



## Guidelines for the Creative Economy: Enhancing the Value of Cultural and Natural Resources in the Peripheral City, Chanthaburi province of Thailand

### แนวทางสำหรับเศรษฐกิจสร้างสรรค์: การเพิ่มคุณค่าให้แก่ทรัพยากรทางวัฒนธรรม และ ธรรมชาติในเมืองรอง กรณีศึกษาจังหวัดจันทบุรี ประเทศไทย

สหสัญญา สัจกุวนิชย์<sup>1</sup> ทิพวัลย์ ตั้งพูนทรัพย์ศิริ<sup>2</sup> และ William Chapman<sup>3</sup>  
Sahasanj Sujjakulvanich,<sup>1</sup> Tippawan Tangpoonsupsiri<sup>2</sup> and William Chapman<sup>3</sup>

#### Article History

Receive: May 12, 2020

Revised: August 14, 2020

Accepted: November 24, 2020

#### บทคัดย่อ

การวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาคุณค่าของทรัพยากรทางวัฒนธรรมและทางธรรมชาติที่เป็นแหล่งท่องเที่ยวของจังหวัดจันทบุรี ทำความเข้าใจถึงความสัมพันธ์ระหว่างการใช้แนวคิดเศรษฐกิจสร้างสรรค์ในเมืองรองกับประสบการณ์ของนักท่องเที่ยวที่ได้รับมาจากการทำงานร่วมกันแบบจตุภาคี และการสร้างสรรค์คุณค่าร่วมกัน และศึกษากรณีเปรียบเทียบการใช้เศรษฐกิจสร้างสรรค์ของเมืองอื่นๆ เช่น เมืองสารคโลก จังหวัดสุโขทัย และเมืองขอนแก่น จังหวัดขอนแก่น ซึ่งแม้ว่าจะมีปัจจัยด้านทรัพยากรทางวัฒนธรรมและธรรมชาติ รวมทั้งปัจจัยด้านอื่นๆ ที่แตกต่างจากจังหวัดจันทบุรีซึ่งเป็นพื้นที่หลักในการวิจัยนี้ แต่กรณีของเมืองที่นำมาศึกษาเปรียบเทียบนี้เป็นตัวอย่างที่ดีที่สามารถแสดงออกถึงกระบวนการของการทำงานร่วมกันแบบจตุภาคี และการสร้างสรรค์คุณค่าร่วมกัน ซึ่งถือได้ว่าเป็นปัจจัยหลักของการประยุกต์ใช้เศรษฐกิจสร้างสรรค์ในเมืองรอง วิธีวิจัยที่ใช้คือแบบผสมผสานระหว่างวิธีวิจัยเชิงปริมาณ และเชิงคุณภาพ เครื่องมือที่ใช้ในการวิจัยคือ แบบสอบถามที่ผ่านการตรวจสอบความเชื่อมั่นและความตรงเชิงเนื้อหาจากค่าดัชนีความสอดคล้องโดยผู้เชี่ยวชาญ 3 ท่าน ส่วนแบบสัมภาษณ์จะเป็นแบบกึ่งมีโครงสร้าง กลุ่มตัวอย่างที่ใช้ในการวิจัย คือนักท่องเที่ยวที่แหล่งท่องเที่ยวทางวัฒนธรรมและทางธรรมชาติในจังหวัดจันทบุรีจำนวน 590 คน และผู้ให้สัมภาษณ์หลัก 20 คน สถิติที่ใช้ในการวิเคราะห์ข้อมูลเชิงปริมาณ ได้แก่ ค่าเฉลี่ย ตารางไขว้ และค่าสหสัมพันธ์ สำหรับการวิเคราะห์ข้อมูลเชิงปริมาณจะใช้วิธีการวิเคราะห์เชิงพรรณนา ผลการวิจัยพบว่า จังหวัดจันทบุรี มีความพร้อมในด้านปัจจัยด้านทรัพยากรทางวัฒนธรรมและทางธรรมชาติ ที่มีความอุดมสมบูรณ์และมีความหลากหลาย และประสบการณ์ของนักท่องเที่ยวที่มาเที่ยวจังหวัดจันทบุรี กับการใช้โน้ตเดลเศรษฐกิจสร้างสรรค์ ที่ประกอบไปด้วยการแสดงออกเชิงสร้างสรรค์ การประยุกต์ใช้เชิงสร้างสรรค์ และการใช้เทคโนโลยีเชิงสร้างสรรค์ มีความสัมพันธ์เชิงบวกอย่างมีนัยสำคัญทางสถิติที่ระดับ .05 นอกจากนั้นการศึกษาวิจัยครั้งนี้ยังพบว่า แนวทางสำหรับเศรษฐกิจสร้างสรรค์เพื่อเพิ่มคุณค่าให้กับทรัพยากรทางวัฒนธรรมและทางธรรมชาติในเมืองรองคือ การทำงานร่วมกันแบบจตุภาคีและการสร้างสรรค์คุณค่าร่วมกัน โดยมีมหาวิทยาลัยในท้องถิ่นเป็นผู้ที่มีบทบาทหลักในการส่งเสริมทำงานร่วมกันและการสร้างสรรค์คุณค่าร่วมกัน ดังกล่าว

**คำสำคัญ :** เศรษฐกิจสร้างสรรค์ ; เมืองรอง ; การทำงานร่วมกันแบบจตุภาคี ; การสร้างสรรค์คุณค่าร่วมกัน ; จังหวัดจันทบุรี

<sup>1</sup> Doctoral Student in Architectural Heritage Management and Tourism, Faculty of Architecture, Silpakorn University

<sup>2,3</sup> Lecturer, Faculty of Architecture, Silpakorn University



## ABSTRACT

The objectives of this study were included three aspects. First, the research aimed to study the value of cultural and natural resources, which were established as the tourism places of Chanthaburi province. Secondly, the research intended to understand the relationship between the application of creative economy in the peripheral city and the tourists' experiences which were derived by the collaboration (Quadruple Helix) and co-creation of value. Thirdly, the research examined the comparative case study of the application of creative economy in other cities such as Sawankhalok district, Sukhothai province and Khon Kaen Province. Although the factors of cultural and natural resources and other factors of these cities were different from those of Chanthaburi Province, the comparative cases were considerably good examples to exhibit the process of collaboration (Quadruple Helix) and co-creation of value that would be considered the core factors of creative economy in the peripheral city. The research method was the combination method between quantitative and qualitative approaches. The research instruments were questionnaires, which were tested for the scores of 'reliability' and for the Index of Item-Objective Congruence (IOC) by 3 experts and the interview questions that were made in the semi-structure. The samples of study were 590 visitors, who visited at the cultural and natural tourism places of Chanthaburi Province with 20 key informants. Statistics used in quantitative data analysis were mean, cross-tab analysis, and correlation analysis. The qualitative method was applied upon the descriptive analysis. The findings suggested that the cultural and natural resources of Chanthaburi were abundant and various tourists' experience in applying creative economy model were comprised of creative expression, creative application, and creative technology, as indicating through a significant positive relationship ( $P < 0.05$ ). Additionally, this research revealed that the guidelines for creative economy enhancing the value of cultural and natural resources in the peripheral city were depended on the collaboration (Quadruple Helix) and co-creation of value. With this said, the local universities played key roles in supporting such collaboration and co-creation of value.

**Keywords :** Creative Economy ; Peripheral City ; Quadruple Helix ; Co-creation of Value ; Chanthaburi Province

## Introduction

Chanthaburi province was one of the fascinating provinces in the Eastern region of Thailand. In fact, the province possessed a plenty of high-quality natural and cultural resources which were scattered around the city, especially within the radius of 20-25 kilometers from Amphoe Mueang, Chanthaburi. The combination and diversity of cultural and natural resources were varied from the historical places and buildings, the beautiful waterfalls from the mountains and the scenic sea shores which were the sanctuaries of aqua plants and marine animals to the mixture of local people such as Thai, Thai-Chinese, Thai-Vietnamese, and indigenous such as Chong.

Because of the distance around 250 kilometers from Bangkok to Chanthaburi and its location among the most famous, adjacent cities for tourist destinations such as Chonburi, Rayong, and Trat, many visitors, hence, considered Chanthaburi the "secondary tourist destination", which normally spent 2-3 hours to visit, took snapshot photos, and then, moved to and stayed overnights at other provinces instead. Even though, Tourism Authority of Thailand (TAT) had launched the national, marketing campaign such as "12 Can't Miss Cities" and "Tax Waive for Travelling to Secondary City" to promote tourism in



such secondary city as Chanthaburi, most tourists had not fully realized that there were many places in Chanthaburi where cultural and natural resources were still attractive and authentic (Yupakaset, 2019).

In order to cope up with this situation and challenge, the concepts and the applications of creative economy in the peripheral city that prioritized the ‘places’ to the ‘spaces’ or ‘distances’ (Collins and Cunningham, 2017) were the feasible answers to Chanthaburi and other peripheral cities of Thailand. To do this, the ‘places’ of Chanthaburi in which cultural and natural resources for tourism were abundant and various should be managed creatively to utilize and to enhance their distinguished value by the application of creative economy model creative expression, creative application, and creative technology, derived by the collaboration and co-creation of value among tourists, local communities, and other stakeholders.

Hence, based on such concepts and applications of creative economy in the peripheral city, this research was concentrated especially on reviewing how the value of cultural and natural resources of Chanthaburi province could be enhanced under the circumstances of collaboration and co-creation of value among local communities, tourists, producers, and other stakeholders. It was expected that by utilizing the application of creative economy model as well as the collaboration and co-creation of value, the value of cultural and natural resources of Chanthaburi province could be enhanced and therefore, contributing to not only the improvement of destination competitiveness and brand image of Chanthaburi province, but the tourists’ experience and the sustainable local communities as well.

## Objectives

1. To study the value cultural heritage and natural resources in Chanthaburi, particularly the tourism places / local communities that were relevant to the collaboration and co-creation of value.
2. To understand the relationship between the application of creative economy model in the peripheral city and the tourists’ experiences which were derived by the collaboration (Quadruple Helix) and co-creation of value.
3. To review the comparative case study of the application of creative economy in other cities which were benefited from the application of collaboration (Quadruple Helix) and co-creation of value.

## Hypotheses:

$H_0$  : There was no relationship between the tourists’ experiences and the application of creative economy model ( $P>0.05$ )

$H_2$  : There was relationship between the tourists’ experiences and the application of creative economy model ( $P<0.05$ )

## Literature Review

### 1. Creative Economy in the Peripheral Regions

In the rural areas or in peripheral regions, the major concerns were about the low population density, the geographical isolation, and the distance from the markets. One might regard this as the locational disadvantage of the rural areas and ranked them in the low potential for income generation while the other would consider the challenges of remoteness as the opportunities to create new experiences.



Firstly, in the peripheral areas such as second tier cities or secondary tourist destinations, the soft factor such as the cultural heritages, a sense of belonging, a tight-knit community, a local lifestyle, and the natural environments & beautiful landscapes were flourished and authentic. The aesthetic and authentic values of such resources potentially attracted the visitors, interested the creative individuals, and retained the local people, resulting in the indices of 'co-creation knowledge' and 'co-creation of value' among them, which was undeniably considered a critical factor in creative economy.

Secondly, the 'experience' derived by the value creation and value consumption of the products and services was uniquely generated by the local people at the local places. Hence, the value was embedded in products and services as well as the 'place'. Under the concept of creative economy in peripheral areas, the place could be deployed wisely to generate cultural goods and services and became product itself by the promotion of its value and the development of 'place branding'. For this case, the place would supersede the 'space' or 'distance' because the place was entwined with the culture and tradition of local people (Collins and Cunningham, 2017).

Thirdly, owing to the technology advancement, the mobile application and online social media became a critical factor for peripheral cities to overcome the locational disadvantage. By connecting the relevant stakeholders (locals, creative individuals, and visitors) online, the creative contents were generated, exchanged, and consumed. This changed a relationship structure from the producer-consumer to be a 'prosumer' who was able to collaboratively produce, modify, and consume the value and could simultaneously share it through the online social network.

Fourthly, the creative economy in peripheral regions was focused on the social cohesion and the sustainability of local communities rather than preoccupied by the huge financial returns. Some academics realized that the importance of cultural heritage helped promote the social cohesion. The local souvenirs, whose design and material inspired by the local cultural and natural resources and produced by local communities were one of good examples to represent a social role to generate a sense of place and social cohesion, and thus contributing to the sustainability of local communities.

The creative economy business model innovation composed of 3 parts, namely, creative expression, creative application, and creative technology had been developed to explain about 'value consumption'. (Collins and Cunningham, 2017) The '*creative expression*' was exhibited through the value consumption of cultural attributes, for instance, the historical and spiritual values in craft and art pieces, cultural heritages, and museums which were unique and distinguished.

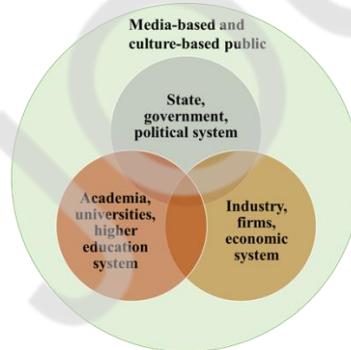
The '*creative application*' was ranged from architecture, fashion, festival, music, television, to the publishing and advertisement. Academics regarded creative application as the 'content industries' where the products and services were creatively produced and they used the copyright to protect and to sustain their competitive offering. Finally, '*creative technology*' was the one based on digital technology. It truly reduced the barrier between the consumers and producers. The rise of collaboration and co-production among the consumers and producers such as crowdsourcing and user-generated content was one of the good examples supported by creative technology. It included not only the application development and internet services, but also the animation, gaming, graphic design, and new media art online.

## 2. Collaboration (Quadruple Helix)

Mentioned explicitly by the Organization for Economic Co-operation and Development (OECD), the ‘knowledge’ was a primary source of value creation. In other words, the value creation derived by the knowledge was collaboratively translated and creatively applied by the industry and become the innovation, the production, and the economic activities by returns.

Originally, the ‘Triple Helix’ model of knowledge creation and application was the collaboration of 3 parties, namely, the state (government), the academia (university), and industry (business or firm). As mentioned by Dr. Alan Paic, an Acting Head of Investment Compact for South East Europe, OECD in 2014, the Triple Helix was composed of 1) science (or university) which created new knowledge, 2) government which was responsible for legislative and infrastructure, and 3) economy (or industry, business, and firm) which converted new knowledge to products and services.

The ‘Quadruple Helix’ model had extended the collaboration of 3 institutions by adding the fourth helix ---‘public’ into the model. As defined by Carayannis and Campbell, the fourth helix was about the ‘media-based and cultural-based public’. They also mentioned that the fourth helix was “associated with ‘media’, ‘creative industries’, ‘culture’, ‘values’, ‘lifestyles’, and perhaps also the concept of ‘creative class’ as defined by Richard Florida”. (Carayannis and Campbell, 2012). The fourth helix, by their definitions, was potentially associated with 1) culture and values on one side and 2) how ‘public reality’ was developed and communicated by the media on the other side.



**Figure 1** A model of ‘Quadruple Helix’ (Carayannis and Campbell, 2012)

The understanding and utilization of ‘Quadruple Helix’ would provide the benefits as follows. (Kolehmainen, Irvine, Stewart, Karacsonyi, Szabo, Alarinta, and Norberg, 2015)

1. The fourth helix, which includes ‘public’ --- the ‘community’ or ‘social and community groups’, could play the major role for local development in case that the supports from the other helix such as local government and local educational institutions were insufficient.

2. The concept and the application of the ‘Quadruple Helix’ could form the networks of ‘wider community’ which contributed to the openness of innovation derived by the combination between the strategic direction of communities and a whole business model, which might not be limited to the producers, but include the consumers as well.

3. Because some problems and challenges in remoted area would not be solved by one institution or one authority by straightforward approach, the fourth helix which was engaged with and based on social collaboration possibly provided the solutions by the contribution of a knowledge-based



and innovation-based driven democracy ‘Creative Society’.

4. The utilization of ‘Quadruple Helix’ were beneficial to the rural city as well as the peripheral region. In order to strengthen the regional development, it was worth to work together to create the shared visions concerning their own future and the whole region. The roles of each community were not only practice of its own vision, but also putting such ‘shared visions’ into practice.

Ultimately, the other research study showed the significant role of the local educational institutions and their network development. For example, the collaboration between Higher Education Institutions (HEIs) and Creative and Cultural Industries (CCIs) in Southern Norway had enabled the innovation, the economic growth, the competitiveness, and the social and culture development at the regional level. To support such collaboration, the ‘bridge’ of communication was required. In fact, the role of ‘broker’ or ‘agent’, which would be supported by local university that acts a role of ‘gatekeeper’ for CCIs and HEIs cooperation and adapted the strategic plan to stimulate academic involvement with regional businesses and industries, was very significant.

### 3. Co-Creation of Value

The concept of co-creation of value had been developed on the foundation that in the value creation process, the customers were considered the active players rather than the passive ones. Moreover, as the value had been moved from products to experiences, the market had not been merely the place for value exchange but the engagement platform of dialogs and interactions among the consumers, the consumers’ communities, and the firms. Therefore, the process of value creation could be generated by the interactions and the co-creation of experiences among them. In this sense, the firms did not only provide the products and services, but they had to engage with consumers or communities and facilitated dialog in order to enhance the value developed through the process of co-creation experience as well.

Prahalad and Rawaswamy, the academic scholars, had developed the blocks or diagrams of interactions which were composed of 4 important parts, namely, dialog, transparency, access, and risk-benefits (Prahalad and Rawaswamy, 2004). These experts valued the interaction process by stating that there were multiple points of interactions and all points of interactions between firms and consumers were significant for creating value.

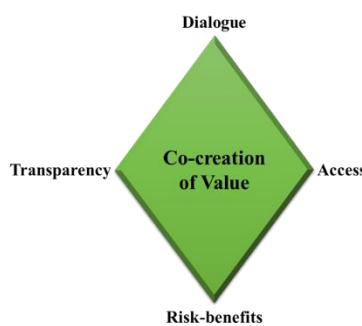


Figure 2 Building Blocks of Interactions for Co-creation of Value (Prahalad and Ramaswamy, 2004)

Subsequently, the concept of ‘Service-Dominant Logic’ (SDL), which was related to the co-creation of value, had been introduced by Vargo and Lusch. The co-creation was viewed as a significant process of which each actor could integrate its resource with another resource offered by the other actor. Then, the



process of co-creation of value was initiated by the integration of such resources (Vargo and Lusch, 2008).

By the integration of resources, it would enable the creation of new potential resources for the next, subsequent use which meant the development of ‘a learning process or learning loop’. There were 4 sub-processes emerged within the process of co-creation of value as 1) interactions across actors, 2) resource integration, 3) engagement, and 4) learning process (Leclercq, Hammedi, and Poncin, 2016).

In the process of co-creation of value, it was important to note that, the interaction behaviors among the actors taken place through the engagement platforms and the degree of connection among actors had affected to their engagement level. The technologies and infrastructures supporting the engagement of actors in the process did not automatically lead to the co-creation of value. Instead, the key factor was the efforts to generate and maintain the engagement of actors continuously (Leclercq, Hammedi, and Poncin, 2016).

Moreover, the designs of engagement platforms should support the dialogue (or communication), the transparency, and the unlimited access to information, resulting in the shared benefits and risks as illustrated by the building blocks of interactions for co-creation of value proposed by Prahalad and Ramaswamy (2004). In other words, the process of co-creation of value required transparency from each actor. Without the transparency, it probably caused the misuse of resource and then, co-destruction of value instead (Plé and Cáceres, 2010).

#### **4. Cultural and Natural Resources, Co-creation of Value, and Tourism Destination Competitiveness**

Stated by one academic who studied the preluded theories of co-creation of value of renowned academics such as ‘Value Co-creation’ of Prahalad and Ramaswamy and ‘Service Dominant Logic (S-D Logic) of Vargo and Lusch as mentioned earlier, the competitiveness of one tourism destination was derived by the creation and the delivery of higher value than that of competitor (Zemla, 2011). The value was defined into 2 categories namely, the expected value and the received value. While the first was based on the customers’ choices, the latter was referred to the customer satisfaction. In his article, the tourism destination competitiveness was particularly based on the ‘expected value’ or the customer choices on the tourism market. The author had explained several interesting issues related to the competitiveness of tourism in peripheral area and the core resources (cultural and natural resources) as follows.

1. Any peripheral region that possessed the tourism products (cultural and natural resources) that met the expectation of customers could gain more competitiveness than other competing tourism destination which was inferior in terms of both location and less attractive resources for tourism.

2. The competitiveness of tourism destination was characterized by the cultural and natural resources and thus, leading to the high spending of the tourists on the local tourism products and services.

3. Besides such natural and cultural resources (in a strong market position) and successful transforming the tourism to benefits the local economy, it was important for such tourism destination to maintain its resources for gaining the competitive position in the future.

Although the privileged conditions of some tourism destinations, which were based on location, natural resource, and cultural values, were important factors of destination competitiveness, the author



also stated about the creation of 'tourism potential'. According to his statement, the creation of tourism potential by the co-creation of the stakeholders of such tourism destination was considered the effective activities and thus, contributing to the development of competitiveness. The co-creation activities were comprised of 1) the tourism planning and policy which was based on the information flow among the potential stakeholders and 2) the management of the specific local destinations. The management was defined as the organizational objectives and its effectiveness on implementing functions and activities (Zemla, 2011).

In order to create the high 'expected value of customers' or visitors, the information related to the potential of tourism destinations must be suitably circulated and therefore, leading to the creation of the desirable image. The 'image' of the particular area, as stated by the author, was directly related to 1) the permanent elements of locations such as cultural and natural resources, 2) the actual level of tourism potential such as general infrastructure, and 3) the co-creation activities among stakeholders such as locals and visitors to build and to shape such image. It was important to note that such 'expected value' of visitors were not based on the facts, but depended on the knowledge and ideas about a particular place.

Finally, the author highlighted about the equally important elements between the role of the tourism destinations as the providers of co-creation and that of visitors to shape their favorable products or services. That role of visitors to co-create their own products and services significantly implied about the high differentiation of such products and services which was finally contributed to the images of such tourism destination and its competitiveness in the long run.

Overall, by pursuing several academic theories and concepts about the creative economy in the peripheral regions or cities, some main points were summarized as follows.

1. In the peripheral areas such as second tier cities or secondary tourist destinations, the abundance and the assortments of the factors such as cultural heritages and beautiful natural environments including with local lifestyles were one of the key supportive factors of creative economy in such peripheral cities.

2. The application of creative economy model which was comprised of creative expression, creative application, and creative technology was considered the helpful instruments for enhancing tourists' experiences.

3. With the collaboration and co-creation of value of many relevant parties as exhibited by the model of 'Quadruple Helix' local governments, local universities, local businesses, and local communities including with the tourists (or the public), the shared knowledge and experience was generated and thus, leading to the flow of knowledge in places and becoming the valuable resources for the new application of creative economy in the peripheral cities.

## Conceptual Framework

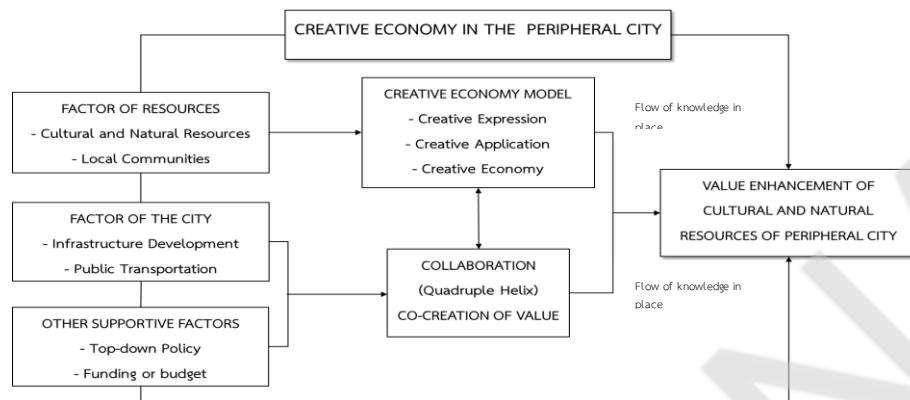


Figure 3 Conceptual Framework

## Research Methodology

This research was conducted by the approach of mixed methods procedures which meant both quantitative and qualitative researches. The research design deployed for this research work was an 'explanatory design' which meant that the research was initially conducted by quantitative methods and the research findings from questionnaires were reviewed. Subsequently, the issues from questionnaires and the interviewees were selected for conducting the in-depth interviews.

In order to implement this research appropriately, the research activities were deployed in different scopes. Firstly, the major study was conducted at several tourism places in Chanthaburi province ranging from the cultural heritages, local communities, and natural places of which their values were enhanced by the application of creative economy model derived by the collaboration and the co-creation of value. Meanwhile, the comparative case study was arranged in the selective local areas such as Sawankhalok district, Sukhothai province and Khon Kaen city where the creative economy in these peripheral areas was distinctively supported by the collaboration (Quadruple Helix) and the co-creation of value. Although the contexts of Chanthaburi province were not similar to those of Sawankhalok district and Khon Kaen city, the lessons learned from such cities did broaden the understanding of factors and applications of creative economy in other peripheral areas.

### Population and Samples

For the quantitative research method, the populations were the visitors who visited Chanthaburi province each month by average and the sample sizes, which were calculated by applying the Yamane Formula at the 95% confidence interval, were around 400. To gather the information of several visitors at the cultural and natural tourism places in Chanthaburi, the questionnaires were exercised.

Regarding to the qualitative research approach, the researcher applied the technique of participant observations in the creative activities & creative seminars and in-depth interviews as well as reviews of the documents. For the in-depth interviews, the selective informants were 20 key persons who were the representatives of either local communities or local institutions and played major roles in tourism or city developments via collaboration and co-creation of value.



### Research Instruments

Firstly, the questionnaire was designed to be composed of 4 sections, namely, 1) the tourists' awareness of tourism places, 2) their experience to cultural heritage and natural resources, 3) their opinion on the application of creative economy model of innovation in Chanthaburi, and 4) the general information of the tourists. On the sections of experience and opinion, the five-point Likert scale ranging from 'strongly agree' to 'strongly disagree' was applied.

Then, a set of 50 drafts of questionnaire regarded as a pilot test was distributed and gathered at the tourism places in Chanthaburi. The reliability score, which was derived by the calculation of Cronbach's Alpha Coefficient, revealed that there were 2 topics related to the creative expression and creative application need to be improved.

Simultaneously, the content validity was calculated by the value of the Index of Item-Objective Congruence (IOC) from which the questions were scrutinized by 3 experts in the fields of cultural resource management (CRM), tourism management, and architectural heritage management and tourism. The parts of experience of visitor and their opinion to the application of creative economy model were initially lower than 0.5. After adjusting the questions, the value scores were improved and closed to 1.0. Then, the questionnaires were distributed and rechecked the reliability score. The new version of questionnaires yielded the Cronbach's Alpha Coefficient in the range between .741 and .907 and hence, was proper to be used.

### Data Collection

The data collection for the quantitative research approach had been arranged since April-May 2019 and a non-probability sampling, especially a convenience sampling was applied. A total of 590 sets of questionnaires was mainly distributed to Thai visitors who visited several tourism places in Chanthaburi, seemed to spend some period of time at these sites, and were willing to share their experiences to somewhat degree. These tourism sites were comprised of historic places, communities, and natural places such as waterfall and beach including with the new tourism places which had been either recently created or adaptively reused.

After the questionnaires were collected and screened, the completed 400 sets of questionnaires were encoded in the SPSS program to computerize and to analyze by the functions of cross-tab analysis and correlation analysis.

For the qualitative method, a 5-day program of creative activity in Sawankhalok district, Sukhothai province as a selective case study was purposively chosen to participate in order to understand the collaboration and the process of co-creation of value in the real situation. In addition, the participation in the creative event in Chanthaburi, namely, Rise Up Chanthaburi, provided the opportunity to get the connections with the President of Chamber of Commerce Chanthaburi and the Mayor of Khon Kaen Municipality who introduced the core principle of collaboration and process of co-creation of value for the city development.

Thereby, with the benefits of questionnaire and direct experience from participant observations, the semi-structure interview questions were developed and exercised with 20 selective key informants in

both Khon Kaen and Chanthaburi provinces during August-November 2019 to comprehend the strength and the limitation of the existing situation as well as their perspectives about the opportunity and the challenge of these cities based on the collaboration and co-creation of value.

### Data Analysis

1. Questionnaire asking about the tourists' awareness of tourism places was analyzed by reviewing the frequency.
2. Questions asked about the visitors' experiences were analyzed to review the scores of Mean and Standard Deviation.
3. Questions asked about the opinions of visitors to the application of creative economy model in Chanthaburi were analyzed to review the scores of Mean and Standard Deviation.
4. Correlation analysis was applied to understand the relationship between the visitors' experiences and the application of creative economy model.

### Results and Discussion

The data collected by the questionnaires can be described in 3 parts. Firstly, the data of visitors' awareness and their reasons for visiting Chanthaburi were described. For instance, the visitors who were at the age between 21-40 years old and females were the major groups of visitors travelling to Chanthaburi. Their awareness of the promotion of tourism places in Chanthaburi was mainly influenced by the online social media such as Facebook, Instagram, YouTube, and Blog.

Most visitors who answered the questionnaires travelled from Bangkok (39%) and other provinces in the eastern region (33%) rather than other parts of Thailand. The main purposes of visiting Chanthaburi were for 1) relaxing and resting, 2) purchasing fruits, sweets, and local products, 3) broadening new experience, and 4) dropping at the stopped-over place. Moreover, although many visitors had visited several places where the cultural and historical value were still flourished, most of them were familiar with the famous tourism places.

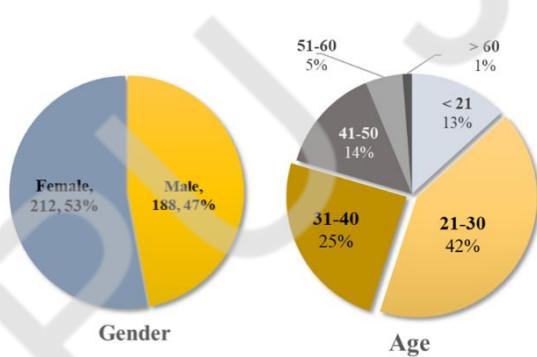


Figure 4 Gender and Age of the Sample, (n = 400)

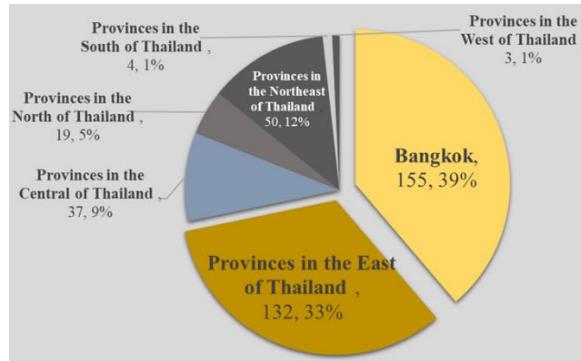


Figure 5 Percentage of Visitor, Who Answered Questionnaires, Travelling from Different Provinces of Thailand to Chanthaburi Province



**Table 1** Reasons for Visiting Chanthaburi

Reasons for Visiting Chanthaburi Province	Frequency	Percent
For relaxing and resting	362	90.5
For buying souvenirs such as local sweets, fruits, and local products	105	26.3
For dropping at the stopped-over place	103	25.8
For broadening new experiences	103	25.8
For recreation activities such as running, biking, and taking photos	54	13.5
For learning	53	13.3
For studying or tracing the historical events/places	34	8.5
Others	8	2.0
For participating the religious ceremony	6	1.5

**Table 2** Crosstab Analysis between Visitors' Profiles and Reasons to Visit Chanthaburi

Reasons for Visiting Chanthaburi Province	Age						Total
	< 21	21-30	31-40	41-50	51-60	> 60	
<b>For relaxing and resting</b>	46	<b>152</b>	<b>89</b>	53	17	5	362
	12.7%	42.0%	24.6%	14.6%	4.7%	1.4%	100.0%
<b>For buying souvenirs such as local sweets, fruits, and local products</b>	11	<b>40</b>	<b>26</b>	20	7	1	105
	10.5%	38.1%	24.8%	19.0%	6.7%	1.0%	100.0%
<b>For dropping at the stopped-over place</b>	17	<b>43</b>	<b>28</b>	7	6	2	103
	16.5%	41.7%	27.2%	6.8%	5.8%	1.9%	100.0%
<b>For broadening new experiences</b>	19	<b>41</b>	<b>23</b>	14	5	1	103
	18.4%	39.8%	22.3%	13.6%	4.9%	1.0%	100.0%

Secondly, the questions about the tourists' experience were collected and the information shown in Table 3 portrayed some information that the experience to value obtained by travelling ( $\bar{X} = 4.05$ , S.D.= 0.67), experience to cultural and natural resources ( $\bar{X} = 3.95$ , S.D.= 0.64), experience to activities available ( $\bar{X} = 3.86$ , S.D.= 0.68), and experience to facilities and services provided at sites ( $\bar{X} = 3.80$ , S.D.= 0.63) were recognized by visitors respectively. Under the group of 'Experience to value obtained by travelling', the tourists' experience of 'Emotion and aesthetic value' was highest ( $\bar{X} = 4.13$ , S.D.= 0.76) and those of 'Historical value' was lowest ( $\bar{X} = 3.96$ , S.D.= 0.81).

Next, in the section of 'Experience to cultural and natural resources', the tourists' experience was accounted on 'Resources are well preserved' ( $\bar{X} = 4.10$ , S.D.= 0.72), 'Resources are supportively promoted' ( $\bar{X} = 4.05$ , S.D.= 0.76), and 'Resources are utilized' ( $\bar{X} = 4.00$ , S.D.= 0.66) correspondingly. The critical point was that the tourists showed less experience of 'Technology was utilized to enhance the experience' ( $\bar{X} = 3.71$ , S.D.= 0.87), particularly at the site where cultural and natural resources existed.

Furthermore, the information under the group of 'Experience to activities available' exhibited that the visitors by the large experienced to 'Have activities represented local identities' ( $\bar{X} = 3.93$ , S.D.= 0.79) and to 'Have ceremony created in specific periods' ( $\bar{X} = 3.90$ , S.D.= 0.76) while their experience to 'Have activities related with local traditions' and 'Have variety of activities' presented the similar value ( $\bar{X} = 3.86$ , S.D.= 0.81 and  $\bar{X} = 3.85$ , S.D.= 0.80). Ultimately, the section of 'tourists' experience towards 'Facilities and services provided at sites, the 'Availability of food and drink shops' was highest ( $\bar{X} = 4.10$ , S.D. = 0.74) followed by 'Variety of products, cleanliness, and good value for money' ( $\bar{X} = 4.03$ , S.D.= 0.72),



‘Friendly Service’ ( $\bar{X} = 3.98$ , S.D.= 0.75), and ‘Availability of information center or learning center ( $\bar{X} = 3.81$ , S.D.= 0.88). The tourist’s experience towards ‘Availability of internet’ provided at site was lowest ( $\bar{X} = 3.29$ , S.D. = 0.95).

**Table 3** Experiences of the Visitors

Experience of Visitor	Mean	S.D.
<b>1) Experience to cultural and natural resources</b>	<b>3.95</b>	<b>0.64</b>
1.1 Resources are well preserved	4.10	0.72
1.2 Resources are utilized	4.00	0.66
1.3 Resources are supportively promoted to be known	4.05	0.76
1.4 The information of resources is provided correctly and clearly	3.91	0.83
1.5 Technology is utilized to enhance the experience	3.71	0.87
<b>2) Experience to facilities and services provided at sites</b>	<b>3.80</b>	<b>0.63</b>
2.1 Availability of information center or learning center	3.81	0.88
2.2 Availability of food and drink shops	4.10	0.74
2.3 Availability of toilets	3.84	0.87
2.4 Availability of parking spaces	3.78	0.91
2.5 Availability of souvenir shops	3.93	0.80
2.6 Availability of internet	3.29	0.95
2.7 Availability of supports for children and handicaps	3.46	0.92
2.8 Easy and comfortable accessibility	3.84	0.83
2.9 Variety of products, cleanliness and good value for money	4.03	0.72
2.10 Friendly Services	3.98	0.75
<b>3) Experience to facilities and services provided at sites</b>	<b>4.05</b>	<b>0.67</b>
3.1 Historic value	3.96	0.81
3.2 Social value (local life)	4.06	0.76
3.3 Local products and service	4.07	0.74
3.4 Emotion and aesthetic value	4.13	0.76
3.5 Educational value (local knowledge)	4.05	0.74
<b>4) Experience to activities available</b>	<b>3.86</b>	<b>0.68</b>
4.1 Have variety of activities	3.85	0.80
4.2 Have activities represented local identities	3.93	0.79
4.3 Have activities all year round	3.77	0.81
4.4 Have activities related with local traditions	3.86	0.81
4.5 Have ceremony created in specific periods of time	3.90	0.76

**Note :** Very Poor = 1.00-1.80; Poor = 1.81-2.60; Fair = 2.61 -3.40; Good = 3.41-4.20; Very Good = 4.21-5.00

Thirdly, the questions were raised to gather information about the visitors’ opinion on the application of creative economy model of innovation by the Creative Expression (CE), Creative Application (CA), and Creative Technology (CT). The statistical data in Table 4 presented that the Creative Technology (CT) obtained the highest score ( $\bar{X} = 4.27$ , S.D.= 0.60) and thus, implying that the tourists were somehow familiar with new technology (i.e., online social media) and used them as channels to share their information and experience. With the application of technology, not only the image of Chanthaburi was enhanced and new tourism places were developed, but the exchange of experience led to the co-creation of value as well.



Furthermore, from the visitors' perspectives shown in the section of Creative Expression (CE), the tourists' opinions towards 'Gain direct experience and share them through any media' and 'Availability of learning centers, museums, artworks, and performances' showed the highest score ( $\bar{X} = 4.24$ , S.D. = 0.58 and  $\bar{X} = 4.21$ , S.D. = 0.60) respectively. However, their opinions on 'Exchange knowledge and experience with the locals' demonstrated the least value ( $\bar{X} = 4.06$ , S.D. = 0.65).

**Table 4** Visitors' Opinions to the Application of creative Economy Model

Visitor's Opinions to the Application of Creative Economy Model	Mean	S.D.
<b>1) Creative Expression (CE)</b>	<b>4.17</b>	<b>0.52</b>
(CE1) Availability of learning centers, museums, and performances	4.21	0.60
(CE2) Gain direct experience and share them through any media	4.24	0.58
(CE3) Exchange knowledges and experiences with the locals	4.06	0.65
<b>2) Creative Application (CA)</b>	<b>4.05</b>	<b>0.59</b>
(CA1) Availability of 3-5 movies or video clips to present tourist sites	3.87	0.75
(CA2) At least 2 Creative activities, fairs, or festival events	4.13	0.69
(CA3) At least 5 Creative products particularly of Chanthaburi	4.15	0.70
(CA4) At least 5 local entrepreneurs who produce creative products	4.12	0.67
<b>3) Creative Technology (CT)</b>	<b>4.27</b>	<b>0.60</b>
(CT1) Utilization of social media to share tourists experiences in Chanthaburi Province	4.30	0.66
(CT2) Use of new technology can enhance the image of Chanthaburi, resulting in the development of new tourism places	4.27	0.67
(CT3) By using technology, the process of co-creation of value between tourists and local is developed	4.25	0.66

**Note :** Very Poor = 1.00-1.80; Poor = 1.81-2.60; Fair = 2.61 -3.40; Good = 3.41-4.20; Very Good = 4.21-5.00

Among these elements of creative economy model as exhibited in Table 4, Creative Application (CA) displayed the lowest score ( $\bar{X} = 4.05$ , S.D. = 0.59). Under Creative Application (CA), the visitors provided the opinions towards 'At least 5 creative products particularly of Chanthaburi ( $\bar{X} = 4.15$ , S.D. = 0.70), 'At least 2 creative activities, fairs, or festival events ( $\bar{X} = 4.13$ , S.D. = 0.69), and 'At least 5 local entrepreneurs who produce creative products' ( $\bar{X} = 4.12$ , S.D. = 0.67) respectively. The last one was their opinions about 'Availability of 3-5 movies or video clips to present tourist sites' ( $\bar{X} = 3.87$ , S.D. = 0.75).

From the correlation analysis (Table 5), the results revealed that there was the positive relationship between the use of creative economy model of innovation and the visitors' experiences and hence, supporting the hypothesis of this study. In fact, the availability of Creative Expression (CE), Creative Application (CA), and Creative Technology (CT) was significant in relation to experiences of visitors. Table 5 showed the statistical values from the correlation analysis to confirm such positive relationship.

**Table 5** Correlation Analysis of Visitors' Experiences and the Application of Creative Economy Model

Experience of Visitor	Creative Expression (CE)		Creative Application (CA)		Creative Technology (CT)	
	R	P	R	P	R	P
1) Experience to Cultural and natural resources	0.42	.00	0.36	.00	0.30	.00
2) Experience to facilities and services provided at sites	0.41	.00	0.34	.00	0.27	.00
3) Experience to value obtained by travelling	0.49	.00	0.44	.00	0.37	.00
4) Experience to activities available	0.45	.00	0.43	.00	0.35	.00

**Note :** 1)  $R > .60$  = Strong positive,  $.60 > R > .40$  = Moderate positive,  $R < .40$  = Weak positive

2) if the significant (P)  $< 0.05$ , there was the positive relationship between the application of creative economy model and the visitors' experiences

There were 2 main points that could be summarized from the statistical analysis of the questionnaires. Firstly, it was true to state that the cultural heritages and natural resources in Chanthaburi province, particularly the tourism places and local communities, were abundant and various. The tourists had experienced to value obtained by travelling to Chanthaburi. However, the data mentioned in the previous tables yet reflected some significant feedback of respondents. In other words, it was implied about the need of learning centers or the proper interpretation techniques to provide the adequate information to the visitors. The lack of information, interpretation, and technology-wise would lessen the value of tourism resources and tourists' experience.

Secondly, as stated in table 4 and 5, it was implied that the visitors' experiences could be enhanced by the application of creative economy model which was derived by the collaboration and co-creation of value. By supporting the engagement platform for sharing or exchanging the knowledge and memorable experience among the tourists, local communities, and other related parties, the content was creatively generated and hence, initiating the creation of new potential resources for the next, subsequent use which was the development of 'a learning process or learning loop' (Leclercq, Hammedi, and Poncin, 2016).

For instance, one gemstone mine in Amphoe Tha Mai had been set up creatively as a recreation place to preserve the value and to interpret the story of gemstones mine. "Bo Ploy Lek Petch Community Learning Center" was not only the showcase of the gemstones founded in this mine, but an interesting field that visitors could directly involve, learn, and experience the process how to find and to clean the sapphires in the mine in this learning center. Such creative activities were so unique because they not only conveyed the new, positive memorable experience to visitors, but also created the possibility of sharing these experiences among their families and friends. Moreover, the exchange of experience or feedback between the tourists and the local entrepreneurs could provide the loop of learning and the chance for new development, i.e., the creation of small museum in this area that exhibited and interpreted the story of sapphire mine in Chanthaburi.



Figure 6 The Application of Creative Economy Model to Enhance Tourists' Experience, Bo Ploy Lek Petch, Chanthaburi

Additionally, the collaboration (Quadruple Helix) and the process of co-creation were applied by many local communities and several tourism places in Chanthaburi province. The analysis from the survey portrayed that the cultural resources such as the historical sites or the architectural buildings were preserved and adaptively utilized to serve new functions by the collaborations from 4 related parties in the Quadruple Helix model such as the local government bodies, the local communities, the educational institutions, and the tourists (Carayannis and Campbell, 2012).

The summary of the cultural and natural resources in Chanthaburi province which had been creatively managed and utilized by the deployment of adaptive reuse, co-creation of value, and collaboration among the relevant stakeholders was shown in Table 6. In fact, the groups of cultural resource ranging from the debris of the ancient towns and the historical sites to the architectural buildings and the local communities including with the natural resource or public opened space in Chanthaburi were benefited from the collaboration and co-creation of value and thus, expressing their value to the visitors. Although, such collaborative activities were arranged occasionally, they would lead to the next collaborations and process of co-creation of value between the residences of Chanthaburi and other related parties of both inside and outside the communities.

Table 6 Summary of Cultural and Natural Resources in Chanthaburi Benefited by the Collaboration and Co-Creation of value

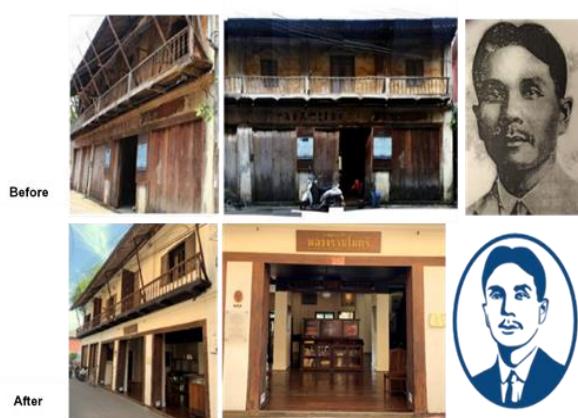
Category	Description	Enhancement of Value of Cultural and Natural Resource			
		Adaptive Reuse to preserve value	Co-creation of value for the surplus benefit		Collaboration to maintain identity
Anceint Towns and the Remains	1) Mueang Paniad Archaeological Site and Wat Thong Tua	-	-	-	✓ Local museum and interpretation of legendary
Historic Site/ Place/ Buildings	2) Taksin Military Camp and the old city wall	✓ Local learning center	✓ Creative activity	✓	Creative activity
	3) Red Building / Chiken Dunk Cell	✓ Local learning center	✓ Creative activity	✓	Creative activity
	4) Noen Wong Fort and Museum	✓ National Maritime Museum	-	-	
	5) King Taksin Dockyard	✓ Sacred area	-	-	
Architectural Buildings	6) Suan Ban Kaew Palace	✓ Local Museum	✓ Creative activity	✓	Cultural performance of locals and ethnic
	7) Luang Rajamaitri Historic Inns	✓ Museum + Hotel	✓ Reproduction of Branding	✓	Interpretation and exhibition
	8) Baan#69, Learning Center	✓ Learning Center	-	✓	Network of local & educational institutions

	9) National Archives, Chanthaburi	✓	Information Center	✓	Creative Space	✓	Local organization and TAT
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Table 6 (Continue)

Category	Description	Enhancement of Value of Cultural and Natural Resource					
		Adaptive Reuse to preserve value	Co-creation of value for the surplus benefit		Collaboration to maintain identity		
Local Communities	10) Chanthaboon Waterfront Community 11) Nong Bua Community 12) Bang Kacha Community in Wat Phlap 13) Sapphire Mines in Bang Kacha 14) Bang Sra Kao Community 15) Local Community near the Catholic Church 16) Tapon Yai Community, Amphoe Khlung	✓ ✓ ✓ ✓ - - ✓	Shops & coffee shops Weekend market Weekend market Learning site Chanthaboon reed mat Creative ceremonies Creative activities	✓ ✓ ✓ ✓ ✓ ✓ ✓	Story telling Local sweets and story Creative events Creative experience Chanthaboon reed mat Creative ceremonies Creative activities	✓ ✓ ✓ ✓ ✓ ✓ ✓	Identity of Chanthaburi Traditional way of life Historical stories Identity of local communities Chanthaboon reed mat and the jewelry to become creative ornaments Creative ceremonies Traditional way of life and traditional ceremonies
Sacred Place / Buildings	17) Cathedral of the immaculate Conception 18) Khao Khitchakut	- ✓	Buddhism Sacred Place	- -		✓ ✓	Landmark of Chanthaburi Landmark of Chanthaburi
Natural Landscape	19) Philo Waterfall and Alangkorn Jedyia 20) Kung Kraben Bay Royal Development Center	✓ ✓	National Park Learning center	✓ ✓	Natural preservation for recreation Natural preservation for recreation	- ✓	
Open Public Space	21) Thung Na Choei Public Park 22) Laem Sing Beach	- -		✓ ✓	Recreation Creative activities (Eat Local, Meet Local)	- -	

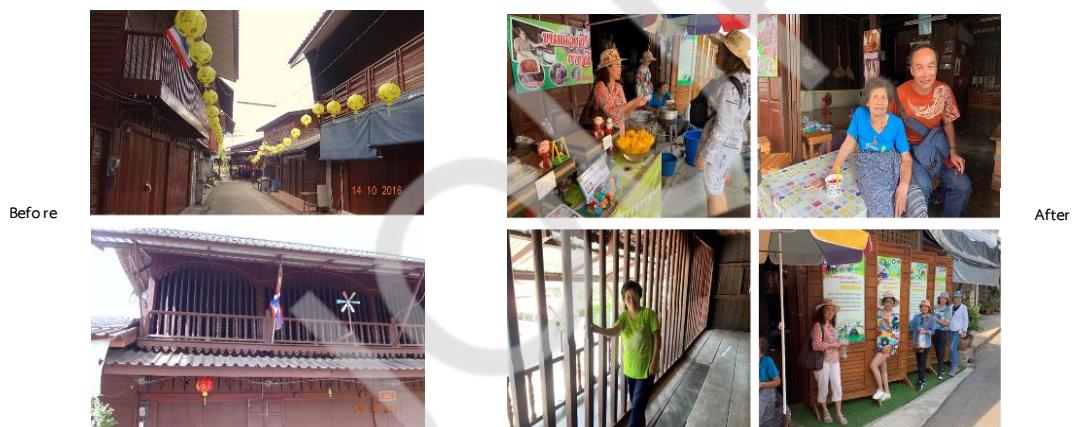
As displayed in Table 6, it was clear that both cultural or natural resources including with the local communities were benefited from the collaboration and the co-creation of value. For example, the house of Luang Rajamaitri, which was constructed during the period of King Rama V, had been renovated and adaptively reused to be “Baan Luang Rajamaitri Historic Inn”. The collaboration among the local residences of Chanthaboon Waterfront communities, the local administrative bodies, and the educational institution helped preserve the values and significances of Baan Luang Rajamaitri and several architectural buildings in this community. Not only had the unique buildings and their styles of decorations called “Gingerbread” been recorded and preserved, but the sense of place in this local community was expressed and engaged with the tourists’ experience as well.





**Figure 7** Collaboration and Co-creation of Value to Preserve the Value of Architectural Building and Identity of Local Community, Baan Laung Rajmitri, Chanthaburi Province

Moreover, the collaboration and the process of co-creation of value to enhance the value of the cultural resource were portrayed by current activities or events arranged in Chanthaburi. Recently, there were several creative activities, creative events, or even the temporarily creative spaces initiated in many local communities in Chanthaburi. The developments of 'creative activities' in local communities such as Nong Bua local community at Amphoe Mueang and Baan Tapon Yai community at Amphoe Khlung of Chanthaburi promoted the identity of local communities and preserved the significance of both tangible cultural heritages such as local architectural buildings and intangible one such as the traditional ceremonies. With the collaboration by the engagement among local communities, local governments, institutions, and tourists, the values of these cultural resource such as some wooden architectural buildings, rare local sweets, livable communities, and sense of places have been preserved for, exhibited to, and shared with publics impressively.



**Figure 8** Collaboration and Co-creation of Value to Preserve the Value of Architectural Building and Identity of Local Community, Nong Bua Local Community, Chanthaburi Province

The other supportive factor for creative economy was the availability of 'creative space' where the local communities and publics could utilize such space to exhibit their creative works and to share their experience with publics. However, the availability of such new, creative amenity in local city was limited. Therefore, in the local contexts like Chanthaburi province, the adjustment of some specific place and temporarily used it as 'creative space' was the example of successful collaboration and co-creation of value.

For instance, the part of official space as King Taksin Military camp for the purpose of learning and sharing experience among the historians, local residences, and publics (Figure 9) and the building and area in National Archive Chanthaburi for the gastronomic event to promote the cultural-based food and stories of Chanthaburi (Figure 10) were served as creative spaces and the events arranged in these spaces were exchanged through creative contents online. Therefore, the values of these cultural resource such as the historical and associated values were preserved and enhanced by the application of creative economy through the collaboration and co-creation of value.



Figure 9 Creative Activities and the Creative Space in Taksin Military Camp



Figure 10 Creative Activities and the Creative Space at National Archive Chanthaburi

From the descriptive and pictorial data displayed above, it was clear that the values of several cultural and natural tourism places in Chanthaburi were benefited by the collaboration and co-creation of value, and thus contributing to the value enhancement of these resources and the memorable tourists' experience. As stated by the Organization for Economic Co-operation and Development (OCED), the co-creation of value or value creation was derived by the engagement of producers, consumers, and places altogether. This could bring about the flow of knowledge in place and the creative experience connected with the place and thereby, reinforcing to the 'identity' or the 'place branding' of this peripheral city (OECD, 2014). The strong identity or place branding would enhance the tourism destination competitiveness.

However, although there were many tourism places where the collaboration and co-creation of value had benefited the local communities and helped promote the identity of Chanthaburi, there was a research study of Malaysian researchers who had made a study of impacts of natural resource, cultural heritage, and special event as well as community support to the competitiveness of the rural tourism destinations Sarawak River in Kuching city of Malaysia. Unlike the concept of collaboration and co-creation of value, the findings of their research revealed that while the natural and cultural resources including with the special events showed the positive significant impacts on competitiveness of the place, the community support indicated the least impact to the tourism destination competitiveness (Lo, Mohamad, Chin, and Ramayah, 2017).

In contrary, based on the project of 'knowledge-based regional development' conducted in Finland, Hungary, Scotland, and Sweden, there was a group of researcher found that the local community or community groups were important for the targeted open innovation and network development. It was presented that targeted open innovation created by local communities (or the fourth helix in the Quadruple Helix model) was considered a tool for building long-term relationship with and loyalty of customers and other related stakeholders (Kolehmainen, Irvine, Stewart, Karacsonyi, Szabo, Alarinta, and Norberg, 2015).

In case of Chanthaburi province, the creative activities or creative experiences initiated by the collaboration and co-creation of value was just temporary and many were always driven by bottom-up collaboration rather than the supports of the top-down policy. In other words, in order to promote the



application of creative economy in peripheral city like Chanthaburi province, there were other 2 factors needed to be improved or developed continuously. The first issue was related with the development of infrastructure and public transportation and the second one was dealt with the collaboration and supports from the local administrative bodies and the local universities in Chanthaburi province.

To gain more in-depth understanding about the practice of collaboration and co-creation of value, the application of creative economy in other peripheral regions had been selected to review and to participate. The comparative cases of practicable creative economy in Sawankhalok district, Sukhothai province and Khon Kaen city disclosed that not only the factor of cultural and natural resources of the city was important, but the factor of collaboration and the process of co-creation of value were critical factors to the successful development of creative economy in such peripheral region as well.

In case of Sawankhalok district, Sukhothai province, the creative workshops had engaged all related stakeholders inside and outside community and allowed them to share experiences to generate the creative ideas and plans to utilize their resources to persuade more visitors to stay longer and spend more in this town. With the solid historical background and the connected story with Amphoe Mueang Sukhothai and Amphoe Sri Satchanalai, the plans of cultural routes, cultural places (including with the adaptive reuse of the architectural buildings), or even the organic farming (local lifestyles) had been creatively generated and proposed for fund raising to execute the projects. Both the local government and the local educational institutions in Sawankhalok district provided the supports, knowledge sharing, and facilitating the creative space of the city for exhibiting the results of the workshops to the tourists and publics.

To highlight the importance of supports from local administrative bodies and local universities in the peripheral city, there were other international researches mentioned about the extended roles of these parties and the leading role of local universities involving with other parties in Quadruple Helix model. For example, while the local universities could provide the educational of future entrepreneurs (or called 'entrepreneurial university'), the local government could support the local businesses by financing the projects (Križanović, Lubar and Gajos, 2014). Furthermore, the research study in Southern Norway discovered the significant roles of the Higher Education Institutions (HEIs) and local universities. Both institutions could develop the academic and the analytical knowledge which was necessary for local businesses or entrepreneurs to adapt and to use for the commercial application. Finally, the local universities which understood the overview of local or regional contexts could play the leading role in the peripheral regions by adapting the strategic plan to stimulate academic involvement with regional businesses and industries (Hauge, Pinheiro and Zyzak, 2016).

In the case of Khon Kaen province, it was noted that some creative projects such as Khon Kaen Smart City and Sri Chan project were the successful, ongoing creative projects fabricated by the collaboration (Quadruple Helix) and the process of co-creation of value, especially the local administrative offices and local universities, namely, Khon Kaen Municipality and Khon Kaen University as well as Creative Economy Agency (CEA) respectively. Additionally, the collaborations with the group of local businesses and publics generated the financial funds and the necessary supports from both local people and the younger generations who devoted their ideas and time to co-create the value to their hometown and hence, driving Khon Kaen province to be the center of northeastern region.

## Conclusions



Chanthaburi was one of the fascinating, peripheral cities of the eastern region of Thailand. With the abundance of the cultural and natural resource, it could be stated that Chanthaburi was attractive to many visitors. What Chanthaburi need was the development of the other supportive factors that specifically and effectively enhance the value of cultural and natural resource of Chanthaburi. For instance, the development of infrastructure and the improvement of public transportation, the integrative and supportive top-down policy of the local government bodies, and the network development by collaboration (Quadruple Helix) and co-creation of value were considered the significant factors for the application of creative economy of peripheral city like Chanthaburi.

From the conceptual framework (Figure 3) and the table displayed below (Table 7), there were 3 factors that involved with the application of creative economy in peripheral regions. These factors were comprised of factor of resource (cultural and natural resource), factor of the city, and the factor of collaboration. The data in the Table 7 was summarized that Chanthaburi province was distinctive in the factor of cultural and natural resource but was inferior in the other 2 factors infrastructure and collaboration. Unlike the factor of resource, the factor of collaboration was outstanding in the cases of Sawankhalok district and Khon Kaen city and was contributed to the co-creation of value which was regarded as the other key component for the successful application of creative economy in peripheral cities. It could be stated that under the circumstances of local contexts, the collaboration (Quadruple Helix) and the co-creation of value were the indispensable factors that supported value enhancement of the cultural and natural resources which absolutely contributed to the uniqueness and the destination competitiveness.

**Table 7** Comparison of Factors of Chanthaburi, Sawankhalok District, and Khon Kaen City

Factor	Chanthaburi	Sawankhalok District	Khon Kaen City
Factor of Resource	<b>+</b> - Cultural and natural resources for tourism in Chanthaburi were abundant and various - Several local communities were strong	<b>0</b> - Tangible and intangible cultural heritages were recognized by local people and visitors	<b>-</b> - Few archaeological sites or cultural heritages were significant and they were scattered and far from the city
Factor of the City	<b>0</b> - No mega projects or investment on infrastructure development recently - Local transportsations were available but needed to be improved on quality and service	<b>0</b> - The city was lack of new infrastructure development and new mega project - Local transportsations were available and they were unique	<b>+</b> - New infrastructure development and project of new mass transit system including with "Smart City" project help Khon Kaen make a quantum leap in this region
Other Supportive Factors and Collaboration	<b>-</b> - Need the integration and assimilation of planning and implementation among stakeholders - Require the network development and agency to bridge the gap of stakeholders - Need the support from top-down policy	<b>+</b> - Network development among the local communities, local administrative bodies, and outside organizations was available and supported the creative activities of the city	<b>+</b> - Network development and connection of top-down and bottom up were strong - Khon Kaen University and Creative Economy Agency (CEA) in Khon Kaen played major roles in linking and supporting the connection of stakeholders

Remark: '+' = Good and Availability, '0' = Fair and Some Availability, '-' = Poor and Less Availability

Ultimately, it was important to state that in the context of peripheral city, the higher education institution always played a key role of the collaboration (Quadruple Helix) and co-creation of value. This was because the local universities were always considered research center that provided knowledge or necessary information to other parties, especially the local communities. By doing this, the local universities could construct the relationships with many parties and thereby, enabling the role of the 'agency' or the 'convener' to bridge the gap and to reinforce the network development which was considerably significant factor for such peripheral city as Chanthaburi province.

### Practical Application

This research study revealed the key success factors of the application of creative economy in peripheral contexts by considering their existing resources and situations. The combination of 1) soft



factor cultural and natural resources including with the proper cultural resource management and the empowerment of local communities, 2) hard factor infrastructure development and public transportation improvement, and 3) the factor of collaboration (Quadruple Helix) that generated the co-creation of value was the core element to enhance the value of cultural and natural resource in the peripheral cities.

In order to bring this academic research into the practical application, it was important to note that the ultimate goals of the application of creative economy in peripheral cities were the values derived by the collaboration and process of co-creation of value. These would lead to the enhancement of brand image or identity of the peripheral city, and hence, contributing to the increase of destination competitiveness. Nevertheless, the values mentioned earlier did not mean the financial value only, but rather the intangible value such as the strength of locality, the social cohesion, the sustainability, and most important, the sufficiency which was based on the tangible and intangible resources of those peripheral cities.

### Limitation of the Study

Since this study was based on the specific area such as Chanthaburi province where the resources and factors were modestly adequate, some applications would not match with the contexts of other peripheral cities. Therefore, the real understandings of the resources and factors in the different rural contexts were necessary before implementation. It would be better to start by studying some peripheral cities in the eastern region such as Prachin Buri where cultural heritage and natural resource for tourism were significant and the collaboration of 4 stakeholders (Quadruple Helix) would be the issue. Moreover, the key role of local educational institutions to bridge the gaps of the network development should be considered for the further study.

Finally, the 'creative content' which was developed by the collaboration or co-creation of value and the state-of-art technology to share and exchange knowledge or experience via the online platform such as Facebook and Instagram should be studied in detail. The understanding of process of creative content development derived by co-creation of value and the policy of local institutions to support the creative activities and creative experience by the engagement of other local stakeholders might be the new clues and necessary for the value enhancement of cultural and natural resource in the peripheral cities of Thailand.

### References

Carayannis, E., and Campbell, D. F. J. (2012). Triple Helix, Quadruple Helix and Quintuple Helix and How Do Knowledge, Innovation and the Environment Relate To Each Other? *International Journal of Social Ecology and Sustainable Development*, 1(1),41-69.

Collins, P., and Cunningham, J. A. (2017). *Creative Economies in Peripheral Regions*. Switzerland : Springer Nature.

Hauge, E. S., Pinheiro, R. M., and Zyzak, B. (2016). Knowledge bases and regional development: collaborations between higher education and cultural creative industries. *International Journal of Cultural Policy*, 24(4),485-503.

Kolehmainen, J., Irvine, J., Stewart, L., Karacsonyi, Z., Szabo., Alarinta, J., and Norberg, A. (2015). Quadruple Helix, Innovation and the Knowledge-Based Development: Lessons from Remote, Rural and Less-Favoured Regions. *Journal of the Knowledge Economy*, 7(2016),23-42.



Križanović, K., Lubar, H. M., and Gajos, M. (2014). *Importance of Triple (Quadruple) Helix Concept for Regional Development-Case Study*” Faculty of Economics in Osijek. Doctoral dissertation, University of J.J. Strossmayer in Osijek, Faculty of Economics in Osijek.

Leclercq, T., Hammedi, W., and Poncin, I. (2016). *Ten years of Value Co-creation: An Integrative Review*. Retrieved May 2019, from [https://dial.uclouvain.be/pr/boreal/object/boreal:169488/dastream/PDF\\_01/view](https://dial.uclouvain.be/pr/boreal/object/boreal:169488/dastream/PDF_01/view).

Lo, M.C., Mohamad A.A., Chin, C.H., and Ramayah, T. (2017). The impact of natural resources, cultural heritage, and special events on tourism destination competitiveness: the moderating role of community support. *International Journal of Business and Society*, 18(4),763-774.

OECD. (2014). *Tourism and the Creative Economy*. Paris : OECD Publishing.

Plé, L. and Cáceres, RC. (2010) Not always co-creation: introducing interactional co-destruction of value in service-dominant logic. *Journal of Services Marketing*. 24(6): 430-437.

Prahalad, C. K., & Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. *Journal of Interactive Marketing*, 18(3),5-14.

Vargo, S. L., and Lusch, R. (2008). Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1),1-10.

Yupakaset, W. (2019). Creative City: Long Poed Chai Hai Mueang Rong. *Creative Thailand*, 10(7),24-27.

Zemla, M. (2011). Value co-creation and tourism destination competitiveness. *Folia Turistica*, 25(1),283-297.