

Uncertain Supply Chain Management

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Community based tourism logistics supply chain management in the top north of Thailand: A key linkage to the greater Mekong subregion

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CHRONICLE

Article history:

Received April 7, 2021
Received in revised format May 28, 2021
Accepted July 5 2021
Available online July 5 2021

Keywords:

CBT
Logistics
Management
Greater Mekong Subregion (GMS)
Networking

ABSTRACT

Thailand's tourism is one of the primary revenues generating industries because of its geographical and richness of natures & cultures. However, some remote destinations require development such as routes, tourism products, and markets. Therefore, the aims of this study are to examine logistics of community-based tourism (CBT) destinations and identify key success of CBT logistics. The inductive method was applied for the insight details and fostering by the quantitative including on-site survey, participants observation, in-depth interview, focus group, Participatory Rural Appraisal (PRA) with tourism stakeholders were conducted. Whereas the questionnaires were served for quantitative methods. The data was collected from 721 tourists onsite. The content analysis and Geographic Information System (GIS) were administered analyzing the qualitative data. On the other hand, the structural equation modelling was applied for a quantitative approach. The result revealed that CBT in the top north of Thailand was faced with logistics problems especially in aspects of accessibility and amenities in the travelling route. Thus, this paper presents a model of CBT logistics management in relation to the Greater Mekong Subregion GMS region.

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1. Introduction

Asian Development Bank- ADB (2011) reported the Greater Mekong Subregion (GMS) was established in 1992 with its 6 country members composing of Lao PDR, China, Myanmar, Vietnam, and Thailand for the purpose of economic cooperation by eliminating barriers for commerce, labor and capital movement. The GMS corridor development has been set enhancing industry, agriculture, service industry development which would result in poverty reduction. The concept of the economic corridor is a strategy to spur economic development in the GMS. It is a mechanism to link the infrastructure investment with the production restructuring, and trade expansion to strengthen regional activity for competitiveness as well as promoting better means of regional communication and transportation to expand investment into different areas to enhance effective linkages of the corridors. Tourism is also seen as an opportunity to move towards sustainable development and peace as addressed in the GMS flagship initiatives in 2005. The program features and objectives include: to develop the sub-region as a single tourist destination; increase tourism in the GMS; strengthen sub-regional cooperation in tourism development among the GMS countries; promote tourism in the GMS which leads to quality of life, mitigate environment degradation; and develop human resources of the sub-region. In management aspect, CBT has been perceived as a mechanism for community development and empowerment as well as the opportunity to solve problems of conflicts, poverty and degradation of natural and socio-cultural resources as well as promoting local participation and their collaboration and providing socially and environmentally friendly products to visitors (Sitikarn, 2008).

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According to Piboonrungraj and Sangkakorn (2013), the statistics of international tourists visiting GMS in the last two months of 2004 most enjoyed local food testing accounted for 85%, while visiting cultural communities around 21%. Thailand has sophisticated local culture destinations and ranked in topmost diversity products and value for money. In addition, their studies on tourism logistic management revealed the infrastructure is one of the main obstacles and key success factors for community tourism. As logistics recently play a vital role in the region especially in terms of trade and other business investment and expansion, the consequences on tourism growth are still in much debate of how logistics of CBT can be formulated so that economic benefits and sustainability are maintained in the region. A well-organized tourism logistic links with other modes of transportation which would result in the efficiency of travel time and cost. The destinations that accommodate good logistics will allow the development of the destination itself and the economic growth of its region (Sittilert, 2011). To search for the answer, this study aimed to: 1) examine logistics of CBT destinations and; 2) identify key success of CBT logistics in relation to the GMS region.

2. Research Methodologies

The mixed method was administered in this study. The inductive data collection included site survey using the Geometric Information System, Participatory Rural Appraisal (PRA) in-depth interview, and focus group. While, the quantitative approach was employed to foster the result by using structural equation modelling (SEM). The purposive sampling was used to tourism stakeholders and 721 tourists who visit the destination in this study including; Maeklangluang, Ruam Tai, Huitorn, Huikeelek, Pamieng, Namka, Kuangbuk, and Donmoon. The content analysis and inferential statistics were exploited to analyse data.

2.1 Tourism Logistics and CBT

Sitikarn (2008) identified logistics as operated quite some time from the beginning of civilization. In business terms, logistics is defined as a business planning, managing of material, products and services, information, and capital flows. Currently, logistic is more complex information, communication, and control systems required increasingly¹. Whilst, Sittilert (2011) stated logistic in tourism refers to the management of distribution channels, the movement of physical, information, and financial concerns with the tourist travelling to destination (Buranawimonwan, & Sukpatch, 2018). Kochadze et al. (2013) defined tourism logistic as the science of managing, controlling, and planning the travel process offered to customers in accordance with their requirements and interests. It is also dealing with the transferring and processing of information. In addition, Ayasanond (2021) said tourism logistics is the management of tourism activities to make the physical flow of the tourists from origin to destination without errors. and make tourists get the highest satisfaction.

Where, Quattrociocchi et al. (2017) cited the tourism interconnect with the instinct of human beings to explore, discover and experience different sites. Tourism, additionally, relates to economic, cultural, and social development of several nations. However, the destination is a site touristic target where travelers visit by reason of natural attractions. Therefore, the site tourist shall have all necessary infrastructures like transportation. Consequently, (Giampiccoli & Saayman, 2018) tourism was administered to minimize poverty and concrete local community growth sustainably. Nevertheless, it has to closely link with local community members.

CBT, then, was identified as a local population participating in tourism planning and developing their communities' areas. In Thailand, CBT has gained attention from various sectors due to its positive impact on the economic, social, and environment of the communities. Hence, the cooperation and participation of the community in tourism management is one of a key result to the success (Nitikasetsoontorn, 2015). Forasmuch, CBT is concerned with the respect of local culture, heritage, and traditions as well as nature, particularly where the environment is one of the spectacular attractions. According to Suansri (2003) the CBT should recognize social, environment, and culture sustainably. That is the community manages for its own benefit, as well as boosting the tourist's comprehension and uncovering the community's ways of life.

Sitikarn (2004, 2006) proposed to operate CBT sustainably shall correlate with various factors including; conservation refers to the contribution on preservation of natural resources, culture and social of local community originality; hiring local people which would result in revenue generation and partition. What is more, it arrays new business in which communities reap from their existing resources; the educational experiences and valuing natural environment and culture. A CBT allows travelers to obtain knowledge and experiences from activities which lead to the understanding of local culture, lifestyle, and people. Local people, on the other hand, can exchange knowledge from travelers. As a result, it evokes the awareness of the environment and culture among stakeholders; the residents involved in planning, decision-making, auditing, and problem-solving which can be done in the form of public and private partnership. In the aspect of tourism logistics, it affects tourism development successfully. Consequently, the basic components of tourism must be considered in the development and planning process as (Dickman, 1997; Sitikarn, 2009) identified into '6As': Attractions, Activity, Accessibility, Accommodation, Amenity, and Ancillary Service. Whereas the 3As relevant to this study are accessibility, amenity, and ancillary service. Since other 3As

¹ <http://www.projectsmonitor.com/detailnews.asp?newsid=6968> (12 August 2010)

have included ancillary service and amenity factors. Nevertheless, safety is one of the key factors in tourism logistics which the travellers consider on their voyage planning. Therefore, we added it as one of the variables for this study. Details are as follows.

2.2 Safety

Ayasanond (2021) mentioned that tourism logistics is about the activities of tourists' movement from one place to another. However, tourists are human beings that compose feelings. Therefore, the travel pattern should be well-organized to create good experiences, especially safety (Sittilert, 2011). Tourism logistics depend on the ability of network planning, comfort, not getting lost, joyful, relaxed, fast and safe. The safety is also including the security at the bus station, along the road, at destination, emergency assistant, roadside lighting system. Buranawimonwan and Sukpatch (2018) cited tourism logistic refers to accident-free driving of vehicles, including the bus cabin has no fall of luggage to hit passengers, the preparing of protective equipment, and having first aid equipment in case of emergency. Kerdphon and Setsathien (2019) found that safety of traveling is the primary factor affecting logistic management. The scholars advised to improve the standard of public transportation and maintain the roadway accessing the touristic sites safely. Therefore, in this study we shed light on the enhancement of safe voyage to destinations. It includes the unrough roadway, the existence of signage along the way, the traffic lights at the crossroad, the security checkpoint, and emergency number signage demonstrated.

2.3 Accessibility

Accessibility or transferability refers to the level of ease with which travelers can gain access to a destination and generally related to the provision of transport facilities (Buranawimonwan, & Sukpatch, 2018; Sanyanunthana & Benabdelhafid, 2016). It also relates to the facilitation of movement within a destination and the location factors contributing to the success of its component attractions (Dickman, 1997). According to Wall (2000), the physical distance between a user and a tourism facility is measured in a straight line or along a route by any of travel time, cost measured in monetary terms, the degree of fatigue that is involved in overcoming the friction of distance, maps display the travel times to a destination with the lines extending outwards to major transportation corridors. At a regional level, statistical methods have been applied to assess the interaction of demand and supply for a particular resource at any point to calculate the potential, or accessibility. This concept has been used widely in transportation studies and marketing (Smith, 1983). More specifically, accessibility may be influenced by factors other than proximity, such as price, membership status and licensing regulations. Along these lines, accessibility of the transport system has a close relationship with tourist attraction and is an important factor in determining the number of tourists to the destination and directly correlated to the growth of tourism.

2.4 Amenity

According to Mitchell (2000: 21), amenity is the facilitation that destinations provide to serve the tourism needs in terms of goods and services. The destinations attempt to maximize the delivery of leisure amenities by positioning their facilities at accessible locations within short distances or travel times of potential markets. Even though hotels, restaurants and entertainment venues in resorts strive to minimize travel costs. Without amenity provisions, a destination may fail to serve visitors. A destination is expected to have certain basic services such as electricity, water, sewage disposal, public toilets, litter bins, police, ambulance, etc. The cost of supplying such services to visitors is sometimes resented by permanent residents, and may be a problem for planners, especially if visitation is highly seasonal. One limitation to the carrying capacity of a destination is the level of amenities that can be provided. (Dickman, 1997: 45).

2.5 Ancillary Service

According to Silapa-acha et al. (2002), one of the primary factors that influence the success of the tourism industry is the administration and operation. Ancillary service is seen as both facilitating and supporting products that must be present for the guest to use the core product and to help to differentiate it from the competition (Kotler et al, 2006, pp. 305-307) such as marketing, information service, security service, tourist centre, cooperation and promotion of tourist activity, tourism policy and planning that facilitate conservation of tourism resources, etc. In sum, tourism components of accessibility, amenity and ancillary services played a vital role in this study as it was used as a framework to develop the assessment criteria of CBT logistics in the study communities.

3. Results and Discussions

3.1 The Current Situation of CBT

According to the PRA, focus group and in-depth interview, CBT has been promoted in Thailand to enhance the growth of employment opportunities, community development, natural and CBT cultural resources conservation. Thus, many communities in upper northern Thailand had turned to be tourism destinations. However, based on the inductive activities including focus groups and in-depth interviewing the community. The numbers of tourists are still a relatively tiny amount. This is because of the location of CBT destinations in the remote area. Furthermore, the destinations lack of basic tourist

infrastructure for instance; the development of accessibility, amenity, accommodation, and ancillary services. On the other hand, the destinations lack government policy on tourism logistics development, the participation of local people and human resource development. Since the community cooperation and the knowledge of tourism operation and services are critical to the success of CBT. Farthest, the financial support is necessary for developing the tourism and human resource development in tourism from public and private partnership.

3.2 Logistics of CBT Destination in Upper Northern Thailand

The data in Table 1 illustrates that accessibility in terms of road condition in most CBT destinations is in good condition. To access the destinations; the private transport is required as there are public transport services only at Maeklangluang in Chiang Mai province and Donmoon in Prae province. Further, Pamieng in Lampang province seems to have the highest potential to welcome and serve tourists due to the promptness of ancillary services in the area.

Table 1
Promptness of Accessibility in the CBT Destinations

Destinations	Accessibility		Amenity	Promptness
	Primary Road	Alternative Road	Public Transport	
Maeklangluang	✓	✓	✓	Yes
RuamTai	✓	✓	-	No
Huitom	✓	✓	-	No
Huikokelek	✓	-	-	No
Pamieng	✓	✓	-	No
Namka	✓	-	-	No
Kuangbuk	✓	-	-	No
Donmoon	✓	✓	✓	Yes

In comparison among the 8 case studies, the study concluded the lack of logistics promptness and amenity in CBT destinations in upper Northern Thailand as demonstrated in Table 3.

3.3 The Structural Equation Modelling (SEM)

The SEM was conducted to compliment and concrete the inductive approach. The confirmatory factor analysis on the measurement model composing safety, amenity, accessibility, and ancillary services relate to tourism logistic and tourist visit destination. The construct reliability (CR) and the average variance extracted (AVE) were tested confirming the model as shown in table 2.

Table 2
Measurement Model Reliability Test

Construct	CR	AVE
Tourism Logistic	0.85	0.60
Tourist Visit Destination	0.92	0.75

From Table 2 it is revealed that the measurement model is acceptable, since the construct reliability of all constructs are above 0.7 and the average variance extracted of all constructs are above 0.5. Meanwhile, the fitness index was obtained as shown in table 3. It can be clearly seen that the measurement model in table 3 exhibited an acceptable model fit of the data.

Table 3
Goodness of fit analysis of confirmatory factor analysis

	Acceptance level	Goodness of fit index		Acceptance level	Goodness of fit index
RMSEA	< 0.05-0.08	0.27	AGFI	> 0.8~0.9	.981
RFI	> 0.9	.990	CFI	> 0.9	.999
p	>0.05	.166			
CMIN/ d.f	< 2	1.524			
GFI	> 0.8~0.9	.997			

The correlation model was tested on tourism logistic, and tourist visit destination. Considering that the exogenous accessibility has the highest factor loading value 0.75 on tourism logistic followed by safety 0.73 and amenity 0.70, respectively. Consequently, the tourism logistic has 0.85 impact on tourism visit destinations. In parallel, the tourists visiting the destination found the amenity has the highest impact with factor loading at 0.94 followed by safety and accessibility with the same factor loading at 0.85 as shown in Fig. 1. This can be annotated that any change on accessibility, safety and amenity would impact tourism logistic 75 percent, 73 percent, and 70 percent accordingly. Insomuch as the changes on amenity, safety and accessibility would affect the tourist visit destination 94 and 85 percent correspondingly. It can be inferred that the inductive result of accessibility and amenity have great influence on tourist visit destinations. However, safety should be considered as a primary basis along the roadway to touristic sites. Specifically, the first-time travellers might require road assistance such

as emergency signage number, security checkpoint, and traffic lights at the crossroad to assure their safety journey. It can be worth noticing that the tourism logistic has an influence on tourist visit destinations 85 percent.

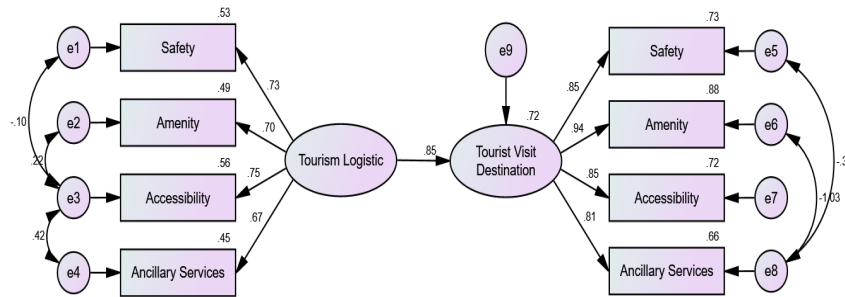


Fig. 1. Exogenous and Endogenous Correlation

4. Conclusions and Recommendations in Relation to the GMS Region

The results showed the inappropriate policy and human development on CBT issues.

To promote CBT, it is important to formulate policies based on local circumstances and address issues of public participation and empowerment. It is also necessary to improve rural and urban infrastructure, upgrade human resources in terms of tourism management and operations. In addition, governments of GMS countries should cooperate and promote tourism in the region through networking to reduce poverty and alleviate environmental degradation in the region. The carrying capacity of the host destination must be extremely considered to avoid negative impacts on the host. The distribution of income can be judged according to the situation of the country and promotion of tourism education among the stakeholders. In Thailand, the local authority called Tambon Administrative Organization (TAO) or sub-district administrative office plays an important role in resource management as well as tourism development. TAO has its budget that is used as a tool for resource conservation and economic development. However, at present, there is no knowledge, understanding and skills in tourism operations. Therefore, increasing knowledge between the TAO and villagers in CBT development is important. In the GMS setting, the study showed that regional cross-border CBT logistics management cooperation can be formulated as a network. Co-marketing under the theme of ‘Six Countries-One Destination’ is necessary and recommended. As the destinations are different, the core of the region must be identified to attract tourists as well as itineraries that include six countries’ destinations where travelers can enjoy the excursions in each country. Furthermore, cooperation on human resource development is necessary. The networks must provide training on tourism management and logistics operation. Thus, collaboration among stakeholders in the region should be promoted. Besides, the issues on safety, amenity, accessibility, and ancillary services shall be brought for planning and implementing tourism logistics.

4.1 Keys Success of CBT Logistics Development

The findings revealed that the key success of facilitating logistics of CBT destinations varies among the provinces and depends on the local circumstances. These include: potentiality of local authority in formulating the development policy and strategic plan, budget, tourist type and the destination, where 6As are issues in consideration. These are demonstrated in the following model.

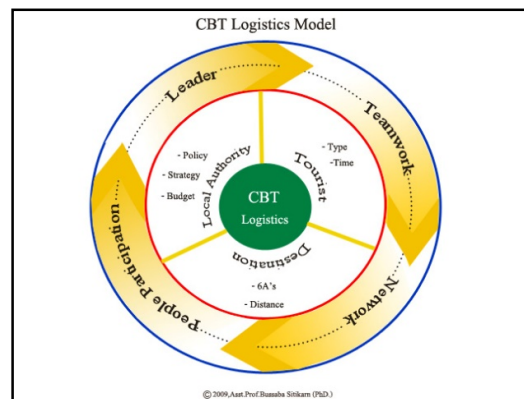


Fig. 2. Components of CBT Logistics Development Model

As demonstrated in the Model 1, the local authority Tambon Administrative Organization (TAO) or sub-district as locals’ leader plays a vital role in logistics development. Their vision on team working, networking and the participation of people

in the development of CBT initiative is significant for CBT logistics development. These elements must be formulated throughout the development process. Therefore, it is necessary to enhance capacity building of the TAO especially, knowledge of how to facilitate logistics of CBT and its success of amenity development under the local circumstances, which is essential for CBT development in the future.

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