VALUING CULTURAL HERITAGE: A CONTINGENT VALUATION STUDY OF TEMPLES IN CHIANG SAEN

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A Thesis Submitted in Partial
Fulfillment of the Requirements for the Degree of
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ABSTRACT

Title of Thesis	VALUING CULTURAL HERITAGE: A CONTINGENT VALUATION STUDY OF TEMPLES IN CHIANG SAEN
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This paper presents a study of willingness to pay of Thai population to preserve historic temples in Chiang Saen, ancient city in Chiang Rai, Thailand as those temples are at risk of degradation and deterioration. This study aims to estimate the factors that affect willingness to pay of people for cultural heritage in Chiang Saen and to investigate willingness to pay and its attributions. The contingent valuation method was used as a valuation technique to conduct an economic valuation of non-market values of preservation of the ancient temples. The results show that Thai people have optimistic perception and attitude toward the cultural heritage in Chiang Saen ancient city since most of the respondents in the study stated their positive WTP on the preservation programme.

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Pongsan Sanyakamdhorn

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ABBREVIATIONS

Abbreviations	Equivalence
BN	Non-users in Bangkok Metropolis
CN	Non-users in Chiang Mai Province
CVM	Contingent valuation method
DU	Direct users
IU	Indirect users
NOB	National Office of Buddhism
POB	Provincial Office of Buddhism
ROFA	Regional Office of Fine Arts
SEZ	Special economic zone
TCM	Travel cost method
THB	Thai Baht
USD	US Dollar
WTP	Willingness to pay

CHAPTER 1
INTRODUCTION

1.1 Cultural heritage at glance

Cultural heritage can be considered as the outcome of collective human activities expressed in various senses to represent masterpieces of human creativity and wisdom. Cultural heritage is an expression of the lifestyle developed by a community over time, portrayed as customs, practices, places, objects, artistic expression and values. It represents a critical historical state of human development and incorporates sites that have remarkable natural beauty and artistic importance and also structures and buildings of architectural or archaeological significance.

In fact, cultural heritage can be categorised into two groups as intangible and tangible cultural heritage (Eley, 2009). Considering cultural heritage as it shares parts of human activities, cultural heritage places tangible displays systems of the human's value, beliefs, traditions and lifestyles and it also contains these observable and substantial hints to seek out the mystery and history from the olden days to the latest present. When one thinks of cultural heritage, it often comes to his mind as in a form of artefacts such as paintings, sculptures, architectures, historical monuments and archaeological buildings. On the other hand, the idea of one's thinking about cultural heritage is actually wider than physical cultural heritage. It has gradually risen to include all evidence of culture and tradition expression made by human being such as photographs, books, manuscripts, languages, instruments, etc. Keep in mind that those examples of cultural heritage are only limited to something that we can see and touch or simple they are tangible. In contrast, cultural goods can also consist of immaterial subjects such as tradition of each community, legend stories that have been told by elderly from generation to generation, various kinds of traditional arts that are performed in present, some knowledge and wisdoms transmitted from the past generation to the posterity like craftsmanship, or even ritual activities.

Rather being simply considered in the same sense as any other physical asset, a cultural asset like historic temple should be categorised into a specific type because

of the value in which the historic temple gives rise (Ashworth & Tunbridge, 2011). For instance, historic temples normally have a religious significance that cannot be monetised even if they may have a potential sale price as other estate assets. Cultural heritage may have an influence on the development or revolution of today's intellects and architectures as we can see it from many architectural styles around the world where they all consist of a significant background of glorious histories. This multidimensional importance gives rise to the terms that the cultural heritage items are important, outstanding, unique and worthy.

Ashworth and Tunbridge (2011) suggested that to understand the values of cultural heritage, people must first recognise some benefit in the heritage item that cannot be expressed in financial terms but rather as an intangible worthiness. This promotes the concept of caring about cultural heritage through appreciating and understanding its importance. Cultural heritage defines the history of civilisation; it must be preserved and passed down for future generations to respect, cherish and admire.

This study particularly focuses on cultural heritage sites in the northern area of Thailand; specifically, in Chiang Saen district of Chiang Rai province because of several reasons. First off, there have been economic and social changes over decades (Integrated Investment Services (OSS), n.d.). An economic development may lead to a worse air pollution in Chiang Rai and finally a degradation of surfaces of historic temples. Additionally, there were consistently natural misfortunes occurred in Chiang Rai (Archa, n.d.) such as earthquakes and flooding. Chiang Rai is one of the most cities that have been being affecting by earthquakes (Seismological Bureau, n.d.) because Chiang Rai is surrounded by active fault lines (e.g. Mae Chan fault line, Mae Ing fault line, Mae Tha fault line, Phayao fault line). More importantly, there is an active fault line in Chiang Saen called Mae Chan fault line (Kosuwan, n.d.-b). This makes Chiang Saen be a city at risk of seismic hazard as there was a 6.7 magnitude quake that struck Chiang Rai in 2011(Kosuwan, n.d.-a) and many Chiang Saen historic temples were damaged. Another reason that many cultural heritage sites in Chiang Saen are easily damaged is that most of those ancient temples are antique which were established over 500 years ago or in some places are nearly one thousand

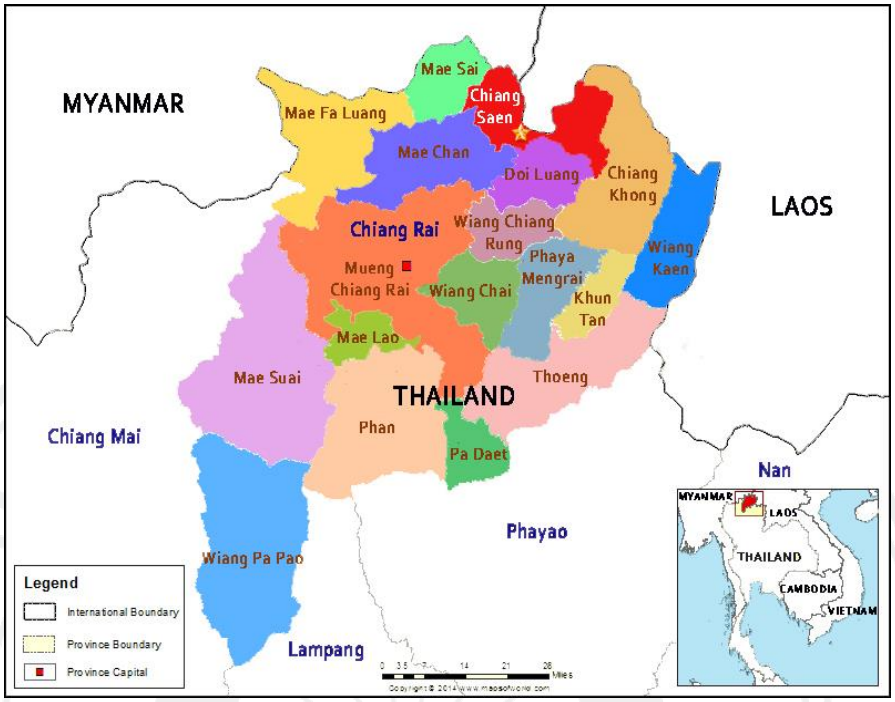
years old. There are, in fact, some temples that left deserted due to the lack of preservation programme.

1.2 Chiang Saen: historic city of Northern Thailand

One of the important historic cultural heritage sites of Thailand is Chiang Saen, an ancient city located in Chiang Rai Province, Northern Thailand (See Figure 1.1 and 1.2). Before getting to know Chiang Saen, let's go beyond the history of Thailand first. Leading up to the era of the recorded past over thousands of time, Thailand was previously populated by many groups of people before they were united as the Kingdom of Siam. Yet, there is a debate over an issue of the origins of Thais. The most reliable argument state that Thais, by presumption, migrated from China's north-west down to the south then split up and settled down as the kingdom of Yonok Nak Phan in the north and the kingdom of Lopburi in the south. Some believe that Thais actually originated in the area as in Thailand today but there are many kingdoms ruled by Thais because those kingdoms in the past shared the mutual language, customs, traditions and cultures.

Figure 1.1 Map of Thailand and Chiang Rai Province

Figure 1.2 Chiang Rai Province and its districts



Once a group of Thais settled down in the north of Thailand, they were ruled by the king and became the kingdom of Yonok Nak Phan where located Chiang Saen as its capital city. After an earthquake struck Chiang Saen, making the city collapsed, some part of Chiang Saen became Chiang Saen Lake (Seismological Bureau, n.d.). Then, those Thais migrated down to further south and split up into three kingdoms which are the kingdoms of Lanna, Sukhothai and Phayao. These three allied kingdoms were established by their leaders and became the representative of the beginning of formal Thai history as in present.

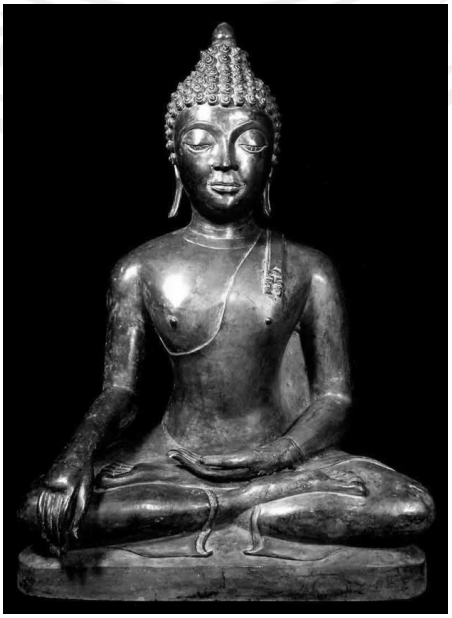
The history of Chiang Saen is recorded in many ancient chronicles (Yangkul, 2013) as the first city populated by Thais. Three principle ancient Chronicles inscribed the history of Chiang Saen: the Chronicles of the origin of Suvan Komkham, Singhanawat Kumar and Hiran Nakon Ngernyang (Princess Maha Chakri Sirindhorn Anthropology Centre, 2016). According to these three chronicles and the scientific proofs, Chiang Saen was originally founded by King Saen Phu in A.D. 1328 and later the capital city was relocated to Chiang Mai and Chiang Saen became

isolated from other kingdoms. Chiang Saen was established as a district of Chiang Rai Province in 1957.

1.3 Chiang Saen heritage

Even though Chiang Saen has been declined its importance as it was no longer a capital city as it was in the era of Yonok Nak Phan kingdom, Chiang Saen still has a great expansion and civilisation under the influence of Buddhism as its predates the architectures and cultures of the later kingdom of Lanna and Sukhothai (Smith, 2011). There are several influential arts and cultures that were originally formed in Chiang Saen. One famous art style is Chiang Saen Buddha image style. According to the published journal of Fine Arts Department of Thailand (Burutrattanapan, 2001), Chiang Saen art styles can be divided into three categories base on revolution and age. They are called Singha 1, 2, 3 respectively but the mutual style is that the top peak of the Buddha statue is not sharp and quite rounded. (See Figure 1.3) Chiang Saen also has its most meaningful influence on many ancient building styles as well as stupa and pagoda styles as those architectures are made from a special technique of stuccowork that was created by architects in Chiang Saen. That is the technique of making stucco from limestone by combusting the limestone and grinding it with sand and glue to make it be the mortar that can be used to mould a statue, stupa, Buddha image or even pagoda. This type of architecture can be found in many temples in Chiang Saen such as Pasak temple, Pradhat Songpinong temple, etc.

Figure 1.3 Chiang Saen Buddha



Many hundreds of ancient temples are located in Chiang Saen (Buddhist Monastery Division, 2016). However, dozens of these temples have now become dilapidated wreckages covered by a green cloak of vegetation. Historically, Chiang Saen is one of the oldest districts of Chiang Rai Province. In the city centre nearby the riverside of Mekong River, there located many dozens of historic temples that had been constructed in the ancient age of Yonok Nak Phan kingdom. Chiang Saen had a city wall surrounding the historic heritage as same as in Chiang Mai. The main area of archaeological importance is in the city centre where located many historic temples. For example, Pasak temple, meaning the teak forest temple in English, was built in the reign of King Saen Phu in 1295 which is approximately over 700 years ago. The temple has been dilapidated bygone times but the pagoda still stands. The pagoda was made of stucco and influenced by the art of Bagan and Haripunjaya styles. In addition, Chedi Luang temple was also built at about the same time as Pasak temple. It is the biggest temple in Chiang Saen located on the site nearby Chiang Saen National Museum. The name "Chedi Luang" was derived from the great pagoda with its height of 88 metres and width of 24 metres, made of brick plastered with stucco, with traces of the bronze covering. The pagoda was built in the style of Lanna which is considered as the biggest bell – shaped pagoda in Chiang Saen.

1.4 Area of study

There are 988 temples located in Chiang Rai Province and 160 of these are located in Chiang Saen district (Buddhist Monastery Division, 2016). Seven temples were chosen as the survey area which was classified by three criteria. First, temples built in the era of Yonok Nak Phan Kingdom were selected since Chiang Saen was once the capital city of the kingdom of Yonok Nak Phan and many significant temples were established during the 13^{th} – 18^{th} century which have now become the most valuable cultural heritage of Northern Thailand. Second, the temples must be registered by the Department of Fine Arts, Thailand. Registered temples have accessible information regarding archaeology and architecture collected and provided by the Fine Arts Department and this can be very useful when conducting a questionnaire and hypothetical scenario. Third, the temples must not be classified as

abandoned as many abandoned temples are located in Chiang Saen City and their histories are ambiguous. The selected temples are listed in Table 1.1.

Table 1.1 Description of seven selected temples in Chiang Saen

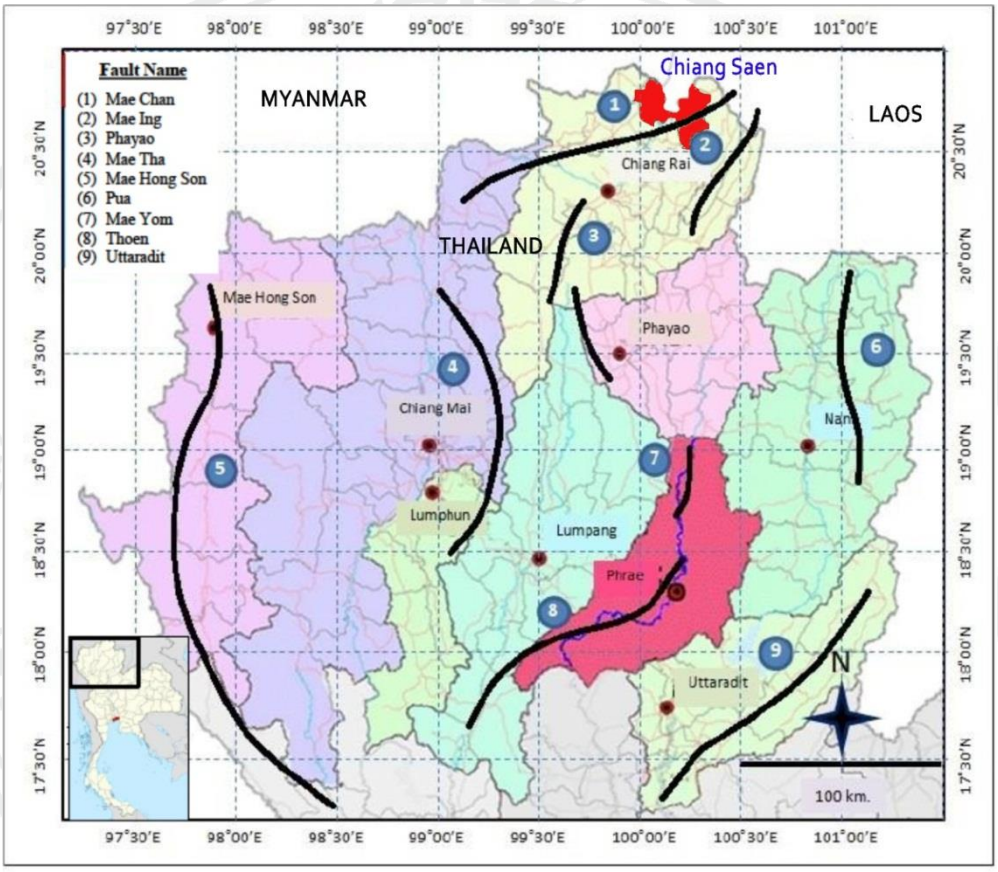
Temple	**Year built**	**Archaeological significance**
Athi Tonkaew	1506	The temple consists mainly of a rectangular shrine (vihara) made of bricks and a wooden roof, the chapel (ordination hall) and the bell – shaped pagoda of Lanna style on a high indented square base. This temple was classified by the Fine Arts Department, Ministry of Culture as a historic site that needed urgent conservation action.
Chedi Luang	1291	The biggest temple in Chiang Saen located on the site nearby Chiang Saen National Museum. The name "Chedi Luang" was derived from the great pagoda with its height of 88 metres and width of 24 metres, made of brick plastered with stucco, with traces of the bronze covering. The pagoda was built in the style of Lanna and is considered to be the biggest bell – shaped pagoda in Chian Saen.
Pasak	1295	The temple comprises the main Lanna style – Pagoda which was influenced by the art of Bagan style, the main shrine made of bricks and laterite, and the chapels.
Pra Buad	1346	According to legend, Phaya Kue Na had this temple constructed around A.D. 1346. The significant structures are the round bell – shaped pagoda located north of the temple and the shrine 13 metres long and 20 metres wide. Inside the shrine is a pedestal base with a stucco Buddha image.
Pra Yuen	1506	The only archaeological site left is the octagonal Lanna style pagoda which contains the Buddha relics. It is stated in the legend that King Khamfoo, son of King

		Saen Phu built the pagoda in A.D. 1331 to house 140 relics of Lord Buddha.
Pradhat Chomkitti	1486	According to the Fine Arts Department Chronicle Vol. 61, King Phangkharaja and his son, Prachao Prohm established this temple to enshrine the Buddha's hair on the top of 'Doi Noi' hill in A.D. 945. The temple has been restored many times. The pagoda was built in the form of a high chamber with a niche on each of its four sides and a bell – shaped superstructure with stucco decorations. Around the base of the pagoda is a courtyard surrounded by a boundary wall with a staircase on the eastern side.
Pradhat Songpinong	13^{th} – 15^{th} century	The site consists of the chapel, the Lanna style pagoda, the bell-shaped pagoda, the shrines and several ancient buildings made of bricks. In 2005, there was a discovery of a bronze Lanna Buddha image, fragments of Hariphunchai Buddha image and porcelains from the Chinese Ming dynasty.

1.5 Chiang Saen at risk: earthquakes

Chiang Rai is one a province that surrounded by many active fault lines (Seismological Bureau, n.d.) (e.g. Mae Chan fault line, Mae Ing fault line, Phayao fault line, etc., See Figure 1.4).

Figure 1.4 Thailand's active fault lines



In addition, there is one fault line in Chiang Saen which is known as Chiang Saen fault line or Mae Chan fault line. This places Chiang Saen and its memorial and meaningful historic temples at risk of the seismic hazard as if there is an earthquake that strikes another place rather than Chiang Saen but a big tremor at one fault line theoretically could affect the other fault lines nearby. This hypothetical assumption had been proved by the actual quake in 2011 when its epicentre was located in Myanmar but caused the great pagoda of Chedi Luang temple to collapse (See Figure 1.5), the pagoda of Pradhat Chomkitti temple to tilt (See Figure 1.6) and the shrine of Pradhat Doi Bhukhao temple to tumble down, (MGR Online, 2011).

Figure 1.5 Collapsed pagoda of Chedi Luang temple

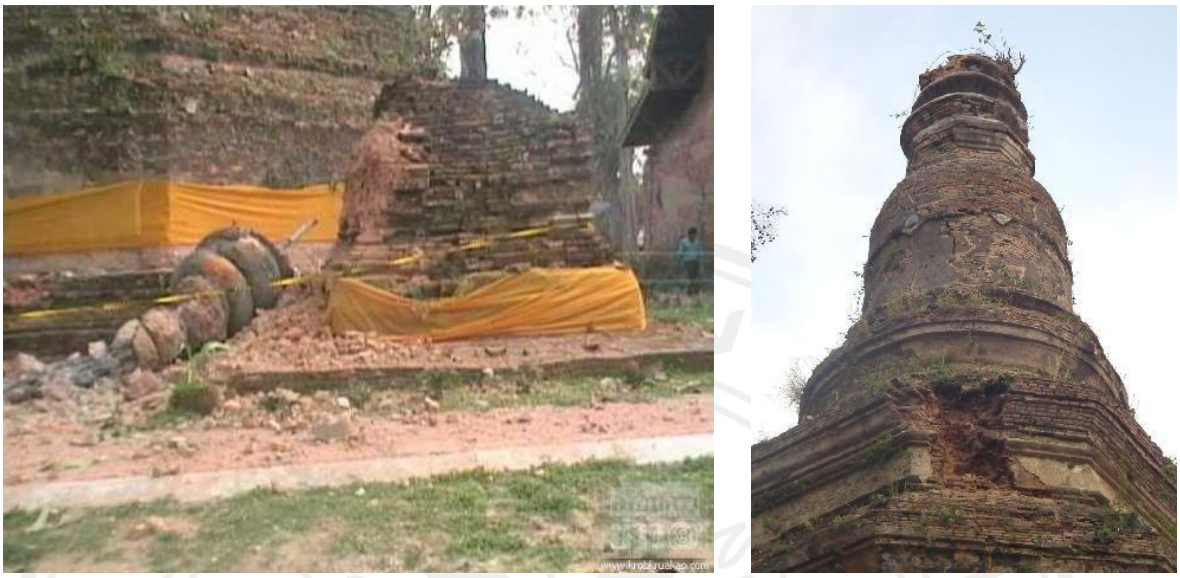


Figure 1.6 Leaning pagoda of Pradhat Chomkitti temple

In fact, according to the seismic hazard map of Thailand (See Figure 1.7) (Ornthammarath et al., 2011) made by Department of Mineral Resources, Ministry of Natural Resources and Environment, it shows that Chiang Rai (as well as Chiang Saen) has been identified as the city at highest ranked-risk of earthquake intensity. Additionally, Chiang Saen's cultural heritage sites have been frequently damaged by natural incidents such as flooding and earthquakes according to the Thailand's Affected Earthquakes Statistics (Seismological Bureau, n.d.) from Seismological

Bureau, Thai Meteorological Department, Ministry of Digital Economy and Society (See Table 1.2).

Figure 1.7 Seismic hazard map of Thailand

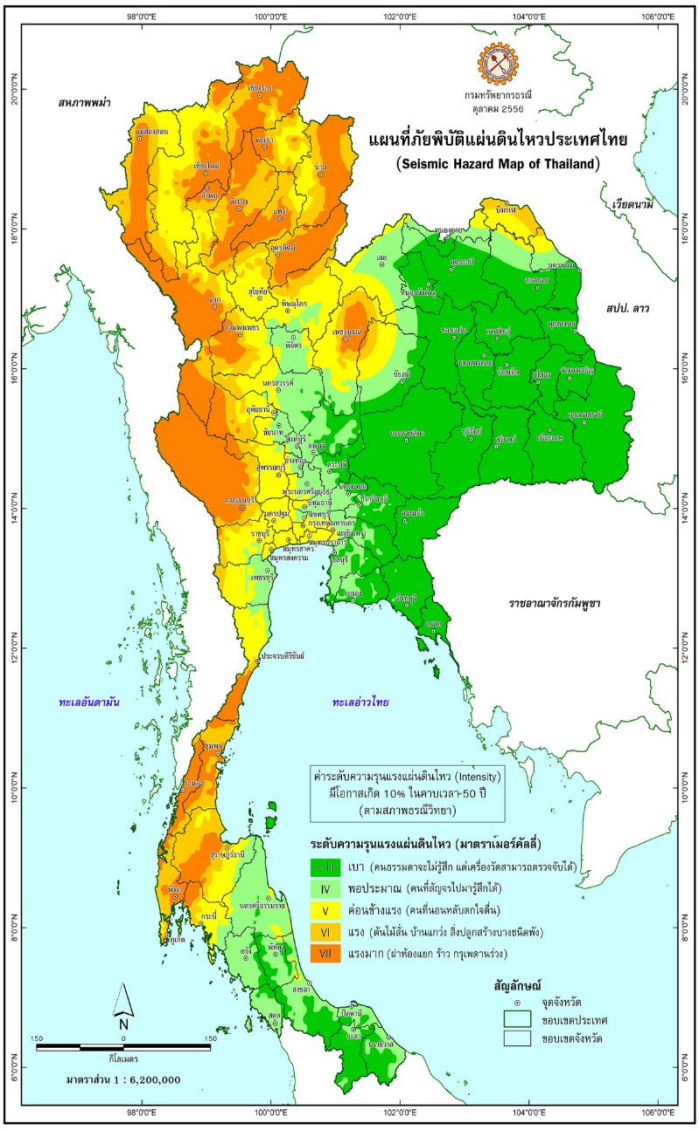


Table 1.2 Thailand's affected earthquakes statistics

Date	**Location**	**Units**
460	Yonok Nak Phan	XII MM
534	Yonok Nak Phan	VIII MM
1715	Chiang Saen	VII MM
Jun 1978	Myanmar	3.9 Ml
Jan 1995	Chiang Khong	3.1 Ml
Apr 1999	Thailand-Myanmar border	3.2 Ml
Jun 2000	Laos	5.9 Ml
Jul 2002	Chiang Saen	4.7 Ml
Feb 2003	Chiang Saen	3.0 Ml
Dec 2004	Myanmar	6.4 Ml
Jan 2006	Myanmar	5.7 Ml
Jun 2007	Myanmar	5.5,5.2 Ml
Jul 2010	Myanmar	4.5 Ml
Mar 2011	Myanmar	6.7 Ml
May 2014	Chiang Rai	6.3 Ml

MM = Modified Mercalli scale, Ml = Local magnitude; popularly known as the Richter scale

Note: The Modified Mercalli Scale is used to measure the intensity of an earthquake which ranges between I – XII. The Richter scale is a scale that is used to quantify the strength or magnitude of an earthquake or how powerful an earthquake was that is determined by seismographic readings.

1.6 Chiang Rai in economic transition

Chiang Saen has been developing rapidly over the past decades as a result of the free trade policy that declaring Chiang Saen as "Special Economic Zone" under the corporation framework of GMS. The Office of the National Economic and Development Board (NESDB) has been ordered by the Prime Minister to turn five high-potential provinces into special economic zones (SEZ) in the second phase of 2015 (Ploddee, 2015). The five provinces are Chiang Rai, Nong Khai, Kanchanaburi, Nakhon Phanom, and Narathiwat. These provinces' borders are connected with neighbouring countries and are considered as important agricultural manufacturing bases.

Chiang Rai is a perfect province to serve as the logistics hub for the Greater Mekong Sub-region because Chiang Rai borders both Myanmar and Laos and it is

only 250 miles south of China's Yunnan province. It also has ports on the Mekong River located on the border of Thailand and Laos in Chiang Saen which is known as Chiang Saen Commercial Port (Port Authority of Thailand, 2012). Chiang Saen Commercial Port links four countries in the Greater Mekong Sub-region together through water transportation (e.g. China, Myanmar, Laos, and Thailand). Chiang Saen Commercial Port is established in order to be a useful transportation channel and supporter in international trades and investments in many sectors as well as to serve the expansion of tourism in that region.

For international trades and investments transportation in Chin Rai, there are two major approaches for traders and investors can get access to, by land transporting or water transporting (Office of the Board of Investment, 2015). One can internationally transport on land through Chiang Khong International Border Checkpoint with Lao PDR and Mae Sai International Border Checkpoint with Myanmar. In addition, one can internationally transport by sea through Chiang Saen Commercial Port, shipping along the Mekong River, further transport to the southern region of Thailand via Laem Chabang Seaport for shipping goods to other regions. Chiang Rai possesses high competency in the area of logistic services to Southern China and upper area of Myanmar and Lao PDR by transporting goods through the Laem Chabang Seaport. In addition, Chiang Rai is a tourist destination linked with other tourist destinations in the upper area of Myanmar, Lao PDR and south of China. Industries located in the area include agro and food processing, furniture, and wood products, in which there is an opportunity to increase the value chain.

The purpose of establishing a special economic zone is to support the integration of the ASEAN Economic Community (AEC) at the end of 2015. Then, Chiang Rai is expected to play a more important role as trade and investment value increase in the border areas. However, the special economic zone (SEZ) is actually not a new concept for Asia. There were, in fact, a few past attempts led by growing Asian economies a few decades ago including India (Gujarat's Kandla SEZ in 1965) (Ministry of Commerce and Industry. Department of Commerce., 2009) and the Four Tigers East Asian Miracles (Page, 1994) (Hong Kong, Singapore, South Korea and

Taiwan) in adopting and implementing this concept as an opportunity for companies (Leong, 2013).

According to the government public relation department (Foreign Office, The Government Public Relations Department, 2016), the office of the Prime Minister, in the first area, Chiang Rai will be promoted as a border trade city to accommodate more trade and investment, connecting with the Greater Mekong Sub-region (GMS) and other ASEAN countries. The second area involves agricultural development and aims to develop Chiang Rai as a health food market. Efforts will also be made to develop the city into a regional hub for agricultural products. In the next step, this regional hub will be upgraded to be a regional hub for the upper-end consumers. In the third area, Chiang Rai will be developed as a tourist city, linking with GMS and other ASEAN countries as the city has good potential for ecotourism, cultural and historical tourism.

As you can see, if the policymakers do not well plan for the upcoming economic development, it can be a tragedy for many cultural heritage places especially when is economic development investment is in the shared area of that historic buildings. In fact, there are several ancient temples in Chiang Saen that were built over hundreds of years old had been damaged and neglected to conserve the significant historical national sovereignty and identity. Some of those temples are becoming or had become abandoned or deserted temples and there are, at least, 10-12 temples according to the information from the Princess Maha Chakri Sirindhorn Anthropology Centre (Public Organisation). Prachao Tongnoi temple; for instance, have been inhabited by the local dwellers and the temple was corrupted by a green cloak of vegetation (See Figure 1.8).

Figure 1.8 Prachao Tongnoi temple

Chiangnoi Tonlan temple (See Figure 1.9) is currently found wrecked. There located ruined brick foundations of the chapel. It is presumed that other parts of the temple possibly eroded away by the streams of Mekong River in the past.

Figure 1.9 Chiangnoi Tonlan temple

However, Chang Kham temple is even worse. The temple was the place that the sandstone Buddha image, inscribed bricks, and the historic porcelains, stupas and pagodas in the era of the kingdom of Yonok Nak Phan and Lanna are found, (Princess Maha Chakri Sirindhorn Anthropology Centre, 2017). But the temple was occupied and surrounded by villagers and it is difficult to get access to the site.

Nonetheless, the current state of conservation and restoration of those temples are poor because there are a large number of places that are in urgent need of preservation programme and maintenance works and inadequate government support. If we do not take the conservation of cultural heritage seriously, and the damage cannot be reversed back, then the posterity or the future generation will certainly lose their opportunity to be enriched in national identity and self-esteem.

1.7 Significance of the study

There were several reasons why Chiang Saen was chosen as the area to research cultural heritage sites. First, every corner of the city is permeated with historic temples since Chiang Saen was the ancient capital city in the era of the kingdom of Yonok Nak Phan before it became integrated into the kingdom of Lanna. Historically, Chiang Saen has been greatly influenced by Buddhism, with ancient buildings reflecting the architectural styles of Thailand through the famous Buddha statue design called “Chiang Saen style”. Chiang Mai, as the capital city of the kingdom of Lanna, is also famous for the memorable historic temples located in the city. However, the temples of Chiang Saen ancient city require urgent maintenance and conservation action. Chiang Mai is a popular tourist destination and many cultural heritage sites are supported by government and funded through the expenditure of both domestic and foreign tourists.

The second reason is that the most striking ancient temples are located in Chiang Saen compared with other cities in Chiang Rai Province. Chiang Saen was once the capital city of the kingdom of Yonok Nak Phan and antiques were found in the hypogea beneath the historic temples. These artefacts were used by archaeological scholars to trace the history of Yonok Nak Phan kingdom which is shrouded in mystery.

Another reason is that Chiang Saen's cultural heritage sites have been frequently damaged by natural disasters such as earthquakes and flooding, (Fredrickson, 2014). The damage is, in many cases, irreversible and Thailand has lost the opportunity to enrich its culture with these historic national treasures.

Cultural heritage can also be considered as a valuable economic development resource. (Bowitz & Ibenholt, 2009) analysed the benefits of cultural heritage on the economic development of the town of Røros in Norway. They suggested that cultural heritage was creating jobs amounting to around seven percent of the overall employment in the region. A report published by the Local Government Association, 2013 comprising local authorities and other public-interest institutions in England and Wales investigated how culture and art contributed as economic drivers. Five major areas of economic impact were identified as: 1) attracting visitors, 2) creating jobs, developing skills and reducing unemployment, 3) attracting and retaining businesses, 4) revitalising the area and 5) developing talent and investing in future value.

This study aimed at valuing the non-market, intangible benefits of cultural heritage sites in Chiang Saen to show how they can contribute many beneficial advantages. Results will provide a firm basis for measuring and quantifying the economic values of cultural heritage as specific and unique goods which preserve ancient cultures. Cultural heritage can be viewed as a public asset, which has two main characteristics of benefit to the local people as non-excludable and non-rival. Put differently, cultural heritage sites can be enjoyed regardless of the entrance fee by all members of the public. If the society as a whole has a positive preference towards preserving the cultural heritage, then the government must analyse the costs and benefits of conserving these historic treasures.

This research will contribute useful idea of the conservation of archaeological sites to government or non-governmental organisations (NGOs) since cultural heritage goods are not traded in the marketplace but exist as intangible benefits for people in the society. Decision-making and policy implementation by public sectors must respect the intrinsic value of cultural heritage sites and implement policies that will attract investment for preservation programmes to restore these heritage sites to their former glory for the benefit of the local people, tourists and the Thai nation.

1.8 Scope of the study

The aim of this study is to conduct an economic valuation of non-market values of restoration and preservation of the ancient temples in northern Thailand, specifically in Chiang Saen district of Chiang Rai. The non-market values being evaluated were use value and non-use value while option value was not included in this study. The in-depth details of the non-market values will be explicated in chapter 3. Thus, the data being analysed in the study was cross-sectional data which was obtained from the survey. The specific objectives are:

1) To estimate the factors that affect willingness to pay of people on the cultural heritage in Chiang Saen.

2) To investigate willingness to pay for cultural heritage in Chiang Saen in terms of money.

This study was conducted to investigate the economic valuation in particular area which gathered the public WTP values that represented a case study in the specific field in Thailand. There were several individuals selected to be respondents of the surveys from different places on account of the non-market values that the individuals obtained from the cultural heritage sites and limited time and budget while the surveys were being conducted.

To achieve the study goals, the paper is organised as follows: Section 1 explicates the overview definition of cultural heritage as has been mentioned and the chosen area located cultural heritage sites in this study. Further, the justifications and significance of research are further mentioned in this component. The second section includes recent literature of an overview of cultural heritage preservation and previous studies on the economic valuation of cultural heritage worldwide. The third section sheds some light on the methodology by investigating the nature of public attitudes and preferences towards the conservation of momentous Thai temples in Chiang Saen, translating them afterwards into economic values using contingent valuation method. Section 4 focuses on the results. Lastly, conclusion and final remarks are held forth in Section 5.

CHAPTER 2
LITERATURE REVIEW

Consider the classical economic concept of goods that are bought and sold in the market, a value or a price of a good is defined by the amount of money that potential buyer would be willing to pay in order to consume the good and the amount of money that seller would be willing to accept. These two conditions are used to help make a decision of buying and selling products and services in the market system. That is, if the value of the good consumed by the buyer exceeds the willingness to pay, then the consumer will purchase the product. Likewise, if the value of producing goods is less than the market price or the willingness to accept, then the producer will sell the product and the market can reach the equilibrium when the willingness to pay equals to the willingness to accept which will be exactly equal to the equilibrium price in the market.

Since there is an absence of a price of cultural heritage goods which implies that we cannot measure the value of cultural heritage directly, we then must use the non-market valuation technique to elicit the economic values of cultural heritage goods. There are two broad strands of nonmarket valuation methods. One valuation method is revealed preference which consists of two methods: Hedonic Price Method and Travel Cost Method. Another valuation method is called stated preference which also consists of two methods: Choice Experiment and Contingent Valuation Method.

There have consistently been previous studies on the economic valuation worldwide. Most of them are conducted in Europe and America, valuing various types of cultural heritage sites from built architectures to historic places like cathedrals. European heritage is the most frequent research that has been conducting such as Italy, UK, Spain, Norway, Netherlands, Greece, Portugal, Ireland, Bulgaria, Switzerland, Denmark. Yet, there is little research on this issue conducted in Asia especially in Southeast Asia. This may be because there is a lack of interest in preservation programme of historic sites and those countries where cultural places are located are mostly developing countries. For recent literature that have been conducted, the methodology used in the studies vary among the research objectives

and specific characteristics of each heritage as each built cultural heritage is invented and created from the diversity of cultures, values, traditions and social conditions. As the results, the methods used in the studies on the economic valuation throughout the world are varying as well.

One popular method of valuing the economic value of cultural heritage is the contingent valuation method (CVM). Bille (Bille, 1998) studied a contingent valuation of the Royal Theatre in Copenhagen, Denmark to estimate the total value of the Royal Theatre to the Danish people and see that the non-market benefits can clarify that the cultural asset is worth the money from the taxpayers' point of view. Meanwhile, Mourato et al. (Mourato, Kontoleon, & Danchev, 2002) studied the preservation of the Bulgarian monasteries in transition economies since the general state of conservation of the monasteries is poor at that time and there was a significant number of sites are in urgent need of restoration, maintenance and repair works. The findings suggested that, on average, Bulgarians attribute a positive preference toward the conservation and restoration of their monasteries which implies that the damages to those heritage sites are undesirable.

Garrod et al. (Garrod, Willis, Bjarnadottir, & Cockbain, 1996) studied the value in terms of finance of the restoration and renovation of historic buildings in the Grainger Town area of Newcastle, comprising streets, market and buildings that are considered as one of an excellent case of town planning in Britain, by using the contingent valuation method to examine how much British locals would be willing to pay for preservation of the site. A questionnaire survey was conducted to investigate a sample of 217 taxpayers in the city and the respondents were asked a discrete question to state their WTP as tax surcharge towards the renovation of the historic buildings. The empiric shows that British people have a strong preference for renovating the historic buildings by almost 90 percent of respondents.

Rosato et al. (Rosato, Rotaris, Breil, & Zanatta, 2009) monetised Italians' preferences toward the Veneto House Market in Veneto, Italy using hedonic price method to elicit the maximum and minimum prices per squared metres for a house localised in the area of each municipality. The hedonic price model comprises the

characteristics of supply and demand of the market at the municipality level. The evidence illustrate that those Italian ancient buildings produce some benefits which can be quantified in financial terms within a range from 3.3 – 5.1 million euros per squared metres per villa.

Verbič et al. (Verbič & Erker, 2005) investigated through the contingent valuation on the economic benefits of the Volčji Potok Landscape Area in Slovenia where residences, castles, wetlands and monuments are located. The double-bounded CVM was used to show that the Slovenian people are willing to pay 388 Slovenian Tolar per person monthly for development and improvement of cultural heritage sites. Meanwhile, Tuan and Navrud (Tuan & Navrud, 2008) applied the CVM on the World Cultural Heritage area, Mỹ Sơn, Hindu temples established in the era of the kingdom of Cham, central part of Vietnam. Figures, photos, maps and text were present to the respondents the status quo scenario with an insufficient resource of conserving the cultural sites and the scenario with restoration plan in order to bring the light on the non-market benefits of the sites shown by Vietnamese visitors, foreign tourists and the local residents. On average, the results show that WTP is US$ 2.27 per capita for Vietnamese and is US$ 8.78 per capita for tourists according to the preservation plan over Mỹ Sơn.

Lvova, Olga (Lvova, 2013) aimed at determining the economic values of the Colosseum, Italy of undergraduate students from Germany, Finland and Netherland using questionnaire- based interview to show students' preference toward the preservation of the Colosseum. The findings reveal that there is 66 percent of the respondents who would be willing to pay an entrance fee that ranges between 5-10 euros. When comparing between methods of payments, 32 percent of the undergraduate students would be willing to pay for preservation plan of the Colosseum as a donation whereas there is only 21 percent of those students who would be willing to support the programme of preservation of the World Heritage site as a tax surcharge. Otherwise, they would be willing to promote the conservation programme through voluntary work and other forms of activities rather than those two methods previously mentioned. Considering each nationality's reference separately, German students would be willing to pay 1-5 euros monthly on the development plan

and 6-10 euros monthly that would be willingly paid by Finnish and Dutch students. Put differently, this evidence shows that German students have a stronger preference than Dutch and Finnish students towards the Colosseum.

Another method that can be used to elicit the non-market benefits of cultural heritage is the Travel Cost Method (TCM). Fonseca and Rebelo (Fonseca & Rebelo, 2010) determined the demand and value of specific cultural goods, the Museum of Lamego, Alto Douro Wine Region in Portugal. The evidence concludes that a better mean of transport could raise the probability of visits to the museum. And it costs 36.4 euros for a person to visit the site with the average travel frequency of 1.98 times. The Poisson model was conducted to estimate the influential factors of the travel which are female gender, educational level and negative travel cost. On the other hand, the study conducted by Bedate et al. (Bedate, Herrero, & Sanz, 2004) opted for TCM to estimate the value and the problems with the method since this method is normally criticised as it poses the scepticism on the lack consideration of the importance of the cultural sites such as the cultural value, people's preference, artistic value, etc. The research aimed at using TCM as a tool analysis in order to contribute use value measure of recreation areas: Museum, cathedral, village and cultural arts event in Castilla y León, Spain. The findings clearly identify that there is a consumer surplus for Spanish over travelling The Iberian Organ Festival (artistic event) which can be calculated as 248.82 euros that are the individual's maximum WTP for visiting and enjoying the festival. Also, the total consumer surplus for the Walled Ensemble of Urueña (village) is 272.26 euros, for the Museum of Burgos is 1,171.97 euros and for the Cathedral of Palencia is 712.2 euros. Even though the study can serve as basic information for individual demand for cultural goods or basic criterion for social decision-making, since this study was conducted by using TCM, there are some possible limitations of further applications. That is, the research did not conclude the major characteristics of the cultural goods and non-use value which could possibly have influence on non-market benefits of the cultural sites.

There are several studies conducted in Thailand in various areas of study. Meesawat (Meesawat, 2007) conducted an open-ended, single bounded closed ended and doubled bounded closed-ended questionnaires to estimate the total economic

value of people towards the market in order to elicit willingness to pay as a donation to conservation funds of the market. The result shows that the economic value of the cultural market is 3,972.25 million Thai Baht (THB) annually from the expected donation which can be implied that people have a strong preference for the site and the cultural market should be preserved as cultural heritage. Pengsawat (Pengsawat, 1999) investigated the use value of the Ayuthaya Historic Park in Thailand. TCM and CVM were carried out and the results show that the use value is THB 290,660,649 per year and THB 7,591,360.603 per year respectively. Seenprachawong (Seenprachawong, 2005) estimated the willingness to pay for preserving ten historic temples in central Thailand, using CVM as a tool of valuation with closed-ended questionnaires. The findings are shown that an individual would be willing to pay once on average of THB 214 per person as tax surcharge and THB 243 per person as a one-time donation.

There are few kinds of literature that had been carried out concerning cultural heritage in the Northern Thailand as well. The first example was studied by Chaimongkol (Chaimongkol, 2009). The research aimed at valuing the economic value of a temple in Phayao for the restoration of the chapel and the area within the temple. Choice experiment method was used to elicit the willingness to pay for renovating the scenery of the temple and it showed the results that individuals would be willing to pay for renovating the chapel in the temple as THB 10,047 per capita for one-time payment and mean WTP for renovating the temple's court using for meditation practice is THB 30.882 for a one-time payment. By using this method, photos and text were used in the interview. In contrast, Khamrangsi et al. (Khamrangsi, Ngamsuksom, Nantasen, & Kuson, 2014) using TCM to valuing the recreational value of tourist and people for tourism of cultural heritage in Nan municipality. The evidence states that the recreational value based on the cost with opportunities cost is THB 1,457.96 million per year which would be willing paid by tourists and THB 134.96 million per year which would be willingly paid by the locals in Nan. Sukchitpinyo and Chokethaworn (Sukchitpinyo & Chokethaworn, 2012) studied an economic valuation to estimate willingness to pay for preservation of Wiang Kum Kam Cultural Heritage in Chiang Mai using open-ended CVM as a tool

of estimation. The study results were obtained by interviewing 400 respondents who stated their mean WTP for Remediation and protection against flooding in Wiang Kum Kam. Individuals stated that they would be willing to pay THB 149.52 per one time of visit and the annual economic value is THB 3,692,695.44. Whereas Suntornwat et al. (Suntornwat, Petcharanon, & Praneetwatakun, 2005) studied on an economic valuation of visual damage of ancient buildings in Chiang Mai Metropolitan Area. Hypothetical situations were used together with double bounded closed-ended CVM in the research. The result indicates that individuals would be willing to individually pay THB 316.89 once for the renovation of the scenery of ancient buildings in Chiang Mai city centre area.

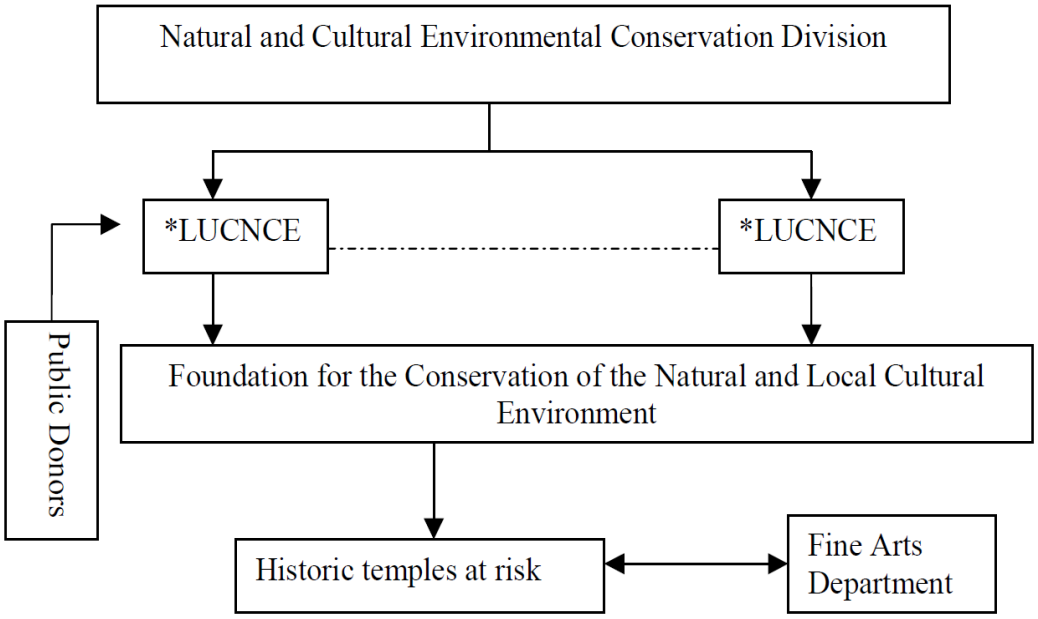
As you can see, there is none of the recent literature that has been studied on the economic valuation of cultural heritage in Chiang Saen. It is a great opportunity to conduct this study since it could possibly fill in the gap of the empirical research in this area.

From previously mentioned literatures, one literature that gives a good example of proposed conservation plan that can be implied with this study is the study of Seenprachawong (2005). In the study, the conservation programme was proposed as policy implication of the study. As there are two major government agencies and one non-governmental organization in Thailand that are responsible for preserving historic temples under their own mandates: The Fine Arts Department, the Natural and Cultural Environmental Conservation Division, and the Foundation for the Conservation of the Natural and Cultural Environment (non-governmental organization). The proposed management scheme for the preservation of historic temples in Thailand is depicted in Figure 2.1.

The proposed management scheme can be built on the existing social infrastructure. The Foundation for the Conservation of the Natural and Local Cultural Environment, which was established in 1993, can work with the Local Units for the Conservation of Natural and Cultural Environment (LUCNCE) to establish a trust fund to be financed mainly by voluntary donations from the public. The public could send their donations to LUCNCE which are located in 75 provinces around the

country. The Fund could be administered by a steering committee composed of representatives from the Foundation, LUCNCE, and the Fine Arts Department. The interest earned should be returned to the Fund to be used to finance restoration works on temples. Thus, a revolving fund has to be created. It is anticipated that the Fund will be able to finance all activities without budgetary support from the central government within a reasonable period of time.

Figure 2.1 A proposed management scheme
for the preservation of historic temples in Thailand



To stimulate voluntary contributions from the public, donors should be informed that the UNESCO will provide a matching contribution. Additional funds can come from fund-raising activities organized by the Foundation. For instance, the Foundation could sell postcards, T-shirts, and other souvenirs and organize shows in performing arts (such as classical dance) at heritage parks. Cultural festivities could be held all year round to create cultural awareness and appreciation of the Thai culture in the young generation. It is hoped that when these youngsters grow up, they will donate money to help support the preservation of historic temples.

CHAPTER 3
METHODOLOGY

3.1 Economic values

Economic value can be classified into three categories (Goodstein, 2011). The total economic value of a natural resource can be represented as the sum of three components as use value, non-use value and option value. Use value represents the advantage that individuals can obtain when consuming the goods both directly and indirectly. Non-use value is the value that can be gained from the knowledge of existent cultural heritage sites and the benefit from leaving the cultural goods to posterity as bequests. Option value is the value placed on private willingness to pay for maintaining or preserving a public asset, with no likelihood of ever using it. Put another way, these economic values of non-market benefits can be written as an equation:

Total value = Use value + Non-use value + Option value

This survey encompassed a random sample of both users and non-users of cultural heritage sites. Users obtained use value from direct consumption of the cultural goods through the experience of visiting the temples in Chiang Saen. Non-users obtained non-use value through various channels as:

- Bequest benefits – since the temples in Chiang Saen contain significant national cultural heritage and identity, the continued existence of these temples will pass on benefits for future generations.
- Existence benefits –international recognition of the intrinsic value of the existing temples in Chiang Saen can contribute to national pride and identity and attract tourists.

There are various methods of economic valuation being continuously applied in recent research but there is no absolute perfect economic valuation technique since one method might be applicable to a situation but not befitting in other features. The Contingent Valuation Method (CVM); however, had been employed in this study because CVM can be applied to investigate economic values from users as well as

non-users. Though CVM has a slight probability of getting a biased result, it can be dissolved by carefully design a questionnaire and a hypothetical scenario to probe credible result.

3.2 Contingent Valuation Method

The contingent valuation method (CVM) is used to estimate economic value for ecosystems and economic services. It involves asking people to state their willingness to pay (WTP) or accept for specific cultural goods based on a hypothetical scenario. To explain the welfare measure that is estimated through the CVM, consider the following utility function,

$$V = U(Y, X, Q)$$

where Y is income, X represents the characteristics of the individual and Q is the state of conservation of the temples.

Let Q_0 be the complete physical description of the temples. There is a policy or conservation programme to improve the state of preservation of the temples from the current state Q_0 to Q_1 which represents some different physical description of cultural heritage sites. If the combination of Y, X and Q that yields higher utility is preferred to the combination of Y, X and Q that yields a lower level of utility, then the welfare measure to be empirically estimated is given by:

$$V(Y, X, Q_0) = V(Y - WTP, X, Q_1)$$

where the quality of goods will be improved from Q_0 to Q_1 if the preservation policy is implemented. The value that the individual places on the alteration from Q_0 to Q_1 is then the largest amount of money that he/she would be willing to give up to attain the state with better-conserved temples at Q_1.

In this study, the hypothetical conservation programme was developed to elicit the WTP of the public for the cultural assets. However, hypothetical bias can be a constraint in the use of CVM since problems arise when the samples do not take the survey seriously as they will not have to genuinely pay the amount of money. Therefore, the Cheap Talk script of Loomis, 2014 was applied to eliminate any hypothetical bias by convincing the respondents to reveal their true WTPs. A one-

time donation was used as a payment vehicle. Each respondent received a sealed envelope which contained a predetermined WTP bid card. The individuals could accept or reject to donate the given amount to the conservation programme of cultural heritage sites without the interviewers knowing their answers. This technique can psychologically encourage the respondents to respond to the survey more effectively and show their true WTP towards cultural heritage. The selected individuals were asked the following question:

"Suppose that there was a referendum for everyone to vote for the donation of X Baht to a trust fund for which the interest on endowment would be managed to pay for the maintenance of the historic temples in Chiang Saen. If more than half of the respondents choose 'YES' to the trust fund, then the referendum is passed and everyone pays X Baht. All the money received will be managed and administered by the 8th Regional Office of Fine Arts, Chiang Mai (ROFA) who will take responsibility for the northern cultural heritage of Thailand. If more than half of the respondents answer 'NO', then no one pays and no money is sent to the 8th Regional Office of Fine Arts, Chiang Mai. Considering your current income, as well as your expenses for food, clothing, utilities, housing, etc., I want you to suppose that we are taking a secret vote. Do you vote for this referendum?"

If the individuals chose 'YES' to the given question, then they were asked to state their maximum WTP. If the individuals, chose 'NO', then they were asked follow-up questions in the WTP valuation section to state their motivation behind zero WTP responses out of a list of numerous possible reasons. Reasons that reflected true null WTP included 'I have no spare income, otherwise I would pay', 'I feel the restoration of historic temples is unimportant' and 'I prefer to make the payment directly to the temple(s)'. Likewise, the survey also included reasons that reflected objection to the payment vehicle or disbelief in the proposed preservation programme as, ('I do not believe paying will solve the problem' and 'I do not like the payment method'), free-riding behaviour ('I think it is the government's responsibility') and lack of understanding (I fail to understand the question on willingness to pay).

Once the survey was completed, a multivariate analysis of WTP was conducted. Various techniques can be used to calculate the value of mean WTP. One

method proposed by Bishop and Heberlein (1979) used a logit model to respond to the hypothetical bid level and the expected WTP was determined by numerical integration of the area below the logistic distribution function truncated from 0 to maximum bid. However, Hanemann (1984) argued that a numerical integration from 0 to infinity (∞) would be a better measure for computing expected WTP as long as the value was constrained as a non-negative random variable. In cases where WTP was not constrained as non-negative, the correct formula to calculate the expected WTP would require a numerical integration from -∞ to ∞ as proposed by Johansson et al., 1989. This study assumed WTP to be a non-negative random variable as the willingness of the public is an amount of money which cannot be a negative value. Mean WTP was calculated by applying the sample mean of each estimated parameter and the mean WTP formula proposed by Hanemann (1984). A mathematical method can be written as:

$$Mean\ WTP\ = \frac{ln(1 + e^{\alpha + \sum \gamma_k S_k})}{\beta}$$

where α is an intercept coefficient which is a constant's coefficient, β is a slope coefficient which is a bid's coefficient, γ is a coefficient of variables, excluding bid variable, S is the mean value of each coefficient and k represents all socio-economic characteristic variables.

Median WTP is another method of calculation of the values of the public WTP. Yet, there is a debate over the two methods of WTP calculation. Hanemann (1989) concluded that the mean WTP method is more sensitive skewness in the data than the median. In addition, the median WTP has innate appeal as a measure of central tendency (Freedman, 1985). The median can also be used to compare with the average WTP as a measure of dispersion. The median WTP formula is written as:

$$Median\ WTP\ = e^{\alpha^*/\beta}$$

where α is an intercept coefficient which is a constant's coefficient and β is a slope coefficient which is a bid's coefficient.

Since the median value is centralised, the median WTP can be used to check the fitness of the mean WTP whether the gathered values are skewed or central.

Another technical argument that the median may be more useful than the average is that the median is more impartial than the mean and it minimises tax discrimination (Freedman, 1985). For example, the median value can be used as a reference number of tax rate to reduce tax discrimination of the public as there are a group of people who praise the historic temples in Chiang Saen and also a group of people who does not care about the cultural heritage.

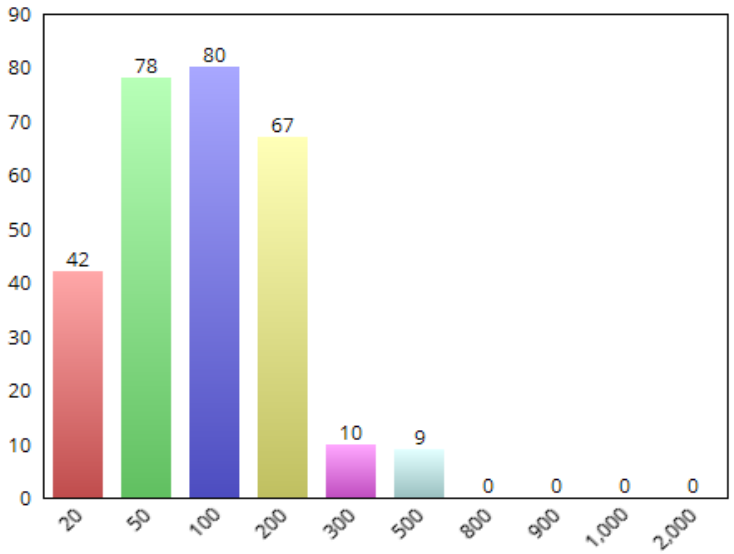
3.3 The surveys

The survey was divided into three phases, with the first involving a draft survey as an open-ended questionnaire to determine ten bids of willingness to pay which were then used in a pre-test survey to avoid a starting point bias of stated WTP. The ten bids were*:* THB 20, 50, 100, 200, 300, 400, 500, 800, 900, and 1,000 *(*USD 1 = THB 33*)*. In this step, 20 questionnaires were conducted and sent to scholars, from Fine Arts Department, Universities and Chiang Saen National Museum, and general public in Bangkok, Chiang Mai and Chiang Rai to investigate the conception of the draft questionnaire and hypothetical scenario and to determine bids of willingness to pay in the pre-test survey (in the second step) to avoid a starting point bias of stated willingness to pay. This one-on-one interview was chosen over the focus group method to avoid the busy audience problem since those respondents are from different places throughout Thailand. With busy audiences, the logistics of gathering a group of participants together in one room are often too complex to make focus groups a realistic option, (McIntyre, 2012). Moreover, participants of the focus group may respond differently regarding the background and notion of Chiang Saen history embedded in each participant. Then, the individual interview is more likely to generate honest and detailed feedback as well as the participants can freely explain their underlying motivations, beliefs, attitudes and feelings without anyone else knowing their opinions. In practice, it is also difficult for the conductor to conduct a focus group by convincing all participants to drive to an unfamiliar site to share their opinions with a group of total strangers, (Edmunds, 1999).

The second phase conveyed the pre-test survey with a closed-ended questionnaire to 50 samples of the general public in Bangkok. The distribution of ten

bids offered in the pre-test survey is depicted in Figure 3.1. As mentioned before, ten bids were determined in the first phase by the open-ended questionnaire. In this step, the samples were asked to identify their opinions on ten predetermined bids. Bid amounts of stated preference on cultural assets were determined at THB 50, 100, 300 and 500. The first two bids *(*THB 50 and 100*)* were the most frequently selected by the samples at roughly 80*%* and the two latter bids *(*THB 300 and 500*)* were the least frequently chosen at less than 10*%*. Then, the main survey was carried out.

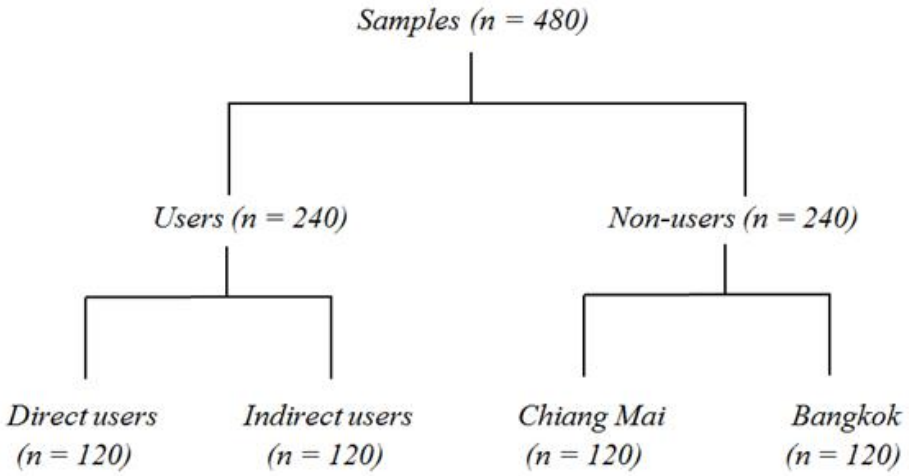
Figure 3.1 Bids distribution in the pre-test survey



Lastly, the main survey was carried out. During the interview, each respondent received a sealed card that specified a predetermined WTP *(*bid amount*)* to prevent the interviewer knowing their answer.

3.4 Sample selection

Figure 3.2 Sample design



The graphical selection of respondents is depicted in Figure 3.2. Random samples of 480 people, in four sampling areas across Thailand, were individually asked as representatives of Thai population.

1) Direct use citizens
   - Tourists at Chiang Saen historic cultural sites in Chiang Saen District where temples located (Wiang Sub-district, Chiang Saen District, Chiang Rai Province)
   - Students and teachers at the Faculty of Humanities and Faculty of Fine Arts, Chiang Mai University in Muang District, Chiang Mai Province
   - Scholars at the 8th Regional Office of Fine Arts, Chiang Mai Province
   - Scholars at Chiang Saen National Museum, Chiang Rai Province

Tourists obtained use value from the historic temples directly from visiting the temples. The students from the Faculty of Humanities and Faculty of Fine Arts at Chiang Mai University study history and archaeology and reaped the use value from the cultural heritage sites in Chiang Saen to their archaeological knowledge and expertise repository. So did the scholars at Chiang Saen National Museum. They receive direct use value from existing temples by passing on their knowledge to tourists and museum visitors.

2) Local people in Wiang Sub-district, Chiang Saen District since they

indirectly experienced cultural heritage through the consumption of other economic services such as restaurants, souvenir shops, market, lodging, etc. which enabled by the discovery of antiques in the hypogea beneath the temples or the preservation plan of the temples. The existing monasteries draw the tourists to Chiang Saen city and the locals gain benefits of economic activities made by the tourists.

3) Students and teachers at Chulalongkorn University and the general public in Patum Wan District, Bangkok.

4) Students and teachers at Chiang Mai University and the general public in Chiang Mai City centre *(*Muang District, Chiang Mai Province*)*.

The first two sampling targets were categorised as users since their fields of interests and specialisations pertained to the direct and indirect use of Chiang Saen cultural assets. Correspondingly, the last target group was sorted as non-users as they made infrequent use of the cultural heritage but benefitted from its existence.

3.5 Questionnaire design

The questionnaire was divided into four parts. The first part was designed to ascertain individuals' attitude towards cultural heritage which aims to elicit the use and non-use values of respondents on temples in Chiang Saen. In this section, textual information was presented describing the history and current state of Chiang Saen cultural assets.

The second part is the willingness to pay valuation. The hypothetical scenario and photos were used in this part to ask respondents to state their WTP for the preservation programme. The respondents will be asked to assume to pay a one-time donation to a trust fund administered by the 8th Regional Office of Fine Arts, Chiang Mai *(*ROFA*)*, followed by the level of certainty questions.

The third component is socio-economic characteristics survey which collects the socio-economic data of respondents.

The last section is questions about the survey which investigate respondents' opinions about the survey whether it is realistic and easy to understand. The questions in the questionnaire are listed in Table 3.1.

Table 3.1 Contents of questionnaire used in the survey

Question Category	**Content of the question**
PART I Attitude towards cultural heritage	Questions about public attitudes toward Chiang Saen temples e.g. How important to you are each of the following reasons for preserving these temples? - It is important to have these temples so that I or my family can visit them - It is important to have these temples so that other people can visit them - It is important to have these temples so that future generations can visit them - It is important to have these temples because their names appear in Thai history - It is important to have these temples for passing on Buddhism to future generations, etc.
PART II Willingness to pay valuation	- Suppose that we are taking a secret vote for the establishment of the trust fund for temple preservation. Do you vote for this referendum? - Reasons for willing to pay - Reasons for not willing to pay
PART III Socio-Economic Survey	- Gender, Age, Religion, Education, Occupation, Monthly income
PART IV Questions about this questionnaire	How strongly you agree or disagree with each of the following statements - I find the questions in the survey are unrealistic - I find the questions in the 1st part of this survey are difficult to understand - I find the questions in the 2nd part of this survey are difficult to understand - I find the hypothesis and scenario in this survey are difficult to understand - The current state of the temples *is better than* presented here - The current state of the temples *is worse than* presented here

CHAPTER 4
RESULT ANALYSIS

4.1 Public attitudes towards cultural heritage

The sample summary revealed that, on average, approximately half of the respondents had visited at least one or two historic sites in Chiang Saen once in their lives. A total of 49.74% of the interviewees had visited by at least one ancient temple in Chiang Saen at some point in their lives and 50.26% had never been to the places before. The most visited site was Pradhat Chomkitti Temple. The survey findings on the attitudes of respondents regarding perception on the conservation of cultural assets in Chiang Saen are reported in terms of percentage in Table 4.1 which shows how the public perceived the importance of Chiang Saen cultural assets.

The respondents were asked how important the cultural assets were to them or their families. Results indicated that the cultural assets were important for more than half who were grateful that the temples existed so that they could visit them. This question aimed to elicit the direct use values of the interviewees. The respondents were also asked about indirect use values of cultural heritage using the tenth question. More than 60% stated that the temples were meaningful to them because they contributed economically to the local people.

For non-use values, Chiang Saen ancient temples were perceived as being an inheritance for posterity. The third statement in the questionnaire was applied to explore the bequest value of the public with the result that almost 80% praised the historic temples as their bequest to their descendants and only 7% disagreed with the statement. The public regarded the existence of the temples as being worthwhile. This existence value was determined from the fourth to the ninth statements in the questionnaire and results indicated that more than 50% believed that the existence of the temples contributed to national pride and identity.

Table 4.1 Public attitude towards the significance of existing historic temples in Chiang Saen (percentage)

Statement	1	2	3	4	5	9
1. It is important to have these temples so that I or my family can visit them.	2.29	10.42	24.78	27.71	31.67	3.13
2. It is important to have these temples so that other people can visit them.	0.42	2.50	14.79	27.50	52.91	1.88
3. It is important to have these temples so that future generations can visit them.	1.67	6.04	15.00	27.29	48.75	1.25
4. It is important to have these temples because they inspire pride in our heritage.	0.21	5.00	14.58	25.00	53.54	1.67
5. It is important to have these temples because they contribute to the aesthetic value of the northern region of Thailand.	0.83	5.83	18.54	30.00	41.67	3.13
6. It is important to have these temples because they are part of Thai way of life.	1.88	5.63	23.96	24.58	42.07	1.88
7. It is important to have these temples because their names appear in Thai history.	1.88	15.20	28.13	25.83	23.96	5.00
8. It is important to have these temples for passing on Buddhism to future generations.	0.42	2.08	15.42	19.58	58.96	3.54
9. It is important to have these temples to remember memorable events in history.	2.08	11.88	32.08	22.50	28.96	2.50
10. It is important to have these temples because they economically contribute to the locals.	0.42	8.13	15.21	52.70	21.04	2.50

1 = Not important, 2 = Slightly important, 3 = Moderately important, 4 = Very important, 5 = Extremely important, 9 = Don't know

4.2 Respondent profiles analysis

The individuals were explored the socio-economic characteristics in the survey as well. The statistics of individuals' socio-demographic characteristics are summarised in Table 4.2.

Table 4.2 Respondents' socio-economic characteristics summary

Characteristics	Number of Respondents	Percentage
Gender:		
Male	235	48.96
Female	245	51.04
Religion:		
Buddhist	465	96.88
Christian	15	3.12
Level of Education:		
Lower Secondary	83	17.29
Upper Secondary	66	13.75
Diploma/Vocational Certificate	36	7.50
Bachelor	206	42.92
Master	85	17.71
Doctoral	4	0.83
Occupation:		
Civil servant	71	14.79
Private firm employee	141	29.38
Business owner/ Self-employed	53	11.04
Labourer	66	13.75
Unemployed/ Homemaker	9	1.88
Retired	12	2.50
Student	124	25.83
Other	4	0.83
Monthly income:		
0 – 5,000 Baht	14	2.92
5,001 – 7,500 Baht	42	8.75
7,501 – 10,000 Baht	41	8.54
10,001 – 15,000 Baht	120	25.00
15,001 – 20,000 Baht	191	39.79
20,001 – 25,000 Baht	63	13.13
25,001 – 50,000 Baht	5	1.04
50,001 Baht and above	4	0.83

Analysis of the data indicated that about 60% of the interviewees were willing to pay for conservation of the temples and approximately 40% were not. Table 4.3

presents brief statistics of public WTP. To identify the motivations behind their answers, the respondents were asked to state why they were either willing or unwilling to pay for the conservation of historic heritage from the possible list of reasons given in the questionnaire. The summarised reasons of positive and null WTP responses are illustrated in Table 4.4 and Table 4.5, respectively

Table 4.3 Willingness to pay statistics

Bid (Baht)	**WTP > 0**	**WTP = 0**	**Total sample**
50	92 (76.67%)	28 (23.33%)	120
100	82 (68.33%)	38 (31.67%)	120
300	67 (55.83%)	53 (44.17%)	120
500	59 (49.17%)	61 (50.83%)	120
Total	300 (62.50%)	180 (37.50%)	480

Table 4.4 Reasons of positive WTP responses

Statement	**Number of Respondents**	**Percentage**
For my own benefit	27	9.00
For society as a whole	23	7.67
For future generations	58	19.33
For the pride of our nation	69	23.00
For passing on Buddhism to your children	99	33.00
For remembering historic events of our nation	12	4.00
For the appearance of the temples' names in Thai history	7	2.33
Other reasons	5	1.67

Table 4.5 Reasons of null WTP responses

Statement	Number of Respondents	Percentage
I have no spare income, otherwise, I would pay	69	38.33
I feel the restoration of historic temples is unimportant	0	0
I do not believe paying will solve the problem	10	5.56
I think it is the government's responsibility	7	3.88
I do not like the payment method	39	21.67
I prefer to make the payment directly to the temple(s)	34	18.89
I do not trust the administration committee	11	6.11
I fail to understand the question on willingness to pay	10	5.56
Other reasons	0	0

The main reasons for willingness to pay included 'for passing on Buddhism to their children' at roughly 33%, followed by 'for national pride' (23%) and 'for future generations' (19.33%). However, the major reason underlying zero WTP response was that roughly 40% of the individuals would like to pay but they could not because they had no disposable income.

In addition, the individuals were also asked to affirm their opinions on the questions, elicitation method and the current state of the temples at the end of the questionnaire. Table 4.6 contains the statistics in the percentage of the ascertaining statements. Nearly 80% of the individuals disagreed that the survey was unrealistic and more than 60% of them found that the questions in the first part of the survey which are the questions about the attitude towards cultural heritage were not difficult to understand. Likewise, the public rated the questions about the WTP elicitation method in the second section of the questionnaire as not entirely difficult to understand, roughly over 50% of the respondents, but there were 33.96% of them neither agreed nor disagreed that those questions were difficult to understand. This may result from the field of specialisation and interest of the public which is not overlapped with the elicitation method of the economic valuation. Meanwhile, the individuals found that the hypothetical scenario used in the survey was not too complicated to understand.

Table 4.6 Ascertaining statement statistics (percentage)

Statements	1	2	3	4	5
I find the questions in the survey are unrealistic.	54.17	25.21	13.13	6.67	0.83
I find the questions in the 1st part of this survey are difficult to understand.	35.21	32.71	22.08	5.21	4.79
I find the questions in the 2nd part of this survey are difficult to understand.	16.67	37.50	33.96	5.00	6.88
I find the hypothesis and scenario in this survey are difficult to understand.	22.29	43.54	22.92	7.29	3.96
The current state of the temples **is better than** presented here.	13.96	21.67	33.96	17.29	13.13
The current state of the temples **is worse than** presented here.	13.96	17.71	33.75	15.00	19.58

1 = Strongly disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Strongly agree

4.3 WTP Analysis

Table 4.7 Variable description

Variable	Coded
WTP	0 = No, 1 = Yes
Bid	50, 100, 300, 500
Age	Age in years
Gender	0 = female, 1 = male
Education	Formal education in years
Civil	0 = if the respondent's occupation is all others 1 = if the respondent's occupation is civil servant
Employ	0 = if the respondent's occupation is all others 1 = if the respondent's occupation is private firm employee
Student	0 = if the respondent's occupation is all others 1 = if the respondent's occupation is student
Income	Monthly income
Users	0 = non-users 1 = users
Direct	0 = indirect users 1 = direct users
Bkk	0 = if the non-user was sampled in Chiang Mai 1 = if the non-user was sampled in Bangkok

Table 4.7 characterises the variables used in the estimation which included the socio-economic characteristics of the respondents. The effect of the socio-economic factors on the WTP regarding cultural heritage in Chiang Saen was estimated. Table 4.8 comprises the results of econometric estimation using a logit model to analyse the factors of the probability of stated preference on cultural heritage of the respondents.

Table 4.8 WTP modelling results of all samples

Variable	**Coefficient (Std. Error)**	**p-value**
Constant	0.7222 (0.7257)	0.320
Bid	-0.0030*** (0.0005)	0.000
Age	-0.0128** (0.0065)	0.049
Gender	-0.6898*** (0.2075)	0.001
Education	0.2461*** (0.0753)	0.001
Civil	0.1799 (0.1060)	0.090
Employ	0.3794 (0.3001)	0.206
Student	0.1479 (0.4873)	0.761
Income	0.9227*** (0.3471)	0.008
Users	0.6290*** (0.2093)	0.003
Log-Likelihood	-288.2072	
N	480	

** Significant at the 5% level, *** Significant at the 1% level

The findings in Table 4.8 showed that bid amounts highly affected public willingness to pay regarding the decision of acceptance or denial to contribute to the trust fund. The negative coefficient of the slope implied that the higher the predetermined bid, the lower probability of getting a positive WTP. This pertained to the WTP statistics in Table 4.3. People were less likely to willingly pay for the conservation of cultural heritage when the bid amount increased. Respondents' age, education, gender and monthly income also clarified statistical significance on the

public WTP decision. Advancing age increased the likelihood of a null WTP. Likewise, a male respondent was less likely to willingly pay for the preservation compared to female individuals. A higher educated individual was more likely to state a higher WTP than a lower educated person. Higher income showed higher WTP compared to lower income. *Users* variable also showed a strong statistically significant effect on WTP which implied that when comparing users and non-users of the temples, respondents who obtained the use value from the cultural heritage were more likely to praise the historic sites than non-users. The analysis was pursued further to study the explanatory power of the socio-demographic characteristics of the public on WTP for the conservation of historic temples by expanding the model into two parts as shown in Table 4.9.

Table 4.9 WTP modelling results of users and non-users

Variable	**Users**		**Non-users**	
	Coefficient (Std. Error)	**p-value**	**Coefficient (Std. Error)**	**p-value**
Constant	-0.3731 (0.8291)	0.649	0.9504 (0.9689)	0.327
Bid	-0.0034*** (0.0008)	0.000	-0.0029*** (0.0008)	0.001
Age	-0.0270** (0.0120)	0.023	-0.0154** (0.0075)	0.042
Gender	-0.3085*** (0.1195)	0.009	-0.3903** (0.1646)	0.015
Education	0.3099*** (0.1129)	0.006	0.2040*** (0.0750)	0.007
Civil	0.7481 (0.5146)	0.146	0.5162 (0.4824)	0.284
Employ	0.1664 (0.4383)	0.704	0.7051 (0.4430)	0.111
Student	0.4215 (0.8309)	0.612	0.2934 (0.6545)	0.654
Income	0.1116*** (0.0372)	0.002	0.2439*** (0.0849)	0.004
Direct	0.2128 (0.1175)	0.070		
Bkk			-0.3624** (0.1677)	0.038
Log-Likelihood	-145.4679		-139.3568	
N	240		240	

** Significant at the 5% level, *** Significant at the 1% level

Table 4.9 presents the WTP modelling results of users and non-users. Two variables, *Direct* and *Bkk*, were introduced to illustrate the geographical distribution of respondents sampled for WTP. As discussed in methodology, the respondents were sampled from different areas to increase the distribution of probability to obtain valid results. The *Direct* variable was added to examine whether direct users (tourists, archaeological students, teachers and scholars) or indirect users (locals in Chiang Saen ancient city) were more likely to have an optimistic perception and attitude towards cultural sites. Results indicated that there was no difference on the effect of public attitudes towards conservation of historic temples whether for indirect use or direct use. The *Bkk* variable was introduced to investigate whether non-users from different areas and backgrounds displayed diverse perspectives on archaeological sites. Results showed that non-users in Chiang Mai were more likely to be willing to pay for the preservation programme than non-users in Bangkok.

Table 4.10 WTP modelling results of direct users and indirect users

Variable	Direct users		Indirect users	
	Coefficient (Std. Error)	p-value	Coefficient (Std. Error)	p-value
Constant	0.0139 (0.0180)	0.439	-0.2299 (0.8514)	0.789
Bid	-0.0025** (0.0012)	0.049	-0.0036*** (0.0012)	0.004
Age	-0.0106** (0.0050)	0.033	-0.0247** (0.0114)	0.038
Gender	-0.1021** (0.0416)	0.013	-0.9090** (0.4520)	0.044
Education	0.2433** (0.1198)	0.042	0.4292** (0.1890)	0.023
Civil	0.1258 (0.4193)	0.761	0.1003 (0.7563)	0.894
Employ	0.1539 (0.6401)	0.810	0.2947 (0.6482)	0.649
Student	0.0627 (0.1254)	0.612	0.1527 (0.3742)	0.682
Income	0.0945*** (0.0357)	0.008	0.2169*** (0.0751)	0.004
Log-Likelihood	-71.6827		-69.6599	
N	120		120	

** Significant at the 5% level, *** Significant at the 1% level

Then, the analysis was pursued further to investigate the explanatory power of demographic factors of each subsample group as shown in Table 4.10 and 4.11. The findings showed that bid variable was strongly negatively statistically significant determinant of WTP. Individuals' age, education, gender and monthly income also highly affected on the public WTP. However, the occupation of the respondents did not show the explanatory power on the public WTP.

Table 4.11 WTP modelling results of non-users

Variable	Bangkok non-users		Chiang Mai non-users	
	Coefficient (Std. Error)	p-value	Coefficient (Std. Error)	p-value
Constant	-0.2540 (0.3298)	0.439	-0.1044 (0.1065)	0.327
Bid	-0.0286*** (0.0108)	0.008	-0.0041*** (0.0013)	0.002
Age	-0.1480** (0.0688)	0.036	-0.0028** (0.0012)	0.023
Gender	-0.7439** (0.3593)	0.049	-0.4375*** (0.1579)	0.005
Education	0.4318*** (0.1575)	0.006	0.1455*** (0.0439)	0.001
Civil	0.0863 (0.1876)	0.639	0.7405 (0.7675)	0.335
Employ	0.0799 (0.4700)	0.913	0.0765 (0.6399)	0.905
Student	0.1983 (0.7932)	0.799	0.5280 (0.4292)	0.251
Income	0.2738*** (0.0912)	0.003	0.3560*** (0.0631)	0.000
Log-Likelihood	-68.2140		-64.1491	
N	120		120	

** Significant at the 5% level, *** Significant at the 1% level

The mean WTP was calculated from the formula mentioned before in the chapter 3, Contingent Valuation Method section, as follows:

Table 4.12 Calculations of WTP values

Sample	Population	Mean WTP		Median WTP	
		WTP Value	Aggregated WTP	WTP Value	Aggregated WTP
DU	57,604	619	35,656,876	520	29,954,080
IU	7,384	603	4,452,552	514	3,795,376
BN	44,258	563	24,917,254	557	24,651,706
CN	13,326	594	7,915,644	572	7,622,472
		Total	72,942,326		66,023,634

Thus, mean WTP values were 619, 603, 563 and 594 for direct users, indirect users, non-users in Bangkok and non-users in Chiang Mai, respectively. Multiplying the mean WTPs by the study population, the aggregate WTP values are shown in Table 4.12 and the total aggregate value was THB 72,942,326.

Likewise, median values were 520, 514, 557 and 572 for direct users, indirect users, non-users in Bangkok and non-users in Chiang Mai, respectively. Multiplying the median WTPs by the same study population as in the mean WTP calculations, the aggregate WTP values are illustrated in Table 4.12 and the total aggregate value was THB 66,023,634.

CHAPTER 5
CONCLUSION

5.1 Concluding remarks and implications

Public willingness to pay for the conservation of cultural heritage in Chiang Saen ancient city was estimated. Results revealed that Thai people had optimistic perceptions and attitudes towards cultural heritage in Chiang Saen ancient city. Most of the samples stated positive WTP for the preservation programme. Thus, deterioration of cultural heritage sites was not acceptable and Thai people were willing to pay an amount of money to conserve cultural sites.

Empirical results also indicated that a small proportion of respondents at 37% showed a null WTP and were not willing to pay to protect historic temples from deterioration. Some repudiated association with the preservation programme because of free-rider behaviour, while others disagreed with some sections in the survey such as the hypothetical scenario and payment method. They did not like the payment method or did not believe that paying for a conservation programme would resolve the problem. Some refused to pay simply because they did not have disposable income, while others expressed disinterest regarding the heritage conservation issue. The genuine null WTP respondees were of the opinion that any change in cultural heritage in Chiang Saen ancient city would not affect the welfare of the population. Put simply, one section of the Thai population does not see any economic potential in cultural assets and is unconcerned regarding the fate of the historic temples in Chiang Saen ancient city.

The econometric result showed that positive WTP responses were high in the richer, younger and more educated segments of the population. Also, females were more likely to be enthusiastic about cultural heritage protection than males. Notably, the decision whether to pay for the preservation of ancient heritage depended on the main determinants as gender, education, age and income. In addition, individuals who obtained value from Chiang Saen cultural heritage stated their preference over cultural assets differently. Individuals who were users of heritage tended to praise the

historic sites more than non-users. One possible reason for this was that users' interests and benefits pertained to the existence of the ancient temples. Comparing between non-users in Bangkok, a capital city located in central Thailand, and Chiang Mai, a northern city located next to Chiang Rai, the two groups of non-users showed diverse perspectives on cultural goods. Individuals from Chiang Mai were more likely to conserve Chiang Saen historic sites than Bangkok citizens. This could be because Chiang Mai citizens had a stronger background in Northern Thailand culture and history.

From the results and conclusions, they implied that cultural heritage in Chiang Saen provide some benefits or values to both users and non-users since there were certain groups of people studied in this research that showed positive willingness to pay to conserve the temples in Chiang Saen. Hence, government may play a role in protection part to preserve temples in Chiang Saen from deterioration and dilapidation to maintain the public benefit. Public policymaker can refer the results from this study to its decision making when the preservation plan of Chiang Saen temple is considered. However, this research considered only a small size of samples. It may not be a good representative of the whole nation decision but it could be a good starter of making a decision of preserving the ancient temples in Chiang Saen. This is because there were only seven archaeological temples that were selected in this study and the findings showed that people in particular areas (Chiang Saen District, Chiang Mai city centre and Pathum Wan District of Bangkok Metropolis) have positive attitude towards the cultural goods in Chiang Saen. If future research is conducted to study the economic valuation of temples in Chiang Saen using bigger size of samples, say, randomly form the whole country's population, the empirical findings would definitely show positive results and attitude of the public towards the cultural heritage.

Since the sample size in this study was restrictively small, this research can provide some contributions to the nation but, apparently, more research on economic valuation of Chiang Saen cultural heritage is needed. One possible practical implication from this study is described as follows. Cultural heritage sites in Chiang Saen ancient city now fall under the administration umbrella of the 8th Regional

Office of Fine Arts, Chiang Mai (ROFA) and the National Office of Buddhism (NOB). ROFA is instructed to preserve, conserve and revive the cultural assets, to promote and disseminate the knowledge, wisdom and culture of the nation and to raise awareness and participation of Thailand's cultural heritage in the younger generation. ROFA provides technicians, specialists and technical support on cultural heritage, not financial assistance, while NOB is mandated to maintain and manage the temples as dissemination centres of Buddhism to the communities. Thus, there is a lack of financial backing to invigorate any preservation activity which is currently funded through public donations.

The Thailand Charter on Culture Heritage Management (Rungrujee, 2014) lists diverse guidelines for conservation and management based on participation from all concerning parties, especially people who live in the sites, as well as respect for the equality of human rights. It states, "all steps of cultural heritage conservation process must be studied and researched to obtain the correct and broad understanding on the cultural heritage site. Conservation of cultural heritage is a multidisciplinary work that requires an integration of scientific standards of all involving professions to apply the knowledge to the conservation of each specific site appropriately."

To achieve the goal of conserving cultural heritage in Thailand, a proper management plan should be undertaken. Some practical policy implications are listed as follows: (See Figure 5.1)

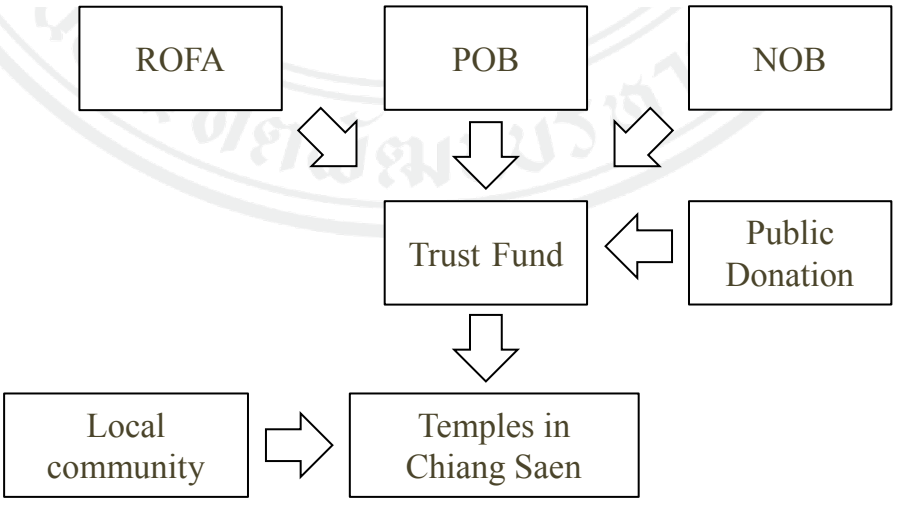
(a) The trust fund can be established and administered by the Provincial Offices of Buddhism (POBs) located in 76 provinces throughout Thailand which are aligned to the NOB. The Temple Development and Restoration Division and the Religious Property Management Division administer, promote, develop and operate development activities for temples, monasteries and religious properties. Public donations will be transferred to finance a trust fund administered by interlocking directorates comprising representatives from POB, NOB and ROFA. The interest earned should be returned to the trust fund to finance conservation works on temples. A working fund, therefore, will be created. The trust fund will be able to finance all activities without government support.

(b) Additional funds can come from fundraising activities organised by the POBs and ROFA. For instance, they could sell small gifts, key rings, t-shirts, souvenirs, etc. and organise traditional performances such as Rabam Chiang Saen (Regional Thai dance) at heritage sites during traditional festivals to disseminate Thai cultures and Chiang Saen historical and cultural traditions. These activities will raise awareness and pride in national identity and increasing concern for cultural heritage preservation.

(c) It is also important that local residents and local government such as the Municipality play crucial roles in the conservation plan as they are mostly involved in the cultural heritage area and cultural heritage sites are the property of all Thai nationals. Local communities and people have rights and duties to participate in the conservation and management of cultural heritage, especially by ensuring that the sites are not vandalised or functionally damaged.

Thai people should share responsibility for the protection and conservation of cultural heritage as a tangible symbol of the rich, diversified history of our nation. Cultural heritage sites represent a living reminder of a bygone age. They must be respected, cherished and lovingly managed as an inheritance to proudly pass down to our children.

Figure 5.1 Management plan for conservation of temples in Chiang Saen



5.2 Limitations and future research needs

Although this research has reached its aims, there were several inescapable limitations. This study was conducted only a small size of sample due to the budget constraint, limited time and the response rate of the questionnaire. However, survey techniques were applied to subdue those hardships such as visual and textual details of the conservation programme of ancient temples, sampling technique, data collection technique, etc. The small sample size might lead to a slight problem that is the multivariate analysis result. From the result discussions, it was obvious that respondents' age showed a negative impact on WTP. The implication of this result is that advancing age leads to a less positive WTP response. Put differently, younger people are more likely to pay some amount to protect the temples in Chiang Saen from deterioration than the elderly do. This seems practically illogical because, in general, older people who are sustained wealthier than the younger will be more willing to pay their money to conserve the temples for the future generations. This event then may result from a small size of sample in this study. This study can be pursued further in the future by extending the sample size of the study to examine the consistency of the results, particularly respondents' age, to obtain a higher level of confidence of empirical information.

The research can be done further by using different payment vehicles in the study since this study's results showed that there were certain group of people who denied paying some amounts to conserve the temples in Chiang Saen simple because they did not like the payment method. The incoming research can use taxes, fees, etc. as payment vehicles and compare each payment method to find out the most proper method of payment for the preservation of the ancient temples. In addition, the future study can be done by comparing the finding from different locations of population such as urban population versus rural population to see whether their behaviour is different. Likewise, the future study can be done by conducting the survey with population from different part of Thailand, say, Northern, Western, Southern and Central Thailand and compare the results find in the study to conclude and imply more appropriate and fitted policy that is acceptable for whole nation.

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APPENDIX

Valuing Cultural Heritage: A Case Study of Temples in Chiang Saen

PART I: Attitude towards cultural heritage

1.1 Have you ever visited any of these historic temples in the Chiang Saen? Please make an X the answer that truly indicates your experience

Temples' names	Yes	No
Athi Tonkaew		
Chedi Luang		
Pasak		
Pra Buad		
Prachao Lantong		
Pra Yuen		
Pradhat Chomkitti		
Pradhat Songpinong		

1.2 Please rate how strongly you agree or disagree with each of the following statements by circling the appropriate number

Statements	1	2	3	4	5	9
1. Whether or not you have visited or plan to visit any of these temples mentioned above, do you feel that it is important that these temples exist?	1	2	3	4	5	9
2. The decision about preserving the temples should be left to the experts.	1	2	3	4	5	9
3. The public should not have to pay for temple preservation programmes.	1	2	3	4	5	9
4. We should pay as much as it takes to preserve historic temples.	1	2	3	4	5	9
5. A preservation programme to maintain the appearance of temples in Chiang Saen should be undertaken	1	2	3	4	5	9

1 = Strongly disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Strongly agree, 9 = Don't know

1.3 How important to you are each of the following reasons for preserving these temples? Read the entire list before answering. *Please circle one number to indicate your opinion.*

Statement	**1**	**2**	**3**	**4**	**5**	**9**
1. It is important to have these temples so that I or my family can visit them.	1	2	3	4	5	9
2. It is important to have these temples so that other people can visit them.	1	2	3	4	5	9
3. It is important to have these temples so that future generations can visit them.	1	2	3	4	5	9
4. It is important to have these temples because they inspire pride in our heritage.	1	2	3	4	5	9
5. It is important to have these temples because they contribute to the aesthetic value of the northern region of Thailand.	1	2	3	4	5	9
6. It is important to have these temples because they are part of Thai way of life.	1	2	3	4	5	9
7. It is important to have these temples because their names appear in Thai history.	1	2	3	4	5	9
8. It is important to have these temples for passing on Buddhism to future generations.	1	2	3	4	5	9
9. It is important to have these temples to remember memorable events in history.	1	2	3	4	5	9
10. It is important to have these temples because they economically contribute to the locals.	1	2	3	4	5	9

1 = Not important, 2 = Slightly important, 3 = Moderately important, 4 = Very important,
5 = Extremely important, 9 = Don’t know

PART II: Willingness to pay valuation

2.1 Suppose that we are taking a secret vote. Do you vote for this referendum?

□ Yes → **(Go through questions 2.2 – 2.4)**

□ No → Would you pay anything?

□ Yes → **(Go to question 2.2)**

□ No → **(Go to question 2.5)**

2.2 What then would be the maximum amount you are willing to donate? _____ Baht.

2.3 What is the reason for your wanting to pay to restore these historic temples?

□ For my own benefit □ For society as a whole

□ For future generations □ For the pride of our nation

□ For passing on Buddhism to your children

□ For remembering historic events of our nation

□ For the appearance of the temples' names in Thai history

□ Other reasons _____

2.4 How certain are you that you would likely vote for this proposition in a real referendum? *Please circle one number to indicate your opinion.*

Not at all likely	**Slightly likely**	**Moderately certain**	**Very likely**	**Completely likely**
1	2	3	4	5

(Skip question 2.5 and go to question 3.1)

2.5 For "No" payment: What is your reason for not wanting to pay anything?

□ I have no spare income, otherwise, I would pay

□ I feel the restoration of historic temples is unimportant

□ I do not believe paying will solve the problem

□ I think it is the government's responsibility

□ I do not like the payment method

□ I prefer to make the payment directly to the temple(s)

□ I do not trust the administration committee

□ I fail to understand the question on willingness to pay.

□ Other reasons _____

PART III: Socio-Economic Survey

3.1 Gender: □ Male □ Female

3.2 Age: _____ years old

3.3 Religion: □ Buddhist □ Christian
□ Muslim □ Hindu
□ Atheist □ Other _____

3.4 Highest level of education:
□ No formal education/No schooling completed
□ Primary □ Lower Secondary
□ Upper Secondary □ Diploma/Vocational Certificate
□ Bachelor □ Master
□ Doctoral

3.5 Occupation: □ Civil servant □ Private firm employee
□ Business owner/ Self-employed
□ Labourer □ Unemployed/ Homemaker
□ Student □ Retired
□ Other _____

3.6 Monthly income: □ 0 – 5,000 Baht □ 5,001 – 7,500 Baht
□ 7,501 – 10,000 Baht □ 10,001 – 15,000 Baht
□ 15,001 – 20,000 Baht □ 20,001 – 25,000 Baht
□ 25,001 – 50,000 Baht □ 50,001 Baht and above

PART IV: Questions about this questionnaire

Please rate how strongly you agree or disagree with each of the following statements by circling the appropriate number

Statements	**1**	**2**	**3**	**4**	**5**
I find the questions in the survey are unrealistic.	1	2	3	4	5
I find the questions in the 1st part of this survey are difficult to understand.	1	2	3	4	5
I find the questions in the 2nd part of this survey are difficult to understand.	1	2	3	4	5
I find the hypothesis and scenario in this survey are difficult to understand.	1	2	3	4	5
The current state of the temples is better than presented here.	1	2	3	4	5
The current state of the temples is worse than presented here.	1	2	3	4	5

1 = Strongly disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Strongly agree

Comments:_____
_____
_____
_____
_____
_____
_____
_____

BIOGRAPHY

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