

## Structural Model of Adaptive Capabilities, Network Capabilities and Community Based Tourism Innovation in the Central Region of Thailand

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**Abstract:** This research aimed to study 1) the influence of community adaptive ability on innovation of community tourism in the central region of Thailand 2) the influence of community adaptability on the capacity of managing the community-based tourism network in the central region 3) the influence of network management ability on community tourism innovation in the central region and 4) to propose a structural model of community adaptability and network management capabilities with community-based tourism innovation in the central region. The mixed methodology research between the quantitative research using the survey data from the questionnaire with 213 communities of community tourism network in the central region and the qualitative research using the in-depth interview method and focus group interview conducted with 5 informants was implemented. Structure Equation Model (SEM) was used for the data analysis. The results demonstrated that (1) the community adaptability in the central region directly influenced community tourism innovation with an influence of 0.56 and indirectly influenced through the management of the community-based tourism network with an influence of 0.66. The total influence was 1.22. (2) Community adaptability directly influenced on the ability of the tourism network management in the central region with an influence of 0.62. (3) the ability to manage a network of communities direct influenced on community-based tourism innovation in the central region with an influence of 0.68. Last but not least, (4) the structural model of adaptive capabilities and the network management capability with community-based tourism innovation in the central region were consistent with empirical data based on the six harmonization indices with  $\chi^2 = 59.85$  p-value = 0.08,  $\chi^2 / df = 0.55$ , GFI = 1.00, AGFI = 0.98, and RMSEA = 0.01 that met the acceptance criteria.

**Keywords:** Community adaptability, Community network management ability, Community-based tourism innovation

### 1. Introduction

The Sustainable Community Tourism Strategic Plan from 2016 to 2020 sets a vision for the importance of community-based tourism in Thailand to develop towards sustainable community, resource preservation and management. The plan focuses on the management that can create international standards of service, hygiene and safety to accommodate quality tourists according to the community potential. The tourism management is based on the concept of preserving and managing the community's resources by people in the community. The management covers many aspects from culture to society and environment (Ministry of Tourism and Sports, 2018). Community tourism plays a significant role in the development of the driving mechanism and the community tourism management system. It is also a vital linkage of the civil state community-based tourism network aiming to develop and manage with a stable and sustainable community-based tourism development. As mentioned above about community tourism, the advancement of community tourism towards sustainability is of great importance and it is imperative to take action through the participation process of all sectors involved in tourism (Eng-Chuan, 2018).

Community-Based Tourism (CBT) is a tourism that focuses on the sustainability of the environment, society and culture. The community plays the role of a manager or a supervisor to direct the operation of community tourism and create learning opportunities along with visitors. Participation is a key component to the success of community-based tourism management. Thus, stakeholders must be involved in decision-making, operations, and community benefits from tourism management. In addition to this, the connection between tourism networks from upstream, middle and downstream should be promoted. Direct involvement of the community in tourism management will be the base for managing sustainable tourism because the direct involvement will promote the integration between business development and community development which includes environmental conservation and taking into account the capacity of nature in the area as a form of sustainable tourism management (Kaewmanee, 2014).

However, academically, the study of the effects of various factors or variables on community tourism such as the adaptability of the community, the network management capabilities and the management of community tourism innovation have not yet made community people or other stakeholders really take part in the management of community-based tourism from the upstream, midstream and downstream. It is therefore challenging to study the effects of such factors or variables so that it can be one of the guidelines for the development of tourism by the community. This notion will create sustainability in terms of natural resources conservation that includes environment, culture and community traditions leading to the sustainability from available resources.

From the background and the importance of community tourism, I am therefore interested in studying and finding empirical answers by examining the effects of adaptability of the community and the effects of the network management capability in the central region of Thailand. This leads to the contribution new knowledge under a model of community adaptability and network management capability with community-based tourism innovation in the central region. The results obtained from this study will benefit the community-based tourism network group and the government sector in creating ways to support domestic tourism in the future.

## **2. Research Objectives**

1. To study the effects of community adaptability on the community tourism innovation in the central region of Thailand.
2. To study the effects of community adaptability on the ability of managing the community-based tourism network in the central region of Thailand.
3. To study the effects of network management ability on the community tourism innovation in the central region of Thailand.
4. To propose a structural model of community adaptability and network management capabilities with community-based tourism innovation in the central region of Thailand.

## **3. Literature Review**

### **Concepts of Community Tourism Adaptability**

Building adaptability is important for community tourism. As community tourism in Thailand attracts tourists with a wide variety of nationalities, cultures and beliefs, community-based tourism has to adapt to this diversity. The process of adaptation according to the concept of community tourism adaptability involves with accessing information from competitors as well as being up to date on news and activities of both national and international competitors. This is to recognize the nature of tourism operations and strategies and how other communities promote their community tourism. This is because the information will be adapted to the circumstances of the community in order to differentiate itself from other tourism by the community. In addition to competitor information, it also requires access and understanding of customers and technology (Noel et al., 2020). The understanding of customers and technology allows the communities to serve the needs of the tourists better through the ability to develop processes that foster new ways of working, providing tourism services and developing community products to tourists. The understanding also creates value to meet the needs that tourists expect. Therefore, the community must have effective resource management to prepare for the opportunities that will arise (Sadaqat et al., 2020).

The development of community tourism adaptability takes the unity and understanding of the community members to build this adaptability together by building a learning community and promoting knowledge exchange within the community. This will also encourage learning between communities to enable communities to create values that arise from their own resources. The resources that each community has will be different; thus, the community tourism presented by each community will be different. In conclusion, the adaptability of community based tourism indicator is related to the accessibility of industry competitors, the accessibility to customer data and the ability to apply technology to the community-based tourism service (Sadaqat et al., 2020; Noel et al., 2020). The community has the ability to develop community processes into the market and the available resources are managed in order to respond quickly to the opportunities that arise and meet the needs of tourists (Pusck et al., 2019; Sadaqat et al., 2020).

### **The Ability to Manage Networks in the Context of Community Tourism**

The concept of network management has been studied in order to create sustainability arising from the increased capacity development of community-based tourism groups in terms of capital, labor, production technology, awareness and distribution (Yuttachai, 2016). Due to proactive competition nowadays, the ability to manage networks is essential and generates a number of benefits to the economic and social system because information and news are connected among the networks (Khakhar and Rammal, 2013). It is necessary for communities to study and analyze the environment in various contexts that will affect them. In addition, the study of network management ability focuses on developing network connections for community management. It is shared among communities. Benefits and resources are also shared. For this reason, trust can be built among the communities. This will results in better performance of the communities and benefit the customers. It can be said that network management capabilities can lead to the creation of new innovations in community-based tourism that contribute to sustainable operations.

## **Concept of Community-Based Tourism Innovation**

Community-based tourism innovation influences marketing growth. Community-based tourism innovations can increase the competitiveness in the construction business and can generate profits in times of crisis as well. (Martinez-Roman, Tamayo and Gamero, 2017). According to literature review both foreign and Thai sources, it was found that community tourism innovations could be described in the manner of a new product-oriented marketing. The community is focused on creating products and services that are different from the existing communities by relying on community resources to develop models to create new products and services. Local wisdom or community ways of life are used to create a marketing approach for the development and improvement of new travel products and different marketing (Ho and Lee, 2020). This is consistent with Martinez-Roman, Tamayo and Gamero (2017), which sees the nature of tourism innovation in the field of developing and creating community processes. It also promotes a market that focuses on knowledge development, working process skills and changing different methods of producing products and services. The changing process can be done through the development of technological knowledge and other techniques that are related to one another. Further, community-based tourism innovation promotes manufacturing process of efficient service and operations. Moreover, this is in line with Birgit, et al. (2019) who emphasized on the creation of new community processes while developing new services. Community-based tourism innovation is presented by the community as a model in tourism service. The innovation is unique as it is the result of the development, the new creation or the improvement from the old version. Hence, bringing technology helps create and add more economic value.

## **4. Research Methods**

This research was conducted by implementing mixed methods research of quantitative research methodology) and qualitative research methodology. The details are as follows:

1. Quantitative research studied the effects of independent variables and dependent variable to construct the structural model of the adaptability of the communities and the network management capacity of the communities with the innovation of community tourism in the central region which is consistent in theory and empirical data.

2. The qualitative research was conducted by using phenomenological method, which is a method of acquiring knowledge and the study of human life phenomena and experience by understanding the meaning from the life experience of the person primarily (Chai Bodhisita, 2009). The qualitative research was divided into 2 steps as follows:

2.1 The first step was an in-depth interview. The key informants were the Community Tourism Association Committee in the central region and scholars specializing in the field of community tourism. The key informants were selected based on the criteria of being a tourism leader in the central region with knowledge and experience in community tourism as well as having conducted a research in community tourism and willing to provide the information related to tourism.

2.2 The second step was focus group. It was conducted with key informants. It was the use of data collected from the data analysis in quantitative research and in-depth interviews. The focus group was implemented in pursuance of examining and confirming the conclusion of the research.

## **Population and Samples**

The population consisted of 224 communities from community tourism networks. They were the members of the Community Tourism Association in the Central Region of Thailand. (Ministry of Tourism and Sports, 2019).

The sample group was the members of the Community Tourism Association in the Central Region of Thailand. They were selected because of their role as a leader in the Community Tourism Network in the central region registered as a member of the Central Community Tourism Association. To determine the sample size for analysis, there were not less than 20 samples per 1 observed variable. There were 9 observable variables in this research. Thus, there were 180 samples selected to prevent statistical error (Hair et al., 2010). In this research, the data were collected from 224 communities. However, 213 communities accounted for 95 percent responded; thus, there were used as a sample of this research.

There was a total of 5 key informants selected to provide the information. The 5 key informants were the members of Community Tourism Association Committee in the central region of Thailand and scholars in the field of community tourism. 2 of these key informants were the members of Community Tourism Association Committee in the central region of Thailand and 3 of these key informants were scholars in the field of community tourism. They were selected by purposive sampling method. The criteria to select them were based on their experience in community tourism and related research experience in community tourism.

## 5. Research Results

### The Analysis of Hypothesized Variables Results

The effects of causal variables which were the community adaptability and network management capacity of the communities in the central region of Thailand with the results of the structural model of the adaptive capacity of the communities and the network management capabilities of the community and the innovation of community tourism in the central region. The model has been developed to explain the research hypothesis. The analysis results are detailed in Table 1.

**Table 1** The Effects of Variables in Structural Models Based on the Research Hypothesis

Causal Variables Dependent Variables	ADAP			NET			R <sup>2</sup>
	DE	IE	TE	DE	IE	TE	
ADAP	-	-	-	-	-	-	-
NET	0.62*	-	0.62*	-	-	-	0.32
IND	0.56*	0.66*	1.22*	0.68*	-	0.68*	0.48
Chi-Square = 59.85, df = 107, P-value = 0.08, RMSEA = 0.01, AGFI = 0.98, GFI = 0.96							

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\*p<0.05; DE refers to direct effects; IE refers to indirect effect; TE refers to total effects.

According to Table 1, the findings of the casual variables and the results of the structural model of the adaptive capacity of the communities and the network management capabilities of the community and the innovation of community tourism in the central region that has been developed to explain the research hypothesis were detailed as follows:

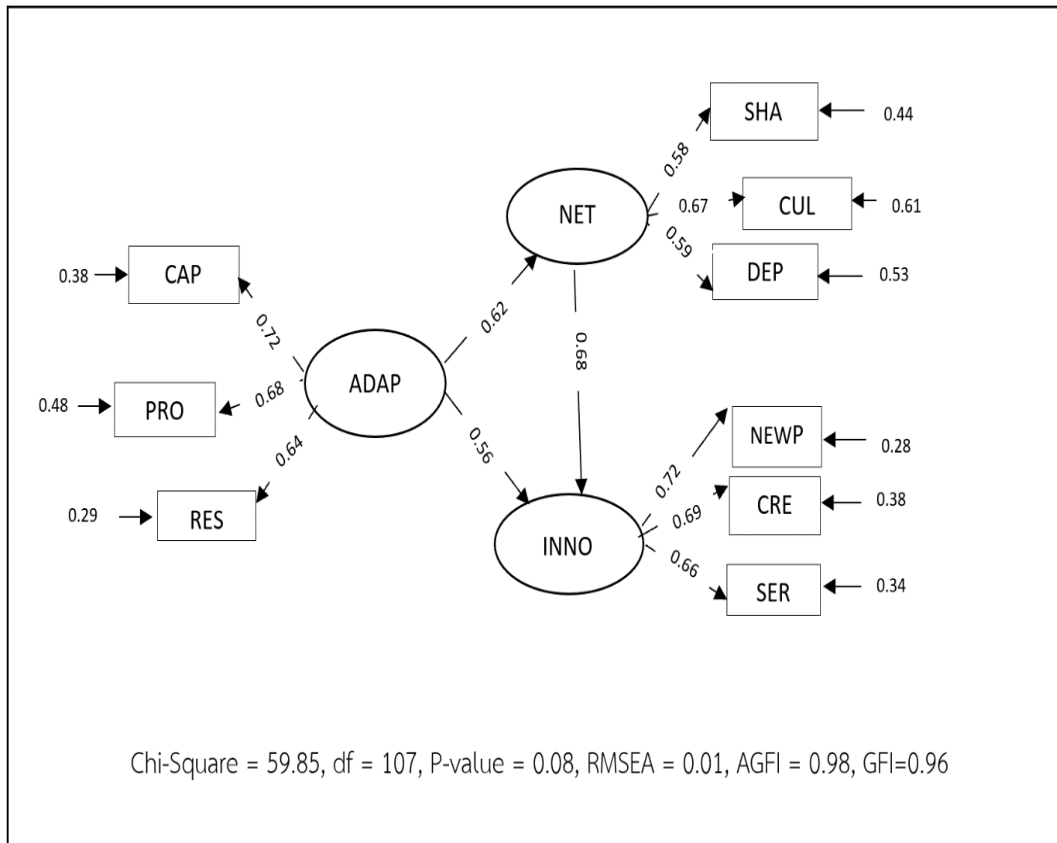
Hypothesis 1 The community adaptability of the central region communities under the ability to keep track of information, process development capabilities and resource management capability directly affected the community tourism innovation in the central region. In addition to this, it indirectly affected on community-based tourism innovation through the central community network management ability. Moreover, it was found that Community Adaptability (ADAP) had a positive direct effect on community-based tourism innovation (INNO) with direct effect of 0.56 and the indirect effect through the community tourism network capacity (NET) of 0.66. The total effect was 1.22 with statistical significance at 0.05 level. Therefore, research hypothesis 1 was accepted.

Hypothesis 2: According to the community adaptability of the central region communities under the ability to keep track of information, process development capabilities and resource management capability, it was found that the community adaptability (ADAP) had a positive direct effect on the ability of the community-based tourism network management (NET) with direct effect of 0.62 and total effect of 0.62. It was statistically significant at 0.05 level. Therefore, research hypothesis 2 was accepted.

Hypothesis 3:

Hypothesis 3 According to the network management capacity of the central region under the elements of the ability to share knowledge, to create a network organization culture and to be interdependent, it was found that the ability to manage the community Network (NET) had a positive direct effect on the community-Based tourism Innovation (INNO). The effect was 0.68 and the total effect was 0.68. It was statistically significant at the 0.05 level. Therefore, research hypothesis 3 was accepted.

The Results Analysis of the Structural Model of Community Adaptive and Network Management Capability with Community-Based Tourism Innovation in the Central Region as Shown in Figure 1



**Figure 1:** Structural Model of Community Adaptability and Network Management Ability with Community-Based Tourism Innovation in the Central Region of Thailand

**The Confirmation and Verification of Findings from In-Depth Interviews and Focus Group Discussion** The results from the In-Depth Inter are as follows:

1. The Adaptability of Community Tourism in the Central Region

The development of the community to support tourists is a characteristic of adapting to create value for their own community. Creating value is a business concept which is an adaptation of the community to be able to generate income for the community and to achieve economic sustainability in the community. In this regard, the whole adaptability of 1) the ability to track information, which is the ability of the community to keep up to date with the competitors in order to have information that is ready for the competitive situation at all times. 2) The process to provide tourism service to attract tourists to travel to the community requires the development of processes in various areas. The process is a key component of the hospitality industry that will make an impression to the visitors. 3) The availability of resources to accommodate tourists in terms of both service resources, food, accommodation and people through the resource management process. In terms of procurement, development and creation, this allows the community's resources to have more values and to maintain its value.

2. Network Management Capabilities of the Central Community

The ability to manage a community network requires sharing the knowledge gained from networking at both the member and community level. Knowledge from outside must be transferred to members of the community. There is a process of teaching to the community members to gain new knowledge in tourism and services. Community cultures have been created in order to strengthen the community in network management. Shared values between communities creates joint improvements and development of tourism management. There is a change in knowledge and skills together to foster joint capacity development. There is a creation of resource exchange and dependence on resources. Strengths of each community support one another between communities. The community network is another reflection of the community's ability to access information. This is the sharing of information that the community needs and is also a validation of feedback to ensure that information or the knowledge that is shared is accurate and can be used to create value for the community.

3. Results of Community Based Tourism Innovation in the Central Region

Community-based tourism innovation promotes marketing campaigns that focus on the form of selling community products. New product-oriented marketing is a process innovation that plays a role in promoting market expansion to tourists. Encouraging new product development requires processes that support the development of knowledge, techniques and skills to create effective work processes by bringing technology to take part in the development to have increased competitiveness. The process and the promotion of new product development will create new types of tourism services. This will bring the community's identity to add and develop values. It is the hallmark of a community that can make a difference from the original and other communities. However, by creating innovation, the community cannot create by itself. It requires communities networks. In terms of new products, in the present day, it is not necessary for the community to produce products themselves. It can be a joint production but the product itself should represent the community value.

### Results from Focus Group

The focus group showed that empirical data obtained from quantitative research and interview data were confirmed by key informants with hands-on experience and academics with expertise in community tourism. The results of the focus group also added suggestions that could be used to benefit the community. The research results were disseminated in various forms of communication, preparation of management manuals, and building community networks. Educating by organizing training in collaboration between communities and educational institutions should be implemented. Informants were also those who applied the findings of this study to their own communities.

Therefore, the confirmation and examination of the findings from in-depth interviews and the focus can be concluded that the model of community adaptability and network management capability with community tourism innovation in the central region are consistent with empirical data. The research results could be explained that the causal variable was community adaptive capacity and the transmission variable was the ability of the community network management both directly and indirectly affect community tourism innovation. This can be displayed as an equation as follows:

$$\text{NET} = (0.62 \times x_1) : R^2 = 0.32$$

$$\text{INNO} = (0.56 \times x_1) + (0.68 \times \text{NET}) : R^2 = 0.48$$

### 6. Discussions and conclusion

1. According to the research results, it was found that the ability to adapt of the central region community has a direct impact on the community tourism innovation in the central region and indirectly affect community-based tourism innovation through network management capabilities of the central region. It shows that a community with a community culture is ready to receive new knowledge and ready to adapt to the new opportunity as well as ready for the threat that will affect the community. Thus this allows the community to create strong innovation. It has had a positive effect on investing in product innovation. This shows that a community with a community culture can make a difference and will result in sustainable innovation in the community. The creation of community-based tourism innovation requires network management capabilities not only to make a difference in mutual interest but also gives rise to innovation. Network management capabilities also gives communities a competitive advantage. As a result, the operations are in line with the goals set. This is because building a competitive advantage has implications for building confidence in success. It also has an important link to the foundation of the organization's resources. This will contribute to the success of the improvement (Ghapanchi, Wohlin and Aurum, 2014). This is also in line with the results of the Kuncoro and Suriani (2018) study who stated that due to the increased competition in the domestic market and all over the world, if there was some reduction in international trade barriers, it may lead to the development of information technology including changing customer needs. Further, it was found that entrepreneurs themselves were in a need to find an effective business management model more than ever. The trend suggested that entrepreneurs should build tools to be more efficient so that they can gain a competitive advantage and benefit from the competition back to the company or business in which they operate. For this reason, community-based tourism innovation is the result of talent development within the organization. The ability to manage the network is in accordance with a dynamic environment. From developing and building adaptability, the assimilation and development of new community products (Breznik and Hisrich, 2014) is the basis of capacity building based on existing resources and the adoption of external knowledge to integrate and adapt to the enterprise. This will bring about community tourism innovation and bring business success further. In addition to this, the links with government agencies, government policy can enhance the benefits among the communities and increase the competitiveness. This link also requires network management capabilities (Kang, Kim and Hur, 2014).

This is consistent with the research showing the relationship between the community's adaptive ability in relying on information, modifying the form, process, method while managing resources for maximum sustainability. These

processes affect the variables as the community requires networking to promote community-based tourism innovation.

2. According to the research findings, it was found that the adaptability of the central community directly affected the capacity of managing the central community tourism network. This is consistent with Ho and Lee's (2020) research describing business innovation: It is data-driven, so if a business does not have information that means knowledge, it does not know how to create new things, new processes, new products or services. The improvement and the transformation of existing potential to respond to changing conditions of the environment is also known as adaptability (Helfat et al., 2009) It also fits the idea of Pavlou and El Sawy (2011) who stated that adaptation is often embedded in community processes and practices that help communities adapt to changes and market competition conditions. Innovation is a combination of elements in product, technology and process management. In addition, individuals and groups within the community can take advantage of new knowledge and skills. Lewis, et al. (2002) also said that product development was born out of the thought of members within the community. Creating value for members of the community. and accepting the creation of value is important and it indicates the work of the community. Community performance autonomy is the creation of work value that gives rise to creativity and forms of innovation. Having the opportunity to make their own decisions and being self initiative will unquestionably affect the goals of community tourism management.

The results of this research show that community-based tourism innovation arises from the organization's ability to continually adjust above its competitors, which is derived from the ability to learn and adapt before other competitors, resulting in sustainable results.

3. From the research results, it was found that the network management capability of the central communities directly affected the innovation of community-based tourism in the central region. It is a systematic link with the community. Steps to make innovation happen. demonstrated how the network management capabilities affected community-based tourism innovation. This is consistent with the Mendonca, Varajao, and Oliveira (2015) study, saying that a collaborative network helps organizations stand out. Collaborative network is a model for communities to be more competitive through innovation that creates differentiated community products. One of the things that contributes to the success of community tourism innovation is organizational flexibility. The ability to reduce costs, enterprise resources, exchange of information, skills and knowledge and general strategies can also be used to increase community service growth. These are all network management competencies (Wang et al., 2013). Network management competencies are the development of business models that have the potential to describe performance, be promoted and conveyed by opportunity. The development of relationships and networking capabilities can positively impact organizational performance at both the community and national levels. The ability to manage a network is a valuable resource. It can be defined as a universal theory that highlights the role of relationship between members and between communities in the evolution and growth of markets. The adoption of technology generated by network exchanges as appropriate for development can include cultural differences (Bianchi and Mathews, 2016). This is because the local community has insufficient resources to develop innovation. It requires support from a network that creates an exchange of resources. These resources and capabilities will be developed into community innovation to promote community tourism.

4. The results of empirical analyzes both quantitative and qualitative research data were consistent with the above literature as it shows the effects of network management capabilities under the elements of the ability to share knowledge, to create a network organization culture and to work interdependently. These have a direct effect on community tourism innovation in the central region. The ability to manage the network is a strength in the area that the community is missing both in terms of information knowledge and technology (Piyakorn, Tin and Phongsak.2020).

### **Suggestions for Application**

1. Study in this research used cross-sectional study. The data was collected at only one time. Studies in business administration is constantly changing. For this reason, longitudinal study should be applied for future study. The longitudinal study can demonstrate the effects of the adaptability and network management on community tourism innovation in the central region over the long term. This could be further studied about creating sustainable innovation in the future using a longitudinal study data collection model.

2. In future research studies, this research conceptual framework can be brought to study control variables such as community size, or characteristics of different community. This is to examine whether any differences could be found about the adaptability and network management towards community-based tourism innovation in the central region.

3. In this research study, it is only to explain the concepts and theories related to adaptability and network management towards community tourism innovation in the central region. There are also other concepts involved and can be a factor in further studies.

4. This research was to collect both quantitative and qualitative data in which qualitative methods were used the question of quantitative research as a guideline. This makes it possible to confirm the results of the quantitative research from the main informants. In this regard, the key informants are community-based tourism operators, so they can further apply the research results to benefit their own community-based tourism. This model is a discussion of interstitial variables in network management that can promote community adaptation to create tourism innovation more effectively.

5. The inferential variable in network management can be applied to other industries, including the service industry that is similar to tourism and manufacturing industries that rely on networks to strengthen their supply chain.

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