

# CONCEPTUALIZING KNOWLEDGE, COMPETITIVENESS AND EMERGING COLLABORATIVE TOURISM CLUSTER

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## ABSTRACT

*Enterprise cluster is based on the idea of ‘mutual dependence’ focusing on real participation of every supply-chain sector of which one strategy creating a strategic strength for the industries among severe competitiveness of the market. This research is aimed at examining the small and medium-sized tourism enterprises, knowledge and understanding of cluster development as determinants and analysing the competitiveness of the operators to determine managerial in developing tourism clusters. Mixed methodology was conducted in this study. 315 samples were purposively selected for quantitative method and 10 informants were selected for qualitative method. The findings showed that enterprises were clearly in the group of slightly high knowledge and understanding of tourism cluster development and in strongly competitiveness. The managerial development for sustainable tourism clusters can be potentially formulated in the form of the cooperation between tourism enterprises with supported by governmental units and educational institutes.*

**Keywords:** Cluster development, Small and Medium enterprises, Competitiveness, Tourism.

## INTRODUCTION

Enterprise cluster is based on the idea of ‘mutual dependence’ focusing on real participation of every supply-chain sectors of which one strategy creating strategic strength for the industries among severe competitiveness of the market. The crucial manner is the creation of cooperation among groups that are producing goods or services, product supplying businesses, and supporting businesses to connect closely, which could yield good impact on reducing the cost for the whole system of supply chain [1]. However, there are several unsolved problems when the cluster concept is used as the mechanism to enhance the tourism industry competitiveness. According to [2], the cluster concept is generally used for manufacturing industries and large scale enterprises, but not for service industry like tourism or small and medium enterprises. Facing impacts of the economic

downturn and crisis from Covid-19 and new normal life changes with technology disruption, SMEs in tourism industry need inevitably to find an appropriate solution to alter these problems to the opportunity with a challenge of collaboration working so called tourism cluster.

Individual tourism enterprises in Thailand to be faced with problems pertaining to qualified personnel. For instance, the inadequacy of well-trained managers and staff to meet the needs of customers leads to the expenses of training their own personnel. Coupled with the present economic downturn situations which have a direct impact on these tourism enterprises operation costs resulting in an increase of relevant burden for the enterprises, the cut-price competition, low service standards, and the lack of qualified personnel [3]. These mentioned crisis situations caused the enterprises realized inevitably how to survive their businesses by using their current knowledge, experience, and capacity in administrations coupled with their competitive ability which was the current weakest point of the enterprises. However, one of the major solutions that could enable them to be successful and survive from the crises was to create business trusts, not only in the same industry but coming from cooperation among tourism enterprises and relevant industries as clustering [4] [1]. This was regarded as integration in the supply chain through drawing the cooperation and supportive from every relevant sectors to obtain a comprehensive supply chain (National Economic and Social Development Commission, 2017; [1, 2, 5]. To tackle the aforementioned problems, this paper seeks to answer the research question “to what extent is the concept of cluster development related to knowledge and competitiveness to small and medium enterprises in tourism industry?” by using the participation action research through the selected tourism destination and certain small and medium enterprises.

The modified model for tourism cluster-based SME development deserves special attention since the small and medium-sized economy is the most vital segment of each national economy. Making this model operational in the tourism industry, especially in creating the tourism service and product, is certainly of vital importance. The study aimed at examining the small and medium-sized tourism enterprises' knowledge and understanding of cluster development, analysing their competitiveness with proposing guideline in developing tourism clusters. The study therefore contributes to the enterprise clustering is regarded as an alternative in generating capacity for business competitiveness in the region so that they can sustain and be able to synergize and compete with their rivals on the principle of developing trusted cooperation to encourage the strong points and avoid the weak points of the clusters.

## **LITERATURE REVIEW**

### ***Concept of Competitiveness***

Enterprise competitiveness is capacity of business through the Diamond Model [2], which is divided into 4 important business environmental factors: production factor, demand condition, context of competitiveness and business strategies, as well as related and complemented industries, whereas there are 2 supplementary environmental factors: government sector's work units and uncontrollable situations. An entrepreneurial network can be defined as a system of long-term relationships between value chain actors, based on coordination of their strategy and activities in a certain industrial market [6]; [7]. Entrepreneurial networks in business are the form of cluster networks that enables organizations to allocate and exploit available resources the most effective way, thus obtaining the optimum synergy [4, 8, 9].

### ***Antecedents of Cluster development***

The role of clusters in the development of domestic tourism was a compilation of existing research approaches and results of original research in this field. According to [9], tourism cluster as a localized tourism and recreation system, consisting of manufacturing, trading, and service firms in the field of tourism services and related industries, as well as various subsidiary businesses, co-operation of which provides the enhancement of the individual competitiveness and specialization of members of the cluster as a result of occurrence of a synergistic effect of the sophisticated complex of services and leads to the creation of regionally concentrated on labour tourism market. In the innovation perspective, [9] analysed the clusters in tourism as innovative form of modernization and diversification of the economy of the territory and the factor of its steady competitiveness, has offered to determine the tourist's cluster as a totality of interacting and interrelated companies and organizations, functionally isolated within the system of value accumulation.

Tourism cluster [10] is a group of tourism businesses and pertaining institutions gathered in order to operate enterprises in certain areas with cooperation, encouragement, connections and promotion one another for the completed supply chain. Vertically, they are the connections among travel and related enterprises from the beginning to the end. Horizontally, they are the connection with different supporting industries including information services providers, trade associations, educational and training institutions, research and development institutions, local government, and relevant government sector's work units. According to [9], the crucial factor needs to as a pre-determinant of cluster development is entrepreneur's knowledge and understanding of tourism cluster. This factor is an attitude or an opinion of business operators or entrepreneurs accumulated from learning and experiences, including practical and skill abilities, operators' understanding about the tourism cluster comprising recognition for gathering into enterprise cluster, acceptance and cooperation within and outside the cluster, time and situation conditions for the cluster gathering, as well as the ability level and potentiality of the enterprises in the cluster gathering. The study on knowledge and understanding of the cluster of tourism business owners provided 5 aspects [11]. These were the recognition for the cluster gathering, the acceptance and cooperation within and outside the enterprise cluster, the condition on time and situation for clustering, and the capacity level and potentiality in the cluster gathering The National Economic and Social Development Commission, 2017. This is the way to expose the operators' basic data necessary to be evaluated in conjunction with the degree of competitiveness through the use of Diamond Model by [2]. From the study of the tourism cluster and innovation in England and other European countries [7, 12], it was found that the developmental process for the tourism cluster was not an easy idea that naturally occurs. Instead, it really needed a strong connection and cooperation among all relevant personnel willing and trustworthiness. In addition, it needed developmental mechanisms to drive the cluster grow steadily with efficiency [7, 13]. One of the key success factors to driving the developmental mechanisms for the cluster growth was how to allocate the appropriated financial profits and benefits to the enterprises within the cluster [13, 14].

### ***Tourism Cluster in Thailand***

The cluster development opportunities and challenging findings were confirmed by a study conducted by the Office for the Development of the National Competitiveness Capacity and the National Economic and Social Development Commission of Thailand in 2017 on the development of competitiveness for regional tourism industry in Phuket

province, a well-known beautiful island in the south of Thailand and in the world. The findings revealed that it included 50 local tourism enterprises as well as several related tourism sectors were successful tourism cluster in the beginning phase of the aftermath of the Tsunami in 2004. In the meantime, the confronted issues that were the challenging problems on potential development for cluster needed imparting of well knowledge and understanding, as well as creating awareness, recognition, motivation, and mutual trust. Under the Covid-19 global pandemic and economic downturn, cooperation network for the members of tourism cluster in small and medium enterprises (SMEs) based on mutual trust and reliability was mandatory and essential [2, 5, 15]. However, many previous cluster studies indicated that a major reason regarding the failure of the cluster was related to the discontinuity of the government policies in local and national level [4, 6, 9, 16] including mutual suspicion and lack of mutual trust or reliability. On the whole, the studies concluded that the lack of a major core in administering the cluster with a well-planned strategy was also considered one of the crucial causes of unsuccessful clusters [8, 13, 17]. Many studied declared there was a major reason regarding this was due to the discontinuity of the government policies, including mutual suspicion and lack of mutual trust or reliability [13, 17]. As a whole, it still lacked a core in administering the cluster sustainability [8, 10, 18].

In the meantime, as previous studies the challenging problems on potential development for cluster needed imparting of knowledge and understanding, as well as creating recognition, and cooperation network for the members of the cluster in Thailand based on mutual trust and reliability [5, 13, 19]. In order to prompt the members to realize the importance and necessity to share mutual tourism cooperation in building up the capacity for the cluster competitiveness in which the business operators have capacity to learn from their experience and seek for more knowledge on their interesting issues and ideas. This would make the business operators know and understand the cluster differently. It was evident that the ideas relating to the enterprise cluster may be synergized but the possibility in developing the regional tourism cluster in Thailand is still not convincing and questionable.

**Conceptual framework**

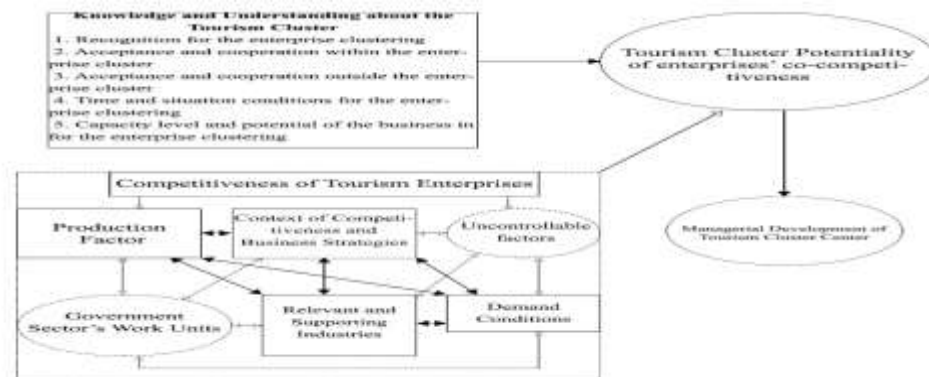


FIGURE 1 CONCEPTUAL FRAMEWORK

**METHODOLOGY**

Mixed methodology was conducted. The samples used for the research were small and medium business operators or owners and tourism managers in Thailand. In the

scientific literature and researches the cluster approach for the tourism industry is characterized as one of the most effective tools of coordination of subjects and objects of the tourist infrastructure and implementation of marketing, service, entrepreneurial and socio-cultural processes [18].

### ***Population and Sample***

According to the SMEs statistics in Thailand, the number of tourism business owner was 2,016 enterprises. Sample size was calculated from the formula of [20]. 334 samples were randomly and purposively selected and consisted of a total of 334 tourism business owners.

### ***Data Collection***

With the quantitative method, data were collected using a structured-questionnaire distributed to 350 small and medium-sized tourism businesses. 175 online survey forms of questionnaire were sent to owners and 175 questionnaires were conducted by personal interview. Purposive sampling was followed by email as an effective way for supporting the variety and qualifications of respondents. An online survey has more advantages than post or paper surveys because of the capability for quick replies without the limitation of geography. All of the 155 paper questionnaires were completed and returned, whereas only 160 of the 175 online questionnaires were completed. Therefore, online survey and personal interview replies were then collected within five weeks, to give a total of 315 respondents, giving 94.31 per cent response rate. Ten experts of tourism clustering management were purposively in-depth interviewed through unstructured interview forms for qualitative method, while the categorized content analysis was conducted to analyse the interviewed data.

### ***Research instrument***

For quantitative research, a questionnaire with closed-end questions was designed from the study of data from textbooks, documents, concepts, theories, and related research. All indicators were adopted from previous research and measured using a five-point Likert scale for determinants of knowledge and understanding about the cluster of tourism business owners provided 5 aspects The National Economic and Social Development Commission, 2017. Furthermore, there were six major enterprise competitiveness measured using a three-point as production factor, demand condition, context of competitiveness and business strategies, related and complemented industries, government sector's work units and uncontrollable situations, was identified based on 's model (1998).

For qualitative research, structured interview form was conducted to collect data from 10 snow-ball samples' interviews who were the experts in business cluster management from private sectors and government sectors.

### ***Measurement Validity and Reliability***

A pre-test was run on a random sample of the population ( $n = 20$ ) to establish research procedure to follow and answer the questionnaires. The reliability and validity of the measures presented in Table 1 were established according to standard procedures recommended by [21]). Following [21], confirmatory factor analysis was conducted to establish the construct validity of the determinant scales of competitiveness: production factor (PF), demand condition (DC), context of competitiveness and business strategies (CS), related and complemented industries (RI), government supports (GS), and irregular or uncontrollable situations (IS) yielded the standardized factor loading significantly. And

confirmatory factor analysis was conducted to establish the reliability of the determinant scales of knowledge and understanding of tourism clustering: acceptance and cooperation outside the cluster (AC), condition of time and situation for the enterprise clustering gathering outside the cluster (TS), acceptance and cooperation within the cluster (AW), the capacity level and potentiality of the business cluster (CP), and the recognition for the enterprise cluster gathering (RG).

Measure reliability was also examined for internal consistency by computing Cronbach’s alpha coefficients as Table 1. The obtained Cronbach alphas of six determinants of competitiveness were PF, DC, CS, RI, GS, and IS were 0.759, 0.782, 0.721, 0.754, 0.898, and 0.819, respectively as well as those of knowledge and understanding of tourism clustering was classified as 5 types as AC, TS, AW, CP, and RG were 0.747, 0.734, 0.802, 0.769, and 0.708, respectively. All of Cronbach’s alpha was found to be greater than 0.70 for the constructs of the major determinants, which is in accordance with [22] for exploratory research.

Table 1

CONFIRMATORY FACTOR ANALYSIS AND CRONBACH’S ALPHA RESULTS

| Construct / items                                 | Standardized loading | t-value | Cronbach’s Alpha | Construct / items | Standardized loading | t-value | Cronbach’s alpha |
|---|----------------------|---------|------------------|-------------------|----------------------|---------|------------------|
| Knowledge and Understanding in Tourism clustering |                      |         | 0.786            | Competitiveness   |                      |         | 0.832            |
| AC  | 0.632**              | 12.527  | 0.747            | PF                | 0.586**              | 14.655  | 0.759            |
| TS  | 0.768**              | 14.285  | 0.734            | DC                | 0.694**              | 11.960  | 0.782            |
| AW  | 0.827**              | 15.410  | 0.802            | CS                | 0.653**              | 11.313  | 0.721            |
| CP  | 0.633**              | 11.709  | 0.769            | RI                | 0.749**              | 11.960  | 0.754            |
| RG  | 0.924**              | 9.473   | 0.708            | GS                | 0.653**              | 11.313  | 0.898            |
|   |                      |         |                  | IS                | 0.749**              | 11.960  | 0.819            |

\* Parameter estimates are significant at the .05 level.

\*\* Parameter estimates are significant at the .01 level.

**Data Analysis**

Descriptive statistics with mean and standard deviation were calculated to depict the conceptual variables. Descriptive statistics were calculated through frequency, percentage, mean scores with the point and interval estimation, and standard deviation (S.D) for knowledge and understanding tourism clustering, and enterprise competitiveness. From structured interview form to evaluate the importance level of each dimensions of enterprise competitiveness which each informant has evaluated the weight value ranges from 0 to 1. Consequently, the mean of 10 interviewers’ rating was called a weighted value of competitiveness which obtained by an interpretation analysis from these 10 snow-ball samples’ interviews. Accordingly, it was also calculated by the statistically interval mean estimation of the competitiveness score and mentioned interview data transformation.

**RESULT AND DISCUSSION**

It was found from Table 2 that there was an average score pertaining to knowledge and understanding of an enterprise cluster rated at the high level (Mean =3.55 (out of 5) or approximately 71 percent, S.D = .27). When considering aspect-by-aspect, it was shown that, as a whole, an average score was at the high level except for an aspect of the recognition for an enterprise cluster gathering which yielded an average score at the medium level based on an average score.

*Table 2*

**KNOWLEDGE AND UNDERSTANDING IN TOURISM CLUSTER AND DEGREE OF COMPETITIVENESS FOR TOURISM CLUSTER**

| Knowledge and understanding in tourism cluster   | Mean | S.D  | Level  | Degree of Competitiveness  | Mean | S.D  | Level  |
|--|------|------|--------|--|------|------|--------|
| 1.Acceptance and cooperation outside the cluster (AC)  | 3.50 | 0.22 | High   | 1. Production factors (PF)   | 2.23 | 0.35 | Medium |
| 2.Condition of time and situation for the enterprise clustering gathering outside the cluster (TS) | 3.63 | 0.31 | High   | 2. Demand conditions (DC)  | 2.45 | 0.39 | High   |
| 3.Acceptance and cooperation within the cluster (AW)   | 3.97 | 0.18 | High   | 3. Related and support industries (RS)                             | 2.61 | 0.39 | High   |
| 4.The capacity level and potentiality of the business cluster (CP)                                 | 2.90 | 0.21 | Medium | 4. Context of competition and operation and business strategy (CS) | 2.33 | 0.60 | Medium |
| 5.The Recognition for the enterprise cluster gathering (RG)  | 3.75 | 0.25 | High   | 5. Government sector’s work units (GS)                             | 2.32 | 0.35 | Medium |
| Grand mean   | 3.55 | 0.27 | High   | 6. Uncontrollable events factor (IS)                               | 1.26 | 0.28 | Low    |
|  |      |      |        | Grand mean   | 2.46 | 0.22 | High   |

Additionally, the degree of competitiveness in tourism enterprises was analysed to achieve the second research objective. According to the business operators’ self-assessment as the Diamond model, the grand mean and standard deviation of their business competitiveness were calculated that yielded 2.46 and 0.22 based on an average score which was classified to three levels of competitiveness as follows. An average score is between 1 to 1.67 represented the low level of competitiveness, an average score is between 1.68 to 2.35 represented the medium level of competitiveness, and an average score is between 2.36 to 3.00 represented the high level of competitiveness.

These above findings have resulted to an evaluation of competitiveness potential of tourism enterprises through SWOT Analysis. By doing this, an analysis of the potential position of business enterprise cluster was divided into two dimensions, which so called “Tourism Cluster Potentiality for tourism enterprises’ co-competitive position index”. The first dimension came from an analysis of knowledge and understanding of five aspects of enterprise clusters, in conjunction with the second dimension which were analysed the industry competitiveness in six aspects. In addition, content analysis through the 10 clustered enterprises was done as the following procedure. The first step was to calculate the weight value ranges from 0 to 1 which obtained by an interpretation analysis from these 10 snow-ball samples’ interviews. According to 10 interviewers’ rating, the weight

value of competitiveness was 0.95. Then the next step was to calculate an average score in the part of the business competitiveness drawn from the questionnaire and the final step was to calculate the weighted score by the formula as follow.

$$\text{Weighted Score of business competitiveness} = \text{Weight Value} * \text{Mean} \quad (1)$$

$$\text{Therefore, Weighted Score of business competitiveness} = 0.95 * 2.46 = 2.34$$

When the weighted score of business competitiveness was obtained, and the results were analysed in conjunction with knowledge and understanding of tourism clustering, which assumed the normal distribution based on the kurtosis and skewness values. To make more meaningful to illustrate the current position of industry, the 95 per cent confidence intervals were constructed with the both variables were so called “Tourism Cluster Potentiality for tourism enterprises’ co-competitive position”. This can depict and represent the possible area for cooperation and competitiveness of business operators as shown in

Table 3

AN EVALUATION OF KNOWLEDGE AND UNDERSTANDING OF TOURISM CLUSTERING AND POTENTIAL COMPETITIVENESS FOR TOURISM

| Variables  | Mean | SD   | Weighted Score* | n   | Confidence Interval(CI)** |
|--|------|------|-----------------|-----|---------------------------|
| 1.Knowledge and Understanding about tourism Clustering | 3.55 | 0.27 | -               | 315 | (3.49, 3.61)              |
| 2.Business Competitiveness                             | 2.46 | 0.22 | 2.34            | 315 | (2.29, 2.39)              |

Note \*Weighted Score obtained from  $\text{Weighted Score} = \text{Weight Value} * \text{Mean}$

\*\* 95 per cent confidence intervals ( $Z_{1-\alpha/2} = 1.96$ ) were calculated from the formula as follows.

The lower endpoint =  $\text{Mean} - (Z_{1-\alpha/2} * S.D/\sqrt{n})$  and the upper endpoint =  $\text{Mean} + (Z_{1-\alpha/2} * S.D/\sqrt{n})$

Accordingly, in regards to the potential evaluation of competitiveness of two dimensions as above, the calculated interval scores were used to draw the area that depicts the potential of cluster development. According to this, the tourism enterprises rated in group number five and six of competitiveness potential level that is the high level of their knowledge and understanding of clustering and slightly strong level of competitiveness as

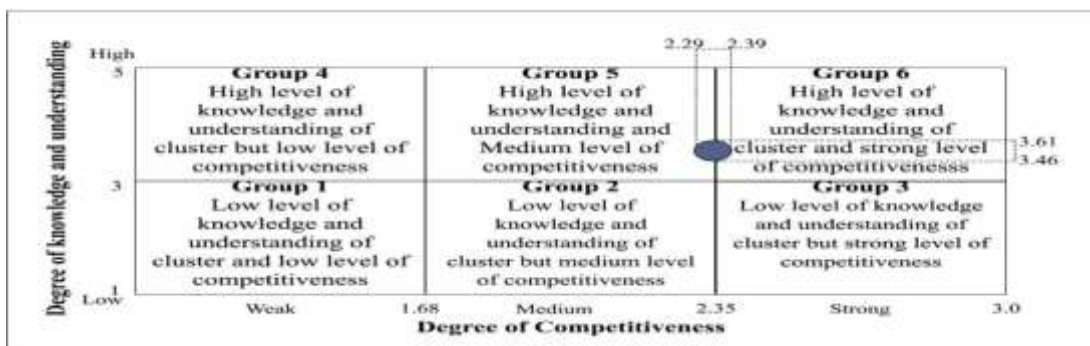


FIGURE 2 TOURISM CLUSTER POTENTIALITY FOR CO-COMPETITIVE POSITION



***The findings can be discussed as follows.***

Business operators that were members of professional clubs or associations, according to their opinion, had more knowledge and understanding of tourism cluster than those of non-members of professional clubs or associations. This came from the fact that the members generally enabled them to experience mutual support and encouragement through their collaboration. Besides, the professional clubs or associations members could mutually indeed share and exchange information and business experiences in order to develop and improve the operations of their own activities. They, therefore, would gain higher operation and management efficiency, as well as generate innovations on products and services through their shared value and experience ([1, 15]. The findings of this research also complied with the study of the Office for the Development of the National Competitiveness Capacity and the National Economic and Social Development Commission (2017) found that the members of the cluster had often exchanged their experiences in order to impart techniques and knowledge in various business opportunities. These are the essential determinants for differentiation and innovation in enterprises [1, 2, 5, 6, 23].

The successful and sustainable development of recreation and tourism business to a great extent depends on coordinated interaction of government and private services, related to this industry. Indicators of successful implementation of the regional participation in the formation and development of the tourism cluster can be represented by such demand side as the number of tourists who have visited the region for the period of the program realization and level of perceived quality of services, as well as supply side such as the number of employees involved in the implementation of the cluster program, their skills and competencies [23]. In this collaboration, the main purpose of the local and state policy in the formation and development of the tourism cluster in the region is to create a highly effective, modern recreational and tourism complex, which will be able to provide the advanced features for sustainable development of the region's economy.

In regards to the interest of enterprises to join tourism clusters, it was revealed that business operators with an interest to join the clusters had more knowledge and understanding of clustering than those without an interest to join the cluster. These findings coincided with the studies of [6] who found that the outstanding points of the operators were their capacity in learning from co-experiences and searching for more knowledge in their interesting topics that could drive them to join the cluster [7]. Importantly, the position of tourism enterprises clustering was in between the group of high degree of knowledge and understanding of tourism cluster as well as relatively strong competitiveness. The position located at which was the high tourism cluster potentiality for tourism enterprises' co-competitive position.

**CONCLUSION**

The results could be applied for managerial development for tourism cluster used as a tool in tackling the existing problems and achieve the cluster goals. Tourism cluster should become the driving force for the regional development, the link between the commercial interests of business, public policy priorities and cultural and moral imperatives of a progressive society. The unity in goals and objectives of the country's and region's development allow implementing the collaboration means successfully, coordinating the operation of all branches of the government, services and ministries for the growth of the cultural level, spiritual potential and prosperity of the country and each of the citizens. Accordingly, the high tourism cluster potentiality for tourism enterprises' co-competitive position was found. Regarding these, the strategically developmental

approach could be, under such the tourism industry turmoil as Covid-19 pandemic and technology disruption Further research should design the research methodology as the participatory action research (PAR). With PAR, many factors and conditions such as determination of a commitment to promote integrative participation in the certain cluster to find out the grassroots problems at the right points, trust building and development of systematic administration and management including marketing promotions and management of tourism resources and environment and well-planned infrastructure would be discovered by the communities of collective inquiry and experimentation grounded in experience and action.

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