiang Rai province were outstanding in terms of nature and environment, health, pottery, and beautiful agricultural areas (rice terrace). Tourism activities in each community could draw specific target groups. Thirdly, Phrae province was unique in terms of the way of life, local careers, and strength of community enterprises, which made it a model for income generation from local careers and a destination for educational tourism. And finally, Phayao province was unique in cultural tourism management, religious architecture, and natural water reservoir (Kwaan); but its tourism infrastructure might not be ready, as there was no transportation via airplane.

1.5) Representatives of NGOs: The informants stated that in the upper northern provinces group 2 there were unique natural tourist attractions, religious and historic places, Lanna culture and tradition, and local wisdom, in different tourist attractions.

1.6) Representatives of customers or tourists: The informants stated that all the four provinces shared similar tourism characteristics, such as arts and culture, tradition, architecture, and natural beauty. Most tourists felt that CBT in Chiang Rai and Nan provinces were clearer tourist destinations than Phayao and Phrae provinces, which were just stop overs along the way. However, there were many interesting tourist attractions in Phayao and Phrae provinces. Phayao province was outstanding in traditions, cultures, historic places, and natural resources. Kwan Phayao, for example, had beautiful scenery and infrastructure that were continuously developed. Also, there was a famous community enterprise of natural indigo-dyed cloths in Phrae province, which could become educational tourism for indigo-dyed cloths, which was a five-star OTOP product. Therefore, most representatives concluded that all the four provinces had their own unique charms, depending on the goal of tourism or the expectation of the target group in each area.

In conclusion, all the six groups of stakeholders stated that each CBT attraction had its own identity in terms of traditions, arts, culture, archaeological sites, natural resources, and activities related to the way of life. The representatives of scholars also

gave information that the CBT attractions in each province were outstanding different ways: (1) Nan was outstanding for historic sites, culture and traditions, (2) Chiang Rai offered many health activities and unique tourism of nature and environment, (3) Phrae was notable in terms of the way of life and local enterprises, and (4) Phayao was outstanding for culture and natural areas. But the representatives of the Provincial Chamber of Commerce stated that Nan and Chiang Rai had a better image as tourist destinations than Phrae and Phayao. The tourists usually made a field trip there, and most tourists set a plan before travelling, especially searching CBT information via online platforms.

2) Demand of products and services

2.1) The business sector consisted of the following three groups.

2.1.1) Representatives of SMEs entrepreneurs: The informants stated that most customers or tourists were quite satisfied with the quality of products and services at the CBT, as the image of products reflected the geography of each CBT attraction. Most customers or tourists would make a plan of everything prior to the trip, such as purchase of community products, transportation, accommodations, restaurants, and other additional services.

2.1.2) Representatives of the Provincial Federation of Thai Industries: The informants stated that currently many community products received a five-star guarantee by the Provincial Federation of Thai Industries. Among them were the OTOP (One Tambon One Product), which received promotion and support by the Office of Community Development. The examples of community products which could be found in CBT included textile products, souvenirs, food, and herbal products.

2.1.3) Representatives of the Provincial Chamber of Commerce: The informants stated that local products of each CBT attraction received attention from customers at a satisfactory level, especially the OTOP products which were continuously supported by the Office of Community Development, such as wicker products, woven clothes, or dyed clothes.

2.2) Related government agencies consisted of the following four groups.

2.2.1) Representatives of the Provincial Office of Tourism and Sports:

The informants stated that the community products were in line with the context of each CBT attraction. Each community also tried to increase the quality standard of its products and services to meet the need of customers.

2.2.2) Representatives of TAT: The informants stated that the characteristics of visitors in CBT attractions differed, depending on the outstanding tourism characteristics of each area. That is, the demand for products and services depended on the tourism destination. During the past two years, most visitors of the upper northern provinces group 2 were Thai tourists, with a higher ratio of adults than teenagers. And their purpose of tourism was to make a field trip.

2.2.3) Representatives of DASTA: The informants stated that DASTA was the first agency which drove creative tourism, of which the product design was based on local culture and beliefs. Local people were encouraged to find their local identity and to develop the production process, which tourists or customers could study and participated in all the production process until they could get the finished work as souvenirs. As for the pricing of products and services, DASTA aimed to add the cultural value and develop understanding of customers/tourists that what they gained from CBT could not be found elsewhere and therefore should be valued. The length of time which most tourists spent in the area was around three days and two nights, and the tourists generally chose the activities which did not take too long to finish. The service providers had to adjust their tourism management to match the demand of the target group by setting suitable service hours and fees, reducing the process in learning of production to a more concise lesson, and focusing more on the presentation of information through media and technology.

2.2.4) Representatives of local administrative organizations: The informants stated that the products and services of the CBT are well accepted by the customers/tourists. Most community products were related to the local way of life, such as processed food from the agricultural sector, woven/dyed/embroidery clothes from the occupational group, souvenirs with local identity, amulets related to religious

beliefs, handicrafts from local wisdom, and herbal medicines. And most community products or OTOP products were approved for community product standard.

2.3) Representatives of local people committees: The informants stated that CBT products and services were unique to the local context, and served the demand of each group of customers or tourists. The community provided the learning base for each step of manufacturing for tourists to study and participate. And the tourists were satisfied with the overall products and services of the community.

2.4) Representatives of scholars: The informants stated that tourism in the four provinces could grow much further, as the CBT image of the upper northern provinces group 2 was well accepted by the tourists, especially the new generation. Therefore, the demand for products and services of CBT could grow along with the growing customer base. And when the specific qualities of products and services were considered, the CBT attractions in all the four provinces were unique in line with the way of life, culture, tradition, and local occupations, which were the capitals of the community. Local people should design and develop new products and services, such as building natural routes, creating check-in points with the symbol of the CBT, designing fashionable products which served the demand of teenagers, and designing activities for target groups with different needs, in order to attract a larger number of visitors who might want to spend longer time in the area and thus spend more money.

2.5) Representatives of NGOs: The informants stated that local products and services were unique, depending on the context of each area, as they were manufactured from local ingredients or resources in the way they were used to. The demand for products and services in the CBT came from the customers or tourists who were attracted to this type of tourism. Together with the growing trend of CBT, the demand for CBT products and services thus increased.

2.6) Representatives of customers or tourists: The informants stated that each community products differed, depending on the local context: (1) Chiang Rai province was famous for its Nang Lae pineapples, herbal medicines, and coffee or tea, (2) Phayao province was famous for Pla Som (fermented fish) and products from water hyacinth, such as lady bags or mats, (3) Nan province was famous for cultural products, such as handicrafts, woven cloths, and silverware, and (4) Phrae province

was famous for clothes, hats, and bags made of indigo cloth. The afore-mentioned community products reflected the geography and local occupations. And most tourists were satisfied with the product quality. The tourism service providers in the four provinces were found to be similar, as they focus on being tourist attractions that demonstrate the way of life in the community, such as cooking culture and traditional dances in Phayao, tie-dye process of indigo cloths in Phrae, Toong (paper flag) cutting and paper lantern making in Nan, and herbal compress in Chiang Rai. And in general SMEs in the service sector within each CBT attraction were restaurants and coffee and beverages shops, accommodations and hotels, souvenir shops, transportation companies, and related businesses.

In conclusion, all the six groups of stakeholders stated that products and services at CBT attractions had different characteristics, depending on lifestyles, cultures, traditions, natural resources, and occupations. Customers or tourists who were passionate in CBT tourism viewed that they were willing to consume CBT products and services, because they recognized the value of CBT that was consistent with DASTA's approach, which aimed to develop an understanding of customers or tourists about the importance of cultural products, making them to willingly support CBT products and services. Furthermore, the scholars gave additional information that nowadays CBT products were increasingly well accepted by the new generation.

3) Related suppliers

3.1) The business sector consisted of the following three groups.

3.1.1) Representatives of SMEs entrepreneurs: The informants stated that in CBT attractions there were small producers with different potential and negotiation power, such as agricultural production groups, who supplied ingredients to entrepreneurs in tourist attractions, such as restaurants, accommodations/hotels, and travel agencies. And even within the groups of CBT community enterprises, there were also the small producers who supplied raw materials for the enterprise's tourism services. For example, the small producers of Ban Thung Charoen community enterprise in Phrae province were the farmer group that grew Pink Strobilanthes (Hom) for fabric dye, and the farmer group that grew herbs, etc.

3.1.2) Representatives of the Provincial Federation of Thai Industries: The informants stated that within the supply chain of CBT there were suppliers with competency and negotiation power, such as restaurants, hotels/accommodations, agricultural producers, travel agencies, and local community enterprises, such as food groups, craft groups, or OTOP groups.

3.1.3) Representatives of the Provincial Chamber of Commerce: The informants stated that in each CBT attraction there were small suppliers who provided raw materials for local entrepreneurs to make products and give services. Thus, the dependence on outsiders for raw materials could be reduced. For example, the farmer group would supply produces for hotels and restaurants, and other raw materials (teak, bamboo, water hyacinth, and indigo) for the manufacturing of products or souvenirs, such as furniture, decorations, and household utilities.

3.2) Related government agencies consisted of the following four groups.

3.2.1) Representatives of the Provincial Office of Tourism and Sports: The informants stated that in each area there were enough tourism suppliers who were ready to run tourism business. They were, for example, agriculture producers, accommodation providers, manufacturers of goods and souvenirs, travel agencies, as well as content creators who raised social awareness of the CBT.

3.2.2) Representatives of TAT: The informants stated that the CBT industry of all the provinces have similar suppliers, such as hotels/accommodations, restaurants, shops, agricultural enterprise groups, and car rental companies, etc.

3.2.3) Representatives of DASTA: The informants stated that related suppliers formed activity groups in the CBT attractions, such as a farmer group, a housekeeper group, a homestay group, a restaurant and souvenir shop group. The travel agencies started to be interested in CBT and provide support for it, which was in line with the growing trend of cultural and local tourism, and social and environmental responsibility. Currently, the travel agencies or private companies increasingly supported the production and the buying of eco-friendly community products through their Corporate Social Responsibility (CSR) projects.

3.2.4) Representatives of local administrative organizations: The informants stated that four provinces share similar suppliers related to the CBT, such

as food and agriculture group, accommodations/hotels/homestay group, rental car group, and travel agency group. These are the sub-suppliers within the tourism industry.

3.3) Representatives of local people committees: The informants stated that the products and services providers in CBT, such as airlines, transportation companies, restaurants, hotels, travel agencies, and farmers, have much more potential in accepting tourists.

3.4) Representatives of scholars: The informants stated that there were three parties related to suppliers: (1) the labor who entered tourism industry, the number of whom was enough for business activities in the service sector, (2) suppliers of products and services in the CBT attraction, such as food ingredient suppliers, hotels/accommodations, restaurants, shops, etc., and (3) private companies related to tourism, such as tour guides, travel agencies, and transportation companies that linked the local service providers with customers/tourists.

3.5) Representatives of NGOs: The informants stated that the suppliers in the tourism sector of each province consisted of accommodations (hotels, guest houses, homestays, etc.), restaurants, agriculture community enterprises (suppliers of meat, vegetables, and fruits), car rental companies and travel agencies.

3.6) Representatives of customers or tourists: The informants stated that travel agencies were still crucial for the CBT and SMEs in the service sector. They observed that there were usually tourists who traveled with travel agencies to CBT attractions, especially foreigners, which might be the main income sources for local SMEs. In case that tourists traveled by themselves, they probably used the online travel agencies to book the accommodations or hotels. However, with the COVID-19 situation, the representatives thought that new suppliers that could help service businesses to survive were application development companies that linked between entrepreneurs and customers in purchasing, such as food delivery or service delivery application, and the package transportation companies who supported e-Commerce, etc.

In conclusion, all the six groups of stakeholders agreed that as a whole the suppliers involved in CBT had potential and bargaining power. They were agricultural

groups, restaurants, accommodations/hotels, travel agencies, and tourism community enterprises. However, the representatives of DASTA and scholars shared in the same opinion that bargaining among suppliers was reciprocally supportive, because the goal of CBT development was to distribute income in the community and to balance the economic, social, and environmental dimensions.

4) CBT strategic plan

4.1) The business sector consisted of the following three groups.

4.1.1) Representatives of SMEs entrepreneurs: The informants stated that SMEs entrepreneurs were aware of the tourism development of the upper northern provinces group 2 to achieve sustainability, by raising the development level of society and encouraging eco-tourism, cultural tourism, and health tourism, together with the conservation of abundant natural resources, and the participatory system in environmental management. Moreover, there was a commercial strategic plan of the upper northern provinces group 2, years 2017-2021, in which the Ministry of Commerce emphasized the trade which could be linked with eco-tourism as well.

4.1.2) Representatives of the Provincial Federation of Thai Industries: The informants stated that the Provincial Federation of Thai Industries already promotes tourism according to the national strategic plan which focuses on five approaches. First, to create and add value to the products and services based on cultural capital and unique local wisdom. Secondly, to develop contextual factors which enhances creativities, which could be applied with tourism products and services such as R&D, design, investment promotion innovation, community enterprises tourism network formulation, marketing promotion, and database system development. Thirdly, to promote the capabilities of entrepreneurs and personals in tourism industry, to develop their skills and business knowledge. Fourthly, to encourage registration, protection, and application of intellectual property and wisdom in the support and development towards creative tourism. And finally, to promote CBT marketing through creative media and other media innovations.

4.1.3) Representatives of the Provincial Chamber of Commerce: The informants stated that all the provinces have their own CBT strategic plan, though the

degree of continuity and clarity might differ. Hence, the level of success in tourism promotion of each province differed accordingly.

4.2) Related government agencies consisted of the following four groups.

4.2.1) Representatives of the Provincial Office of Tourism and Sports:

The informants stated that each Provincial Office of Tourism and Sports has the CBT development strategy agenda as follows: (1) to improve the CBT quality, products, and tourism service for balanced and sustainable growth; (2) to improve the infrastructure and facilities in response to the expansion of tourism; (3) to improve human resources in tourism and encourage participation by local people in driving the tourism; (4) to expand the market to those who favored CBT, by using technology in marketing based on stakeholders' participation to achieve balanced and sustainable growth; and (5) to integrate tourism management – from the direction, administration, and provision of quality services to giving support for the investment by the private sector and for setting up the information center for tourism.

4.2.2) Representatives of TAT: The informants stated that the setting the central strategic plan was under the responsibility of Department of Tourism and was implemented at the provincial level by the Provincial Office of Tourism and Sports, together with the Provincial Office of Designated Areas for Sustainable Tourism Administration (DASTA) of the announced provinces. Other government agencies at the same level also had their strategic plans in tourism promotion and development which conformed to the main mission of each agency. Therefore, the drive of CBT by each agency all existed in each organization's strategic plan.

4.2.3) Representatives of DASTA: The informants stated that DASTA implemented the CBT sustainability plan, 2016-2020. Moreover, the Office of the Permanent Secretary of the Ministry of Tourism and Sports also had an action plan for the sustainable and creative development of the CBT, 2018-2022, which corresponded to the CBT strategic plan of DASTA.

4.2.4) Representatives of local administrative organizations: The informants stated that the strategic plan had been fully implemented since 2016. Each community tried to find social, cultural, and natural capitals to transform into tourism with the concern of a balance in sustainable economic, social, and environmental

development. It was necessary for local people to participate in tourism management which would generate income and fairly distribute profits to community members. While creating the process of selection and integration of traditional and modern cultures in a smooth fashion.

4.3) Representatives of local people committees: The informants stated that each province had its own agency that was responsible for the implementation of CBT strategic plan, such as the Provincial Office of Tourism and Sports, which would work together with related agencies, depending on the scope and characteristics of operation, except for Nan province, where DASTA was mainly responsible for CBT promotion and development because the province was announced as the Lanna heritage city of Thailand.

4.4) Representatives of scholars: The informants stated that each province followed the same direction of tourism promotion and development in the CBT strategic plan of the Ministry of Tourism and Sports, and the commercial strategic plan of the upper northern provinces group 2 of the Ministry of Commerce.

4.5) Representatives of NGOs: The informants stated that the directly responsible agency was the ministry of tourism and sports, which transferred the mission to the Provincial Office of Tourism and Sports to implement the CBT strategic plan together with related agencies including NGOs which provided human resources training on knowledge and skills for sustainable CBT management in accordance with the sufficiency principle of CBT management. The implementation of the plan would also add more value to the community tourism resources or capital, which could raise the level of community importance for the society's awareness and increasing the number of communities with standardized CBT management in line with their capacity to welcome tourists. And overall, this would increase the number of networks and strength of CBT.

4.6) Representatives of customers or tourists: The informants stated that the provincial government agencies systematically and continuously played their role in accordance with CBT promotion and development strategic plan to ensure concrete results. The provincial government agencies could be considered as the mediators between the central administration and people. However, the strategic operation of the

CBT required connecting all stakeholders in the system: (1) financial institutions which provided capital for SMEs management in the service sector, educational institutions that provided training in management and product or service development; (2) government agencies related to the promotion, development, and certification of community product or service standard; and (3) last but not least, the local entrepreneurs and NGOs that participated in the sharing ideas for balanced and sustainable development.

In conclusion, all the six groups of stakeholders realized that every province had a strategic plan to develop CBT with the Provincial Tourism and Sports Office as the host agency to drive sustainable and creative CBT development. However, Nan province, which was identified by the government to be a special area for sustainable tourism, had DASTA, which directly responsible for driving and monitoring the CBT development through DASTA's sustainable CBT plan. Other government agencies and related network partners also work together to drive CBT development, depending on the missions of each organization.

5) Opportunity and support from the government sector

5.1) The business sector consisted of the following three groups.

5.1.1) Representatives of SMEs entrepreneurs: The informants stated that the government provided support for service business groups in CBT periodically. However, enterprises that could get the support tended to be the groups that already had capabilities, such as the group of hotels and restaurants with capacity to invest and access the business supporting information swiftly. Therefore, they wanted the government to provide access for local business groups as well in order to help all local SMEs to survive and grow together.

5.1.2) Representatives of the Provincial Federation of Thai Industries: The informants stated that there was certainly an opportunity to seek the government support. SMEs entrepreneurs could request help through the SME Support & Rescue Center (SSRC). The mission of the center was to promote, support, and assist them in terms of development and finance. With regard to development, the SSRC would contact the related network partners, such as Industry Transformation Center (ITC), to provide help with technological development, and Thailand Industrial design Center

(Thai-IDC) to provide help with product design and development. As for finance, there were funds available for SMEs, such as a working capital fund of the Industry Promotion Division and other funds in cooperation with the Small and Medium Enterprise Development Bank of Thailand (SME Bank), such as Entrepreneur Loan 4.0 and Local Economy Loan. Moreover, the Office of Small and Medium Enterprises Promotion (OSMEP) also provided guidance and cooperated in development to increase SMEs to enable them to grow and compete at the international level.

5.1.3) Representatives of the Provincial Chamber of Commerce: The informants stated that SMEs had an opportunity to be supported by the government in CBT promotion, which focused on the strengthening the community economy in line with the national strategic plan which the related government agencies implemented annually according to the plan. These agencies included the Provincial Office of Tourism and Sports, the Provincial Office of Commerce, the Provincial Federation of Thai Industries, TAT, DASTA, and local administrative organizations. It was certain that the provincial government agencies would provide support for the service businesses related to CBT development.

5.2) Related government agencies consisted of the following four groups.

5.2.1) Representatives of the Provincial Office of Tourism and Sports: The informants stated that the government provided support for tourism management, which was currently under the National Tourism Development Plan II (2017-2021). Four objectives of the plan were: (1) to have quality tourist attractions in order to raise the competitiveness level, (2) to increase the economic value of tourism industry in a balanced way, (3) to distribute income and benefit from tourism to each community, and (4) to develop tourism in a sustainable way, based on the local identity and the way of life.

5.2.2) Representatives of TAT: The informants stated that the major support came from the government agencies with the major mission in tourism promotion and development, such as local administrative organizations, the Provincial Office of Tourism and Sports and DASTA, which drove the operation together with the network partners, including local administrative organizations, TAT, the

Provincial Chamber of Commerce, the Provincial Commercial Office, the Provincial Federation of Thai Industries, and the Office of Community Development.

5.2.3) Representatives of DASTA: The informants stated that there was a very good opportunity to set support for CBT promotion and development from the government, as the CBT development's goal conformed to the policy of grassroots economy promotion to ensure employment, income, and income distribution at the community level, together with the empowerment of communities throughout the country.

5.2.4) Representatives of local administrative organizations: The informants stated that there was an opportunity for continuous support, as it corresponded to the government policy which focused on the promotion and development of tourism as a major source of income for the country, which generated employment and distributed income to communities. The informants therefore thought that the government would provide support for tourism through government mechanism, from the central administration to the province and to the community, respectively. As for the support from the local administrative organization, it might depend on how much the administrators in each term would give importance to tourism development.

5.3) Representatives of local people committees: The informants stated that previously the community received financial support by writing projects and submitting them to the related government agencies, such as the Provincial Office of Tourism and Sports, local administrative organizations, DASTA, and the Office of Community Development. The budget would be used for the projects related to tourism and standard development of products and services. Meanwhile, supports from other agencies were usually in the form of training to improve managerial skills of the entrepreneurs and marketing support, such as using the government area for product distribution.

5.4) Representatives of scholars: The informants stated that SMEs had an opportunity to set support from various agencies – the government, the private sector, local administrative organizations, – and educational institutions as these agencies have a budget for working with the community, including promoting and developing

the CBT. However, the level of support would depend on the priority the leader of each agency gave to individual projects. Moreover, the capacity of each agency to support could differ. Especially, if the local administrative organization received continuous financial support from the government, this could benefit the CBT development more. And if any the province had an agency directly responsible for tourism development, such as DASTA in Nan province, the chance for CBT development with clearer and faster results would increase.

5.5) Representatives of NGOs: The informants stated that there was an opportunity for continuous support from the government, as Thailand depended on income from tourism to boost its economy. When the government promoted and developed more CBT, there would be more employment, income, and distribution of profits at the grassroots level.

5.6) Representatives of customers or tourists: The informants stated that the community which could receive support from the government had to be able to utilize their own potential in tourism management first, which was the bottom-up process of work. Because whether or not CBT enterprises could survive and grow did not depend only on the national policy administration in the top-down approach, but they also had to get participation within community to find the identity and to push the CBT development together in the same direction. Once the community had strong participation, it was not hard to gain support from the government.

In conclusion, most stakeholders believed that there was an opportunity for continuous support from the government, as Thailand depended on mainly income from tourism to boost its economy. And when the more the government promoted and developed CBT, the more the employment and the income distribution at the grassroots level. Furthermore, representatives of the scholars also stated that the potential community could also receive a budget funded by public and private organizations, local administrative organizations, and educational institutions. The representatives of the entrepreneurs stated that although SMEs were occasionally supported by related government agencies in the past. The support was not continuous; enterprises who could access support were just existing groups with capabilities to invest and to access the supporting information swiftly.

4.4 The Gap of Service Quality, Problems, and Obstacles of SMEs in the Service Sector in the Community - Based Tourism Attractions

The data in this section were gathered by distributing the questionnaires to 400 customers or tourists in four community-based tourism (CBT) attractions in the upper northern provinces group 2. The results were divided into three parts: (1) general information of the respondents, (2) the gap of service quality, and (3) problems, obstacles, and suggestions for SMEs' operation.

4.4.1 General Information of the Respondents

The general information of customers or tourists consisted of nine items with the following details (Table 4.7).

Gender: The majority of the respondents were female (58.50%) and the rest were male (41.50%).

Age: Most of the respondents were lower 30 years old (46.20%), followed by 31-40 years old (28.20%), 41-50 years old (15.00%), and over 51 years old (10.50%), respectively.

Education level: Most of the respondents held a Bachelor's degree (58.80%), followed by Master's degree (14.50%), high school or equivalent (11.20%), diploma or equivalent (8.00%), doctoral degree (5.00%), secondary school or equivalent (1.50%), and primary school (1.00%), respectively.

Income per month: Most of the respondents earned a monthly income of 10,000-20,000 baht (29.50%), followed by less than 10,000 baht (28.00%), 20,001-30,000 baht (15.50%), 30,001-40,000 baht (11.20%), over 50,000 baht (9.00%), and 40,001-50,000 baht (6.80%), respectively.

Frequency of visiting CBT attractions: Most of the respondents travelled only once in a while (68.80%), followed by rather often (26.50%), and the lowest number of them travelled often (4.80%).

Nature of visiting: More than half of the respondents preferred an overnight trip (59.20%) rather than a day trip (40.80%).

Number of nights spent at the CBT attraction: Most of the respondents preferred to stay at CBT attractions for 1-2 days (90.30%), followed by 3-4 nights (7.17%), 5-6 nights (1.69%), and over 7 nights (0.84%), respectively.

Likelihood of returning: Most of the respondents planned to return to the tourist attraction in the next trip (67.50%), followed by those who were uncertain about returning (31.80%), and the rest were not sure whether to return or not (0.80%).

Channels of information regarding CBT attractions: Most of respondents learned about CBT attractions through five sources, ranked from the most important to the least as follows: (1) online media, such as Facebook, Instagram, or Twitter (85.20%), (2) recommendation by others (45.20%), (3) visiting by chance (21.00%), (4) radio or television (16.20%), and (5) printed media such as newspapers or magazines (12.80%).

Table 4.7 General Information of the Respondents

	(n = 400)	
Items	Frequency	Percent
1. Gender		
- Male	166	41.50
- Female	234	58.50
2. Age		
- Less than 30 years old	185	46.20
- 31 - 40 years old	113	28.20
- 41 - 50 years old	60	15.00
- over 51 years old	42	10.50
3. Education level		
- Primary school	4	1.00
- Secondary school	6	1.50
- High school/equivalent	45	11.20
- Diploma/equivalent	32	8.00
- Bachelor's degree	235	58.80

(n = 400)		
Items	Frequency	Percent
- Master's degree	58	14.50
- Doctoral degree	20	5.00
4. Income per month		
- 10,000 baht or below	112	28.00
- 10,001 - 20,000 baht	118	29.50
- 20,001 - 30,000 baht	62	15.50
- 30,001 - 40,000 baht	45	11.20
- 40,001 - 50,000 baht	27	6.80
- 50,000 baht or above	36	9.00
5. Frequency of visiting the CBT attraction		
- Once in a while	275	68.80
- Rather often	106	26.50
- Often	19	4.80
6. Nature of visiting		
- Day trip	163	40.80
- Overnight	237	59.20
7. Number of nights spent at the CBT attraction (n = 237)		
- 1 - 2 nights	214	90.30
- 3 - 4 nights	17	7.17
- 5 - 6 nights	4	1.69
- Over 7 nights	2	0.84
8. Likelihood of returning		
- Very likely	270	67.50
- Unlikely	3	0.80
- Not sure	127	31.80
9. Channel of information regarding the CBT attraction (more than 1 answer selected)		
- Recommendation by others	181	45.20
- Online media: Facebook, Instagram, or Twitter	341	85.20
- Radio/television	65	16.20

(n = 400)		
Items	Frequency	Percent
- Printed media: newspapers or magazines	51	12.80
- Visiting by chance	84	21.00

4.4.2 The Gap of Service Quality of SMEs in the Service Sector

This section presents mean, standard deviation, and the level of opinion of customers or tourists regarding expectation and actual perception of the service quality of SMEs in the CBT attractions. The data were collected from 400 tourists. The results of the study were divided into five dimensions, which would be further analyzed to find the gap of service quality, as follows (Table 4.8).

4.4.2.1 Reliability of the service

Regarding the expectation, the respondents expected the reliability of SMEs service at a high level ($\bar{x}=3.65$; $SD=0.77$), and the analysis of all the items also revealed that the expectation for reliability of the service was high for all of them: (1) honestly and reasonable prices of products and services ($\bar{x}=3.72$; $SD=0.92$), (2) interesting and reliable channels of public relations ($\bar{x}=3.62$; $SD=0.90$), (3) credible community leaders or entrepreneurs ($\bar{x}=3.62$; $SD=0.94$), (4) service staff with good personality who could solve unexpected problems ($\bar{x}=3.72$; $SD=0.88$), and (5) application of modern technology, such as online transactions ($\bar{x}=3.58$; $SD=0.96$).

Regarding the actual perception, it was found that overall, the respondents perceived that SMEs were reliable at a high level ($\bar{x}=3.42$; $SD=0.64$). But the analysis of all the items revealed that the respondents' perception of reliability could be divided into two levels. First, the perception was at the high level in the following items: (1) honestly and reasonable prices of products and services ($\bar{x}=3.49$; $SD=0.73$), and (2) service staff with good personality who could solve unexpected problems ($\bar{x}=3.44$; $SD=0.79$). Secondly, the following perception items were perceived to be a moderate level: (1) interesting and reliable channels of public relations ($\bar{x}=3.39$; $SD=0.79$), (2) credible community leaders or entrepreneurs ($\bar{x}=3.38$; $SD=0.85$), and (3) application of modern technology, such as online transactions ($\bar{x}=3.39$; $SD=0.81$).

4.4.2.2 Assurance of the service

Regarding the expectation, it was found that the respondents expected the assurance from SMEs at a high level ($\bar{x}=3.60$; $SD=0.85$). And the analysis of all the items also revealed that the expectation of assurance was high for all of them: (1) providing safe and standardized infrastructure and traffic systems ($\bar{x}=3.68$; $SD=0.96$), (2) having CCTVs installed around the tourist attractions ($\bar{x}=3.45$; $SD=1.02$), (3) having security officers who monitored security matters ($\bar{x}=3.53$; $SD=1.00$), (4) having clear signs or announcement boards which showed the conditions of services ($\bar{x}=3.68$; $SD=0.92$), and (5) providing standardized facilities ($\bar{x}=3.67$; $SD=0.98$).

Regarding the actual perception, the overall perceptual of assurance of SMEs service was found to be at a moderate level ($\bar{x}=3.27$; $SD=0.75$). The analysis of all the items also revealed that the respondents perceived the assurance to be at a moderate level for all of them: (1) providing safe and standardized infrastructure and traffic systems ($\bar{x}=3.39$; $SD=0.86$), (2) having CCTVs installed around the tourist attractions ($\bar{x}=3.09$; $SD=0.94$), (3) having security officers who monitored security matters ($\bar{x}=3.17$; $SD=0.89$), (4) having clear signs or announcement boards which showed the conditions of services ($\bar{x}=3.38$; $SD=0.82$), and (5) providing standardized facilities ($\bar{x}=3.30$; $SD=0.88$).

4.4.2.3 Tangibles of the service

Regarding the expectation, it was found that overall, the respondents expected tangibles of SMEs at a high level ($\bar{x}=3.73$; $SD=0.82$). The analysis of all the items also revealed that the respondents expected tangibles from SMEs at a high level for all the items: (1) maintenance of physical environment unique to the community ($\bar{x}=3.78$; $SD=0.88$), (2) clean and tidy place ($\bar{x}=3.92$; $SD=0.93$), (3) convenient shuttle services ($\bar{x}=3.57$; $SD=1.02$), (4) providing facilities such as parking spaces, rendezvous points, and Wi-Fi ($\bar{x}=3.67$; $SD=0.98$), and (5) universally friendly architecture ($\bar{x}=3.72$; $SD=0.92$).

Regarding the actual perception, the respondents were found to perceive tangibles of SMEs at a high level ($\bar{x}=3.44$; $SD=0.70$). However, the consideration of all the items revealed that the respondents perceived the tangibles in two levels. First, they perceived the tangibles in the following items at a high level:

(1) maintenance of physical environment unique to the community (\bar{x} =3.54; SD=0.80) (2) clean and tidy place (\bar{x} =3.66; SD=0.81) and (3) universally friendly architecture (\bar{x} =3.43; SD=0.85). On the other hand, they perceived the tangibles of the following items at a moderate level: (1) convenient shuttle services (\bar{x} =3.24; SD=0.91), and (2) providing facilities such as parking spaces, rendezvous points, and Wi-Fi (\bar{x} =3.35; SD=0.90).

4.4.2.4 Empathy of the service

Regarding the expectation, it was found that overall, the respondents expected the empathy of SMEs at a high level (\bar{x} =3.81; SD=0.82). The analysis of the five items also revealed that the respondents expected empathy at a high level for all the items: (1) providing service in a friendly and good-spirit manner (\bar{x} =3.95; SD=0.87), (2) willingness to provide suggestions for customers (\bar{x} =3.93; SD=0.87), (3) clear and systematic coordination (\bar{x} =3.69; SD=0.92), (4) caring for the details of the customers' needs (\bar{x} =3.76; SD=0.92), and (5) acceptance of the customers' suggestions for further improvement of services (\bar{x} =3.73; SD=0.93).

Regarding the actual perception, the respondents perceived the empathy of SMEs to be at a high level (\bar{x} =3.56; SD=0.75). The analysis of all the items also revealed that they expected the empathy at a high level for all the items: (1) providing service in a friendly and good-spirit manner (\bar{x} =3.74; SD=0.84), (2) willingness to provide suggestions for customers (\bar{x} =3.68; SD=0.84), (3) clear and systematic coordination (\bar{x} =3.42; SD=0.85), (4) caring for the details of the customers' needs (\bar{x} =3.49; SD=0.88), and (5) acceptance of the customers' suggestions for further improvement of services (\bar{x} =3.47; SD=0.88).

4.4.2.5 Responsiveness to the customers

Regarding the expectation, it was found that the respondents expected from the responsiveness of SMEs at a high level (\bar{x} =3.76; SD=0.84). The analysis of all the items also revealed that they expected the responsiveness at a high level for all the items: (1) timely and prompt service (\bar{x} =3.82; SD=0.89), (2) enthusiasm of the service providers (\bar{x} =3.84; SD=0.94), (3) adequate number of service providers (\bar{x} =3.76; SD=0.93), (4) adequacy of equipment and facilities (\bar{x} =3.75; SD=0.93), and

(5) providing fast and convenient channels to offer help, such as application or coordination center (\bar{x} =3.62; SD=0.98).

Regarding the actual perception, the respondents' actual perception of responsiveness from SMEs was found to be at a high level (\bar{x} =3.42; SD=0.75). However, the analysis of all the items revealed that the actual perception of responsiveness could be divided into two levels. The perception of responsiveness was at a high level in the following items: (1) timely and prompt service (\bar{x} =3.43; SD=0.85), (2) enthusiasm of the service providers (\bar{x} =3.52; SD=0.84), and (3) adequate number of service providers (\bar{x} =3.45; SD=0.84). On the other hand, the perception of the responsiveness was at a moderate level in the following items: (1) adequacy of equipment and facilities (\bar{x} =3.39; SD=0.84) and (2) providing fast and convenient channels to offer help, such as application or coordination center (\bar{x} =3.31; SD=0.95).

Table 4.8 The Gap of Service Quality of SMEs in the Service Sector in Community - Based Tourism Attractions

(n=400)

Aspects of Service Quality	Opinion of Customers or Tourists					
	Expectation			Actual Perception		
	\bar{x}	SD	Result	\bar{x}	SD	Result
Reliability	3.65	0.77	High	3.42	0.64	High
1. Honestly and reasonable prices of products and services.	3.72	0.92	High	3.49	0.73	High
2. Interesting and reliable channels of public relations, such as newspapers or online media.	3.62	0.90	High	3.39	0.79	Moderate
3. Credibility of the community leaders or entrepreneurs of the service sector in the community.	3.62	0.94	High	3.38	0.85	Moderate

(n=400)

Aspects of Service Quality	Opinion of Customers or Tourists					
	Expectation			Actual Perception		
	\bar{x}	SD	Result	\bar{x}	SD	Result
4. Good personality of the service staff with an ability to solve unexpected problems.	3.72	0.88	High	3.44	0.79	High
5. Application of modern technology, such as contacting customers via online platforms.	3.58	0.96	High	3.39	0.81	Moderate
Assurance	3.60	0.85	High	3.27	0.75	Moderate
6. Safe and standardized infrastructure and traffic systems.	3.68	0.96	High	3.39	0.86	Moderate
7. CCTVs installed around tourists' attractions.	3.45	1.02	High	3.09	0.94	Moderate
8. Security officers who monitored security matters.	3.53	1.00	High	3.17	0.89	Moderate
9. Signs and announcement boards which showed the rules, regulations, or conditions.	3.68	0.92	High	3.38	0.82	Moderate
10. Standardized equipment/facilities, such as phone booths, fire exits, fire extinguishers, ramps, etc.	3.67	0.98	High	3.30	0.88	Moderate
Tangibles	3.73	0.82	High	3.44	0.70	High
11. Maintenance of the physical environment unique to the community.	3.78	0.88	High	3.54	0.80	High
12. Clean and tidy place.	3.92	0.93	High	3.66	0.81	High
13. Convenient shuttle services.	3.57	1.02	High	3.24	0.91	Moderate
14. Facilities, such as parking spaces, rendezvous points, and Wi-Fi.	3.67	0.98	High	3.35	0.90	Moderate

(n=400)

Aspects of Service Quality	Opinion of Customers or Tourists					
	Expectation			Actual Perception		
	\bar{x}	SD	Result	\bar{x}	SD	Result
15. Architecture/buildings friendly to all age groups and genders.	3.72	0.92	High	3.43	0.85	High
Empathy	3.81	0.82	High	3.56	0.75	High
16. Friendly services.	3.95	0.87	High	3.74	0.84	High
17. Willingness of the staff to provide suggestions for customers.	3.93	0.87	High	3.68	0.84	High
18. Systematic coordination.	3.69	0.92	High	3.42	0.85	High
19. Care for the details of customer's needs.	3.76	0.92	High	3.49	0.88	High
20. Listening to the customer's suggestions for further service improvement.	3.73	0.93	High	3.47	0.88	High
Responsiveness	3.76	0.84	High	3.42	0.75	High
21. On-time and prompt service.	3.82	0.89	High	3.43	0.85	High
22. Enthusiastic service providers.	3.84	0.94	High	3.52	0.84	High
23. Adequate number of service providers.	3.76	0.93	High	3.45	0.84	High
24. Adequacy of facilities/ equipment.	3.75	0.93	High	3.39	0.84	Moderate
25. Fast and convenient channels to provide help, such as application or the coordination and public relation center.	3.62	0.98	High	3.31	0.95	Moderate

4.4.3 Problems, Obstacles, and Suggestions for SMEs in the Service Sector

In the study of the service quality of SMEs' operation, the data were collected by using questionnaire with open-ended questions from 400 tourists. The following were the results of the analysis.

There were 107 respondents, or 26.75% of the total population who answered the questionnaire. The analysis revealed seven dimensions of problems or obstacles, ranging from high to low levels of seriousness as follows.

1) Administration system: uncertainty of opening-closing time of services, inadequate staff, and inadequate facilities, such as parking spaces and restrooms (f=26; 24.30%; n=107).

2) Poor use of information technology, such as online channels or others to publicize information to target groups. (f=23; 21.50%; n=107)

3) Low quality products and services: unclear prices or too-high prices, and lack of service skills on the part of some entrepreneurs, especially professionalism and friendliness (f=20; 18.69%; n=107).

4) Visual pollution: ugly environment, dirtiness, untidiness, and unsorted trash (f=13; 12.15%; n=107).

5) Transportation: non-inclusive transportation system or infrastructure under construction, inconvenient transportation, rugged and unsafe traffic surface (f=11; 10.28%; n=107).

6) Identity of tourist attractions: unclear identity of the community, inability to utilize the potential of community to a full extent, lack of integration in working, and lack of continuity of the government's support (f=8; 7.48%; n=107).

7) Pandemic and weather condition: the COVID-19 pandemic, climate change, and natural disasters (f=6; 5.61%; n=107).

Apart from the problems or obstacles related to service quality of SMEs' operation mentioned above, the respondents also provided suggestions as follows.

1) Administration system: The entrepreneurs should focus on every detail in order to ensure the standard of service, especially the clear procedure, in

terms of (1) service hours of tourist attractions, (2) parking hours and the rate of parking fees, (3) organization of orderly traffic circulation which followed traffic rules, (4) providing adequate assistance staffs for customers or tourists, (5) improving adequacy and readiness of facilities, especially parking spaces, restrooms, and ramps, (6) creating tourist attraction maps for customers or tourists to conveniently access to information, and (7) preparing assistance equipment for urgent situations.

2) Information technology: The entrepreneurs should focus on the following IT operation: (1) using online platforms to communicate with customers or tourists better, such as creating Facebook page and develop the website of the enterprise, (2) regularly updating the contents of products and service promoted through online platforms, especially the image, prices, fees, quantity of products and types of service, and schedules, and (3) applying the principle of online communication to provide convenience and user-friendliness for all target groups to access information or news of products and services easily and equally.

3) Product and service standard: The entrepreneurs should provide honest and transparent services, especially the clear and fair price rate for customers. There should not be an excessive price rise during the tourist festival. Furthermore, the entrepreneurs and the staff in the service sector should be regularly trained to provide quality service and should employ efficient product and service management, as they are basically important to further service development for better community tourism.

4) Scenery or visual environment: All the area of community-based tourism attractions should be clean and safe, especially restrooms, parking spaces, and rendezvous points. And there should be participation from both entrepreneurs and tourists or customers in sorting of trash. And the beauty of tourist attractions should be maintained in order to attract tourists in all seasons.

5) Transportation: Related agencies should urgently build roads which connect the community-based tourism attractions. And safety standards should be regularly tested and maintenance of road surface should be done in order to ensure safe driving and to reduce road accidents. However, in transportation management within the community-based tourism attractions, participation should be sought from

community members, while the related agencies should act as trainers to provide suggestions and consultancy.

6) Identity of tourist attractions: Tourism attraction management must focus more on participation by the community, and tourism should reflected the identity of each community, such as the local dialect, food, costumes, arts and cultures, traditions, festivals, and religious activities, which should not too much emphasize business benefits. Therefore, the government agencies in charge should provide support for the community to manage tourism while maintaining the original way of life. They also should encourage entrepreneurs to access capital resources for product and service development in order to ensure the quality and international standard. Meanwhile, it was necessary to improve the presentation of the original identity by using updated technology and media in order to reach wider target groups, especially the new generation of tourists who mostly access information of community-based tourism attractions via digital equipment and online platforms. Furthermore, the community should be creative in designing its product and service to have updated look and beauty in order to meet the demand of various customers and expand the customer base of the new generation. Thus, the process of identity creation for a community tourist attraction should be an integration of local people, entrepreneurs, the local administrative organization, and related local government agencies. They should work together in systematically, taking into account the unique local culture, and should apply digital technology creatively in order to ensure the strong and sustainable community tourism.

7) Pandemic and climate: Prior to take a trip to any area, tourists should study the tourism attractions, especially during the uncertainty of the situation, such as during the COVID-19 pandemic or the season change, in order to set a travel plan correctly.

CHAPTER 5

DISCUSSION, CONCLUSIONS, AND IMPLICATIONS

The purposes of the study were (1) to identify the factors influencing the response of SMEs in the service sector of community-based tourism (CBT) in the digital economy age, (2) to examine the context of policy implementation and the role of stakeholders in the promotion and development of SMEs in the service sector of CBT under the framework of digital economy development, (3) to analyze the competitiveness of SMEs in the service sector of CBT, and (4) to point out the gap of service quality, problems, and obstacles of SMEs of CBT attractions.

The findings would serve as information to make policy suggestions on how to promote and develop the SMEs in the CBT attractions, so that they could adjust themselves to survive and grow amid technological change of the digital economy age. Four CBT attractions in the upper northern provinces group 2: Chiang Rai, Nan, Phayao, and Phrae were studied. The study period lasted 1 year and 9 months from March 1, 2019 to December 31, 2020. The population was divided into six groups: the business sector (i.e., SMEs in the service business), related government agencies, local people committees, scholars, NGOs, and customers or tourists.

Both the qualitative and quantitative method studies were conducted to fulfil the research objectives. The qualitative method was involved with the examination of the context of policy implementation and the roles of stakeholders in the promotion and development of SMEs in the service sector of CBT under the framework of digital economy development; an analysis of competitiveness of SMEs in the service sector of CBT; and the identification of problems and obstacles in the service business operation. The data was collected from two types of sources: (1) the primary data were collected by using focus group discussion and in-depth interview with six groups of the stakeholders, and (2) the secondary data were taken from documents, government reports, research reports, and related statistical information. The

quantitative method was divided into two parts. The first part dealt with the factors influencing SMEs' response. A questionnaire was used to collect the primary data from the SMEs entrepreneurs. The second part concerned the gap analysis of service quality of the SMEs' operation. The primary data for this part were collected by using a questionnaire for customers or tourists.

The details in this chapter consists of four parts: (1) summary of the study, (2) discussion of the results, (3) conclusions and recommendations, and (4) limitations and future direction of research study.

5.1 Summary of the Study

5.1.1 The Factors Influencing the Response of SMEs in the Service Sector in the Digital Economy Age

This part is the summary of the study. The data of which were collected from 160 entrepreneurs. The results are divided into five sections, as follows.

Section 1 dealt with the information of the sample group. It was found that most of the entrepreneurs were in food and beverage business (51.20%). They registered their business in the private name (89.40%), and almost three-fifths of the entrepreneurs were female (58.10%). The age range of most entrepreneurs were 31-40 years old (35.60%) The majority held a Bachelor's degree (58.8%). In their business, most of them employed 1-2 employees (63.10%). They earned a monthly income less than 50,000 baht (61.90%). Most SMEs had fixed asset value of less than 500,000 baht (63.10%). Almost half of the entrepreneurs were in business for over five years (46.90%). For the past five years, they mostly used technology in their operation (53.80%) via internet connecting devices: tablets, computers, or smartphones (98.75%), followed by online platforms (60.63%), machines or robots (21.25%), and AI or big data (3.75%). Moreover, most of the entrepreneurs daily used four types of aforesaid technologies in their operation (46.90%), especially in the following seven divisions: customer services (86.66%), marketing (81.88%), accounting (60.00%), planning (55.00%), manufacturing (27.50%), human resource management (23.13%), and research and development (20.00%), respectively.

Section 2 concerned SMEs' operation in the digital economy age: The discussion was divided into five subtopics related to the studied actions as follows.

1) The structural contingency factor: The entrepreneurs stated that the structural flexibility was at the moderate level ($\bar{x}=4.33$; $SD=1.12$). It was also found that enterprises operated under the open structure at a moderate level. All the items found to be at a moderate level included (1) flexible working structure in both vertical and horizontal operation, (2) decentralization of power to the division heads, (3) teamworking (4) informal corporate culture, (5) freedom granted for each division, (6) internal and informal communication within the enterprise, (7) systematic planning, and (8) skillful employees in the tasks for which they were responsible.

2) The SMEs' potential factor: The entrepreneurs considered the SME's potential to be at a moderate level ($\bar{x}=4.39$; $SD=1.08$). But in the analysis of the subtopics, the entrepreneurs' opinions could be divided into two levels. First, a high level belonged to the following topics: (1) having a clear and systematic procedure, (2) having efficiency and adequate raw materials, products, spare parts, and a good service system which supported the business operation, (3) having a good process to communicate the customers, and (4) having efficient usage of social network. On the other hand, the moderate level belonged to the following sub-topics: (1) having the employees who possessed required technological skills for their tasks, (2) having enough capital for business operation, (3) having efficiency and adequate equipment, tools, or machinery, and (4) setting the motivation system for employees.

3) The perception factor: It was found that overall, the entrepreneurs perceived the external environment to be at a moderate level ($\bar{x}=4.43$; $SD=1.19$). But careful consideration of the subtopics revealed that the entrepreneurs' perception could be divided into two levels. A rather high level belonged to four items: (1) being aware of the influence of e-Commerce over the operation, (2) recognizing the importance of hardware, software, and telecommunication networks which supported e-Commerce, (3) knowing the ease of putting current e-Business/e-Commerce into practice, and (4) recognizing the necessity of cyber security in using technology for business operation. And a moderate level belonged to the following items: (1) aware of the necessity of business operation via e-Commerce, (2) aware of the necessity to

use technology compatible to the type of tasks, (3) knowing that they should try out new technology prior to the full application, and (4) aware of the necessity of the assessment of the outcome from the use of technology.

4) Decision-making process factor: Overall, the entrepreneurs considered the decision-making process in selecting or avoiding the technology in SMEs' operation to be at a moderate level ($\bar{x}=4.41$; $SD=1.16$). However, the analysis of the individual items indicated two levels of perception of the decision-making process. First, a high level belonged to the following topics: (1) expecting that customers to respond well to the use of e-Business/e-Commerce in the enterprise, and (2) being confident that the enterprise could be adjusted to survive and grow during the age of digital economy. A moderate level belonged to the following items: (1) the decision to use e-Business/e-Commerce in SME's operation, (2) realization of the strengths and weaknesses of e-Business/e-Commerce in the enterprise, and (3) the capacity of the enterprise to invest in technology.

5) Strategic management factor: It was found that the entrepreneurs considered overall strategic management to be at a moderate level ($\bar{x}=4.25$; $SD=1.15$), and all the items of strategic management had also the same level. These items included (1) having a systematic plan for strategic management, (2) using the proactive marketing strategy, (3) often following and analyzing both the external and internal economic situation, (4) emphasizing the internal management strategy, (5) focusing on the prevention of technological consequences, and (6) often seeking the technology which could be used to drive the enterprise growth.

Section 3 concerned SMEs' response to opportunities and threats in the digital economy age: Overall the entrepreneurs' response was found to be at a moderate level ($\bar{x}=4.26$; $SD=1.09$). Both prospector response and defender response were both at a moderate level ($\bar{x}=4.23$; $SD=1.17$ and $\bar{x}=4.29$; $SD=1.10$). The responses could be divided into four subtopics as follows.

1) The prospector response to opportunities: It was found that overall the entrepreneurs' response was at a moderate level ($\bar{x}=4.43$; $SD=1.33$). However, consideration of the details revealed that there were two levels of prospector response. First, the entrepreneurs' response was at a high level in the following subtopics: (1)

regularly finding a new business opportunity, (2) focusing on the improvement of service quality to expand the market and the customer base, and (3) regularly following the technological progress which supported e-Commerce. The entrepreneurs' prospector response found to be at a moderate level in the following three subtopics: (1) using hardware, software, or telecommunication networks to support the enterprise operation, (2) focusing on the business operation through the electronic systems, and (3) regularly seeking technological partners for business development.

2) The prospector response to threats was found to be at a moderate level ($\bar{x}=3.98$; $SD=1.12$), and the detailed analysis also revealed the same level of response for all the subtopics: (1) regular analysis and assessment of the possible impacts if the technology was not utilized in the business, (2) carrying out public relations and generating a customer relationship via social media platforms to prevent any interference from competitors, (3) using the cyber security software to eliminate computer viruses, (4) obeying the National Cyber Security Act and Personal Information Protection Act of B.E.2562 in order to understand the conditions and penalties prescribed in the acts, and (5) seeking partners to strengthen the business sector through technological networks.

3) The defender response to opportunities was found to be at a moderate level ($\bar{x}=4.29$; $SD=1.12$), and the detailed analysis also revealed that the defender response was at a moderate level in the following subtopics: (1) focusing on maintaining the stability in business operation rather than seeking a new market, (2) willingness to invest in technology, which supported the business by reducing costs in other aspects, (3) willingness to invest in technology for business development with more capital, and (4) restructuring the internal process to suit the electronic business process in the digital economy age. However, the participants still focused on labor-intensive operation rather than technologies at a high level.

4) The defender response to threats was found to be at a moderate level ($\bar{x}=4.29$; $SD=1.21$), and the detailed analysis also revealed that the defender response was at a moderate level in the following subtopics: (1) giving importance to the development of the employees' technological skills to be able to find solutions to

cope with cyber threats, (2) willingness to invest in the cyber security software to protect information and assets, (3) following the news regarding cyber threats to ensure the timely prevention and coping with them, and (4) regularly changing the strategy that responded to the competitors through various electronic channels such as e-Business and e-Commerce. But the participants tended to avoid online transactions without any security system for information and assets at a high level.

Section 4 concerned the analysis of factors influencing SMEs' response to opportunities and threats in the digital economy was conducted with the multiple regression analysis. It was found that the coefficients of multiple determination (R^2) of the five steps were 50.8%, 60.0%, 72.7%, 75.7%, and 78.7% respectively. The application of the fifth model revealed that all the independent variables could together explain the coefficient of multiple determination in the SMEs' response (SMEs' Res) at 78.7% ($R^2=0.787$), which was statistically significant at a high level ($F=113.49$; $df=5, 154$; $p=.000$). The variables in the fifth model included Struc, Poten, Per, Decis, and Stra. The regression coefficients (b) of the afore-mentioned five variables and the dependent variable SMEs' Res were 0.119 ($t=1.997$; $p=.048$), 0.050 ($t=0.734$; $p=.464$), 0.122 ($t=1.651$; $p=.101$), 0.261 ($t=3.587$; $p=.000$), and 0.362 ($t=4.616$; $p=.000$), respectively. The following were the findings: (1) When the structural contingency factor increased one level, it could be predicted that SMEs' response would increase at 0.119 with statistical significance, when the variables Poten, Per, Decis and Stra were controlled; (2) when SMEs potential for management increased one level, it could be predicted that SMEs' response would increase at 0.050 with no statistical significance, when the variables Struc, Per, Decis and Stra were controlled; (3) when the level of entrepreneurs' perception of external situation increased one level, it could be predicted that SME's response would increase at 0.122 with no statistical significance, when the variables Struc, Poten, Decis, and Stra were controlled; (4) when the level of entrepreneurs' decision to implement technology in the operation increased one level, it could be predicted that SME's response would increase at 0.261 with statistical significance, when the variables Struc, Poten, Per, and Stra were controlled; and (5) when the level of entrepreneurs' strategic management increased one level, it could be predicted that SME's response

would increase at 0.362 with statistical significance, when the variables Struc, Poten, Per, and Decis were controlled. The analysis of the standardized coefficient (beta) also revealed that all the five variables had positive influence as follows: the variables Stra, Decis, Per, Struc, and Poten (0.383, 0.277, 0.133, 0.122, and 0.050, respectively). Thus, the results of the analysis confirmed the hypothesis of this study, that H_A : all independent variables in the equation could together predict the dependent variable ($H_A: \rho \neq 0$), and rejected the hypothesis H_0 : all independent variables in the equation could not together predict the dependent variable ($H_0: \rho = 0$).

Section 5 dealt with problems, obstacles, and suggestions regarding the promotion and development of the business sector in the digital economy age. There were five aspects under consideration as the following. (1) Digital technology skills (42.22%): Most entrepreneurs lacked the knowledge and skills in using digital technology; thus, there should be training agencies that provided free-of-charge knowledge about digital technology usage and there should be the free wi-fi in the community for SMEs. (2) Finance and investment (24.44%): Most entrepreneurs could not access capital resources and had no capital for investment. So, entrepreneurs had to reduce unnecessary costs, and meanwhile the government should help them to access financial resources, should develop infrastructure with lower charges, and should provide tax/vat reduction for them. (3) Economy, society, and environment (15.56%): Because of economic depression, widespread pandemic of COVID-19, and wildfire and smoke; thus, the government should urgently implement policies to stimulate the economy and promote tourism and should provide preventive strategies for wildfire problems. (4) Highly competitive marketing in both the offline and online (8.89%): It was necessary for the entrepreneurs to adjust their business strategies, especially the regular utilization of online media. And (5) the support from the government (8.89%): Because of delayed support from the government, lack of access to the information about tourism promotion by the government, and unclear information, the government should have a clear and swift approach for SMEs promotion, reduce the work process, and urgently train officials responsible for SMEs promotion.

5.1.2 The Context of Policy Implementation and the Role of Stakeholders in the Promotion and Development of SMEs in the Service Sector in the Community-Based Tourism under the Framework of Digital Economy Development

This section summarizes the perception of six groups of stakeholders in five aspects of CBT promotion and development: (1) context of policy implementation, (2) stakeholders' roles in policy implementation, (3) SMEs' adjustment in the digital economy age, and (4) factors contributing to success of policy implementation, and (5) direction of policy to promote and develop SMEs (Table 5.1).

Table 5.1 The Summary of the Study from Six Groups of Stakeholders' Perspectives in CBT Promotion and Development

Issues Stakeholders	Context of CBT policy implementation	Stakeholders' roles of CBT policy	SMEs' adjustment in the digital economy age	Factors contributing to success of CBT policy implementation	Direction of CBT policy to promote and develop SMEs
1. The business sector					
1.1 SMEs entrepreneurs (n=12)	<ul style="list-style-type: none"> - SMEs learnt about policy implementation from the Provincial Chamber of Commerce. - CBT development by the government sector still lacked a system and a mechanism to link between community and SMEs entrepreneurs. 	<ul style="list-style-type: none"> - Participating in provincial meetings to discuss SMEs tourism promotion - Organizing or participating in local tourism promotion activities - Supporting small businesses in CBT: buying community products, helping with product distribution, and hiring on employing local labors 	<ul style="list-style-type: none"> - Using computers, tablets, and smartphones for planning, accounting, and human resources management - Using online platforms and applications for public relations, transaction, and communication - Using online marketing - Using e-Banking 	<ul style="list-style-type: none"> - Development of strong SMEs networks to promote CBT together - Conversion of culture and wisdom into products or tourism activities - The government's continuous policy of SMEs promotion and development 	<ul style="list-style-type: none"> - To be continued collaboration with the Provincial Chamber of Commerce - SMEs in the service sector were mediators in community product distribution to customers.

Issues Stakeholders	Context of CBT policy implementation	Stakeholders' roles of CBT policy	SMEs' adjustment in the digital economy age	Factors contributing to success of CBT policy implementation	Direction of CBT policy to promote and develop SMEs
1.2 Provincial Federation of Thai Industries (n=4)	<ul style="list-style-type: none"> - Being aware that the CBT policy aimed to distribute income to the community - Focusing on developing the community with potential in tourism to set up a community enterprise - Focusing on e-Commerce market development - Strengthening the community to ensure CBT sustainability 	<ul style="list-style-type: none"> - Promoting SMEs in product development and processing, especially local economy products related to tourism - Pushing SMEs in the vicinity to form to a business cluster to help each other 	<ul style="list-style-type: none"> - Urgently using digital technology in their business due to the COVID-19 pandemic 	<ul style="list-style-type: none"> - Strong participation of local people and entrepreneurs - Readiness of the community in terms of resources and tourism infrastructure - SMEs adjustment to economy, social, and technological changes 	<ul style="list-style-type: none"> - Continuation of policy implementation to help SMEs to grow and survive - SMEs entrepreneurs' preparation to reach product or service quality standards
1.3 Provincial Chamber of Commerce (n=4)	<ul style="list-style-type: none"> - Provincial Office of Tourism and Sports was directly responsible to CBT promotion and development, and coordinated with related network partners. 	<ul style="list-style-type: none"> - Providing consultation for SMEs in writing a business plan and promoting access to capital resources with a low interest rate - Organizing tourism promotion and marketing activities to find customers - Supporting the 	<ul style="list-style-type: none"> - Entrepreneurs needed be perseverant, creative, disciplined, and sincere to the customers and used digital technology in business operation to increase competency. 	<ul style="list-style-type: none"> - Participation by every local sector - There are research studies and quality control to reach community product standards. - Development of tourism statistic database for marketing analysis both offline 	<ul style="list-style-type: none"> - SMEs in the service sector could grow much more due to the strength in tourism resources; however, it depended on the economic situation of the country and the continuity in policy implementation by the government.

Issues Stakeholders	Context of CBT policy implementation	Stakeholders' roles of CBT policy	SMEs' adjustment in the digital economy age	Factors contributing to success of CBT policy implementation	Direction of CBT policy to promote and develop SMEs
2. Related government agencies					
2.1 Provincial Office of Tourism and Sports (n=4)	<p>Many agencies were directly responsible to CBT promotion as follows.</p> <ul style="list-style-type: none"> - Department of Tourism: providing a project budget for the community - Provincial Office of Tourism and Sports: giving knowledge to local people, developing their skills, and encouraging the community's access to financial resources, while providing consultation for CBT - DASTA: transmission 	<p>community with tourism potential to set up a community enterprise</p> <ul style="list-style-type: none"> - Provide skills training for entrepreneurs - Transmission of knowledge of tourism to people, taking community values into account - Participation in planning the direction of CBT which led to employment, income generation, and conservation of the community identity 	<ul style="list-style-type: none"> - Most SMEs could adjust well and the entrepreneurs participated in training on the use of technology or equipment related to business operation. 	<p>and online channels</p> <ul style="list-style-type: none"> - Creating awareness among target groups via every possible channel - People's awareness of the necessary to participate in CBT development - Readiness of tourism infrastructure - Technology implementation in tourism management - Creative development and restoration of tourism resources 	<ul style="list-style-type: none"> - Government will continue to promote and develop SMEs in the service sector as the income from tourism will help boosting grassroots economy, create employment and facilitate income distribution - Continuity of CBT development with focus more on creative tourism was the future direction of CBT.

Issues	Context of CBT policy implementation	Stakeholders' roles of CBT policy	SMEs' adjustment in the digital economy age	Factors contributing to success of CBT policy implementation	Direction of CBT policy to promote and develop SMEs
Stakeholders	<p>of knowledge, improving local people's skills, and providing monetary support for the community</p> <ul style="list-style-type: none"> - TAT: focusing on marketing promotion 	<ul style="list-style-type: none"> - Promotion and market analysis of CBT to help transmit information of products and services to target groups to attract tourism in CBT. 	<ul style="list-style-type: none"> - Using Digital Marketing - Accessing tourism Big Data - Using more channels to access online information by tourists - Start Up's swiftly implementing modern technology in their business operation 	<ul style="list-style-type: none"> - Understanding of all levels of tourism personnel about the approach to CBT development. - Strong community and network partners working together to find the suitable direction of sustainable tourism development - Participation from network partners - Communication and development of understanding among CBT stakeholders, and using appropriate 	<ul style="list-style-type: none"> - Continuity of the policy implementation to achieve the goal of sustainable tourism in socio-cultural, economic, and environmental dimensions - Continuity of policy implementation resulting in benefits in three dimensions of (1) economy: generating employment and
2.2 TAT (n=3)	<ul style="list-style-type: none"> - The government aimed for creative and sustainable CBT development and promotion based on existing social capital in order to distribute income to the community directly. 	<ul style="list-style-type: none"> - Coordinating in CBT development with related agencies in the provinces announced as special tourism areas in order to achieve the goal of sustainable 	<ul style="list-style-type: none"> - Entrepreneurs' adjustment of their business approach to suit the technological change by using online marketing 		
2.3 DASTA (n=1)	<ul style="list-style-type: none"> - The government's awareness of the importance of CBT development in special areas which seeking a balance of economic, socio-cultural, and 				

Issues Stakeholders	Context of CBT policy implementation	Stakeholders' roles of CBT policy	SMEs' adjustment in the digital economy age	Factors contributing to success of CBT policy implementation	Direction of CBT policy to promote and develop SMEs
<p>2.4 Local administrative organizations (n=4)</p>	<p>environmental dimensions.</p> <ul style="list-style-type: none"> - The government increasingly provided clear CBT promotion and development - Related agencies helped promote CBT in line with their missions, namely, Department of Tourism, Department of Community Development, TAT, Provincial Office of Commerce, Provincial Federation of Thai Industries, educational institution, and NGOs 	<p>tourism.</p> <ul style="list-style-type: none"> - Promoting and supporting conservation of arts, culture, environment, and local employment - Jointing tourism promotion of CBT, providing training and consultation for the community enterprise through the local administrative organization - Coordinating with the community and other related agencies 	<ul style="list-style-type: none"> - Participating in training and swiftly using technology and online social media as channels to communicate product and service information to customers 	<p>technology which benefited the communication process</p> <ul style="list-style-type: none"> - Striving for coordination among various sectors - Scholars as the mediators of balanced CBT development knowledge to people - Strength of the civil society - Community enterprises learning and developing managerial skill, and application of technology 	<p>income, (2) society: encouraging strong participation, and (3) environment: maintaining and conserving the environment</p> <ul style="list-style-type: none"> - The government's using tourism as a mechanism to boost the economy - Provinces with high tourism potential, such as Nan, would further operate tourism to meet the Global Sustainable Tourism Criteria (GSTC).

Issues	Context of CBT policy implementation	Stakeholders' roles of CBT policy	SMEs' adjustment in the digital economy age	Factors contributing to success of CBT policy implementation	Direction of CBT policy to promote and develop SMEs
Stakeholders					
3. Local people committees (n=12)	<ul style="list-style-type: none"> - The government had some way to promote and develop CBT, with provincial agencies joining the development and operation finding 	<ul style="list-style-type: none"> - Finding outstanding traditional resources of the community to restore and create the CBT management process, sources budgets, coordinating with network partners, directing and monitoring the operation, and engaging in tourism public relations 	<ul style="list-style-type: none"> - Participation in training on media or technology usage - Using media or technology for communication and public relations - Using more online transaction system 	<ul style="list-style-type: none"> - Participation from all parties concerned - Systematic coordination - Good governance and fair benefit allocation - Focusing on using social media to communicate about CBT 	<ul style="list-style-type: none"> - Continuity of supporting SMEs in the service sector to grow sustainably, as there was still a lot more social capital in the areas which were not yet presented as tourist attractions. - Arranging new tourism activities and expanding tourism routes between communities
4. Scholars (n=4)	<ul style="list-style-type: none"> - Improving policy implementation in terms of management and service provision standard - Local people considered that CBT was just additional income during the high season 	<ul style="list-style-type: none"> - Jointing development projects, giving consultation, monitoring and evaluating CBT promotion - Conducting research and providing academic service to local communities 	<ul style="list-style-type: none"> - Competition causing SMEs to learn and mutually imitate a good practice of each other and developing quality products and services - Creation of media for public relations of products and services to increase the online customer base 	<ul style="list-style-type: none"> - Ability of community leaders to have participation in CBT development - Analysis of the target group's demand - All channels of using media or technology for tourism public relations 	<ul style="list-style-type: none"> - Continuity of the CBT policy as Thailand gained immense income from tourism industry. Therefore, government would carry out tourism promotion and development in all sectors and at all levels.

Issues Stakeholders	Context of CBT policy implementation	Stakeholders' roles of CBT policy	SMEs' adjustment in the digital economy age	Factors contributing to success of CBT policy implementation	Direction of CBT policy to promote and develop SMEs
<p>5. NGOs (n=4)</p>	<p>- Aware of CBT promotion policy from (1) coordination with the local administrative organization, (2) public relations of related agencies at the provincial level, and (3) conferees of network partners in CBT development, in which the policy was considered good and possible to boost the grassroot economy</p>	<p>- Enhancing technological knowledge and management skills, in order to raise the level of CBT environment management - Helping to transmit tourism information via many technological channels to create awareness of the society about CBT value and in adding value to tourism</p>	<p>- Online payment of products and services - Communication via applications - Public relations via online social media</p>	<p>- Consensus of people and participation in CBT development - Having consulting and supporting agencies for communities - Utilizing business models - Continuity of CBT development</p>	<p>- Policy will continue, and the area of CBT will expand. It is also expected that SMEs in the service sector of CBT will have the opportunity to grow in the direction which support tourism industry.</p>
<p>6. Customers or tourists (n=12)</p>	<p>- Aware that the government launched CBT promotion and development policy and other related policies - Government policy implementation was a good thing, but the question was how to implement the policy to get concrete results.</p>	<p>- Helping to boost the economy through tourism activities - Helping to disseminate CBT information via online social media</p>	<p>- SMEs entrepreneurs had to adjust themselves to cope with technological change in the highly competitive market, to prepare themselves to accommodate tourists, and to analyze the target group of each type of products and services.</p>	<p>- Strength of service business networks at the provincial level - Participation of stakeholders - Good tourism management</p>	<p>- Continuity of implementation of the existing policy, as the operation of SMEs in CBT was based on the principle of conservation and maintaining the authentic identity of the community.</p>

5.1.3 The Competitiveness of SMEs in the Service Sector of Community-Based Tourism

This section comprises the summary of competitiveness analysis of SMEs in the service sector of CBT in the upper northern provinces group 2 (Table 5.2).

Table 5.2 The Summary of SMEs' Competitiveness in the Service Sector in the upper Northern Provinces Group 2

Perspectives Stakeholders	Tourism destination	Demand for products and services	Related suppliers	CBT strategic plan	Opportunity and support from the government sector
1. The Business sector					
1.1 SMEs entrepreneurs (n=12)	<ul style="list-style-type: none"> - Each CBT attraction had its own identity. - Visitors were mostly group tourists from other places who visit the community for educational purpose. - Customers or tourists looked for information about the CBT in advance from online social media. - The factor influencing a decision to visit was the reviews on websites. 	<ul style="list-style-type: none"> - Most customers/ tourists were satisfied with products and services. - Images of the products could reflect the CBT geography. - Most customers/ tourists planned to purchase products and service in advance. 	<ul style="list-style-type: none"> Overall, the suppliers that have potential and bargaining power were - agricultural production groups - restaurants - accommodations/hotels - travel agencies - community enterprises related to tourism 	<ul style="list-style-type: none"> - Awareness that all provinces had some plan for CBT development to achieve sustainability. - Awareness that the Ministry of Commerce had a commercial strategic plan , of 2017-2021 for the upper northern provinces group 2 	<ul style="list-style-type: none"> - Government provided support to CBT business group's operation periodically. - SMEs with ability to seek the government's support were often the existing groups with high capacity of investment and fast access to information.

Perspectives Stakeholders	Tourism destination	Demand for products and services	Related suppliers	CBT strategic plan	Opportunity and support from the government sector
1.2 Provincial Federation of Thai Industries (n=4)	<p>Three outstanding points were</p> <ul style="list-style-type: none"> - religious and historic places - beautiful culture and tradition which reflected the local identity - beautiful natural environment 	<p>The customers/tourists were interested in the CBT products because</p> <ul style="list-style-type: none"> - the products were promoted and developed by the community development office - the products were certified for their standard by the provincial office of industry - the products were distributed throughout the CBT. 	<p>Overall, the suppliers with potential and bargaining power were</p> <ul style="list-style-type: none"> - restaurants - hotels/accommodations - agricultural producers - tour agencies - local community enterprise groups, such as food, craft, and OTOP groups 	<p>Focusing on the following:</p> <ul style="list-style-type: none"> - adding value for products and services - promoting investment, R&D, design, marketing, networking of CBT, and database development - promoting SMEs capability - promoting intellectual property registration 	<p>The major agencies providing support for SMEs regarding development and capital access were listed below</p> <ul style="list-style-type: none"> - SME Support & Rescue Center (SSRC) - Office of Small and Medium Enterprises Promotion (OSMEP)
1.3 Provincial Chamber of Commerce (n=4)	<ul style="list-style-type: none"> - Nan and Chiang Rai had a better tourism image than Phrae and Phayao, except when the tourists set a travel plan in advance, or when these were special events to promote tourism elsewhere. 	<ul style="list-style-type: none"> - Each community's products were satisfying and could draw attention from tourists, especially standardized OTOP products. 	<ul style="list-style-type: none"> - Farmers would supply raw materials as food ingredients for hotels and restaurants as well as other natural raw materials (teak, bamboo, water hyacinth, indigo) for the manufacturing of products or souvenirs. 	<ul style="list-style-type: none"> - All the four provinces had a CBT strategic plan although the level of continuity and clarity might differ. 	<ul style="list-style-type: none"> - There is the opportunity to be supported by the government in accordance with the CBT promotion to strengthen the community economy in line with the national strategic plan.

Perspectives Stakeholders	Tourism destination	Demand for products and services	Related suppliers	CBT strategic plan	Opportunity and support from the government sector
2. Related government agencies					
2.1 Provincial Office of Tourism and Sports (n=4)	<ul style="list-style-type: none"> - The outstanding aspects were - natural resources - culture, tradition, and ethnic diversity - health and food. 	<ul style="list-style-type: none"> - Community products were in line with CBT context. - The community tried to increase the quality and standard of products and services to serve the customers' needs. 	<ul style="list-style-type: none"> - The suppliers were in agricultural sector - Accommodation service providers - Manufacturers of products or souvenirs - Tour companies - CBT content providers for public relations 	<ul style="list-style-type: none"> - Improvement of product and service quality - Development of infrastructure/facilities - Tourism human resources development - Promoting participation by local people - Expanding the customer base by using marketing technology - Integrating tourism management and promoting private investment 	<ul style="list-style-type: none"> - The government focused on supporting tourism management under the 2nd national tourism development plan (2017-2021).

Perspectives	Tourism destination	Demand for products and services	Related suppliers	CBT strategic plan	Opportunity and support from the government sector
Stakeholders					
2.2 TAT (n=3)	<ul style="list-style-type: none"> - Clear image and charm of CBT, as people could conserve their way of life, tradition, culture, historic places, and natural environment. 	<ul style="list-style-type: none"> - Most tourists were adults visiting CBT for educational purpose. - Demand for products and services corresponding to the goal of tourism 	<p>The suppliers that had potential and bargaining power were</p> <ul style="list-style-type: none"> - hotels/accommodations - restaurants - shops - car rental companies - community enterprise groups in food or agricultural manufacturing. 	<ul style="list-style-type: none"> - Related agencies set a strategic plan with agenda of tourism promotion and development which conformed to their missions. 	<ul style="list-style-type: none"> - The major agencies in tourism promotion were the Provincial Office of Tourism and Sports, and DASTA, which operated together with network partners.
2.3 DASTA (n=1)	<ul style="list-style-type: none"> - Nan's CBT had a very good tourism image. - Being outstanding in arts and culture, history, and architecture related to the settlement of Lanna community. 	<ul style="list-style-type: none"> - Cultural products which the community tried communicate their value to the customers in order to be for them to buy at the price fixed by the community. 	<p>The suppliers that had potential and reciprocal by helped each other were</p> <ul style="list-style-type: none"> - farmer groups - craftsman groups - house wife groups - homestay groups - restaurant groups - souvenir shops - guide tour companies. 	<ul style="list-style-type: none"> - DASTA set a sustainable CBT strategic plan, 2016-2020. - The undersecretariat office of TAT had an action plan for sustainable and creative development of CBT (2017-2023). 	<ul style="list-style-type: none"> - It was very likely to be supported by the government, as the goal of CBT development policy was to promote the grassroot economy.

Perspectives	Tourism destination	Demand for products and services	Related suppliers	CBT strategic plan	Opportunity and support from the government sector
Stakeholders					
2.4 Local administrative organizations (n=4)	<p>The outstanding points included</p> <ul style="list-style-type: none"> - natural resources and beautiful scenery - ethnic diversity - beautiful culture and tradition - historic places - kind and friendly people. 	<ul style="list-style-type: none"> - Customers gave good feedback to products and services - Most products were related to the local way of life. - Most OTOP products were certified for their standard. 	<ul style="list-style-type: none"> - Accommodations/hotels/homestays - Producers in the agricultural sector - Rental car companies - Tour companies 	<ul style="list-style-type: none"> - The strategic plan had been actively implemented since 2016, when the community tried to find their own cultural and natural capitals to convert them for tourism. 	<ul style="list-style-type: none"> - It was very likely to gain further support as the government had the policy to promote and develop tourism to generate income, employment, and income distribution to the community.
3. Local people committees (n=12)	<p>The outstanding points included</p> <ul style="list-style-type: none"> - arts and culture - historic places - natural resources - activities related to the local way of life for educational tourism. 	<ul style="list-style-type: none"> - The outstanding points varied, depending on local context and the tourist demand. - Most tourists were satisfied with community products and services. 	<ul style="list-style-type: none"> - Hotels - Restaurants - Tour companies - Famer groups - Airlines - Transportation companies 	<ul style="list-style-type: none"> - In all the provinces, the organization directly responsible for the operation of CBT strategic plan was the provincial office of tourism and sport. 	<ul style="list-style-type: none"> - The community had an opportunity to receive support financial by writing a project proposal to related government agencies.

Perspectives	Tourism destination	Demand for products and services	Related suppliers	CBT strategic plan	Opportunity and support from the government sector
Stakeholders					
4. Scholars (n=4)	<ul style="list-style-type: none"> - Nan: historic places, culture, and tradition - Chiang Rai: health, nature, and environment - Phrae: way of life and local occupations - Phayao: culture and natural environment 	<ul style="list-style-type: none"> - Each CBT attraction had different products/services in accordance with their way of life, culture, tradition, and local occupations. - The feedback was good, especially among the new generation of tourists. 	<ul style="list-style-type: none"> - Local labor in the community - Producers of products and services: farmer groups, hotels , shops, and restaurants - Related private companies: tour travel agencies, accommodations/hotels, and transportation companies 	<ul style="list-style-type: none"> - CBT strategic plan was set by the Ministry of Tourism and Sports. - Commercial strategic plan for provincial groups set by the Ministry of Commerce. 	<ul style="list-style-type: none"> - CBT development very likely to be supported by both government and private agencies, the local administrative organization, and educational institutions.
5. NGOs (n=4)	<ul style="list-style-type: none"> - Natural resources - Religious and historic places - Tradition and culture of Lanna - Local wisdom 	<ul style="list-style-type: none"> - The uniqueness of the products depended on the context of each community. - Demands for products and services could be found among the customers who were fascinated by CBT. 	<ul style="list-style-type: none"> - Accommodations (hotels/homestays) - Restaurants - Community enterprises in agriculture (meat, vegetable, fruit) - Rental car companies - Tour companies 	<ul style="list-style-type: none"> - Provincial Office of Tourism and Sports drives the CBT strategic plan together with related agencies as well as NGOs. 	<ul style="list-style-type: none"> - The government would provide continuous support as Thailand depended on income from tourism to boost local economy to generate employment, and to have income distribution.

Perspectives	Tourism destination	Demand for products and services	Related suppliers	CBT strategic plan	Opportunity and support from the government sector
Stakeholders					
6. Customers or tourists (n=12)	<p>The four provinces share similar uniqueness in art and culture, tradition, Lanna architecture, and natural resources.</p>	<p>All the four CBTs provided educational tourism service for outsiders to learn local way of life.</p> <p>Most customers/tourists were willing to buy good-quality products.</p>	<p>Four companies</p> <p>Travel agencies</p> <p>Accommodations/hotels reservation on websites</p> <p>Application developers (delivery applications)</p> <p>Parcel delivery companies</p>	<p>Provincial government agencies participating in CBT promotion</p> <p>strategic plan to ensure concrete, systematic, and continuous results.</p>	<p>The community with capacity would receive government support for tourism management, with emphasis on a bottom-up approach in working.</p>

5.1.4 The Gap of Service Quality of SMEs in the Service Sector in the Community -Based Tourism Attractions

This section is the summary of the study of the gap of service quality of SMEs in the service sector in the community-based tourism attractions. The data were collected from 400 tourists. There can be divided into the following five parts.

Part 1 dealt with general information of the respondents: Three-fifths of the respondents were female (58.50%). Almost half were less than 30 years old (46.20%). Most of them held a Bachelor's degree (58.80%) and had a monthly income of less than 20,000 baht (57.50%). As for the frequency of visiting the CBT attraction, it was found that most respondents traveled only once in a while (68.80%), and more than half preferred an overnight trip (59.20%) and stayed at the CBT attraction for 1-2 days (90.30%). Moreover, most of the respondents planned to return to the attraction in the next trip (67.50%). Regarding the channels of information had about the CBT attraction, it was found that most got related information from through five sources, as follows: (1) online media, such as Facebook, Instagram, or Twitter (85.20%), (2) recommendation from others (45.20%), (3) visiting the attraction by chance (21.00%), (4) radio or television (16.20%), and (5) printed media, such as newspapers or magazines (12.80%).

Part 2 concerned the analysis of the gap of service quality of SMEs in the CBT attractions. Five aspects considered were as follows.

1) Reliability of the service: Overall, the respondents expected the reliability of SMEs at a high level ($\bar{x}=3.65$; $SD=0.77$), which was consistent with their actual perception which was also at the same level ($\bar{x}=3.42$; $SD=0.64$). However, the analysis of the subtopics revealed that the respondents' perception of reliability could be divided into two levels. The high level was found in the following subtopics: (1) the clear, transparent, and suitable price rate of products and services, and (2) having service staff with good personality who could solve unexpected problems. The moderate level was found in the following subtopics: (1) having interesting and reliable channels of public relations, (2) having credible community leaders or entrepreneurs, and (3) having application of modern technology, such as online contact.

2) Assurance of the service: It was found that the respondents' expectation of the assurance from SMEs was at a high level ($\bar{x}=3.60$; $SD=0.85$). And the analysis of subtopics also revealed that their expectation of assurance was at a high level for all subtopics: (1) providing safe and standardized infrastructure and traffic systems, (2) providing CCTVs installed around tourist attractions, (3) providing security officers who looked after security matters, (4) providing clear signs or announcement boards of information which shows the conditions of service, and (5) providing standardized facilities. On the other hand, the actual perception of assurance from SMEs, as a whole and the individual subtopics, was found to be only at a moderate level ($\bar{x}=3.27$; $SD=0.75$).

3) Tangibles of the service: It was found that the respondents' expectation of the tangibles from SMEs at a high level ($\bar{x}=3.73$; $SD=0.82$), and their actual perception of tangibles from SMEs was also at a high level ($\bar{x}=3.44$; $SD=0.70$), the all subtopics considered were: (1) maintenance of physical environment unique to the community, (2) clean and tidy place, and (3) universally friendly architecture. But the actual perception of tangibles from SMEs was found to be at a moderate level in the following subtopics: (1) having convenient shuttle service, and (2) providing facilities such as parking spaces, rendezvous points, and Wi-Fi.

4) Empathy from SMEs: It was found that the respondents' expectation and perception of empathy from SMEs was found to be at a high level. ($\bar{x}=3.81$; $SD=0.82$ and $\bar{x}=3.56$; $SD=0.75$). The subtopics included (1) providing service in a friendly manner, (2) willingness to provide suggestions for customers, (3) clear and systematic coordination, (4) caring for the details of customers' needs, and (5) acceptance of customers' suggestions for further service improvement.

5) Responsiveness of the service: It was found that as a whole, the expectation of the responsiveness from SMEs were found to be at a high level ($\bar{x}=3.76$; $SD=0.84$). All the individual subtopics were found to be at a high level too. The actual perception of the responsiveness from SMEs was at a high level as well ($\bar{x}=3.42$; $SD=0.75$), including the following subtopics: (1) timely and prompt service, (2) enthusiasm of the service providers, and (3) adequate number of service providers. However, the actual perception of the responsiveness from SMEs was at a moderate level, especially in the following subtopics: (1) adequacy of equipment and facilities,

and (2) providing fast and convenient channels to offer help, such as applications or the coordination center.

Part 3 concerned problems, obstacles, and suggestions for SMEs in the service sector in the CBT attractions. This section summarized the results of the analysis of the data taken from 107 tourists or customers, or 26.75% of the total population (n=400), by using open-ended questions. The results were divided into seven dimensions, as follows.

1) Management system (24.30%): It was found that the opening and closing time of service was still uncertain; there was inadequate staff, and inadequate facilities (e.g. parking spaces, restrooms); therefore, the respondents suggested that the management system be improved to have a clear and systematic procedure.

2) Information technology (21.50%): There was not much use of technology in SMEs operation; thus, the entrepreneurs should focus on IT in their business by using online platforms to communicate more with customers, improving the content about products and service promoted through online platforms, and considering the use of online communication to provide convenience for all groups to access information easily.

3) Standard of products and services (18.69%): It was found that products and services were of low quality, the prices were unclear or too-high prices, and some entrepreneurs lacked service skills. Hence, the entrepreneurs and the staff should be regularly trained to provide quality service and to have creative product and service management.

4) Visual pollution (12.15%): Since there were ugly environment, dirtiness, untidiness, and unsorted trash; the SMEs should focus on cleanliness and safety, with participation from both entrepreneurs and tourists.

5) Transportation (10.28%): The transportation system was not complete or was under construction, resulting in inconvenient transportation. Also, the roads were rugged and unsafe. Therefore, the related agencies should urgently build and repair the roads to the CBT attractions. And the safety standards should be tested and roads be maintained regularly. The community should help in checking their road condition and in traffic management.

6) Identity of tourist attractions (7.48%): The identity of some communities was unclear and community people had no ability to utilize the potential of the community. Besides, there was lack of integration in working. So, tourism attraction management had to focus on the participation by all stakeholders, and each tourism attraction should clearly express its identity.

7) Pandemic and weather condition (5.61%): Due to the COVID-19 pandemic, climate change, or natural disaster; tourists should study the CBT attractions, especially in the uncertain circumstance, prior to the trip to any area.

5.2 Discussion of the Results

This section is divided into four parts: (1) the factors influencing the response of SMEs in the service sector in the digital economy age, (2) the context of policy implementation and the role of stakeholders in the promotion and development of SMEs in the service sector of CBT under the framework of digital economy development, (3) the competitiveness of SMEs in the service sector of CBT, and (4) the gap of service quality of SMEs, in the service sector in the CBT attractions, in the upper northern provinces group 2.

5.2.1 The Factors Influencing the Response of SMEs in the Service Sector in the Digital Economy Age

The analysis of the factors which influenced the response of Thai SMEs in the digital economy age in the service sector of community-based tourism in the upper northern provinces group 2 was made by using multiple regression analysis (MRA). It was found that all independent variables in the equation could together predict the dependent variable. The research hypothesis $H_A: \rho \neq 0$ was confirmed. The coefficient of multiple determination (R^2) of the model was 78.7% ($F=113.49$; $df=5, 154$; $p=.000$). And the influence of each of independent variables on the dependent variable (SMEs' Response) was as follows. (1) The structural contingency factor (Struc) was found to have a low level of positive influence over the dependent variable ($\beta=0.122$, $p=.048$), (2) the SMEs' Potential Factor (Poten) had a very low level of positive influence ($\beta=0.050$, $p=.464$), (3) the perception factor (Per) had a low level of positive

influence ($\beta=0.133$, $p=.101$), (4) the decision-making process factor (Decis) had a moderate to low level of positive influence ($\beta=0.277$, $p=.000$), and (5) the strategic management factor (Stra) had a moderate level of positive influence ($\beta=0.383$, $p=.000$) (Figure 5.1).

$$\text{SMEs' Res}' = 0.291 + 0.119(\text{Struc}) + 0.050(\text{Poten}) + 0.122(\text{Per}) + 0.261(\text{Decis}) + 0.362(\text{Stra})$$

$$Z'_{\text{SMEs' Res}} = 0.122(Z_{\text{Struc}}) + 0.050(Z_{\text{Poten}}) + 0.133(Z_{\text{Per}}) + 0.277(Z_{\text{Decis}}) + 0.383(Z_{\text{Stra}})$$

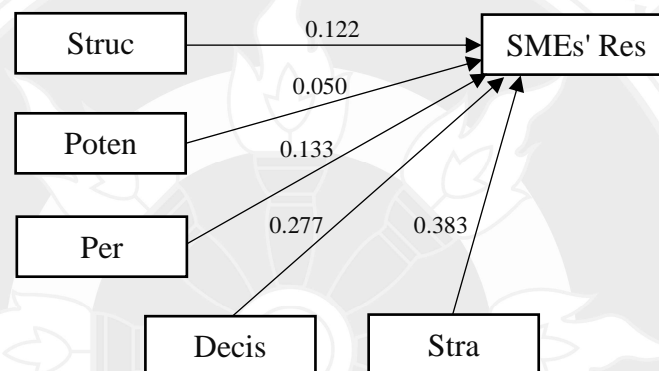


Figure 5.1 The Model of Multiple Regression Analysis and the Equation of Unstandardized Coefficients and Standardized Coefficients

According to the results of study above, it could be stated that the factors in the MRA equation which most influenced Thai SMEs' response in the digital economy age was the strategic management factor (38.3%), followed by the decision-making process factor in selecting or avoiding the application of technology or innovation in the age of digital economy in the business operation (27.7%). The rest of the factors together influenced the response of SMEs as well, but the levels of influence were similarly low. These factors involved the structural contingency factor (12.2%), the perception factor (13.3%), and the SMEs' potential factor (5.0%). Therefore, it could be said that the response of SMEs in the service sector of CBT in the upper northern provinces group 2 in the digital technology age depended on the five factors. The details are as follows.

The first factor was the strategic management factor (Stra), which referred to the constant adjustment of the enterprise strategy and the managerial process to suit the new business opportunity, when the organizational environment was more complex and swiftly changing (Miles et al., 1995). And with the increasingly competitive market situation, it was necessary for entrepreneurs to develop their products and services. Efficient management was an important strategy which could help the organization to further develop managerial innovation, process, and products (Schniederjans & Schniederjans, 2015). Moreover, the external environment of technological change in the digital age requires creativity among the entrepreneurs in order to face the challenges to gain business outcome. Therefore, entrepreneurs generally selected an aggressive strategy to find a new opportunity and markets (Hatch & Cunliffe, 2006). This strategy included the use of technology in business operation, such as the internet and e-Commerce, which could help the enterprise to respond to technological change in terms of both threats and opportunities (Drew, 2003). The enterprise which applied information technology and the internet in their strategic management, marketing, and product and service development could thus create a competitive advantage (Martin & Matlay, 2003). And when the application of digital technology in community-based tourism was considered, it was found that most entrepreneurs increased their use of digital technology in response to both the opportunities and threats, especially during the COVID-19 pandemic became an extra factor that urged the application of technology among SMEs. This finding corresponded to the survey of types of technology used by SMEs. It was found that most SMEs used internet connectivity devices (smartphone, computer, tablet, laptop) in the largest percentage (98.75%), and they applied technology in all departments – planning, production, accounting, purchasing, marketing, customer contact, research and development, and human resource management. Additionally, the findings also corresponded to those found in the focus group discussion with service SMEs representatives (n=12) who deemed that most SMEs adjusted themselves by using technological devices, such as (1) computers, tablets, and smartphones in planning, accounting, and human resource management, (2) online platforms and other applications for public relations, buying and selling, customer contact, and online marketing in order to create marketing advantage, and (3) use of e-Banking for

convenience of the customers and prevention of moral hazard problems the staff might encounter.

The second factor was the decision-making process factor (Decis) or the entrepreneur's decision-making process in selecting or avoiding modern technology in their operation. Based on the fundamental concept of decision-making theory, it could be said that the entrepreneurs seemed to be reasonable and could adjust their enterprises to suit the external situation to ensure survival and efficient operation of the enterprise. Moreover, the entrepreneurs had to design the operation structure which would reduce the impacts from the dynamic external environment as much as possible. The constantly changing environment could impact the stability of the operation in an enterprise (Lorsuwannarat, 2015, pp. 116, 121); therefore, the entrepreneurs had to make the most reasonable decision (Rowe et al., 1984) in order to select or avoid using technology or innovation for work, and had to consider the consequences of related factors in making such a decision, such as organizational readiness, managerial productivity, external pressure, decision aids, compatibility, perceived usefulness (Grandon & Pearson, 2004) education, information system planning, (Wielicki & Arendt, 2010) funds, and skills of technology and innovation (Demirbas et al., 2011). The reasonable decision-making process of an entrepreneur was related to three factors; (1) attitude of the entrepreneurs toward both the positive and negative impacts of decision-making on the enterprise, (2) perception of social expectation from the organization. Especially when the organization became larger and more famous, the social expectation would increase, and (3) ability to control internal resources to eradicate obstacles which might occur. (Harrison et al., 1997). As the findings from this study revealed that entrepreneurs with more than five years of experience (67.5%) decided to seriously apply technology in business operation, especially during the last five years (82.6%). Moreover, it was evident that the most-used technology in SMEs operation were internet connectivity devices, such as smartphones, computers, tablets, and laptops (98.75%), followed by online media or platform (60.63%). Thus, it could be predicted that SMEs response to opportunities and threats during the age of digital economy would be stronger as long as the entrepreneurs decided to apply technology in their operation. The results corresponded to the view of the six groups of stakeholders about SMEs adjustment

during the age of digital economy that in the current digital technology change, SMEs entrepreneurs had to accelerate their decision to adjust themselves to the situation, especially the adjustment of marketing strategy, that is, using online channels in order to gain advantage over competitors and ensure the survival and growth of their business. The findings from the study on “Digital economy and tourism impacts, influences and challenges” by Hojeghan and Esfangareh (2011) also suggested that the entrepreneurs and the labor in the service sector of tourism had to swiftly adjust themselves and develop skills to suit the highly competitive environment in order to respond to the changing needs of the market. Especially, the entrepreneurs should actively consider and decide to apply modern innovation or technology, such as e-Commerce or e-Business, in respond to the concept of digital economy development.

The third factor was the structural contingency factor (Struc). Due to the complex and dynamic environment, the entrepreneurs had to adjust their organization structure, strategies, and managerial process in response to the new business opportunity (Miles et al., 1995) in order to ensure the organization’s adjustment and survival in the uncertainty of the environment (Bowornwathana, 2015; Daft, 2001). Especially, tourism industry was highly competitive, so the entrepreneurs had to focus on creating quality and standard of products and services to serve the need of customers and on adjustment of organization structure to suit the external environment. Structural adjustment should be done in the following aspects, (1) flexible structure with vertical and horizontal integration, (2) decentralization of powers to the leader of each department, (3) teamworking with focus on adjustment and innovation, (4) low formality which enabled to adjust the tasks in accordance with the situation, (5) focus less on control, as organization members had skills and expertise, so they could think creatively and independently, (6) informal internal connection, especially the horizontal consult action among departments (Hatch & Cunliffe, 2006). Furthermore, the entrepreneurs had to be concerned about the efficiency of other related factors such as planning, staff skills, technology, organizational culture, and administrative strategy which would allow the organization to adjust itself best to the uncertainty of environment. Nevertheless, it should be noted that the structural contingency factor could increase only 12.2% of the likelihood for SMEs to respond to opportunities and threats during the age of

digital economy, compared to the strategic management factor (Stra) and the decision-making process factor (Decis), the influence of which was more than three times and twice, respectively.

The fourth factor was the perception factor (Per). The entrepreneurs had to constantly perceive and interpret the dynamic external situation (Sutcliffe, 1994), as what the entrepreneurs were aware of or interested in would generally influence the practice and future outcome of the organization (Waller et al., 1995). Furthermore, the level of entrepreneur's awareness of the external situation in terms of threats and opportunities was all related to the level of priority they put in planning and strategic management in order to achieve the organizational goal (O'Regan et al., 2007). Especially in the age of digital technology change, the entrepreneurs had to be concerned about three elements of digital economy: (1) e-Business infrastructure: overall infrastructure which supported business operation through the e-Commerce system, (2) electronic business (e-Business): business operation process via the electronic system and online channels, and (3) electronic commerce (e-Commerce): values of products and services generated from e-commerce transaction (Mesenbourg, 2001, pp. 3-4). Additionally, entrepreneurs should be aware of six major characteristics of innovation: (1) relative advantage, or expected benefits from applying innovation in business, (2) compatibility, or the suitability of innovation which would be applied in each organizational task, (3) complexity of the innovation which would be applied in the organization, as the entrepreneurs tended to adopt innovations which was simple to put into practice rather than complex ones, (4) trialability, or the ability of innovation. The sooner the entrepreneurs knew about trialability, the better it would be in applying innovation for the benefit of the business, (5) observability, or the social results which might occur after innovation was applied in operation, e.g., customers' satisfaction and dissemination of tourism management knowledge (Rogers, 2010), and (6) security of innovation applied in the organization. The entrepreneurs had to know e-Commerce system's security (Shim et al., 2013). However, the perception factor's level of influence was just 13.3%, compared to the strategic management factor (Stra) and the decision-making process factor (Decis), both of which had of three times and two times more influence, respectively.

The last factor was the SMEs' potential factor (Poten), which reflected the organization's ability to have adequate resources for adjustment of organizational structure and competition strategies in response to the environment (Pertusa-Ortega et al., 2010). This study applied the principle of the 8M's by Ferrero diRoccaferrera (1972) in the analysis of administrative resource elements. Eight dimensions of resources of SMEs in service sector include (1) Man: having employees with technological skills which matched the tasks, (2) Money: having adequate capital for business operation, (3) Material: having efficient service process, adequate raw materials/products to support the business, (4) Method/Management: having a clear and systematic work process, (5) Machine: having adequate and efficient machinery/equipment/tools, (6) Market: using efficient online social media, (7) Message: having a good process to communicate products/services to customers, and (8) Morale: having a system to boost the morale of the employees. And the MRA analysis revealed that the SMEs' potential factor is one of the five predicting variables which increased the likelihood to respond to opportunities and threats in the age of digital economy. However, the level of influence of the SMEs' potential factor was just 5.0%, comparing to the strategic management factor (Stra) and the decision-making process factor (Decis), which were of eight times and six times more influence, respectively.

5.2.2 The Context of Policy Implementation and the Role of Stakeholders in the Promotion and Development of SMEs in the Service Sector of Community-Based Tourism under the Framework of Digital Economy Development

This section describes the content analysis of two data sources: (1) the secondary data from documents, government reports, research reports, and statistical data from relevant organizations, and (2) the primary data collected from six groups of stakeholders involved in the promotion and development of CBT in the upper northern provinces group 2. The details are divided into two main topics as follows.

5.2.2.1 The Context of Policy Implementation for Promotion and Development of SMEs in the Service Sector in the Community-Based Tourism under the Framework of Digital Economy Development

1) National policy which promoted and developed SMEs.

The Thai government announced the implementation of digital economy policy in 2014, by focusing on the Information and Communications Technology (ICT) which connected all sectors – the government, local people, and the private sector, including the large-scale businesses and SMEs. This policy involved the use of digital technology to increase efficiency in management and to respond to the users or customers' needs swiftly and efficiently (Kiatsanpipop, 2015). And since the announcement of digital economy by the government, the service sector of tourism industry was eager to operate through the e-Commerce system as Thailand was one of the major tourism destinations of the world. The tourism industry could therefore play a major role in generating income and activating economic growth of Thailand. As a result, digital technology and fast communication system were other important factors in connecting tourists and entrepreneurs. In addition, they would also increase the competency of Thailand tourism at the international level. Nevertheless, it was essential for the government to provide support in entrepreneurs capacity development to ensure their ability to use digital technology in business operation and to increase an opportunity to generate income (Thawornprapasawat, 2018).

Currently, there are many agencies in Thailand which are responsible for e-Commerce promotion, such as (1) the Office of the National Digital Economy and Society Commission, (2) the Digital Economy Promotion Agency, (3) the Electronic Transactions Development Agency (Public Organization), (4) the Department of Business Development, Ministry of Commerce, (5) the Community Development Department, Ministry of Interior. All the agencies are responsible for projects related to the promotion and support for e-Commerce, such as providing training, consultation, and technological skills development to entrepreneurs (ONDE, 2018), especially the agency that is directly responsible for the ICT missions, such as the Ministry of Digital Economy and Society (MDES). The MDES provides support for SMEs entrepreneurs in at least three dimensions (MDES, 2017), as follows.

The first dimension is policy and planning, which consists of three objectives: (1) to increase the business sector's competitiveness in order to add the economic value through the use of digital technology to reform the business, (2) to increase job opportunity in agriculture and sale of community goods through digital technology with the participation of the state, the private sector, and the people, and (3) to accelerate the development of digital technology startup, which will be a mechanism for propulsion of digital economy.

The second dimension is plans and related projects. Organizations under the Ministry of Digital Economy and Society (MDES) are in collaboration to encourage SMEs' entrepreneurs through various projects, such as (1) the Village Broadband Internet project, which aims to support the community entrepreneurs, (2) the SMEs Go Online project run by the Electronic Transactions Development (public) (ETDA), which aims to increase the number of the new e-Commerce entrepreneurs, (3) setting measures and approaches by MDES to facilitate the opportunity for online transactions and develop the SMEs' entrepreneurs in both the central administration and regional sectors, (4) the community digital center project called "Village e-Commerce" run by the Office of the National Digital Economy and Society Commission (ONDE), which aims to increase the knowledge of SMEs entrepreneurs and encourage the target group to use digital technology in their business. The consulting center will provide service related to e-Commerce and other services as the community digital center, and (5) the digital community project in e-Commerce, which is the point of sale (POS) system by the Thailand Post that will support the sale of local products and services through the online platforms and the competency of Thailand post, which will sell goods through various channels, including the online store, POS, delivery through the e-Logistics, as well as e-Payment.

The third dimension is building the environment, motivation, and knowledge by (1) improving the community digital center; providing lifelong learning environment which allows learning at any time in any place with any device; providing digital service and socio-economic information; collecting community news; organizing economic activities, such as opening an online store; and

improvement of product and service. And (2) organizing activities to promote and train SMEs in each region.

2) Policy implementation in promotion and development of SMEs in the service sector under the framework of digital economy development

The Thai government gave high priority to tourism industry, as it could generate income, investment, employment, and income distribution in the society. Thus, the government implemented the tourism promotion policy in the following six ways: (1) supporting quality tourism that was friendly to the environment, (2) rebranding the image of Thai tourism in the eyes of global tourists, (3) using ICT to promote tourism in accordance with the concept of Thailand 4.0, (4) prioritizing the use of social media for public relations of the country's tourism, (5) improving services and facilities to reach the international standard, (6) distributing income from tourism to the local people, especially in the form of CBT in small provinces (MOTS, 2017, p. 2).

The government agency directly responsible for promotion, support, and development of tourism industry was the Ministry of Tourism and Sports. The strategic plan for 2017-2021 involved following: (1) developing product and service resources and facilitates based on sustainability while maintaining a balance in Thai tourism through marketing; providing safety and convenience for tourists, and diffusing different groups of tourists to different areas and at a different time, (2) developing the personnel and network partners in all sectors of tourism industry by increasing competitiveness of the community, entrepreneurs, and employees in tourism, and (3) integrating efficient tourism management in all levels by improving the factors which influenced the efficiency of tourism management (Ministry of Tourism and Sports, 2017). Moreover, the Ministry of Tourism and Sports was also responsible for not only developing the ICT system but also for providing knowledge and innovation which could add economic values to tourism industry. It set up Digital Tourism action center to serve as a policy instrument in the central administration and local government. The center provided updated and reliable digital information through a digital tourism platform, on which all users could be content creators and editors. They could continuously add information about tourism such as tourists' stories and experiences. Entrepreneurs could also put in record information related to

their service businesses in tourism. And all information would be checked before being officially publicized through a mobile application and the website www.thailandtourismdirectory.go.th (Ministry of Tourism and Sports, 2018b).

Hence, it could be said that the previous operation of Ministry of Tourism and Sports followed the government's direction of digital economy development, especially the policy "Digital for community-based tourism: connecting the major cities and distributing income to minor cities", which aimed to distribute tourism income to less-popular area of Thailand (Ministry of Tourism and Sports, 2018b). One of the policies in promoting minor cities which utilized technology to support tourism together with promotion of income distribution to the grassroots level was "Community-based tourism policy", which was the form of creative and standardized tourism management by the community. The policy would create the learning process in each community which would lead to the sustainable environment, local culture conservation, and a good quality of life (The National Tourism Policy Committee, 2016a). The promotion of community-based tourism would be conducted under the strategic plan of sustainable community-based environment under the Ministry of Tourism and Sports to coordinate with partners in all other sectors. The Designated Areas for Sustainable Tourism Administration (Public organization) acted as secretary. The vision of the strategic plan was "Thai community-based tourism development to reach the international level based on the sustainable community resource management and conservation to bring about the community happiness". Therefore, it could be said that the government tried to launch the community-based tourism policy as the instrument to develop the community at the micro level and to better distribute income, while focusing on the conservation of the local way of life and culture by creating awareness of all sectors in conserving the environment and natural resources (TAT Review, 2019). On the other hand, it also prioritized technology as an instrument for economic development in the tourism sector, by promoting the entrepreneurs' skill and ability to utilize ICT technology to increase their competency, add value, and ensure their growth and survival in digital economy development.

3) Operational mechanism, actors, instruments, and approaches in the promotion and development of service businesses in community-based tourism

The findings in the first and second topics could lead to the conclusion of “operational mechanism, actors, instruments, and approaches” in the promotion and development of service businesses in community-based tourism group under the framework of digital economy development, from the level of national policy to the implementation in the provincial level, as follows.

3.1) Operational mechanisms: The details are divided into the following three levels (Figure 5.2).

3.1.1) Policy level: The National Tourism Policy Committee that was responsible for all tourism policies at the national level appointed the Community-based Tourism Subcommittee as the mechanism to implement and monitor the sustainable community-based tourism strategic plan 2016-2020. All the related sectors, i.e., the government sector, the private sector, the academic sector, and the people had to report the results of their activities throughout the nation to the top administration to acknowledge so that it could promote related sectors to achieve concrete results in the future.

3.1.2) Implementation level: The policy was implemented by the Community-based Tourism Subcommittee, which consisted of the agencies with mission related to tourism development. The committee would implement the strategic plan in sustainable community-based tourism. The Designated Areas for Sustainable Tourism Administration (Public Organization) would act as secretary of this committee.

3.1.3) Area level: In each area tourism development area in Thailand, the district committee of community-based tourism promotion, which involved the government sector, the private sector, the academic sector, and local people, was responsible for implementing the strategic plan of community-based tourism in line with the local context.

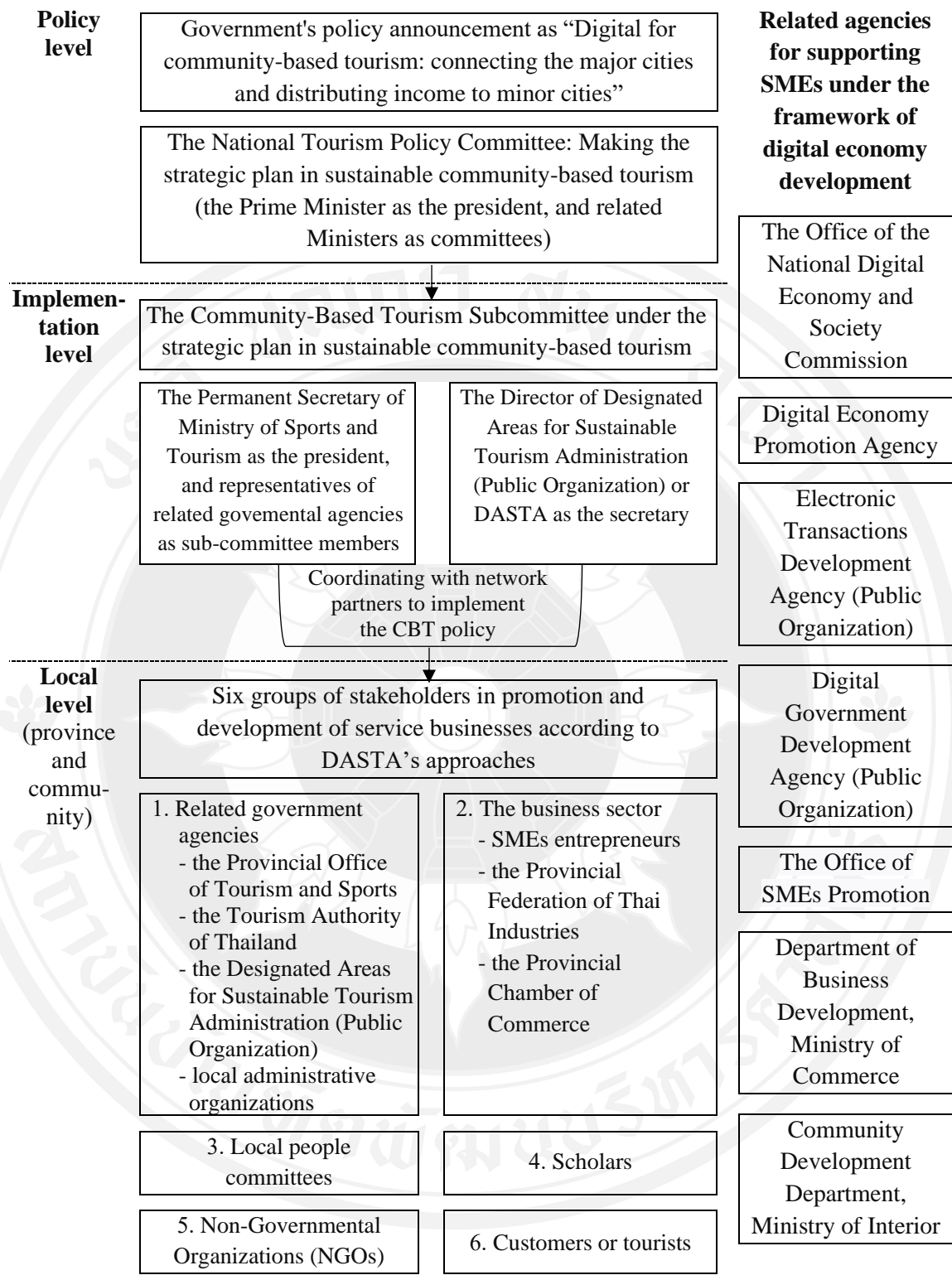


Figure 5.2 Operational Mechanism to Promote and Develop SMEs in the Service Sector of Community-Based Tourism under the Framework of Digital Economy Development

3.2) Actors: The discussion here is based on the analytical framework of policy implementation process by Nakamura and Smallwood (1980) , which explains that the policy process is the system which involves three processes: (1) policy formulation, (2) policy implementation, and (3) policy evaluation. Each process has its own environment, stage, and actors of the policy. And the environment in three processes can connect, communicate, give an order, and follow the order of the actors as in Figure 5.3.

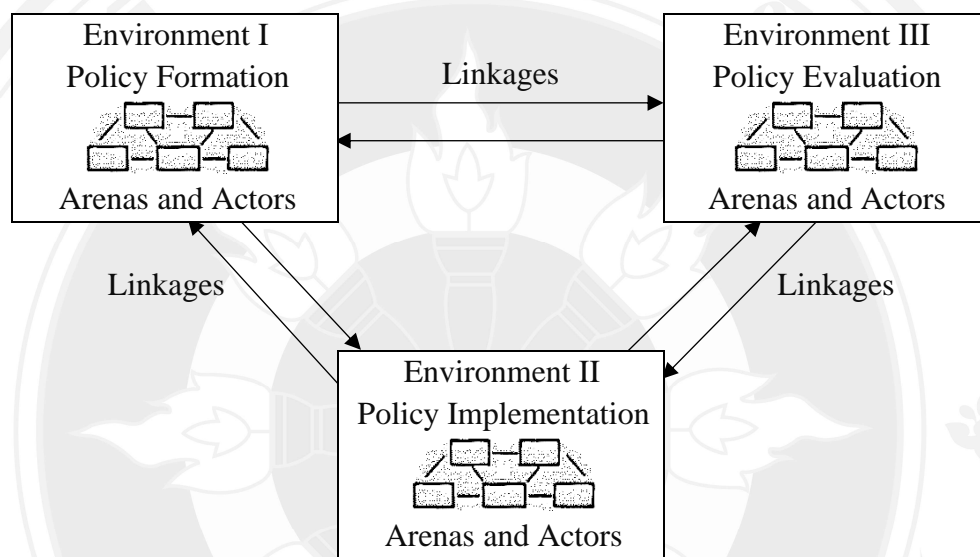


Figure 5.3 Environments influencing policy implementation

Source: Nakamura and Smallwood (1980)

According to Figure 5.3, it could be explained that the implementation of policy in promotion and development of service businesses in community-based tourism required actors in the environment of policy implementation, who integrated the tourism promotion and development in accordance with the mission of related agencies, developed the instrument, the process, and the administration approach to suit the tourism situation, as well as monitored and evaluated the results of tourism development. The actors could be divided into three levels as follows.

3.2.1) Policy level under Provision 5 of the National Tourism Policy Act of B.E.2551 (National Tourism Policy Act, 2008)

The National Tourism Policy committee consists of the Prime Minister as the president and the Minister of Sports and Tourism as the vice president. The committee members include Minister of Transportation, Minister of Natural Resources and Environment, Minister of Interior, Minister of Culture, Permanent Secretary of Ministry of Defense, Permanent Secretary of Ministry of Foreign affairs, Permanent Secretary of Ministry of Commerce, Permanent Secretary of Ministry of Labor, Permanent Secretary of Ministry of Public Health, Secretary of Office of the National Economic and Social Development Council, Director of Bureau of Budget, Director of Royal Thai Police, President of the Local Administrative Organization Council of Thailand, President of The National Municipal League of Thailand, President of District Administration Organization Council of Thailand, President of Tourism Council of Thailand, and no more than nine specialists appointed by the Prime Minister.

The Permanent Secretary of Ministry of Sports and Tourism was a member secretary of the committee. And the Director of Office of Tourism Development and the Director of Tourism Authority of Thailand was a committee member and vice-secretary of the committee.

Therefore, two to four specialists would be appointed from organizations with specialization or experience in tourism and tourism industry, marketing, hospitality, business administration, arts and culture, or natural resources and environmental conservation. They were selected from the list nominated by the Tourism Council of Thailand.

3.2.2) Implementation level According to the order of the National Tourism Policy committee number 5/2016, the appointment of the sub-committee of community-based tourism was as follows.

The Permanent Secretary of Ministry of Sports and Tourism shall be the president, and the Director of Designated Areas for Sustainable Tourism Administration (Public Organization) shall be the first vice president, and the deputy director of the Department of Tourism shall be the second vice president.

The sub-committee members included representatives of (1) Tourism Authority of Thailand, (2) Thailand Convention and Exhibition Bureau (Public Organization), (3) Community Organizations Development Institute (Public Organization), (4) Office of the National Economic and Social Development Council, (5) Department of Local Administration, (6) Department of Community Development, (7) Department of Cultural Promotion, (8) Department of Industrial Promotion, (9) Department of Agricultural Promotion, (10) Department of Environmental Quality Promotion, (11) Department of National Parks, Wildlife and Plant Conservation, (12) three representatives of the Thailand Tourism Council, (13) Thai Ecotourism & Adventure Travel Association (TEATA), (14) President of Network Club in Community-based Tourism Promotion in Designated Area, (15) President of CBT North Thailand, (16) Managing Director of Pracharat Rak Samakkee (Thailand) Co., Ltd., (17) President of CBT North-eastern Thailand, (18) President of CBT Andaman, (19) Thailand Research Fund, (20) Thailand Community Based Tourism Institute Foundation, and (21) Dean of the Graduate School of Management, National Institute of Development Administration.

The Director of CBT Thailand Office, under the Designated Areas for Sustainable Tourism Administration (Public Organization) shall be a sub-committee member and the secretary, and the representatives of the Office of Permanent Secretary, Ministry of Sports and Tourism, and the Director of Tourism Development Division, Department of Tourism were sub-committee members and assistants to the secretary.

3.2.3) Local level (at the province and community levels) included six groups of stakeholders who participated in the promotion and development of CBT, as follows (DASTA, 2018, pp. 24-26).

3.2.3.1) Related government agencies consisted of (1) the Provincial Office of Tourism and Sports, (2) Tourism Authority of Thailand, (3) the Designated Areas for Sustainable Tourism Administration (Public Organization), and (4) local administrative organizations. This group was mainly responsible for tourism, and they had to coordinate and promote people's participation, to ensure the same direction of policy formulation and tourism promotion.

3.2.3.2) The business sector consisted of three major groups of (1) SMEs entrepreneurs in the service sector, (2) the Provincial Federation of Thai Industries, and (3) the Provincial Chamber of Commerce, all of which were the major base of tourism industry. The tourism policy drives by the government requires coordination and participation from the business sector. Meanwhile, the business sector was still under the government's control to ensure that the business would be conducted creatively with responsibility for the community, the society, and the environment.

3.2.3.3) Local people committees. Each local people committee represented the community and was responsible for the promotion and development of community-based tourism, starting from the process of initiation and implementation to the outcome of tourism development.

3.2.3.4) Scholars who played the role of providing knowledge and enhancing labor skills and intellectual capital, which were the factors for entering to the tourism industry.

3.2.3.5) NGOs partly built cooperation from local people with an aim to conserve natural resources, to bring prosper to the society, and to boost the economy by raising people's awareness of the society regarding the obligations and responsibilities of all the sectors in driving the creative tourism industry in Thailand.

3.2.3.6) Customers or tourists who visited or used tourism services at the tourist attractions in communities, and they could give feedback to service quality of CBT attractions.

3.3) Instruments and operational approaches

From Figures 5.2 & 5.3, it was evident that there were many related agencies in the policy implementation process at the national policy level, the implementation level, and the local level. But this part aimed to discuss the instruments and approaches of promotion and development of service businesses. The responsibilities belonged to two organizations: the sub-committee of CBT tourism, the president of which came from Office of Permanent Secretary of Ministry of Sports and Tourism, and the Designated Areas for Sustainable Tourism Administration (Public Organization or DASTA) which acted as the secretary who coordinate with

related network partners in order to drive the implementation of the strategic plan in sustainable and creative CBT development, 2018-2022. There were five major strategies (Ministry of Tourism and Sports, 2018a), as detailed in Table 5.3.

Moreover, in the provinces with specially approved CBT attractions, such as Nan Province (lively old town), DASTA had developed a major instrument for participatory planning, implementation, and evaluation in accordance with to the Global sustainable tourism criteria (GSTC) under the CSR-MA project, in collaboration with the CBT Institution, TEATA, the Green Leaves Foundation, and the European Centre for Eco and Agro Tourism (ECEAT). The criteria were set for the CBT development in the designated area in 2012. And meanwhile, there was coordination with network partners to appoint the CBT supporting committee. Its members involved representatives of the government sector, the private sector, the academic sector, and local people committees, all of whom participated in the development and improvement of criteria in line with the community context in Thailand. Later in 2014, DASTA applied these criteria as the approach to develop fourteen model communities in the designated area. There was a process of self-evaluation by the community, and the evaluation results were used to formulate the community development plan, and the results of development were followed by the CBT supporting committee. Afterwards, the criteria were adjusted the second time for better clarity and sustainable development, resulting in convenient and efficient monitoring and evaluation. Until 2015, the completed criteria called “The Criteria for Thailand’s Community-Based Tourism Development” was applied in CBT development. The criteria encompassed five dimensions of (1) sustainable administration, (2) distribution of benefits and well-being to local people, (3) conservation and promotion of cultural heritage, (4) systematic management of natural resources and environment, and (5) quality services and safety. The criteria in each dimension aimed to get continuous and circular development from (1) planning, (2) implementation, (3) monitoring, and (4) development (The National Tourism Policy Committee, 2016a).

Table 5.3 Instruments and Approaches in Promotion and Development of SMEs in the Service Sector under the Framework of Digital Economy Development

Strategy	Instruments	Approaches
1. Upgrading knowledge and skills of human resources for effective tourism management.	1.1 Project on collaboration of the new generation of entrepreneurs who cared about CBT development.	1.1.1 Organizing a workshop to create awareness, knowledge, and understanding of natural, cultural, and traditional resource conservation. 1.1.2 Organizing activities for entrepreneurs who were interested in forming a linkage with CBT attractions, such as a field trip to tourist attractions.
1.2 Project on building a CBT database through the ICT system.	1.2.1 Studying, analyzing, designing, and creating the database of CBT knowledge via online channels which were easily accessible. 1.2.2 Creating interesting CBT contents which were updated and easy to learn.	1.1.3 Promoting and supporting collaboration between the entrepreneurs and operations at tourist attractions, such as supporting human resource development and referring tourists to the tourist attractions.
		1.2.3 Organizing road shows to generate social awareness in using the database.

Strategy	Instruments	Approaches
	<p>1.3 Project on promoting young adults to apply their knowledge and to use technology for CBT.</p>	<p>1.3.1 Setting approaches for young adults to participate in media creation for CBT development.</p> <p>1.3.2 Appointing a committee to publicize contests, select the winner, and organize an awarding ceremony.</p>
<p>2. Promoting value-addition and price increase of local resources by the product and services based on local identity, with the participation of the community as a role model for CBT development and administration at all levels.</p>	<p>2.1 Project on one Chamber of Commerce per community to add value in CBT.</p>	<p>2.1.1 The Chamber of Commerce set five criteria of excellence: (1) clear administrative mechanism, (2) unique resources or activities, (3) suitable marketing, (4) establishing a fund from CBT income, (5) connecting the community to major tourist attractions.</p> <p>2.1.2 Selecting potential communities each year, for the chamber of commerce to support and develop their products, management, and marketing channels.</p> <p>2.1.3 The Chamber of Commerce provided consultation and suggestions on marketing channels, especially the online market for the community and for the entrepreneurs in CBT.</p>
	<p>2.2 Project on service training for CBT</p>	<p>2.2.1 Gathering related information about CBT development for use in promoting sustainable growth of CBT.</p> <p>2.2.2 Providing training on service businesses to increase service skills for the community and the entrepreneurs.</p>

Strategy	Instruments	Approaches
		2.2.3 Monitoring and evaluating the operation to use information for further improvement.
2.3	Project on promoting community development to reach the CBT standard.	2.3.1 Creating an operating system to maintain the tourism standard.
		2.3.2 Gathering information about CBT standards and approaches to reach the standards.
		2.3.3 Training the community and potential entrepreneurs about standard through an online system and field trip activities
		2.3.4 Developing tourists attraction to international standard and coordinating with related agencies for budget support.
		2.3.5 Publicizing standardized CBT and creating a CBT network in accordance with the type of CBT for mutual learning and sharing knowledge and experience.
2.4	Project on creating a website to disseminate CBT information	2.4.1 Gathering tourism information, such as uniqueness, identity, history, ways of life, tradition, and culture of different tourist attractions.
		2.4.2 Creating a website to disseminate tourism information.
		2.4.3 Reviewing and updating information.

Strategy	Instruments	Approaches
3. Development of CBT administration.	<p>3.1 Project on developing a tourism and marketing database for CBT.</p> <p>3.2 Project on training ICT skills to promote CBT.</p> <p>3.3 Project of online market for CBT.</p> <p>3.4 Project on marketing promotion of community products at all levels.</p>	<p>3.1.1 Designing and creating the database of community-based tourism, marketing, and human resources specialized in tourism.</p> <p>3.1.2 Creating a tourism database by the community or a group of entrepreneurs in the form of digital or ICT media.</p> <p>3.2.1 Setting up a system for developing human resources, organizations, and related communities in CBT to ensure readiness and ICT skills.</p> <p>3.2.2 Providing ICT training for CBT personnel from all area.</p> <p>3.2.3 Following-up and evaluating.</p> <p>3.3.1 Providing training on online marketing.</p> <p>3.3.2 Promoting sales and training on sales methods for tourism entrepreneurs.</p> <p>3.3.3 Sharing experiences of the generation of entrepreneurs who used social media and digital technology in marketing or presenting CBT products and services.</p> <p>3.4.1 Selecting community products for development in relation to tourism.</p> <p>3.4.2 Developing products and packaging in relation to local</p>

Strategy	Instruments	Approaches
<p>4. Development of mechanism to employ the administrative system and linking networks with unity, security, and sustainability.</p>	<p>4.1 Project on CBT information system development.</p> <p>4.1.1 Preparing required database system and developing CBT information systems.</p> <p>4.1.2 Preparing database of provincial tourism information.</p> <p>4.1.3 Preparing ICT information for network management.</p> <p>4.1.4 Creating a tourism map which included population, culture, resources, tradition, and learning resources. A committee was appointed to be responsible for surveying and collecting the data.</p> <p>4.1.5 Appointing a working group to be responsible for following-up, coordinating, and managing the database.</p> <p>4.2 Project on the development to link the government sector, the private sector, and the community.</p>	<p>employment.</p> <p>3.4.3 Testing the market of new products, with monitoring and evaluating for improvement.</p> <p>3.4.4 Participating in marketing promotion activities in both online and offline channels.</p> <p>4.2.1 Organizing joint meetings between tourism groups and provincial government organizations, private enterprise, and the community to exchange knowledge and methods to develop the network, products, and packaging.</p>

Strategy	Instruments	Approaches
		<p>4.2.2 Preparedness for management to support CBT market linkage.</p> <p>4.2.3 Establishing the CBT coordination center to support mutual understanding of all partners to bring about sustainable CBT coordination.</p> <p>5.1.1.1 Formulating the conceptual framework and the methods to develop an index to measure tourists' happiness and satisfaction.</p> <p>5.1.1.2 Surveying and analyzing the satisfaction of tourists and reporting the results and suggestions for further development, or for arranging successful CBT activities or producing products.</p> <p>5.2.1 Providing training on tourist assistance for entrepreneurs, local people, and volunteers.</p> <p>5.2.2 Consistently organizing activities to test the readiness for tourist assistance in the simulated situation.</p> <p>5.2.3 Gathering knowledge and methods for tourist assistance in various cases.</p>
<p>5. Developing a happiness index of the community and tourists to develop the tourist attraction to become an ASEAN learning center for tourism.</p>	<p>5.1 Project on developing happiness index of tourists in CBT.</p> <p>5.2 Project on training on how to be a host and tourist assistant volunteers.</p>	

Source: Ministry of Tourism and Sports (2018a)

5.2.2.2 The Role of Stakeholders, as Actors in the Policy on Promotion and Development of Community-Based Tourism in the Area

It is necessary for sustainable CBT development to stem from participation in the community, with the aim to use community potential by means of increasing essential knowledge and skills for tourism management, such as good governance, value addition for local resources, being a good host, and awareness of an opportunity to link the community with tourists together with related network partners. Government agencies, the private sector, the academic sector, and NGOs all have their roles in the CBT promotion and development in accordance with their organizational mission. Hence, all the sectors, especially the local people, need to “participate in thinking, planning, acting, responsibility, and profit distribution”. As a result, there is direction of systematic CBT development which will help improve the economy and distribute more income at the grassroots level. (TAT Review, 2019)

According to the above principle of sustainable CBT development, which encompassed many stakeholders, this study set the scope of population as policy actors by selecting only those with the roles in CBT development in the areas (province and community). According to DASTA (2018), there were six groups of stakeholders, including (1) business group: SMEs entrepreneurs in the service sector, the Provincial Federation of Thai Industries, and the Provincial Chamber of Commerce, (2) the government sector: the Provincial Office of Tourism and Sports, TAT, DASTA, and the local administrative organization, (3) civil society committee, (4) scholars, (5) NGOs, and (6) customers or tourists. In the discussion section, the researcher discussed the roles of stakeholders in CBT development and promotion on the basis of the model of participatory CBT development in accordance with the sustainable CBT strategic plan years 2016-2020, set by the CBT sub-committees under the national tourism policy committee as seen in Figure 5.4.

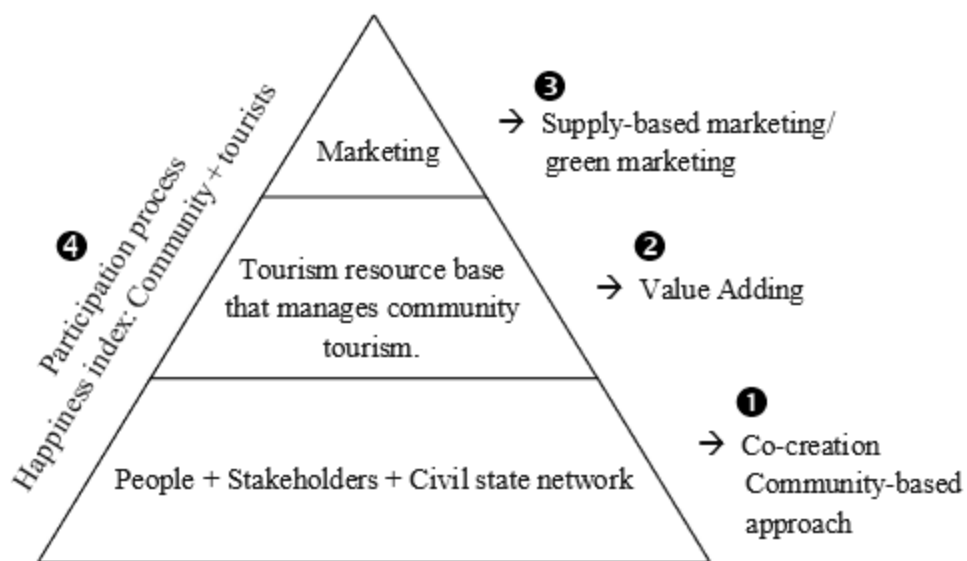


Figure 5.4 The Development of Participatory Community-Based Tourism

Source: TAT Review (2019)

According to Figure 5.4, the roles of stakeholders in CBT promotion and development, in the area, are discussed. The data were collected from the in-depth interview and focus group discussion with stakeholders as stated section 4.2 in Chapter 4, and section 5.1.2 in Chapter 5. The major roles of the stakeholders which corresponds to the approach of participatory CBT development could be found as follows.

Table 5.4 Analysis of the Role of Stakeholders in the Promotion and Development of CBT in the Area

Approaches*	Major roles of stakeholders
<p>1 Co-creation community - based approach:</p> <p>1) Human resources development in the tourism sector, by focusing on training local community members to ensure they can manage their CBT.</p> <p>2) Strengthening network by focusing on the community's connection with other sectors to exchange resources, knowledge, and experiences to form long-term and strong networks.</p>	<p>1. Business sector</p> <p>1.1 Entrepreneurs: Becoming network partners in promotion and development of service businesses in CBT, with coordination with government agencies at the provincial level, by, for example, joining meetings to discuss the direction of driving SMEs in the service sector, or organizing and participating in tourism promotion activities in the province.</p> <p>1.2 Provincial Federation of Thai Industries: Upgrading skills and developing SMEs entrepreneurs who are mostly in food production and agricultural raw material processing sectors.</p> <p>1.3 Provincial Chamber of Commerce: Providing consultation for writing a business plan, supporting SMEs' access to financial resources with a low interest rate, encouraging community enterprise to be set up in potential CBT, and providing training programs in tourism management for entrepreneurs.</p>

2. Related government agencies

- 2.1 Provincial Office of Tourism and Sports: Providing knowledge in good service practice to local people.
- 2.2 DASTA: Building a body of knowledge in CBT management in the special tourism zone, and coordinate with other agencies, e.g., related government agencies, local administrative organizations, the private sector, and local people to drive CBT to achieve sustainable development and local employment and income distribution.
- 2.3 The local administrative organization: Participating in CBT development, providing training and consultation for community enterprises through the tourism promotion project, and coordinating between the community and related agencies, such as Provincial Office of Tourism and Sports, TAT, educational institutions, community development office, etc.

3. Local people committees: Being a number of the committee to promote CBT, creating the CBT process, finding a budget for operation, coordinating with community members, other committees, and network partners of CBT, as well as monitoring and evaluating CBT operation.

4. Scholars: Participating in CBT development, providing consultation, monitor, and evaluating CBT operation.

5. NGOs: Enhancing knowledge in management skills and technological skills of SMEs to raise the level of CBT management in environment conservation and revitalization of natural resources to maintain the diversities of agricultural ecology.

2 Value addition: increasing value of local resources by seeking unique and authentic resources within community and then present it with the connection of tourism, which does not require the creation that is not local identity.

1. Business sector

1.1 Entrepreneurs: Supporting small businesses in CBT by purchasing raw materials or products from the community and conducting public relations of community products to customers.

1.2 Provincial Federation of Thai Industries: Promoting and developing community tourism products which are called Local Economy Products and certifying the community product standard.

1.3 Provincial Chamber of Commerce: Being a mediator in arranging activities of events that promote tourism in the province.

2. Related government agencies

2.1 Provincial Office of Tourism and Sports: Participating in planning the direction of community tourism in order to ensure employment, income generation, and conservation of the community identity.

2.2 DASTA: Promoting and supporting the conservation of CBT-related arts, culture and environment.

2.3 The local administrative organization: Promoting the increase of economic

benefits and reducing negative impacts.

3. **Local people committees:** Joining with other sectors to look for unique and outstanding resources of the community to link the resources to tourism.
4. **NGOs:** Creating awareness in the society about the value of CBT and conducting public relations through various technology channels which could in turn add value to tourism and generate the community's income from eco-friendly agriculture.
5. **Scholars:** Conducting joint-research and providing academic service related to the community.
6. **Customers or tourists:** Boosting the economy through various tourism activities, such as shopping, staying at accommodations, having meals at restaurants, and using transportation, etc.

③ Supply-based marketing or green marketing: 1. Business sector

- 1) Building an ability to respond to tourists' needs while maintaining the community identity.
- 2) Doing marketing suitable for the community and seeking tourism markets suitable for each community.
 - 1.1 Entrepreneurs: Purchasing local raw materials or products, conducting public relations of local products and tourism activities to customers or tourists, and helping to generate employment.
 - 1.2 Provincial Federation of Thai Industries: Encouraging businesses in nearby areas to unite to form a business development group which could link them to support each other, with minor marketing push.
 - 1.3 Provincial Chamber of Commerce: being the mediator between the community

Approaches*

3) Coordinating with entrepreneurs in the service sector to propose suitable CBT activities to add value in the tourism route.

Major roles of stakeholders

and tourists by providing information and persuading tourists to enter the area.

2. Related government agencies

2.1 Provincial office of sports and tourism: Providing knowledge of tourism

management to local people, especially the value of the community's way of life.

2.2 TAT: promoting and conducting marketing analysis of CBT in order to distribute products or services from the community to each target group so as to generate income for the community.

2.3 DASTA: Encouraging the community to supply entrepreneurs in accommodations/hotels with local cultural products to sell them to their customers and linking the tourism route from SMEs to the community.

3. **Local people committees:** Spreading tourism information to attract tourists to visit the community.

4. **Scholars:** Conducting joint-research and providing academic service to the community.

5. **Customers or tourists:** Helping to spread information about CBT swiftly through online social media by making comment on websites, checking-in, or sharing pictures or location, etc.

Approaches*

Major roles of stakeholders

④ Participation process and happiness index:

Besides participation from all the sectors, the happiness index was academically designed to measure CBT's success. The indicators were not only the increasing income or the increasing number of tourists but also all the dimensions of well-being of local people as a result of growth in tourism. The tourists' experiences were also taken in to account through mutual sharing of experiences between visitors and the hosts so that both parties were equally happy.

The study of six groups of stakeholders revealed the related agencies together operated CBT development according to the missions of each organization. However, they could not integrate the redundant missions and budgets. Therefore, the stakeholders stated that as the partners of development all the sectors, especially the government agencies, should participate in CBT promotion and development in a systematic and continuous way. This direction of expectation corresponded to the fourth approach of “④ Participation process and happiness index”. This model of participatory CBT development prioritized participation from all the sectors and required measurement of happiness of community members and tourists, for success was not just the increasing income or tourists, but also the well-being of the community. Unfortunately, this research did not include happiness measurement in CBT, as happiness is complex and involved many indicators. Therefore, it was suggested that further research should study happiness measurement of those related to CBT.

* Source: TAT Review (2019)

Furthermore, the six groups of stakeholders also have other perspectives related to CBT promotion and development. Their comments could be divided into three issues as follows.

1) Current government's policy implementation in CBT development and promotion: All the six groups of stakeholders were aware that the goal of the government's policy implementation was to strengthen and to distribute income to the community through tourism activities based on the existing social capital. Therefore, each community tried to create and design products and services to reflect their unique identity. The community with high tourism potential was encouraged to set up the community enterprise to strengthen the system of tourism management and the fair allocation of benefits in the community. The agencies that played the role in CBT development and promotion included government agencies, the private sector, local administrative organizations, educational institutions, and NGOs. Each agency focused on their organizational mission. Therefore, the perspectives of the results of CBT promotion and development policy implementation were similar among the four groups of stakeholders: local people committees, representatives of government agencies, scholars, and NGOs. They stated that the government tended to have a good approach in CBT promotion and development in terms of management and service standard. They also believed that such CBT promotion and development could boost the grassroots economy, although local people committees stated that income from tourism was just additional income, while the entrepreneurs in service businesses thought that government policy implementation still lacked a system and mechanism to link between the community and SMEs entrepreneurs.

2) Expected roles of stakeholders in CBT development and promotion: The perspectives of six groups of stakeholders regarding expected roles could be divided into three issues. The first issue was the expectation that all related sectors would together set a plan and the direction of tourism and development in service businesses so that all would go in the same direction. However, they were concerned about the impact on the environment and the society as a result of use in tourism. Therefore, participation in continuous and sustainable CBT development was necessary to gain the balance of economy, society, culture, and environment. The second issue was the expectation from the service businesses in CBT they expected

that the entrepreneurs would be creative and sincere to customers, and focus on product or service development to achieve the quality standard. Meanwhile, the community with high tourism potential should be encouraged to form the community enterprise, as this would make the management system more efficient. The benefit would also be distributed in the community in a clearer and fairer way. The last issue was the expectation from the related government agencies in the following issues: (1) disseminating information related to local economic development and tourism to all enterprises without bias, (2) creating widespread social awareness of CBT principle in all channels, (3) continuously carrying out the project on CBT development in accordance with the specialization of each agency, and providing consultation for the community to improve the tourism management skills, and (4) preparing the basic infrastructure in economy, commerce, and investment at the provincial level to be ready for long-term growth of tourism industry. The findings corresponded to those in the study of “Service quality in rural tourism: A prescriptive approach” by Kumra (2008). Kumra concluded that the successful tourism operation required the government to do four things. (1) Creating social awareness by continuous spreading knowledge and information about tourism development, (2) preparing human resources and the target area for tourism development in a medium-term and a long-term, (3) integration of the environment policy and the tourism promotion policy for sustainability, and (4) listening to the stakeholders of tourism development, and promoting participation of network partners who developed and improved service quality in a creative way, as well as supporting innovation to increase capacity of service businesses.

3) Policy direction in promotion and development of SMEs in the service sector in the future: the six groups of stakeholders stated that promotion and development of SMEs in the service sector corresponded to the direction of CBT policy implementation, which received ongoing support and development from the government, as it could help boost the economy, increase employment, and distribute income directly to people at the local level. The ratio analysis of businesses in the service sector related to tourism in Thailand revealed that almost all the businesses (99.8%) were SMEs, e.g., tourism businesses, hotels, restaurants, recreation, transportation, communication, property, finance, health service, and assistance

service (CIO World & Business, 2017). Therefore, SMEs in the service sector of tourism industry were highly important to the national economic growth. Furthermore, the six groups of stakeholders thought that in the long term the CBT should be concerned about sustainability in three dimensions: society, economy, and environment. Moreover, they said that local SMEs should participate in CBT operation by (1) focusing on business operation related to creative tourism, (2) being mediators in community product distribution to customers via both online and offline channels, and (3) helping in development and promotion of product and service standard levels to suit the need of different groups of customers.

5.2.3 The Competitiveness of SMEs in the Service Sector of Community-Based Tourism in the Upper Northern Provinces Group 2

The results of the study in this section was based on Porter's five forces model (Porter, 2004) to analyze the competitiveness of CBT in the upper northern provinces group 2. The content analysis was made to analyze the data collected by in-depth interview and focus group discussion with six groups of stakeholders previously mentioned in section 4.3, Chapter 4. Porter's five forces model consists of rivalry of community-based tourism, threat of new entrants, threat of substitute, bargaining power of suppliers, and bargaining power of customers. The results are discussed below.

1) Force I was rivalry of community-based tourism. Eight related factors were described as follows.

1.1) Numerous competitors: Considering the number of competitors within tourism industries, it was found that currently there were many communities in the upper northern provinces group 2, which became aware of the importance of tourism management by the community itself due to the government's policy of CBT promotion and development to boost grassroots economy. However, each community had similar potential and destination characteristics: northern cultural tourism, religious historic places, local occupations, ways of life, and natural resources. Furthermore, the business groups in the service sector of each CBT attraction were also similar in terms of service, price, and service standard. Therefore, it could be said that CBT industry was highly competitive. The opinion about fierce competition of

service business in CBT were similar among entrepreneurs, the Provincial Federation of Thai Industries, TAT, local people committees, scholars, and tourists.

1.2) Slow industry: Due to the fact that the emergence of CBT and new businesses in CBT followed the direction of CBT promotion and development by the government, all the six groups of stakeholders agreed that the growth of CBT was in the same direction with the government policy implementation. Especially, the NGOs' group stated that the government was trying to push the development of tourism in the community in both the quality and the number so that there would be increasing number of CBT attractions and it expected that each community would use "Best Practice" approach for tourism management. Therefore, the competition for market share was increasing; in other words, the market size of each community was decreasing.

1.3) High fixed of storage costs: Taken into consideration was the increase in production capacity. Currently, service businesses in CBT could emerge easily, resulted in similar enterprises around CBT attractions, such as accommodations (hotels/homestays), restaurants, and souvenir shops. Once the production capacity in CBT industry increased too much, it could lead to a price-cutting situation or the pricing which was lower than the market standard and did not reflect the true cost, as the seller only expected to sell with a higher volume. Once the increasing cost could no longer be coped with, some entrepreneurs had to give up their business. The analytical results in this section corresponded to the opinion of stakeholders in the business sector, especially the entrepreneurs who stated that there was actually a problem of price-cutting in CBT market.

1.4) Lack of differentiation of switch costs: The service businesses of each CBT attraction included accommodations and shops/souvenir shops that provided similar products and services, so the tourists had a bargaining power to buy products or services because they could compare the prices. This analysis corresponded to the opinion of stakeholders in scholars' group and the tourist's group, they stated that in a highly competitive market with similar products or services, customers would have power to decide on purchasing products and services based on pricing. The exception was the tourism service of the community enterprise group, as the price was fixed on the basis of the number of visitors, who always contacted the

community committee prior to using tourism service. Therefore, pricing of the community enterprise group was special, and it only generated additional income for the community.

1.5) Capacity augmented in large increment: Here, production capacity increase was considered. The fact that the entrepreneurs increased too much production capacity would lead to the oversupply situation and price cutting. The analysis of this situation among the CBT's SMEs revealed that price cutting generally occurred with SMEs manufacturers of agricultural produces and food. The entrepreneurs would use the discounting strategy or the price which was lower than the average market price to gain more market share. The result of analysis in this section corresponded to the opinion of the stakeholders in the SMEs group who informed the researcher that some enterprises focused on discount during their opening period as they expected to create a customer base in order to survive.

1.6) Diverse competitors: There is an analysis of how competitors change their marketing strategy. Within the CBT service business industry, if competitors constantly change their strategy, it will lead to the unpredictable competition. And especially when customers tend to buy increasingly from online channel, the online market become much higher in competition. Therefore, entrepreneurs must adjust to technological advancement and change their marketing strategy to gain advantage over their competitors, survive, and grow. The analysis in this section corresponds to the perspective of six groups of stakeholders regarding situation, impact, and adjustment of SMEs in the age of digital economy. Stakeholders deemed that entrepreneurs must adjust their strategy by using technology more in their operation, especially all online marketing strategies.

1.7) High strategic stakes: It could be said that the CBT industry in the upper northern provinces group 2 had many competitors who were highly successful. This corresponded to the opinion of all the six groups of stakeholders that each CBT attraction was famous as a unique destination, with products and services reflecting the identity and the context of each area, especially in Nan, which was announced as a special tourism province that won many tourism awards. Moreover, representatives of the scholars informed the researcher about situation of business competition in all the four provinces that the overall market competition was high, as

the service businesses of each community learned and imitated the best practice in tourism management from neighboring communities and then applied it in their own area. Hence, this process of learning and imitation was spread widely and helped to raise the standard of tourism management in the provincial group. However, there should be concern that the adjustment of service businesses which tried to create international-level products and services to reach a wider target group had to take the original identity of community into account.

1.8) High exit barriers: An analysis was made about hardship in withdrawing from the CBT industry. If an entrepreneur already invested substantially, withdrawing would not be worth doing. Therefore, once the business existed in the industry, the entrepreneur had to continue to fight for survival amidst the highly competitive situation, especially the hotel and restaurant business group. This finding corresponded to the opinion of representatives of the entrepreneurs' group who stated that the hotel and restaurant business group had high capacity of investment. They could also access the policy support from the government easily. Since the government support was usually given to the already existing group – withdrawal was not an easy option. On the contrary, enterprises with lower capacity of investment could not access the financial resources so they faced the liquidity problem and increasing debt. This finding also corresponded to the opinion of the representatives of the Provincial Federation of Thai Industries and TAT, who stated that this problem reflected an important weakness which most SMEs were currently facing.

2) Force II was threat of new entrants: Seven related factors were taken into account as follows.

2.1) Economy of scales. An analysis was made on the capacity to buy a large amount of raw materials necessary for manufacturing products and providing services, which could help entrepreneurs to reduce cost per unit. Entrepreneurs with a large economy of scales were in the advantage position compared to those with a small economy of scales. This finding corresponded to the opinion of the representatives of SMEs and the community committee in the CBT of the upper northern provinces group 2. They stated that hotel and restaurant entrepreneurs had the capacity to invest in buying a large amount of ingredients for

customers. They also had a strategy of finding new customers from government agencies who could order products and services in large quantity, such as for conferences, seminars, and field trip projects. The finding also corresponded to the operation of community enterprise group who focused on organizing tourism for a large group of visitors with educational purposes and on producing community products in large quantity for selling both within the CBT and in other areas, inside and outside in the country. Therefore, it could be concluded that entrepreneurs with a large economy of scales could reduce cost per unit and gain more profit per unit.

2.2) Product differentiation: An analysis was made on product differentiation, which could help entrepreneurs to build a strong brand. If an entrepreneur could not design a different product or if the product is less outstanding than those of the existing competitors, it would be an obstacle for that entrepreneur to enter the industry. This finding corresponded to the opinion of the three groups of stakeholders: representatives of scholars, tourists, and government agencies. The stakeholders stated that business of the private sector and the community enterprise had to design different products and services with creative uniqueness to meet the customers' demand. Government agencies which encouraged entrepreneurs in CBT to have creative thinking for tourism products and services development were the Provincial Federation of Thai Industries, DASTA, TAT, the local administrative organization, and Thailand Industrial design Center (Thai-IDC).

2.3) Capital requirement: An analysis was made on required investment for opening the business. If an enormous amount of budget was required, it would unavoidably be a barrier to enter the industry. However, regarding the investment required for entering CBT industry by SMEs of the service sector in the Upper northern provinces group 2, it was found that many new SMEs were emerging in some CBTs. Most of them were SMEs that offered similar products or services such as food, accommodation, fashion, agriculture, souvenirs, and OTOP products. Therefore, it could be said that the investment to enter CBT was not an obstacle for the emergence of new SMEs. This finding corresponded to the opinion of the representatives of the Provincial Federation of Thai Industries and scholars. Furthermore, both groups of stakeholders shared a similar opinion that when many similar SMEs existed in the same market, the competition would be high, and it could

become a barrier for SMEs who could not compete in terms of price and quality of products and services.

2.4) Switching costs: An analysis was made on the cost for the target customers had to pay to switch to the products and services of other entrepreneurs. This cost would depend on the loyalty of customers to the existing brand, which resulted from differentiation of each product or service. When product difference in the CBT of the Upper northern provinces group 2 was considered, it was found that products and services have distinct characteristics in line with the context of each community. Meanwhile, most community enterprises tried to raise the standard of products or services to suit the customers' demand. As a result, most tourists were satisfied with community products or services. This finding corresponded to the perspective of the entrepreneurs, the Provincial Chamber of Commerce, DASTA, the local administrative organizations, the local people committees, and the scholars who informed the researcher that products or services of CBT were well accepted by tourists. Therefore, the cost of switching was rather low, as the CBT target group was willing to support CBT products or services, especially those with educational tourism purposes. Furthermore, the representatives of DASTA stated that CBT products and services originated from community identity and thus could not be found elsewhere. Therefore, they wanted the tourists to understand and be aware of such value and buy products or services at the price fixed by the community.

2.5) Access to distribution channels: An analysis was made on distribution channels which entrepreneurs had to take into consideration. If an entrepreneur had no place for distribution or could distribute his goods in few channels than competitors, they could be in a disadvantage position. The finding about product distribution channels of SMEs in the service sector of CBT in the upper northern provinces group 2 was that most entrepreneurs were varying their distribution channels, including distribution places in the community, enterprises, and the online market. This finding corresponded to the information given by the representatives of all the six groups of stakeholders who stated that SMEs entrepreneurs are highly active in digital marketing which helped to increase channels

to spread information to customers and to create advantage over their competitors in the highly competitive market.

2.6) Cost disadvantages independent of scale: The analysis was based on the fact that SMEs entrepreneurs who entered the industry first would have a better opportunity and more experience in effective development and cost management than new SMEs. They would know how to use technology to reduce costs and could learn from previous errors. Therefore, those who entered the industry first was in an advantage position compared to the newcomers. The analysis of SMEs in the service sector of CBT revealed that all stakeholders shared the same opinion that most entrepreneurs in the current CBT industry had skills and experiences in tourism management as well as their business partners who could jointly develop CBT products or services. Therefore, entrepreneurs who entered CBT industry first would have a better opportunity and more experience in effective development and cost management than new SMEs.

2.7) Government policy: When control and support from government for SMEs in the service sector were considered, it was found that all the six groups of stakeholders thought that the government's policy administration in CBT promotion and development could help boost the grassroots economy, as CBT development would lead to employment, income, and profit distribution to the community. And certainly, SMEs in the service sector would be promoted and supported in the same direction as tourism industry development. The agencies that directly provided support for SMEs in the service sector were (1) SME Support & Rescue Center (SSRC), which provided support and assistance for development and finance, (2) Industry Transformation Center (ITC), which provided technological development assistance, (3) Thailand Industrial Design Center (Thai-IDC) which provided assistance in product development and design, (4) Small and Medium Enterprise Development Bank of Thailand (SME Bank), which provided financial assistance and access to several funds, (5) Office of Small and Medium Enterprises Promotion (OSMEP) which participated in development and provided assistance, guidance, and training to increase potential of SMEs to ensure growth and survival in the international level.

3) Force III: Threat of substitute. The emergence of new products to replace the existing ones might be a cause for higher competition in the industry. In terms of CBT, there could be other tourist attractions with higher potential in destination because of their uniqueness, diverse tourism promotion activities, a variety of accommodation choices, similar products or souvenirs with lower prices, etc. These factors could all lead to higher competition in the CBT industry CBT. This finding corresponded to the opinion of the representatives of the Provincial Federation of Thai Industries, TAT, local people committees, scholars, and tourists. They agreed that the operation of service businesses in CBT was facing a higher level of competition as there was an opportunity that other communities could imitate and develop their tourism management with a better result from the existing CBT. Moreover, all the six groups of stakeholders shared a similar view that the direction of government's policy administration in CBT promotion and development would continue. Therefore, the existing CBT would be promoted and developed while new CBTs would also emerge.

4) Force IV was bargaining power of suppliers. An analysis was made on negotiation power of suppliers who could increase the price of raw materials or reduce their quality. The data were collected from all the six groups of stakeholders. Most suppliers in CBT were labor group and manufacturers in the agricultural sector who supplied raw materials for local SMEs in the service sector. Even in the CBT community enterprise, there are sub-suppliers who provided raw materials for community enterprises which helped to reduce dependence on externally sourced raw materials to a certain extent. Others were tour companies, transportation companies, and travel agencies who booked accommodations, parcel delivery companies, and application developers (buying and delivery application). The representatives of the entrepreneurs, scholars, and TAT informed the researcher that suppliers in CBT all had potential and bargaining power which affected the survival of SMEs. Suppliers that help support the operation of SMEs, were, for example, tour companies which took a large number of tourists to the area to use services and thus generate income for the CBT. Agricultural suppliers also provide raw materials for SMEs to manufacture products and services. However, they seemed to mutually depended on each other. The labor group would vary depending on the tourism season. The scholar representatives reflected that during the low season the labor would return to their

main career in farming. Therefore, it could be concluded that suppliers in CBT had a certain level of power and potential to negotiate with SMEs, although the bargaining power was not high as each partner depended on each other, especially the manufacturers in the agricultural sector and community enterprises.

5) Force V was bargaining power of customers: An analysis was made on customers' power in negotiation to reduce the price while the demand for product and service quality increased. According to the representatives of the Provincial Chamber of Commerce and TAT, it was found that generally the CBT target group was the group of visitors with educational purpose, families, and friends. Before visiting a tourist attraction, tourists would first study the information about CBT from online social media and compare the quality of products and services based on the review of previous tourists. Therefore, the CBT tourists had a rather high level of bargaining power as they could study and compare the quality of products and services in advance. Moreover, CBT tourism was limited in terms of inconvenience in tourism management, as tourists had to contact the community committee before visiting CBT to prepare a schedule and calculate the cost per person, which could be negotiated by tourists. Therefore, most tourists who decided to visit each CBT attraction would spend a short time in the area if they had a schedule to visit other places. This analysis corresponded to the opinion of the DASTA representative that tourists generally spent three days and two nights in each CBT attraction on average before visiting other places.

5.2.4 The Gap of Service Quality of SMEs in the Service Sector in Community - Based Tourism Attractions

It is widely accepted that businesses in the service sector is highly important to the economic growth of the country. Meanwhile, businesses in the service sector are facing obstacles to good service quality improvement, which is the key to winning customers and maintaining the customer base (Ghobadian et al., 1994), as customers not only compare their perception of service quality with their own expectation, but they also compare the service quality and all of their previous experiences (Valarie et al., 2003). So, service quality could reflect the customer loyalty which reflected through satisfaction surveys. The service quality evaluation could be made by

analyzing the gap between expectation and actual perception of service in five dimensions, the so-called 'RATER': reliability, assurance, tangibles, empathy, and responsiveness (Marathe, 2017).

The study of gap in service quality in this research measured satisfaction of tourists (n=400) with the service quality of SMEs in the service sector of the CBT in the upper northern provinces group 2. The results are presented in five dimensions (RATER) as follows.

Reliability: The overall expectation and actual perception of reliability were similarly at a high level ($\bar{x}=3.65$; $SD=0.77$, $\bar{x}=3.42$; $SD=0.64$). However, the analysis of the sub-topics of the actual perception revealed that the reliability level was moderate in the following three issues: (1) having reliable and interesting channels of public relations, such as printed media or online media, (2) having reliable community leaders and entrepreneurs, and (3) using updated technology to benefit the business, such as online communication with customers. Therefore, there was a gap of service quality in these three issues. The finding confirmed to the study of G. G. Lee and Lin (2005) that entrepreneurs should adopt technology and create a good image to ensure customers' satisfaction and trust in the enterprise. The finding also corresponded to the opinion of the six groups of stakeholders – the business sector, government agencies, civil society committee, NGOs, scholars, and tourists – who stated that SMEs in the service sector should launch widespread public relations with interesting advertising content. They should increasingly reach target customers through online channels and urgently improve essential skills in rendering services such as international-standard service skills and modern technological skills, in order to increase their customer satisfaction and reliability.

Assurance: The sample groups have the expectation in assurance both in general and in sub-issues at a high level ($\bar{x}=3.60$; $SD=0.85$). However, their actual perception differed from their expectation. The actual perception in general and in sub-issues are all at a moderate level ($\bar{x}=3.27$; $SD=0.75$). The sub-issues included (1) having a standardized and safe system and structure, (2) having surveillance cameras around the tourism area, (3) having the staff to monitor safety, (4) providing signs which clearly stated the rules or conditions of services, and (5) having standardized facilities, equipment such as phone booths, fire exits, fire extinguishers, and ramps.

To sum up, there was a gap in assurance service quality. This finding corresponded to the opinion of the four groups of stakeholders (e.g., the business group, government agencies, scholars, and tourists) that SMEs in the service sector still faced the problem in providing assurance. For example, the traffic management was poor, with some limitations in using parking spaces, inadequate and lower-than-standard facilities, environmental degeneration, and the lack of the personnel with service skills and service-mindedness. The problem about the personnel could be solved by adopting the solution suggested by Dewhurst et al. (2007). He proposed that entrepreneurs had to give importance to the process of recruitment and provide training for them to improve their service skills, while also trying to maintain the skilled employees. However, many entrepreneurs are facing the liquidity problem in the current situation. They lacked the budget for enterprise improvement and technological investment to support the operation, such as installing surveillance cameras and having adequate facilities. Although the Office of Tourism and Sports in each province attempted to develop the infrastructure and facilities according to the CBT development strategic plan in order to prepare for the growth in tourism industry, they could not ensure that customers would be as satisfied as expected.

Tangibles: Overall, the participants' level of expectation and actual perception of tangibles were at a high level ($\bar{x}=3.73$; $SD=0.82$, $\bar{x}=3.44$; $SD=0.70$). But the analysis of the sub-issues in actual perception reveal that the participants' level of actual perception was moderate in the following sub-issues: (1) having convenient shuttle buses, and (2) having facilities such as parking spaces, meeting points, and Wi-Fi. Therefore, there was a gap of service quality in the aforementioned issues. The finding corresponded to the opinion of three groups of stakeholders: TAT, the business sector, and NOGs, that SMEs in the service sector still had a problem of the readiness of facilities. Meanwhile, the representatives of the Provincial Chamber of Commerce made a suggestion for SMEs improvement that the entrepreneurs had to focus on improving the quality of management system, being sincere to the customers, being punctual, being neat and clean, as well as providing adequate facilities. Therefore, the measurement of tangibles could help entrepreneurs to decide how to improve the service to increase customers' satisfaction. This finding

corresponded to that in the study of service quality by Ham et al. (2003) and Tsai et al. (2011), which pointed out the problem of tangibles of service.

Empathy: The participants' expectation and actual perception were at a high level ($\bar{x}=3.81$; $SD=0.82$, $\bar{x}=3.56$; $SD=0.75$), both in general and in the following sub-issues: (1) providing friendly service, (2) willingness to give suggestions, (3) clear and systematic communication, (4) caring in details for customers' needs, and (5) willingness to accept customers' criticism to improve services. Therefore, there was no gap in service quality in empathy. This finding corresponded to the opinion of the three groups of stakeholders, namely the business sector (entrepreneurs and the Provincial Chamber of Commerce), government agencies (local administrative organizations and DASTA), and NGOs, that most entrepreneurs were skillful and experienced in service provision and were friendly, creative, and competent in coordination. In addition, the finding also corresponded to that in the study of Dimitriadis and Stevens (2008) who suggested that in terms of empathy, entrepreneurs had to coordinate with customers to maintain a good relationship, which was an important factor to gain a better understanding of customers.

Responsiveness: Overall, the participants' level of expectation and that of actual perception of responsiveness were at a high level ($\bar{x}=3.76$; $SD=0.84$, $\bar{x}=3.42$; $SD=0.75$). But the analysis of the sub-topics of the actual perception revealed that the level of responsiveness was at a moderate level in the following: (1) adequacy of equipment or facilities, and (2) having convenient and swift channels of assistance, such as applications, or coordination and the public relations center. Therefore, there was a gap in service quality in the sub-topics. Since SMEs in the service sector still had a problem in facility readiness, especially during the high season, they should have a plan and make preparation beforehand, while also using media and technology for business, such as using online platforms in publicizing tourism and product or service information. They should coordinate in providing speedy assistance and better convenience for customers, as Parasuraman et al. (1994) pointed out that SMEs had to have the capacity to respond to the expectation of customers who should receive quality service.

5.3 Conclusions and Recommendations

5.3.1 Theoretical Contributions and Implications

5.3.1.1 The factors influencing the response of SMEs in the service sector in the digital economy age

The result of the multiple regression analysis showed that all the independent variables in the equation together influenced the likelihood for SMEs in the service sector to respond to opportunities and threats in the age of digital economy (78.7%). The theoretical conclusion and practical finding of each variable are discussed below.

The strategic management factor (Stra): This factor influenced the response of SMEs at the highest level (38.3%). The finding confirmed the research hypothesis. According to the strategic management theory, all enterprises must adjust strategy and management process in response to the changing environment and the new business opportunities (Miles et al., 1995). Especially in the current business environment which is highly competitive, entrepreneurs must give a higher priority to thinking, planning, and strategic management (Harindranath et al., 2008). Strategic management of the organization should correspond well to the environment. Therefore it is necessary to conduct a thorough survey of the environment before formulating a clear strategy for implementation (Analoui & Karami, 2002). The organization may focus more on an innovative strategy rather than an internal cost control strategy in order to respond to the highly competitive environment (Tang & Hull, 2012). Specifically in the age of digital economy, technology is increasingly an important link between buyers and sellers, for it can reduce time, cost, and labor (Unold, 2003, p. 48). Moreover, the technological advancement also affects the form of relationship in the supply chain as the economic activities such as production, commerce, service, and consumption are all related to the technological infrastructure (ASEAN Secretariat, 2018, p. 164). Therefore, entrepreneurs must have knowledge and skills in using technology while also being capable of systematic strategic management in order to gain business opportunities and to prevent cyber threats which can damage the enterprise.

The decision-making process factor (Decis): This factor could influence the response of SMEs at 27.7%. The finding confirmed the hypothesis of the decision-making theory, as Anderson (2014) explains that decision-making based on reasoning takes into consideration achieving the highest goal of an individual or organization, which consists of six elements: (1) identifying the problem clearly, (2) having a clear goal, value, or objective, (3) finding options to reach the goal, (4) analyzing cost and benefit, or strengths and weaknesses of each alternative, (5) comparing the alternatives to find the best one, and (6) deciding which alternative will achieve the highest goal. Similarly, Lorsuwannarat (2015) explains that the executive tends to be reasonable, and therefore plays the major role in organizing the enterprise to suit the external environment in order to ensure survival and effective operation to achieve the organizational goal. The decision-making process involves three factors (Harrison et al., 1997), which are (1) awareness of both negative and positive effects of the external environment on the enterprise, (2) expectation of the society about the enterprise, especially when the enterprise grows, the society's expectation will also grow, and (3) ability to control organization resources to solve problems and obstacles. Moreover, there are some factors which influence the decision of SMEs entrepreneurs in using modern technology in work. According to the study of Limthongchai and Speece (2003), there are four factors: (1) internal and external environment of the business, especially the suitability of technology which will affect the business efficiency most, (2) enterprise's readiness and support from business partners, (3) financial impacts, and (4) efficiency of the production process. Therefore, the trend of response of SMEs in the age of digital economy also depends on the decision-making of SMEs entrepreneurs.

The structural contingency factor (Struc): This factor affected the response of SMEs at 12.2%. And although the size of variable's influence was not high, but it could still confirm the hypothesis of the structural contingency theory formulated by Donaldson (2001) that the enterprise will focus on adjustment in line with the environment, that is, by adjusting its structure to suit the factors in the environment. For example, Raymond (2005), proposes that organization can organize its internal management system and implement advance manufacturing technology to reduce costs while increasing production efficiency, product flexibility, quality of

work, and integration of work among departments. And whenever the enterprise faces increasingly uncertain environment, it is increasingly required to organize its operation system to match the environment. Likewise, Sun and Pan (2011) states that the organization must adjust its structure to suit the market change, which will benefit the organization's effectiveness. However, the practical problem of structural contingency theory is that although executives are aware of the direction of change in the environment, they are not aware of the size of change and therefore cannot adjust the organization structure to completely fit the environment. Therefore, Donaldson (2001) proposes the solution based on the neo-contingency theory that executives may adjust the structure to suit the environment by using a "quasi-fit" approach, which requires adjustment of some part that is only essential for survival. Hence, this study had some limitations due to the inability of SMEs entrepreneurs to identify the size of change in the external environment during the age of digital economy, although they were aware of the direction, especially the necessity to adjust the organization to technological change by using e-Commerce in business and utilizing online communication channels for maximum benefit, etc.

The perception factor (Per): This factor could influence the response of SMEs at 13.3%. And although the size of influence of this factor was small, it could still confirm the hypothesis of the perception theory that an individual could perceive the attitude, emotion, and condition by interpreting the observed behavior or the environment (Bem, 1972). Similarly, an executive perceives and interprets an uncertain situation (Sutcliffe, 1994), which can impact the enterprise. Therefore, the executive's perception of the external environment can highly influence the structural adjustment and internal management of the enterprise in the constantly dynamic environment (Yasai-Ardekani, 1986). What the executive knows and is interested in can significantly influence the enterprise's operation (Waller et al., 1995). Nevertheless, it should be noted that the findings in this study corresponded to those in the study of McAdam and Reid (2001) that the perception of SMEs entrepreneurs in terms of knowledge management and innovative development is still unclear, especially the SMEs in the developing countries that lack the investment in the system and mechanism which supported the enterprise's knowledge management, such as e-Commerce & e-Business. It is due to the perspective of entrepreneurs that their

business does not gain much profit from investment, and the outcome of investment is low in comparison to investment by large-scale enterprises (MacGregor & Kartiwi, 2010). In addition, most entrepreneurs lack knowledge and experience in the application of technology, such as Cloud computing solutions, to generate opportunities (Arendt, 2008; Sutanonpaiboon & Pearson, 2006; Tutunea, 2014). Moreover, most Thai SMEs still cannot access capital resources for technological development, which requires a rather high budget.

The SMEs' Potential Factor (Poten): This factor influenced the response of SMEs at 5.0%, although the size of influence might be very low, but it could still confirm the concept of 8M's proposed by Ferrero diRoccaferrera (1972). He stated that the elements for organizational management competency are (1) man: having employees with technological skills suitable for tasks, (2) money: having adequate capital for business operation, (3) material: having adequate raw material/product and an efficient service system which support the business operation, (4) method/ management: having a clear and systematic process or method, (5) machines: having adequate and efficient equipment/tools/machinery, (6) market: using online social media in an effective way, (7) message: having the process to communicate the value of products or services to customers, and (8) morale: having the system to build the morale of the employees. However, it is necessary for the enterprise to prepare all resources. According to the study of "Competitive strategy, structure and firm performance: A comparison of the resource-based view and the contingency approach" conducted by Pertusa-Ortega et al. (2010), the enterprise needs to adjust the structure of the organization to suit the environment at that time, for restructuring the organization can lead to the efficiency of the operation through competitive strategy. Hence, it is not surprising that the MRA analysis in this study revealed that the SMEs' potential factor (Poten) was highly related to the perception factor (Per), the decision-making process factor (Decis), and the strategic management (Stra).

5.3.1.2 The context of policy implementation and the role of stakeholders in the promotion and development of SMEs in the service sector of community-based tourism under the framework of digital economy development

This part concerns the theoretical conclusion and practical findings, which can be divided into two subtopics: (1) context of policy implementation in promotion and development of service businesses in CBT under the framework of digital economy development, and (2) the stakeholders' role as the local-level actors of CBT development and promotion policy.

1) The context of policy implementation of the promotion and development of SMEs in the service sector of community-based tourism under the framework of digital economy development

The theoretical conclusion about policy implementation is divided into sections: (1) operation mechanism, (2) policy actors, and (3) instruments and approaches.

1.1) Operation mechanism can be divided into three levels: policy level, implementation level, and local level (province and community). The analysis based on the policy implementation theory and the findings of other scholars such as Dellar (1992), Madon, Sahay, and Sudan (2007), and Johnson (2013) revealed that the mechanisms in all the three levels are under the policy implementation, which can be divided into two levels. (1) Macro level includes the operation mechanism at the policy level and the implementation level. And (2) micro level includes the operation mechanism at the local level. The theoretical conclusion is given below (Figure 5.5).

1.1.1) Policy implementation at the macro level involves the operation mechanism at the policy level and at the implementation level and is divided into two steps as follows (Figure 5.5).

The first step is to put the policy into practice in the form of plans, projects, and guidelines (Rabinovitz, Pressman, & Rein, 1976), starting from the cabinet as the political actors that announced the digital policy for CBT, connecting the major cities and distributing income to minor cities. The policy is overseen by the National Tourism Policy Committee, of which the Prime Minister served as the president and the related Ministers served as the committee members.

After that, the CBT policy will be implemented in the form of a sustainable CBT strategic plan. The CBT sub-committee members will be appointed under the strategic plan, with the Permanent Secretary of Ministry of Sports and Tourism as the president and the representatives of related government agencies as the sub-committee members, while the director of DASTA acts as the secretary who coordinates with local network partners (in the province and the community) for the following operations (The National Tourism Policy Committee, 2016b). (1) CBT promotion and development, (2) developing instruments, a process, and tourism administration approaches in accordance with the situation, (3) monitoring, evaluating, and reporting lessons from the process of tourism development, (4) appointing committees to implement CBT development activities as required, and (5) doing other duties as appointed by the National Tourism Policy Committee. So, it is obvious that the implementation of the policy related to CBT requires agencies at the ministry level or department in the central administration to transform the policy into guidelines, plans, and projects so that local agencies can act accordingly.

The second step is to convince the agencies that implement the policy to accept and be willing to put the guidelines, plans, and projects into practice (M. Hill & Hupe, 2009; Lipsky, 2010), which can be done through the CBT sub-committees. The Office of Permanent Secretary of Ministry of Sports and Tourism which is the principal agency from the central administration will transform the policy to be under the control of the provincial office of sports and tourism. However, the acceptance of policy transformation from the central administration depends on many factors, as Chandarasorn (2002) has provided examples such as the characteristics of the target province, the socio-economic environment of the area, and the benefit allocated by the government to local agencies. In general, the allocated benefit for the province will be resources and a budget for action in line with the plans and projects, in which the timeframe and objectives are already set. The more ready the agency, the more it will accept the policy transformation from the central administration. For example, in Nan province, DASTA is an agency responsible for both policy implementation and CBT promotion and development in the area. Therefore, Nan province tended to accept guidelines, plans, and projects related to CBT for policy implementation more than Chiang Rai,

Phayao, and Phrae provinces. However, the policy acceptance of implementation-level and local-level agencies does not guarantee that the policy implementation will be successful, as the success or failure of a policy requires other factors, especially those related to policy implementation at the micro level.

1.1.2) Policy implementation at the micro level

The first step is kickstarted by the local-level agencies, starting with two important activities of seeking policy acceptance, and seeking support from network partners (Lambright, Teich, Carroll, Beardsley, & Dorsey, 1977). Here the Provincial Office of Sports and Tourism as the local actor (the province and the community) directly plays the role of tourism promotion and development. It will consider the suitability of policy contents related to CBT promotion and development and its own mission and objectives before accepting to implement the policy in the form of plans and projects with budgets. Meanwhile, it seeks support from both its organizational members and six groups of external stakeholders identified in the sustainable CBT development strategic plan (DASTA, 2018). The stakeholders include (1) related government agencies, such as the Provincial Office of Sports and Tourism, the Tourism Authority of Thailand (TAT), and local administrative organizations, (2) the private sector, such as entrepreneurs, the Provincial Industry Council, and the Provincial Chamber of Commerce, (3) local people committees, (4) scholars, (5) NGOs, and (6) customers or tourists.

The second step is implementation, starting with the process of adjusting the plans and projects assigned by central administration before actual implementation, in which the implementers may either change their behavior to serve the plans and projects, or adjust the plans and projects to suit their regular tasks. Implementers may also use their personal judgement in working with the target group, which the political sector from the central administration or higher-level agencies cannot oversee (Berman & McLaughlin, 1974; Larsen & Agarwala-Rogers, 1977; Wildavsky & Majone, 1978). Likewise, this study found that each province had its own approach for CBT promotion and development. Moreover, the agencies concerned can adjust the plans and projects assigned by the central administration to handle the local stakeholders' problems and needs. These local stakeholders include the local administrative organization, entrepreneurs, the Provincial Industry Council,

the Provincial Chamber of Commerce, local people committees, NGOs, scholars, and customers or tourists. For example, in using the strategy for upgrading skills and ability of human resources for tourism management (Ministry of Tourism and Sports, 2018a), the local agency or the Provincial Office of Sports and Tourism may change sub-activities of the following projects. (1) The project of developing collaboration among the new generation of entrepreneurs who care about CBT, (2) the project of creating the database of CBT knowledge by using ICT system, and (3) the project of promoting young adults to utilize knowledge and technology for CBT. In spite of the changes, these projects can still serve the objectives of the aforementioned strategy.

The final step is ensuring cohesion and continuity, which involves finding a way for the policy to be accepted and adjusted to become regular tasks of implementers, on which they will work continuously and regularly (Meyers & Vorsanger, 2006). The policy implementers at all levels, especially at the local level play a key role in policy implementation. The study of scholars such as Montes, Moreno, and Morales (2005), Guler and Nerkar (2012), Mulunga and Yazdanifard (2014) stated that cohesion contributed to the success of policy implementation. Nevertheless, Chandarasorn (2002) stated that the success of policy implementation could even be higher if the local agencies could build cohesion and continuity. Therefore, the CBT sub-committee must set a “strategy for developing sustainable, secure, and cohesive administrative mechanism and coordinating among networks” (TAT Review, 2019) in the sustainable CBT strategic plan as the guideline for local agencies to carry out the policy continuously. However, more studies are needed to understand factors which influence cohesion and continuity of local implementers (Mulunga & Yazdanifard, 2014), because each area differs in terms of the policy implementation context, and especially the internal factors such as leadership, loyalty, policy acceptance, motivation, participation, and teamworking, etc.

1.2) Actors are those related to implementation of the policy for promotion and development of service businesses in the CBT group under the framework of digital economy development. Actors from each group differ in terms of expectation and goal, but they are required to interact or work together. Each group has a different level of influence over the result of policy implementation (Bressers, 2004), and there is no one group who can control the whole outcome or the direction

of policy implementation (Chandarasorn, 2002). The actors of policy implementation in this study were then analyzed by following the guidelines given by Wright (1978), which can be divided into three levels: the national policy level, the implementation level, and the local level, as follows.

1.2.1) Actors at the national policy level are politicians or the Cabinet, including the Prime Minister and related ministers responsible for policy implementation. The political sector's role is initiating and proposing a CBT policy under the concept "Digital for CBT: connecting major cities and distributing income to minor cities". These actors set rules, regulations, and budget allocation for policy implementation. As Stover and Johnston (1999) stated that planning and raising enough resources is the factor which influences successful policy implementation.

Promotion, support, and development of tourism industry is under the responsibility of the National Tourism Policy Committee, which consists of Minister of Sports and Tourism and the other ministers as well as representatives of related agencies who act as committee members. These agencies are Ministry of Transportation, Ministry of Natural Resources and Environment, Ministry of Interior, Ministry of Culture, Ministry of Defense, Ministry of Foreign Affairs, Ministry of Commerce, Ministry of Labor, Ministry of Education, Ministry of Public Health, Office of the National Economic and Social Development Council, Bureau of the Budget, Royal Thai Police, the Local Administrative Organization Association of Thailand, the National Municipal League of Thailand, District Administrative Organization Association of Thailand, Thailand Tourism Council, and related specialists (The National Tourism Policy Committee, 2016b).

In policy implementation, the politicians have got authority through the bureaucracy system at the national level, implementation level, and local level. Weber (2009) and S. M. Barrett (2004) comment that the political leader will exercise their power through legal domination, as it is their legal power, while the bureaucratic sector has to follow the leader due to the designated rules and formality. The bureaucracy system consists of all government agencies in the process of policy formulation and the process of policy implementation. And when the process of policy formulation is considered, it is evident that the bureaucracy system

plays an important role. Meltsner (1976), Mintrom (2017), and Weimer and Vining (2017) similarly state that the bureaucracy will gather, analyze, and give the information to the political sector. And generally, the bureaucracy system will designate those responsible for setting plans and projects a long time beforehand, while the politicians have some limitations in terms of information and expertise. Therefore, the politicians must rely on the information from the bureaucracy system as the guidelines for policy formulation. Likewise, the policy of service business promotion and development in CBT in this study was formulated by the politicians who relied on the information about economic development, promotion of service businesses in CBT group, and other related agendas provided by related government agencies that joined the National Tourism Policy Committee, in accordance with section 5 of the National Tourism Policy Act, 2008.

1.2.2) Actors at the implementation level consist of high-level bureaucrats of the agencies responsible for policy implementation appointed by the National Tourism Policy Committee to be a CBT sub-committee. The Permanent Secretary, Ministry of Sports and Tourism, is the president, the director of DASTA is the first vice president, and Deputy director of Tourism Department is the second vice president (The National Tourism Policy Committee, 2016b).

The director of DASTA is also appointed to be a sub-committee member and secretary, and the representative of the Office of Permanent Secretary, Ministry of Sports and Tourism to be a sub-committee member and assistant secretary (The National Tourism Policy Committee, 2016b).

The CBT sub-committee consists of related agencies in the bureaucracy system and has an important role in policy implementation, as the government agencies have no problem about competitors and their operation does not focus on making profits. So, they have no concern about the profit loss as do the private sector. Furthermore, policy implementation is the mission of agencies in the bureaucracy system (Chandarasorn, 2002). In this study, the agency which is mainly responsible for CBT policy implementation is the Office of Permanent Secretary, Ministry of Sports and Tourism. Its authority and duties include (1) implementing the CBT development policy as assigned by the political sector, (2) formulating and developing the national tourism development plan, (3) acting as the center of

coordination and supporting policy implementation in all sectors, (4) surveying and collecting information as well as monitoring the trend and situation in tourism, and (5) analyzing the economic condition and tourism as well as publicizing tourism statistics (The National Tourism Policy Committee, 2016b). Other government agencies cannot intervene with their responsibility, although they might be supporting agencies of policy implementation under the digital economy development framework.

1.2.3) Actors at the local level are the stakeholders of CBT development policy implementation at the provincial and community level. This group of actors play a large role in the success or failure of service business promotion and development in the CBT group, especially the government agencies that serve as the implementation mechanism, such as the Provincial Office of Sports and Tourism, the Tourism Authority of Thailand (TAT), and the local administrative organizations. Similarly, Lipsky (2010); Meyers and Vorsanger (2006) comment that the street-level bureaucrats' behaviors are influenced by (1) the context of the agency, such as the organizational goal, rules and regulations, budget, and time for operation, and (2) the level of policy acceptance and the bureaucrats' understanding of policy implementation with the target group.

When the procedure of the policy implementation by each agency was considered, it was found that there were three levels of actors: (1) high-level executives or the leaders who could bring about smoothness or obstacles to policy implementation as they could order or control the operation of bureaucrats under their authority (Lipsky, 2010), (2) project managers or the mid-level executives who were mediators between the high-level executives and the project-level actors. They could put support and intention of the high-level executives into practice as well as be the operational center of the bureaucrats, and (3) street-level bureaucrats or those who carried out the project plan and interacted closely with the target group. This group of actors was independent in using their own discretion at work (Lipsky, 2010; Meyers & Vorsanger, 2006; Tummers & Bekkers, 2014), in contrast with their leaders who could not monitor and control the operation all the time. Therefore, scholars such as Berman and McLaughlin (1974), Larsen and Agarwala-Rogers (1977), Wildavsky and Majone (1978) conclude that the street-level bureaucrats generally interpret the rules, regulations, or policy guidelines to suit their mission or

behavior. And in the case in which the policy lack clarity, there can be problems in policy implementation.

In addition, local-level policy implementation also relies on other actors than those in the government sector, such as the policy clients or stakeholders of policy implementation who can be individuals, groups, or organizations. These stakeholders will closely contact street-level bureaucrats (Palumbo, Maynard-Moody, & Wright, 1984). And once the bureaucrats realize the importance of coordination and requests from policy stakeholders, they may be willing to accept the policy and implement it successfully (Meyers, Vorsanger, Peters, & Pierre, 2007; Sandfort, 2000). In this study the direct stakeholders of this policy in promotion and development of service businesses consisted of SMEs entrepreneurs in the service sector of CBT, who could be in the form of juristic person, individual, and community enterprise. Once the stakeholders could unite, they would have more power to make a bargain with the political sector and the bureaucratic system, as the politicians wanted votes from the people while the latter could demand the responsibility of the bureaucrats that implement the policy, to provide continuous budget support, or improve activities which could further benefit them (Cohen, Benish, & Shamriz-Ilouz, 2016). Therefore, policy clients could influence policy implementation as well. And it should be noted that the process of policy implementation does not only involve giving or obeying the order, but also the interaction at an equal level, including bargaining and mutual benefiting of each partner. The concept is supported by S. Barrett and Hill (1984), and Brinkerhoff and Crosby (2002) who conclude that policy implementation involves both administrative and political interaction at the same time.

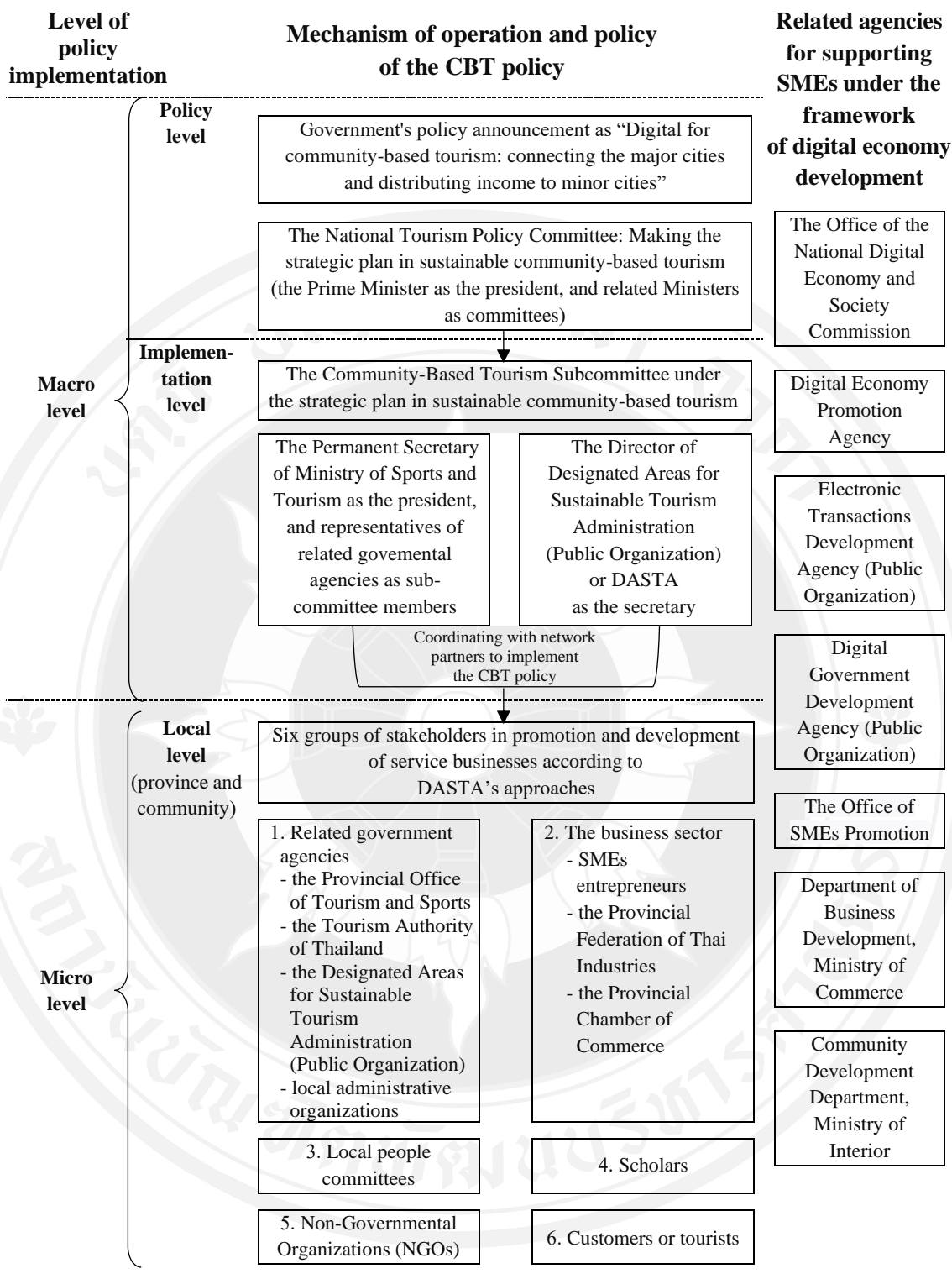


Figure 5.5 Level of Policy Implementation, Mechanism of Operation, Actors, and Related Agencies for Supporting SMEs under the Framework of Digital Economy Development

1.3) Instruments and approaches

The policy instrument of the local-level agencies stems from the results of implementing the national policy at the street level and the local level in the form of plans and projects (Howlett, 1991; Lowi, 1972) which are in the annual action plan of each agency in order to reach the strategic objectives of the agency and the goal of the national policy, respectively. The instruments and approaches of service business promotion and development in the CBT group under the digital economy development framework can be concluded as follows (Table 5.5).

Table 5.5 Instruments and Approaches to Promote and Develop SMEs in the Service Sector of Community-Based Tourism

Policy implementation	Operation mechanism and actors	Instruments	Approaches
Macro level	Policy level By the National Tourism Policy Committee	Policy of digital for CBT: connecting major cities and distributing income to minor cities	Transformation of the CBT policy to implementation through sustainable CBT strategic plans and the appointment of CBT sub-committee responsible for policy implementation
	Implementation level By CBT sub-committee	Sustainable CBT strategy and the Criteria for Thailand's Community-Based Tourism	Using the following approaches: 1. Promotion and development of CBT
		Development in five dimensions: 1. Sustainable management 2. Distribution of benefit to local	2. Development of instruments, processes, and tourism management guidelines 3. Monitoring, evaluation, and conclusion of the

Policy implementation	Operation mechanism and actors	Instruments	Approaches
<p>Micro level</p> <p>Local level: The Provincial Office of Sports and Tourisms, supporting agencies and stakeholders:</p> <p>1. Government agencies such as: TAT, DASTA and LAO</p> <p>2. The private sector: entrepreneurs, the</p>	<p>community and society for better quality of life</p> <p>3. Conservation and promotion of cultural heritage</p> <p>4. Sustainable and systematic natural resources and environmental management</p> <p>5. Service and safety Projects in service business promotion and development under the digital economy</p> <p>development framework of the sustainable CBT strategic plan</p> <p>Project examples:</p> <p>1. Collaboration development among the new generation of entrepreneurs who care about CBT development</p> <p>2. Creating the database of CBT knowledge through the ICT system</p>	<p>lessons learned in the tourism development process</p> <p>4. Appointment of the CBT development committee</p> <p>5. Other missions as assigned by the National Tourism Policy Committee</p>	<p>1. The local agencies are legally authorized and supported with a budget in accordance with the action plan of each agency.</p> <p>2. Carrying out the plans set prior to the project implementation, with executives and committees overseeing the operation to ensure the progress and success of the project and the strategic plan.</p> <p>3. Promotion of the sustainable CBT development process to ensure continuity of</p>

Policy implementation	Operation mechanism and actors	Instruments	Approaches
	Provincial Chamber of Commerce, and the Provincial Federation of Thai Industries 3. Local people committees 4. Scholars 5. NGOs 6. Customers or tourists	3. Training of ICT skills to promote CBT 4. Creating a website to spread CBT information 5. Online marketing for CBT 6. CBT Information Systems Development 7. Development of network of the government sector, the private sector, and the community	planning, action, evaluation, and improvement

2) The Role of stakeholders as the local-level actors of the CBT promotion and development policy

In this study, the stakeholders or the local-level actors in policy implementation consisted of six groups from the private sector, related government agencies, local people committees, scholars, NGOs, and customers or tourists, all of which are related to the promotion and development of service businesses of CBT. The concept of “Collaborative public management (CPM)” which is part of the “Collaborative Governance” concept is defined by Emerson, Nabatchi, and Balogh (2012) as the process or structure of public policy decision and participatory administration across the boundaries or administrative levels, with the collaboration of organizations from the government sector, the private sector, and the people who join the policy implementation. The term “Collaborative Public Management” is further explained in the same direction by Kapucu, Yuldashev, and Bakiev (2009) as the extension from the idea of New Public Management during the changing trend of globalization, as the technological development has brought forth more complexities in society. This idea is also influenced by the concept of Network Management which stated that the form of collaboration of the government and the society varies, with no official network identification. It is also influenced by the concept of civil participatory or the networking among organizations from all sectors specifically to organize public activities mostly at the community or the local level.

It can be said that the Collaborative Public Management is the process of horizontal collaboration among the diverse groups, organizations, or institutions to ensure the success of the same policy. This form of management is rather flexible, and the form of interactions among actors will be mutually dependent, especially in the local-level collaboration process (Agranoff, 2003; Bingham, 2008; Kapucu et al., 2009). Therefore, policy implementation and problem-solving can be done easily and more swiftly, instead of having to wait for the one-way control of the bureaucracy system’s mechanism.

In this study, it was found that the collaborative process in service business promotion and development in the CBT group among the six groups of stakeholders aimed to reach the goals clarified by Huxham, Vangen, and Osborne (2009) as relevance and collaboration substances. That is, the groups or organizations

all have missions related to the promotion and development of service businesses of CBT, and the main host of the collaboration is the Designated Areas for Sustainable Tourism Administration. The collaboration is horizontal at the local level rather than vertical at the policy level. The collaboration substances can be clarified into four aspects (DASTA, 2018) as follows (Figure 5.6).

The first aspect was co-creation community-based approach: Five groups of the stakeholders from the business sector, government agencies, local people committees, scholars, and NGOs participated in the implementation of two strategies: (1) human resources development related to tourism, especially the local community members who should be able to manage their own CBT, and (2) strengthening the network by developing community potential to link and mutually share resources, knowledge, and experience to become a strong network in the long term.

The second aspect was value adding: Six groups of the stakeholders from the business sector, government agencies, local people committees, scholars, NGOs, and tourists, all have the role in the implementation of the strategy for adding value to local resources by discovering authentic and unique resources of the community and presenting them by linking to tourism.

The third aspect was supply-based marketing or green marketing: Five groups of the stakeholders from the business sector, government agencies, local people committees, scholars, and tourists had the role in the implementation of three strategies, including building competitiveness in response to tourists' needs while maintaining the local identity, conducting suitable marketing and seeking an appropriate tourist market for each community, and getting entrepreneurs in the service sector to present appropriate tourism activities to add value for the tourism route.

The last aspect was the participation process and the happiness index: Six groups of the stakeholders from the business sector, government agencies, local people committee, scholars, NGOs, and tourists, all played the role in the participation process and happiness measurement of community people and tourists. As the indicators of success from CBT not only include the increasing income or the

increasing number of tourists, but also the well-being in all dimensions related to tourism and the process of mutual sharing and learning.

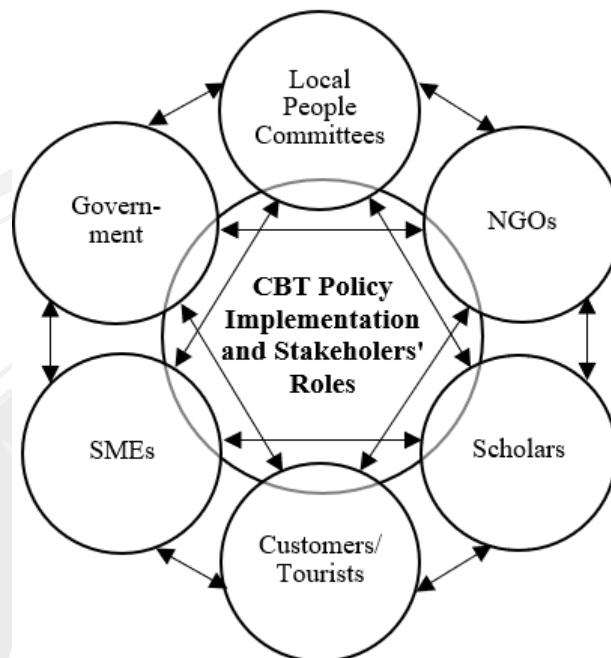


Figure 5.6 Stakeholders as the Local-Level Actors in the Participation Process of the CBT Promotion and Development

Regarding the factors which influence the implementation of Collaborative Management concept, the researcher reviewed literature in this field during the past decade and found that scholars such as Huxham, Vangen, Huxham, and Eden (2000), Booher (2004), Innes, Connick, Kaplan, and Booher (2006), Ansell and Gash (2008), O'Flynn and Wanna (2008) Abbott (2012), Donahue and Zeckhauser (2012), and Tantrajin (2020) pointed out the factors influencing the success or failure of the implementation of Collaborative Management concept, which could be applied in the promotion and development of service businesses of CBT. The researcher thus divided these factors in three levels as follows.

The policy-level factors were those which supported the collaborative process among the national-level actors that concerned law, policy, regulations, design of the organizational structure or the form of relationship among

the stakeholders, motivation, resources allocation such as budget, manpower, knowledge, database, and ICT, etc.

The implementation-level factors were related to the interaction among the local-level actors (community) who participated in the collaboration process for building awareness and understanding, creating trust, mutual agreement, mutual dependency, legitimacy of operation, length of time for developing relationship among the members, and the impacts of the collaboration process which made it necessary for the members to adjust themselves, etc.

The individual-level factors indicated the individual characteristics, such as leadership, language, culture, group's history, legitimate authority, and social influence, etc. of the representatives of different groups, agencies, or institutions participated in the collaboration process.

When the opinions of all the six stakeholders (Figure 5.6) on the expected roles in driving the sustainable community tourism were considered, it could be concluded that each group of the stakeholders has expectations from each other as follows.

Expectation of all the stakeholders: Participation in sustainable and continuous CBT development, with emphasis on the balance of the economy, the society, the culture, and the environment.

Expectation of the entrepreneurs: Willingness to learn, being creative, being sincere to customers, and striving to develop quality products and services. And the community with high tourism potential should form a community enterprise.

Expectation of the government agencies: (1) thorough and complete dissemination of information in economic and tourism development, (2) creating social awareness about the CBT principle, (3) continuously conducting CBT development projects, by providing consultation and training on tourism management skills for the community, and (4) preparation of economic commercial, and investment infrastructure at the provincial level, to be ready for the long-term growth of tourism industry.

The stakeholders' roles is one of the three elements of the policy system under the policy analysis framework by Dunn (2015), while the other

two elements are the policy environment and the public policy. That is, the government formulated CBT development based on the realization that business in the service sector of CBT could help to stimulate the national economic growth and to distribute income to the community directly in the form of community-based tourism (CBT). Meanwhile, CBT also focused on maintaining the identity of each community with emphasis on social and environmental sustainability plus the participation from community members. CBT not only responded to the need of tourists but also developed the capacity of community members without destroying local lifestyles and resources. And it was certain that when the government implemented the policy, the implementation would involve many groups of stakeholders who participated in the CBT promotion and development policy implementation in line with the mission and specialization of each group.

5.3.1.3 The competitiveness of community - based tourism and SMEs' situation in community - based tourism attractions

The findings from the competitiveness analysis of CBT based on Porter's five forces model (Porter, 2004) could be concluded as follows.

Table 5.6 The competitiveness analysis of the CBT based on the five forces model

Five Forces	Implications
Force I : Rivalry of community - based tourism	
1) Numerous competitors	Currently, many communities are aware of tourism management as a result of the government's policy in tourism promotion and development. However, these communities share similar potential and uniqueness of tourism destinations and therefore the CBT industry is highly competitive.
2) Slow industry	According to the government policy which encourages the community to develop tourism in the quantitative way, in other words, the increase of tourist attractions in the community, and in the qualitative way; that is, expecting the community to manage tourism in accordance with the "Best Practice". Thus, the market becomes increasingly competitive, and the market size of each community is decreased.

Five Forces	Implications
3) High fixed of storage costs	Currently it is easy for businesses in the service sector of CBT industry to emerge. Hence, similar types of business exist throughout the CBT. And once the supply in CBT industry increases too much, it leads to the price-cutting or setting the price below the market average price which does not reflect the real cost.
4) Lack of differentiation of switch costs	Businesses in the service sector of each CBT attraction offer similar products and services, so the customers have the power to make decisions based on price comparison, except for the tourism service by the community enterprise, which set the price per person, depending on the number of visitors.
5) Capacity augmented in large increment	Enterprises which increase too much production capacity will lead to oversupply and price-cutting. This situation often occurs in agricultural product and food businesses, in which entrepreneurs have to cut the price or set the price below the market average price to compete for market share.
6) Diverse competitors	Due to the current behavior of customers, the online market competition is increasing. Hence, SMEs in the service sector of CBT must adjust their operation strategies and focusing more on online marketing through channels.
7) High strategic stakes	In general, tourism industry in the upper northern provinces group 2 is rather highly competitive, as the businesses in service sector of community have learned and imitated the best practice from neighboring area and then applied in their own area. Once such a process of learning and imitating becomes widespread, it can help to raise the level of tourism management in the provincial group.
8) High exit barriers	As for businesses with high investment, withdrawal is not an option. Thus, once the business operator enters the industry, he must fight for survival in the highly competitive condition. Likewise, the hotel and restaurant business group in CBT have high investment potential and can easily access support from the government. And the support is often given to the same cluster which makes it hard to withdraw from the industry.

Five Forces	Implications
Force II: Threat of new entrants	
1) Economy of scales	<p>Entrepreneurs with high economy of scales are in the advantage position compared to those with low economy of scales. And hotel and restaurant entrepreneurs in CBT are those with potential for investment or those purchasing raw materials for the manufacturing of products and services in a large quantity. Furthermore, they have a mechanism to seek new customers from the government agencies with a large scale of purchasing power. Meanwhile, the group of community enterprises aim to serve a large group of visitors with educational purpose and seek to produce community products in a large quantity.</p>
2) Product differentiation	<p>Entrepreneurs must develop and design products and services different from others to serve the customers' demand. However, this process is not yet evident within the CBT industry. Therefore, related government agencies will increasingly support entrepreneurs in terms of creativity and development for product and service related to the community identity. These agencies include the Provincial Federation of Thai Industries, DASTA, TAT, the local administrative organization, and Thailand Industrial design Center (Thai-IDC).</p>
3) Capital requirement	<p>In many CBTs, new SMEs have emerged and offered similar products and services, such as food, accommodation, fashion, agricultural products, souvenirs, and OTOP products. Therefore, the capital required for entering the service sector of CBT industry is not an obstacle for the emergence of new SMEs.</p>
4) Switching costs	<p>Products and services from the community enterprise in CBT tend to reflect the local context of each community. Most community enterprises try to increase the product standard to serve the customers' need. As a result, tourists are rather satisfied with the products or services of the community. On the other hand, it reflects that the cost of switching community products or services among the target group is rather low, as the CBT target group is already</p>

Five Forces	Implications
	willing to purchase from the community. On the contrary, the target group's switching cost in products and services from the private sector is rather high, as it depends on quality and standard of products and services, and the market mechanism.
5) Access to distribution channels	Entrepreneurs without distribution channels or those who can distribute products in fewer areas comparing to their competitors will be in the disadvantage position. Therefore, most SMEs entrepreneurs in the service sector of CBT have to increase and vary their product distribution channels, such as distribution points in the community, at the community enterprise, and on the online market.
6) Cost disadvantages independent of scale	Most entrepreneurs in CBT industry are those with skills and experiences in tourism service. They also have business partners who can join the development of products and tourism services in CBT. Therefore, entrepreneurs who entered the CBT industry first will have a better opportunity and more experience to develop and manage cost effectively before new SMEs can do so.
7) Government policy	The government has a policy in CBT promotion and development with the goal of boosting grassroots economy, as CBT development will generate employment, income, and income distribution to community. Therefore, it is certain that SMEs in the service sector will receive support and promotion in accordance with the direction of tourism industry development. The agencies that directly provide support for SMEs include the SME Support & Rescue Center (SSRC), Industry Transformation Center (ITC), Thailand Industrial design Center (Thai-IDC), Small and Medium Enterprise Development Bank of Thailand (SME Bank), and Office of Small and Medium Enterprises Promotion (OSMEP).

Five Forces	Implications
Force III: Threat of substitute	<p>The emergence of new products which can replace existing products may result in increasing competition. Likewise, in the CBT industry, if any community has higher potential such as a unique destination, a variety of tourism promotion activities, availability of choices of accommodation, or similar products with lower prices, this can increase competition in CBT industry, thus, affecting service businesses in CBT. Also, they cannot avoid increasing competition, as there is an opportunity for other communities to imitate and develop tourism better than the existing CBT. Furthermore, the government's policy of CBT promotion and development will continue, the existing CBT will be promoted, and new CBTs will emerge.</p>
Force IV: Bargaining power of suppliers	<p>Suppliers in CBT all have capacity and bargaining power to deal with SMEs, as suppliers can help support SMEs operation. For example, SMEs in businesses such as tour companies will bring tourists to use service and generate income in CBT in a large number at one time, while suppliers in the agricultural sector will provide raw materials for SMEs to manufacture products and render services. However, their relationship tends to be mutually dependent. On the other hand, the labor group's involvement in CBT depends on the season, as they can return to agricultural careers in a low season.</p>
Force V: Bargaining power of customers	<p>Generally, the main target group of the CBT is tourists who visit for educational purpose, a family group, and a friend group. Prior to visiting the tourist attractions, these tourists will study the CBT information from online social media and compare the quality of products and services as commented by tourists who previously visited the place. Therefore, CBT tourists have rather high bargaining power. Moreover, the CBT has some limitations in that</p>

Five Forces	Implications
	it lacks flexibility in tourism organization. Tourists must always contact the community committee prior to their visit and therefore they can bargain the price.

In Table 5.6, it is obvious that the analysis of competition in CBT industry based on Porter's five forces model could help to see the tourists' destinations better, and this could lead to setting the sight direction of tourism market development at the local level in order to more competitive. The analysis also helped to see the restrictions and trend of investment in tourism for better planning and preparation of contents and service structure to suit the trend of investment (Dobrivojevic, 2013; C. W. Hill et al., 2014). This finding corresponded to the approach of SMEs promotion and development, under the Office of Small and Medium Enterprise Promotion (OSMEP, 2018b), the major agency in the competitiveness analysis of Thai tourism industry. OSMEP also employed Porter's five forces model as the tool for analysis.

5.3.1.4 The gap of service quality of SMEs in the service sector in community - based tourism attractions

The results of the analysis of the gap in service quality of service businesses in CBT were divided into three groups based on the levels of opinion of tourists or customers who used the service of SMEs as follows (Table 5.7).

The first group was the level of actual perception. The actual perception was lower than the expectation, and thus the improvement of service was needed in terms of assurance of the standard traffic system and structure, surveillance cameras, security officers, clear signs of rules or service conditions, and standard facilities.

The second group was the level of actual perception that was the same as the expectation, and therefore some aspects of service needed to be proved. They were (1) reliability of SMEs, public relations channels, and technology to communicate with customers, (2) tangibles of service such as shuttle buses and other facilities, including adequacy of parking spaces, meeting points, and Wi-Fi, and (3) responsiveness,

especially adequacy of facilities and the existence of fast and convenience channels of assistance, such as using applications.

The third group was the level of actual perception that was the same as the expectation. The good quality of service should be maintained in terms of empathy, including friendliness, willingness to provide suggestions, clear communication, caring for the needs of customers, and willingness to listen to criticism.

Table 5.7 Summary of the Analytical Results of the Gap of Service Quality of SMEs in the Service Sector

(n=400)

Dimensions	Level of Opinion		The Results of the Gap of Service Quality
	Expectation	Perception	
1 Assurance	High (\bar{x} =3.60, SD=0.85)	Medium (\bar{x} =3.27, SD=0.75)	Perception < Expectation (Both the overall and sub topics)
Reliability	High (\bar{x} =3.65, SD=0.77)	High (\bar{x} =3.42, SD=0.64)	Perception = Expectation (Note: There is required to improve some part of service)
2 Tangibles	High (\bar{x} =3.73, SD=0.82)	High (\bar{x} =3.44, SD=0.70)	
Responsiveness	High (\bar{x} =3.76, SD=0.84)	High (\bar{x} =3.42, SD=0.75)	Perception = Expectation (Both the overall and sub topics)
3 Empathy	High (\bar{x} =3.81, SD=0.82)	High (\bar{x} =3.56, SD=0.75)	

According to the above findings, it can be said that the SMEs in the service sector of CBT should check their readiness and evaluate the results of the operation in order to be aware of the problems and to see if they are aligned with the service standard. Then the problems should be prioritized in order to use their limited resources effectively. Furthermore, if the entrepreneurs are aware of customers expectation, they can prepare services that serve the customers' needs and can help them understand different characteristics of quality standard service. Should there be any gap in service quality, the entrepreneurs will then be able to find a solution swiftly. (Y.-C. Lee et al., 2016) Nevertheless, although the entrepreneurs are aware of

the gap in service quality and already attempt to close the gap, they cannot be sure that the customers will be willing to pay more for a better-quality service (Ham et al., 2003; Zeithaml, Berry, & Parasuraman, 1996). Thus, the entrepreneurs may make improvement of service quality based on cost-effectiveness, or on the survey of customers' opinion to see whether they will be willing to pay more for better quality, or whether the price can be raised. If so, which level of price is suitable?

5.3.1.5 Conclusion

The theoretical contributions of the factors which together influenced the Thai SMEs' response in the digital economy age, can be summarized as follows.

The strategic management factor is the variable that confirms the assumption of the strategic management theory. SMEs' entrepreneurs in the CBT need to adjust their strategies and management process to the changing environment in order to get the new business opportunity (Miles et al., 1995), especially in the highly competitive business environment. Therefore, it is necessary for SMEs' entrepreneurs to give a higher priority to planning and strategic management (Harindranath et al., 2008).

The decision-making process factor is the variable that confirms the assumption of the decision-making theory proposed by Anderson (2014) that a logical decision requires consideration of how to achieve the highest goal of an individual or organizations. Likewise, Lorsuwannarat (2015) explains that the executives tend to make decisions based on reasoning, as they have a major role in organization management to suit the external environment to ensure the growth and effective operation of the organization.

The structural contingency factor is the variable that confirms the assumption of the structural contingency theory. In this study, it was found that the majority of SMEs had structural flexibility and decentralized power among departments. They focused on teamwork, informal organizational culture, sharing opinions with each other, and operation suitable for the external environment. The organizational management was in line with the structural contingency theory, which could be called as organic organization or living organization, Donaldson (2001) and Raymond (2005) explains that an organization will adjust itself to fit its environment by adjusting its structure to cope with the factors in the environment at the time. It also

organizes its internal management and utilizes high-level production technology to reduce costs while increasing production efficiency, flexibility, work quality, and boosting integration among departments.

The perception factor is the variable that confirms the assumption of the perception theory. An individual can perceive the attitude, emotion, and condition by interpreting the observed behavior or environment (Bem, 1972; Sutcliffe, 1994; Yasai-Ardekani, 1986). As well SMEs' entrepreneurs perceive and interpret the uncertain environment, which can affect their business. Therefore, the entrepreneurs' perception of the external environment can highly influence structural reorganization and internal administration to ensure adjustment and survival in the constantly dynamic environment.

The SMEs' potential factor is the variable that confirms the assumption of the concept of 8M's proposed by Ferrero diRoccaferrera (1972). He states that each organization needs to have sufficient resources in both quality and quantity. Such resources are man, money, material, method/management, machine, market, message, and morale to reach the organization's goal of management among the ever-changing environment. Especially, in the digital economy age, SMEs' entrepreneurs need to apply new technologies, information, and online platforms to grow increase their competitiveness and to support decision making in choosing the most appropriate strategy for their organizations.

Although the five independent variables could together influence the level of responses by SMEs to opportunities and threats in the digital economy age, it is more important to find the way to ensure that SMEs in the service sector of CBT, which are the primary economic backbone of the country, can survive and grow securely under both internal and external pressure, such as technological change, conditions to access loans from financial institutions, fiercely competitive marketing, natural disasters, and the COVID-19 pandemic. Therefore, the researcher studied and analyzed the context of the government's policy implementation in promotion and development of SMEs in order to understand the policy, mechanism, actors, roles of stakeholders, instruments, and approaches so that Thai SMEs in the service sector could efficiently respond to economic opportunities and technological threats. The findings were summarized below.

Operational mechanism was divided into three levels: national policy, implementation, and local (province and community) levels. When the researcher analyzed the mechanism based on the theory of policy implementation and reviewed the studies conducted scholars such as Dellar (1992), Madon et al. (2007), and Johnson (2013), it was found that the three levels of mechanism could actually be divided into two levels: (1) the macro level which involved the mechanism at the national policy level and at the implementation level. The macro level implementation consisted of two steps. Firstly, the policy had to be transformed into plans, projects, and guidelines (Rabinovitz et al., 1976). Secondly, the agencies at the implementation level had to be convinced to accept and willing to implement the guidelines, plans, and projects (M. Hill & Hupe, 2009; Lipsky, 2010). And (2) the micro level involved the mechanism at the local level and consisted of three steps. The first stop was the “Kickstarting”. The local agencies had organized two important activities: considering whether to accept the policy and seeking support from network partners (Lambright et al., 1977). The second step was the “Implementation”. This step involved the process of adjusting the plans and project taken from the central administration and materializing them. Here the implementers could either change their behavior to fit the plans and projects or adjust the plans and projects to suit the characteristics of their regular tasks. The implementers could use their personal judgement in working together with the target groups, which the political sector or the higher-level agencies could not oversee (Berman & McLaughlin, 1974; Larsen & Agarwala-Rogers, 1977; Wildavsky & Majone, 1978). And finally, “Ensuring cohesion and continuity” involved finding the way for the policy to be accepted and adjusted into the regular and continuous mission of the implementers (Meyers & Vorsanger, 2006).

The policy actors were those related to the implementation of policy to promote and develop service businesses in CBT group under the framework of digital economy adjustment. These actors differed in terms of expectation and goals. However, they were required to interact or collaborate. The role and influence of each group over the outcome of policy implementation also differed (Bressers, 2004), with no individual partner being able to control the whole results or the direction of policy implementation (Chandarasorn, 2002). Hence, the actors could be divided in three levels: (1) National policy level or the political sector or the Cabinet. This level

encompassed the prime minister and related ministers responsible for policy implementation. The political sector had a role in initiating and proposing the CBT policy under the concept “digital for CBT: connecting the major cities and distributing income to minor cities” as well as the establishment of rules and regulations and budget allocation for policy implementation. (2) Implementation level referred to high-level bureaucrats of the agencies mainly responsible for policy implementation who were appointed by the National Tourism Policy committee. And (3) Local level referred to the stakeholders in CBT development, especially in the province and the community. This group of actors had an important role in the success and failure of policy implementation, especially the government agencies which were the government operation mechanism such as the Provincial Office of Tourism and Sports, Tourism Authority of Thailand, and the local administrative organization. In addition, there are other supporting agencies under the framework of digital economy development, such as the Office of the National Digital Economy and Society Commission, Digital Economy Promotion Agency, Electronic Transactions Development Agency (Public Organization), Digital Government Development Agency (Public Organization), The Office of SMEs Promotion, Department of Business Development, and Department of Community Development, etc.

Instruments and approaches consisted of plans and projects to develop service businesses in CBT under the framework of digital economy development formulated by the local government agencies, which is also the result of transforming the national policy into implementation (Howlett, 1991; Lowi, 1972) under the annual action plan of the agency. The approaches consist of (1) delegating legal authority to the local agencies along with supporting budgets to carry out the action plan, (2) following the plans set prior to the project overseen by the executives and the committee to ensure the progress and success of the project, and (3) promoting the sustainable CBT development process from planning, action, and evaluation to improvement.

The role of local stakeholders or the local-level actors in policy implementation. There were six groups of stakeholders: the business sector, related government agencies, local people committee, scholars, NGOs, and customers or tourists. All of them played the role in promotion and development of service

businesses in CBT in accordance with the concept of Collaborative Public Management (CPM), which is part of Collaborative Governance (Emerson et al., 2012). It is horizontal collaboration among the diverse groups, organizations, and institutions to implement the same policy with rather high flexibility and mutually dependent interaction among the actors, especially at the community level (Agranoff, 2003; Bingham, 2008; Kapucu et al., 2009). The researcher divided the goal of collaboration based on the idea of Huxham et al. (2009) who divided the goal in terms of relevance and substance of collaboration. It was found that the collaborative partners all had the role related to promotion and development of service businesses in CBT. The agency that was mainly responsible for the horizontal collaboration with related agencies at the local level was the Designated Areas for Sustainable Tourism Administration. The essence of collaboration were divided into four dimensions (DASTA, 2018): (1) developing human resources, the community, and the network to ensure the community's capability to link each other and mutually exchange resources, knowledge, and experiences as a strong network, (2) increasing the value of local resources by seeking the original resources of the community and link them to tourism, (3) developing marketing techniques of each community to serve the tourists' demand and encouraging the entrepreneurs to arrange tourism activities together in order to add value to the tourism route, and (4) participation of all sectors through the process of mutual knowledge exchange.

After the government announced the policy of promotion and development for service businesses in CBT in 2016, the CBT industry of Thailand grew stronger with higher competency, as evidenced by the result of competency analysis of CBT based on Porter's five forces model (Porter, 2004). The findings could be itemized as follows. (1) Rivalry of community-based tourism. It was found that there were many emerging CBT and SMEs in the service sector, but when the supply in the industry became too large, the market became highly competitive. Therefore, SMEs with larger capital who could adjust their marketing strategy well would have a better chance to survive and grow. (2) Threat of new entrants. It was found that in many CBT attractions, there were a large number of emerging SMEs that provided similar products and services. And SMEs with higher bargaining power needed have skills and experiences in service businesses, business alliance, unique

products, higher economy of scale, low cost of switching among their customers, diverse distribution channels, and access to continuous support from the government sector. (3) Threat of substitute. It was found that there was an opportunity for more and more new tourist attractions to emerge, as communities tended to imitate and develop new attractions to compete with the existing attractions. Moreover, the tourism promotion policy of the government tended to continue with the support for both the existing and newly emerging tourist attractions. (4) Bargaining power of suppliers. It was found that most bargaining power was in the form of mutual dependency, such as tour agency, agricultural producers, and labor in the service sector. And (5) bargaining power of customers. It was found that most customers studied and compared the quality of products and services prior to their trip and thus had rather high bargaining power. Meanwhile, the tourism management by the community was not flexible as prior contact with community was required before every trip.

The CBT industry has been growing continuously during the past five years. When the researcher surveyed the opinions of customers on the quality of services, it was found that most service businesses still had the gap of quality in terms of customers' confidence. The survey result revealed that customers trust the service only at a moderate level, which was lower than their expectation, which was at a high level, especially in terms of the readiness of the system and traffic infrastructure, close-circuited cameras, security staff, signs with details of service conditions, and adequacy and quality of facilities. Therefore, the entrepreneurs should solve these problems as soon as possible while also regularly reviewing the readiness and adequacy of facilities (Y.-C. Lee et al., 2016) in order to increase customers' trust and satisfaction. However, although the entrepreneurs had already improved the quality of service, it could not guarantee that customers would be willing to increase their payment for better-quality services (Ham et al., 2003; Zeithaml et al., 1996). Therefore, the entrepreneurs should consider the service quality improvement based on the return on investment first.

5.3.2 Recommendations of the Study

The results of the study of problems, obstacles, and suggestions from the stakeholders in the promotion and development of SMEs in the service sector of CBT in the upper northern provinces group 2, the recommendations are divided into two parts: (1) policy recommendations and (2) recommendation on SMEs' operation, which will help the SMEs in the service sector to adjust themselves to grow and survive in the current of technological change in the age of digital economy.

5.3.2.1 Policy recommendations: Recommendations were made in four dimensions as follows.

1) Digital technology skills: Since SME entrepreneurs lack knowledge and skills to implement digital technology for the business operation, the government should focus on promoting them to adjust themselves by using technology to increase their competitiveness. It should set up a learning center for digital technology usage, especially for the entrepreneurs, or coordinate with network partners to provide training on digital technology and online commerce for them. There should be Free Wi-Fi provision around CBT, too.

2) Finance and investment: Due to the liquidity problem, the entrepreneurs cannot invest more, and they are also blacklisted because of NPL that prevents them from accessing financial resources. Besides, they do not have enough capacity to invest in high-cost digital technology. Therefore, the government should increase their access to financial sources through the government mechanism and agencies with related missions, while seeking to improve digital technology infrastructure, decreasing service charges, and formulating the policy of tax deduction in some items for SMEs in the service sector.

3) Economy, society, and environment: There are now few tourists or customers due to the economic depression, the COVID-19 pandemic, and natural disasters, which have directly impact the income of SMEs. Therefore, the government should focus on implementing the policy to revitalize the national economy by promoting all forms of marketing for tourism within the country.

4) Supporting system and mechanism from the government: Due to the delayed and discontinued support from government, and the restrictions of the budget regulations of related government agencies which prevent integration of

the budgets and missions, SMEs promotion and development by the government sector is delayed and cannot cope with the business condition which is changing very fast. Moreover, the access system to the government database is still complex and some data are unclear, as they cannot be analyzed to set a marketing plan. Therefore, the government should not only have a clear and systematic SMEs promotion and development policy but should also reduce the work process for giving faster support to handle the situation in time. The government should also focus on developing the skills of government officials in SMEs promotion and development through digital technology.

5.3.2.2 Recommendations for the operation of SMEs in the service sector of CBT are divided into four dimensions based on types of strategy as follows.

1) Proactive strategy by (1) focusing on seeking new customers through online channels, by presenting attractive contents which can serve the demand of a large group of customers, (2) striving to create products which reflect the local identity and are made from local raw materials, and (3) driving the business groups in CBT to set up in the form of a strong business network that continuously participates in the development and promotion of local tourism.

2) Reactive strategy by focusing on (1) converting cultural and wisdom capital into income based on the concept of Creative Economy which seeks the balance of the economy, the society and the culture, and the environment, (2) maintaining products and services, and arrange up additional activities to impress customers, (3) the network of entrepreneurs joining the planning of the direction in tourism development together with related agencies in order to develop the economy, commerce, and tourism related to the local context, and (4) providing tourism service based on the new-normal approach for health safety to build confidence for both service providers and receivers.

3) Problem-solving strategy: (1) The core entrepreneurs should coordinate with government agencies through tools/ technology/ smartphones in order to have policy information quickly and thoroughly, (2) the management skills of entrepreneurs should be upgraded, the level of service standard raised and online marketing conducted, (3) organizing tourism promotion activities throughout the year with focus on public relations through online channels, (4) analyzing tourism behavior

of the target group , using Big Data in the government database in order to design products and services to meet the needs of the target group, and (5) technology should be used to support business operation and marketing strategy formulated to attract target customers who use online social media.

4) Preventive strategy: (1) The government should spread the knowledge and creating understanding in the CBT development approach via both offline and online channels in order to create social awareness and gain social support. (2) The government should train entrepreneurs and employees to increase their technological skills and standard service provision. (3) the government should persuade entrepreneurs in the Start Up group who possess skills in technology usage to help develop tourism. (4) The entrepreneurs should follow the policy of financial institutions and requesting assistance from agencies related to SMEs promotion and development in order to access low-interest loans. (5) The entrepreneurs should improve the internal management system for more efficiency and systematic process by describing a clear role and duty of each department. And (6) the entrepreneurs should invent preventive measures for cyber threats, such as encouraging customers to transfer payment directly to their account or having specialists to consultation about technology.

5.4 Limitations and Future Research Studies

5.4.1 Limitations of the Study

5.4.1.1 This research did not study the size of change in the external environment during the age of digital economy. It focused only on the opinions and approaches in business operation of SMEs entrepreneurs in the service sector in response to the direction of economic development by digital technology.

5.4.1.2 The study of the stakeholders' roles in the CBT promotion and development in the upper northern provinces group 2 did not examine the level of participation by the stakeholders and measurement of happiness of community people or service providers, and that of tourists or service receivers. Because measurement of happiness requires a clear definition of happiness dimensions as well as the complex details of indicators.

5.4.1.3 The study of the gap in service quality of business in service sector of the CBT within the upper northern provinces group 2 aimed to compare the expectation and the actual perception of tourists regarding the service quality. However, this study cannot examine the results after service improvement whether the customers will be willing to pay more for better service, or how much the price should be increase so that the customers will still be satisfied.

5.4.1.4 Situation of the COVID-19 pandemic affected the data collection, as enterprises in the service sector had to top their service due to the curfew announcement by the government from March 26th to April 30th, 2020, in order to control the pandemic for the safety of the people. Therefore, all tourism activities were halted, even after May 1st, 2020, when the government began to relax the control. Since, the period of May - June, 2020 was the period of data collection, the access to foreign tourists was immensely limited. Therefore, the data collection was possible from Thai tourists only.

5.4.2 Future Direction of Research Studies

Due to the limitations of the study, further study should focus on the following.

5.4.2.1 Research should be conducted on the size of change in the external environment during the age of digital economy in order to analyze the trend of response by SMEs to the size of impact by digital economy. Further studies can also focus on different dimensions of impact and selecting the target group of SMEs in the production sector and trading sector.

5.4.2.2 Studies should be conducted on the participation level of the stakeholders in CBT development and promotion, and of measurement of happiness both the community and tourists as the result of community tourism management. One internship topic is how to formulate happiness indicators quantitatively and qualitatively in order to reflect the impacts and outcomes from CBT policy implementation.

5.4.2.3 Further studies can fulfill the study of the gap in service quality of businesses in the service sector of CBT by focusing on the impacts and outcomes after the improvement of service quality in order to help the entrepreneurs, especially

the community enterprise, to seek marketing strategies which respond to the customers' needs.



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APPENDICES



Appendix A:

The interview guide for in-depth interview and focus group discussion for the stakeholders in the promotion and development of community - based tourism

This form is designed for in-depth interview and focus group discussion with the stakeholders of “Thai SMEs’ response in the digital economy age: A case study of the service sector of community-based tourism in the upper northern provinces group 2”, which will be submitted in partial fulfillment of the academic requirements for the degree of Doctor of Public Administration of National Institute of Development Administration (NIDA). Your cooperation in providing information will be highly appreciated.

Part 1 General Profile of Participants

- 1.1 Name - surname
- 1.2 Organization
- 1.3 Position
- 1.4 Telephone number
- 1.5 Email

Part 2 Role and experiences in the promotion and development of service businesses of the community - based tourism in the digital economy age.

- 2.1 What is your perception of the government’s policy administration regarding the promotion and development of the community-based tourism? And what is your previous role in driving SMEs in the service sector of the community-based tourism?
- 2.2 What is your perception of the competitiveness (tourism destination, demand of products and services, related suppliers, CBT’s strategic plan, and the government’s promotion) of the community-based tourism? And what are factors contributing to the success of the community-based tourism in the digital economy age?
- 2.3 What is your perception of the situation, impact, and adjustment of SMEs in the service sector of the community-based tourism in the digital economy age?
- 2.4 What is your perception of the opportunities and threats for the survival and growth of SMEs in the service sector? And what are SMEs’ responses (strategies/means) to their opportunities and threats?
- 2.5 What is your perception of the strengths and weaknesses in the operation of SMEs in the service sector? And what are SMEs’ responses (strategies/means) based on their strengths and weaknesses?
- 2.6 What is your perception of the future direction of the public policy to promote and develop SMEs in the service sector of community-based tourism? And what are the expected roles of the stakeholders?

- Thank you for your participation -

10. Type of implemented technology in SMEs' operation (more than 1 answer can be selected)

- () 1. None () 2. AI/big data
 () 3. Online media/platforms () 4. Machines/robots
 () 5. Internet connecting devices: tablets, computers, or smartphones. () 6. Others (please specify)

11. Period of technology implementation in SMEs' operation

- () 1. None () 2. Less than 1 year
 () 3. 1-5 years () 4. 6-10 years
 () 5. Over 10 years

12. Frequency of using technology in SMEs' operation

- () 1. None () 2. 1-2 days/week
 () 3. 3-4 days/week () 4. 5-6 days/week
 () 5. Everyday

13. Department/division where the technology is implemented (more than 1 answer can be selected)

Department \ Technology	AI/Big Data	Online Media/ Platforms	Machines/ Robots	Computers/ Tablets/ Smartphones
1. Planning/administration				
2. Manufacturing				
3. Accounting/procurement				
4. Marketing/public relations				
5. Coordination/customer services				
6. Research & development				
7. Human resource management				
8. Others (please specify.....)				

Part 2: Information regarding factors which affect SMEs' response in the digital economy age.

Instructions: Please mark ✓ at the level which match the actual conditions in your enterprise. There are seven levels, as follows.

Lowest Lower Low Moderate High Higher Highest
 1 2 3 4 5 6 7

Dimensions	Levels of Actual Conditions						
	1	2	3	4	5	6	7
The structural contingency factor							
1. There is structural flexibility (integrate both vertical and horizontal structure) in my enterprise.							
2. In my enterprise, the authoritative power is decentralized among the department/division heads.							
3. There is teamwork in my enterprise.							
4. In my enterprise, the corporate culture is informal.							
5. In my enterprise, each department/division is granted freedom for work.							
6. In my enterprise, the internal communication is informal.							
7. There is systematic planning in my enterprise.							
8. My employees are skillful in the tasks for which they are responsible.							
The SMEs' potential factor							
9. In my enterprise, the employees possess the required technological skills for their tasks.							
10. In my enterprise, the capital is enough for business operation.							
11. In my enterprise, the equipment/ tools/ machinery is efficient and adequate.							
12. In my enterprise, the procedure is clear and systematic.							
13. In my enterprise, the raw materials/ products/ spare parts/ service system which support the business operation are efficient and adequate.							
14. In my enterprise, the process of product value communication to the customers is good.							
15. In my enterprise, there is efficient usage of social networks.							

Dimensions	Levels of Actual Conditions						
	1	2	3	4	5	6	7
16. In my enterprise, there is a motivation system for employees.							
The perception factor							
17. Currently, I think e-Commerce is highly influential to the enterprises' operation.							
18. I give importance to the hardware, software, and telecommunication network which support e-Commerce.							
19. I focus on business operation via e-Commerce.							
20. In my opinion, technology used in business must match the type of work.							
21. Currently, I think that it is convenient to put e-Business/e-Commerce into practice.							
22. If there is any new technology, I will try it first prior to the full application.							
23. In my enterprise, I will assess the outcome from the implementation of technology.							
24. In my enterprise, there must be cyber security in the application of technology.							
The decision-making process factor							
25. I have decided to use technology/e-Business innovation in SMEs' operation.							
26. I have perceived the strengths and weaknesses of technology/e-Commerce implementation in the enterprise.							
27. I expect that the customers will respond well to the implementation of e-Business/e-Commerce in the enterprise.							
28. I have a budget for the investment in technology for the enterprise.							
29. I believe that my enterprise can be adjusted to survive and progress in the age of digital economy.							
The strategic management factor							
30. I have a systematic plan for strategic management.							
31. I focus on proactive marketing strategies.							
32. I often follow and analyze the economic conditions both inside and outside the country.							
33. I focus on internal management strategies.							

Dimensions	Levels of Actual Conditions						
	1	2	3	4	5	6	7
34. I focus on the prevention of technological impacts on cyber security, technological investment, and human capital investment, etc.							
35. I often seek new technology which can be used to drive the enterprise growth.							

Part 3: The approach of SMEs' response to opportunities and threats in the digital economy age.

Instructions: Please mark ✓ in the space which is most relevant to your response. There are seven levels, as follows.

Lowest Lower Low Medium High Higher Highest
 1 2 3 4 5 6 7

Response to opportunities and threats	Level of Response						
	1	2	3	4	5	6	7
Prospector Perspective							
• Opportunities							
1. I often seek new business opportunities.							
2. I focus on the improvement of quality of goods/services to expand the market or customer base.							
3. I often follow technological progress which supports e-Commerce.							
4. I use hardware/software/telecommunication networks to support my business operation.							
5. I focus on the business operation through the electronic systems, such as online trading, communication, and customer services.							
6. I seek technological partners for business development.							
• Threats							
7. I often analyze and assess possible impacts if technology (such as e-Business and e-Commerce) is not utilized in the business.							
8. I conduct the public relations and generate customer relationship via social media platforms to prevent any interference from competitors.							
9. I use the cyber security software in my business to eliminate computer viruses.							

Response to opportunities and threats	Level of Response						
	1	2	3	4	5	6	7
10. I follow the National Cyber Security Act and the Personal Information Protection Act of B.E. 2562, to understand the condition and penalties prescribed in the Acts.							
11. I seek external partners/organizations to strengthen the business through technological networks.							
Defender Perspective							
• Opportunities							
12. I focus on maintaining the stability of business operation rather than seeking new markets/customers.							
13. I focus on the labor-based intensive system/services rather than the machinery/technology.							
14. I will invest in technology which supports the business and reduce the costs in some tasks.							
15. With more capital, I will invest more in the technology for business development.							
16. I will restructure or re-engineer the internal process to suit the electronic business process in the digital economy age.							
• Threats							
17. I give importance to developing my employees' technological skills to cope with cyber threats.							
18. I tend to avoid online transactions without any security system for my information and assets.							
19. I will invest in the cyber security software to protect my information and assets.							
20. I follow the news regarding cyber threats to ensure the timely prevention and coping with them.							
21. I tend to change the strategy for responding to my competitors by using various electronic channels, such as e-Business and e-Commerce.							

Part 4: Problems, obstacles, and suggestions on the promotion and development of the service businesses in the age of digital economy.

Instructions: Please specify the problems and obstacles you are currently facing, along with making suggestions to solve them.

4.1 Problems and Obstacles

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4.2 Suggestions

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- Thank you for your cooperation -

9. Channel of information regarding the community-based tourism attraction

(More than 1 answer can be selected)

- () 1. Recommended by others () 2. Online media: Facebook, Instagram, or Twitter
 () 3. Radio/television () 4. Printed Media: newspapers or magazines
 () 5. Visit by chance

Part 2: Expectations and actual perception of service quality of the service businesses at community-based tourism attractions

Instruction: Please a tick (✓) at the level which matches your opinion. There are five levels as follows.

Lowest Low Moderate High Highest
 1 2 3 4 5

Question	Level of Expectation	Level of Actual Perception
Reliability		
1. Clear, transparent, and suitable rate of products and services' prices	1 2 3 4 5	1 2 3 4 5
2. Interesting and reliable channels of public relations exist, such as newspapers or online media.	1 2 3 4 5	1 2 3 4 5
3. Credibility exists in the community leaders or entrepreneurs of the service sector in the community.	1 2 3 4 5	1 2 3 4 5
4. The personality of staffs who provide service are good, and they can solve unexpected problem.	1 2 3 4 5	1 2 3 4 5
5. Service businesses in the community applied modern technology, such as contacting customers via online platforms.	1 2 3 4 5	1 2 3 4 5
Assurance		
6. Infrastructure and systems of traffic are safe and standardized.	1 2 3 4 5	1 2 3 4 5
7. There are CCTVs installed around tourists' attractions	1 2 3 4 5	1 2 3 4 5
8. There are security officers who monitor security matters.	1 2 3 4 5	1 2 3 4 5
9. Signage or point of information which show the rules, regulations, or condition of services are clearly installed.	1 2 3 4 5	1 2 3 4 5

Question	Level of Expectation	Level of Actual Perception
10. There are standardized equipment/facilities installed, such as phone booth, fire exit, fire extinguisher, ramp, etc.	1 2 3 4 5	1 2 3 4 5
Tangibles		
11. There is the maintenance of physical environment which is unique to the community.	1 2 3 4 5	1 2 3 4 5
12. The place is clean and tidy.	1 2 3 4 5	1 2 3 4 5
13. There are convenient shuttle services	1 2 3 4 5	1 2 3 4 5
14. There are facilities provided, such as parking space, rendezvous point, and Wi-Fi.	1 2 3 4 5	1 2 3 4 5
15. Architecture/buildings are friendly to all age groups and genders.	1 2 3 4 5	1 2 3 4 5
Empathy		
16. The service is provided with friendly and good spirit.	1 2 3 4 5	1 2 3 4 5
17. The staffs are willing to provide suggestion for customers.	1 2 3 4 5	1 2 3 4 5
18. The coordination is systematic.	1 2 3 4 5	1 2 3 4 5
19. The detail of customer's needs is cared for.	1 2 3 4 5	1 2 3 4 5
20. The customer's suggestions are accepted for further improvement of services.	1 2 3 4 5	1 2 3 4 5
Responsiveness		
21. The service is on-time and prompt.	1 2 3 4 5	1 2 3 4 5
22. The service providers are enthusiastic.	1 2 3 4 5	1 2 3 4 5
23. The numbers of service providers are adequate.	1 2 3 4 5	1 2 3 4 5
24. The facilities/equipment are adequate.	1 2 3 4 5	1 2 3 4 5
25. There are fast and convenient channels which provide help, such as application or coordination and public relation center.	1 2 3 4 5	1 2 3 4 5

Part 3: Problems, obstacles, and suggestions regarding the service quality of the service businesses in community-based tourism attractions.

Instruction: Please identify the problems, obstacles, and suggestions regarding the service quality of the service businesses in community-based tourism attractions.

3.1 Problems and Obstacles

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3.2 Suggestions

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- Thank you for your participation -

BIOGRAPHY

NAME

WANNAPA TONGDAENG

**ACADEMIC
BACKGROUND**

Master of Arts in Social Development
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National Institute of Development Administration
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Naresuan University
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