

**YANGON UNIVERSITY OF ECONOMICS
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**A STUDY ON PUBLIC AWARENESS FOR
CONSERVATION OF U BEIN BRIDGE
IN MANDALAY REGION**

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EMPA - 12 (16th BATCH)**

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MASTER OF PUBLIC ADMINISTRATION PROGRAMME**

**A STUDY ON PUBLIC AWARENESS FOR CONSERVATION OF
U BEIN BRIDGE IN MANDALAY REGION**

A thesis submitted in partial fulfillment of the requirements for the degree of
Master of Public Administration (MPA)

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ABSTRACT

Myanmar is rich in cultural heritage for centuries and cultural heritage plays an important role in social and economic conditions at local and macro levels. However, conservation efforts are still low and insufficient in Myanmar. Specifically, knowledge, awareness and value placed on these cultural heritages among residents are also in need. This study aims to explore the awareness of local people on conservation of cultural heritage, U Bein Bridge, in Mandalay Region and their willingness to pay for conservation of the Bridge. Descriptive method is used based on primary data, collected through surveying 200 respondents from four townships of the urban and rural areas of the Mandalay District. The study found that respondents have only medium level awareness towards heritage conservation as well as for conservation of U Bein Bridge in particular. Moreover, majority of the respondents willing to pay Ks 5,000 as annual contribution for conservation of the Bridge and among them some are willing to contribute more than the set amount, Ks 5,000 per year. It is suggested that public awareness programs, collaborative efforts between all stakeholders and control the visitation of the sites are indispensable for successfully conserving U Bein Bridge.

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LIST OF ABBREVIATIONS

AD	Anno Domini “in the year of the Lord”
BC	Before Christ
CBO	Community Based Organization
CHCFE	Cultural Heritage Counts for Europe
CSO	Civil Society Organization
CVM	Contingent Valuation Method
EENCA	European Expert Network on Culture and Audiovisual
EU	European Union
GDP	Gross Domestic Product
GDRC	Global Development Research Center
ICH	Intangible Cultural Heritage
ICOMOS	International Council on Monuments and Sites
INGO	International Non-Governmental Organization
LNGO	Local Non-Governmental Organization
NGO	Non-Governmental Organization
NPO	Non-Profit Organization
MCDC	Mandalay City Development Committee
TEV	Total Economic Value
UNESCO	United Nations Educational, Scientific and Cultural Organization
WTP	Willingness to Pay
YHT	Yangon Heritage Trust

CHAPTER I

INTRODUCTION

1.1 Rationale of the Study

All over the world, cultural heritage not only plays an important role in describing cultural identity, it also gives connection to young generation with values, beliefs, customs, unity and uniqueness. For every country, cultural heritage is not just a set of cultural objects or traditions from the past, it is an expression of the ways of living developed by ancestors, which are inherited from generation to generation, including customs, practices, sites, arts, etc.

According to Brandenburg (et. al.) (2010), cultural heritage includes several main categories: tangible cultural heritage, intangible cultural heritage and natural heritage. As part of human action, cultural heritage produces tangible symbols of the value, beliefs, traditions and lifestyles. Cultural heritages are crucial part of culture, which contains visible and tangible hints from ancient times to the recent history. Cultural heritage can provide an automatic sense of unity and belongingness for citizens of a country or an ethnicity and allow people to better understand previous generations and their history.

In this era of globalization, cultural heritage helps people to be able to recall their origins and develops mutual respect with others. Therefore, they are essential and worth preserving for future generations. However, protection of cultural heritage is an old problem for most of the groups, regions and countries. Heritage is not a given, nor is it automatically handed down from generation to generation. It needs protection and conservation. Usually, heritage conservation is a multidimensional practice in which diverse stakeholders play active parts in its choosing, managing and interpreting them.

Conservation of cultural heritage today becomes crucial in all countries of the world. Therefore, cultural heritage conservation cannot be the domain of experts only, communities' active participation in heritage conservation activities became prominent nowadays. The most frequent problems in conservation of cultural heritage

are the challenging relationship between the individual and the community as well as public and private rights to use them.

In many countries, whether conservation of cultural heritage is supported by government and international organizations or supporting through collecting user fees or donations are still arguing. As a result, the perception on people becomes important in conservation of cultural heritage. Involvement of the public in valuing cultural heritage is a significant approach in sustainability of these heritages. Therefore, valuing non-economic items of cultural heritage are useful. Nowadays, economic valuation is a very useful method in examining cultural heritage. This approach is also important in allocating, managing and organizing inputs for cultural heritages conservation

In developing country, Myanmar, conservation of cultural heritage is still implemented by the Government and NGOs while participation of community is still low. Myanmar is rich in cultural heritage sites including those recognized as World Heritage Sites by UNESCO (Bagan and Pyu Ancient Cities). There are also other tangible heritages that are valued by local and foreign tourists. Among all States and Regions, Mandalay City and surrounding areas possesses large numbers of cultural heritage sites and U Bein Bridge is one of them. It is located in Amarapura Township, was built in 1849 and started using in 1851. Therefore, it has life span of 168 years. Total length is 0.75 miles. With its long life, deteriorations of the bridge occur due to natural and manmade causes.

For this Heritage Bridge, conservation efforts are made by Government at different levels, private businesses, NPOs and NGOs. In addition to these stakeholders, citizens, especially the local people's views and willingness to contribute for conservation of U Bein Bridge is needed. Accordingly, it is important and necessary to study the value placed by citizens from Mandalay City and nearby Townships on U Bein Bridge.

1.2 Objective of the Study

The objective is to examine the public awareness and willingness to pay for conservation of U Bein Bridge in Mandalay Region.

1.3 Method of Study

In this study, descriptive analysis on assessing respondents' awareness, and value placed on conservation of cultural heritage is used. Particularly, respondents' knowledge on cultural heritage in general and in Myanmar and in Mandalay City as well as their awareness on conservation is also asked. To examine the respondents' value on U Bein Bridge, their willingness to pay for yearly contribution on U Bein Bridge conservation and their desired amount and frequency for conservation of the Bridge are asked through survey. To do this, 50 respondents each from two townships of Mandalay City (Aungmyay Tharzan and Chanmya Tharzi Townships) and two townships from rural areas nearby townships, Patheingyi and Amarapura Townships (total of 200 respondents) are asked through structured questionnaire.

1.4 Scope and Limitations of the Study

In this study, among the major associated factors for the successful conservation of cultural heritage, efforts have been made to study the local community supports. In particular, respondents' awareness and values on U Bein Bridge (willingness to pay for conservation of U Bein Bridge) are asked to reach the objective. In addition, citizens' benefits achieved from existence of U Bein Bridge and their awareness and participation in conservation of the Bridge are studied. Total of 200 respondents from Mandalay City and nearby Townships were surveyed. Survey was conducted in rural and urban areas of the four selected Townships in Mandalay Region.

1.5 Organization of the Study

Altogether five chapters are organized in this study. Chapter I presents the introductory part. This consists of rationale, objectives, scope and limitations, method and organization of this study. Chapter II is literature review, which takes into account nature and types of cultural heritage, economic and social benefits of cultural heritage, conservation of cultural heritage, valuation of cultural heritage and review on previous studies. Chapter III consists of major cultural heritage sites in Mandalay City and history and current conservation of U Bein Bridge. Survey analysis is made in Chapter IV, which includes survey design and results. In particular, socioeconomic condition, knowledge, awareness and willingness to pay for conservation of U Bein Bridge in Mandalay Region are studied. Chapter V is conclusion, with findings from

the study and recommendations for conservation of U Bein Bridge Heritage in the future.

CHAPTER II

LITERATURE REVIEW

2.1 Types of Cultural Heritage and Importance

Heritage is regarded generally as a property that is or may be inherited. Heritage is inherited from past generations, maintained in the present, and bestowed to future generations (Pasikowska-Schnass, 2018). In particular, heritage is anything that is considered important enough to be passed on to the future generations. According to Collins Dictionary (2019), a country's heritage is all the qualities, traditions, or features of life there that have continued over many years and have been passed on from one generation to another. Heritages are classified in several ways.

According to UNESCO (2019), heritage of a country can be classified as two types, natural and cultural. Natural heritage include natural sites with cultural aspects such as cultural landscapes, physical, biological or geological formations. Particularly, natural heritage takes into account geographical areas that create habitat for endangered animals and plants species as well as those with educational values and picturesque landscapes including flora and fauna.

Cultural heritage is a manifestation of the ways of living established by a community and passed on from generation to generation. These include traditions, lifestyles, places, objects, arts, beliefs and values. Cultural Heritage is often expressed as either Intangible or Tangible Cultural Heritage (ICOMOS, 2002). Cultural heritage is also the legacy of physical artifacts and intangible attributes of a group or society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations.

2.1.1 Types of Cultural Heritage

Cultural heritage encompasses several main categories of tangible and intangible heritages described below.

Tangible cultural heritage comprises movable cultural heritage (paintings, sculptures, coins, and manuscripts), immovable cultural heritage (monuments,

archaeological sites, and so on) and underwater cultural heritage (shipwrecks, underwater ruins and cities). Especially, tangible heritage includes buildings and historic places, monuments, artifacts, etc., which are considered worthy of preservation for the future, which consist of the archaeology, architecture, science or technology of a specific culture. Objects are important to the study of human history because they provide a concrete basis for ideas, and can validate them. Their preservation demonstrates recognition of the necessity of the past and of the things that tell its story. Preserved tangible cultural heritage also confirm memories and histories. Yet, it is necessary to reduce and remove the risks of theft and extinguishing due to human beings.

Intangible Cultural Heritage (ICH) means representation, proficiency, and practices which individuals and communities recognize as their cultural heritage. In addition, protection of cultural identities, foods, festivals, crafts, customs and traditional crafts are taken into consideration (UNESCO, 2018). Among them, foods, festivals, oral history and performing arts are the most prominent ones.

One of the important ICHs is food. According to the UNESCO heritage policies, there are an increasing number of food-related nominations submitted by countries to protect intangible cultural heritage. The second type is the cultural festivals. Getz (2010) studied the values of festivals on cultural heritage and analyzed 18 festivals around the world. Festivals have numerous values as ICH concerning the places and spaces. Festivals are significant for religion, culture, history, social and economics. Festivals are regarded as part of ICH as they are ways to recall histories as well as memorizing previous civilizations.

The oral traditions include proverbs, riddles, tales, poems, prayers, songs, and performances, etc., which are used in transferring knowledge, cultural and social values. They play a crucial part in keeping cultures alive. Some oral expressions are common and can be used by entire communities while others are limited to particular groups. Since oral expressions are passed on through word of mouth, they vary significantly in their telling.

2.1.2 Importance of Cultural Heritage

Cultural heritage is vital for establishing individual's identity. Moreover, it increases feelings of access to communities and linking ancestors' inheritances. Usually, individuals are enjoying, understanding, and valuing their cultural heritage.

Scholars found that cultural heritage have an economic value yet there exist difficulties to be quantified. However, this value is necessary to take into account in development policy and planning. Tangible cultural heritage shows a sense of symbolic meaning for civilization and important times of that culture. They can be regarded as passing historic value and so forth.

Moreover, tangible cultural heritage can also share values of a society to community at the macro level. Value of a visit to a cultural heritage site is not only the value relating to recreation, but there is also a value for education and science. In addition to tangible cultural heritage, intangible cultural heritage is significant as inherited traditions and culture from the past, revealing contemporary practices, inspiring a sense of identity and responsibility, valued as a cultural good, etc. Recognition of the individuals and community as a whole is important in valuing and conservation of these intangible heritages.

Cultural heritages can not only be found in remote areas, they can also be observed in urban city center. Conservation of cultural heritage assets, particularly in historic city centers, is about to generate significant non-market benefits. These benefits arise as public goods enjoyed in various ways (through business activities, localities and tourists) in the cultural heritage sites and surrounding areas. For intangible heritage, sustaining them through everyday utilization, passing these intangible cultural knowledge from person-to-person and generation-to-generation, are indispensable in conservation, Safeguarding intangible heritage has become one of the priorities in international arena today.

2.2 Economic and Social Benefits of Cultural Heritage

Benefit is defined in economics as anything that increases human welfare. Cultural heritages broadly provide benefits, largely in the form of services. Benefits gained from cultural heritage can be classified as primary and secondary benefits. Primary or direct use benefits could include residential, commercial, tourism, recreational, leisure, and entertainment activities. Secondary benefits refer to wider socioeconomic impacts that may be reserved from tangible cultural heritage such as improvement in education and knowledge and religious and spiritual benefits.

(a) Economic Benefits of Cultural Heritage

The economic benefits of cultural heritage have been assessed on the national, regional and local levels. National level studies usually compare countries while there are sectoral studies and studies on social and economic impact at the local and community level provide assessment on heritage institutions (museums, libraries, etc.). Nowadays, cultural heritages are accepted as important determinants that affect economic development at different levels. Primary benefits are the direct benefits to the individual's quality of life or welfare, whereas secondary benefits refer to wider economic or social impacts that may be distant to the individual such as a museum's impact on employment creation, tourism and GDP. Cultural heritage can contribute directly to economic through making profits by creating or sustaining tourism sites and linking with other tourism related activities (including logistics, restaurants, souvenir shops, etc.). In addition, employment opportunities and incomes can be gained for local people around the cultural heritage sites (Court and Wijesuriya, 2015).

Economic benefits of tangible cultural heritage are important on tourism, transport and construction work. As stated by Cultural Heritage Counts for Europe (CHCFE) (2015), tangible cultural heritages represent 2.1% of total employment and 1% of the total economic turnover within the European Union. In particular, Italy and Austria respectively has 42% and 18% of the total economic turnover of the tourism sector is due mainly from tangible cultural heritage sites whereas it was lower yet gradually increasing in Romania and Slovenia. In EU, about 300 000 people work directly in the cultural heritage sector and created around 7.8 million jobs in cultural heritage tourism related sector. This is the indirect economic benefits of the sector. As mentioned above, utilization and revitalization of cultural heritage can also help local economies through employment opportunities and generation of income from tourism. Local, Regional and National Governments, property owners and members of the community all have a role to play in ensuring that the valuable asset of heritage is recognized, respected and promoted. However, emphasis on short- term economic benefits can generate negligence of the sustainability of the heritage.

(b) Social Benefits of Cultural Heritage

Unlike the economic value of cultural heritage, its social value is mostly the qualitative assessment. In past decade, there are significant changes in ideas concerning cultural heritage. Till 1980s, cultural heritage was seen mainly in terms of

built monuments that were to be conserved for exhibiting cultural origins. Nowadays, both tangible and intangible heritages are taken into account in the socio-cultural and political setting. Heritage places also contribute to the quality of life and cultural identity of the communities. Many heritage places are the focal point for community gatherings and tourists attractions.

One of the social benefit of cultural heritage becomes particularly explicit in the cases where heritage is used for encourage discussion and negotiation between different cultural groups. Through fostering intercultural dialogue and negotiation, cultural and social inclusion can be improved. For minorities or migrants, they form a foundation for a new approach to using cultural heritage as an instrument of social development. Many cultural heritage goods exhibit intermediate levels of rivalry. For instance, a cathedral that receives many visitors may become so crowded that each visitor's enjoyment of the experience becomes diminished. Such a cathedral would be a congestible public good. The presence of the visitor may actually harm the cultural heritage good itself. In either case, in contrast to the pure public good case, it may be desirable to limit the number of people who visit the site (EENCA, 2018).

One approach to control visit is by charging an entry fee. As compared to other means of limiting entry, such as cueing, an entry fee has a couple of advantages. It generates revenues that can be invested in the cultural heritage good, and it assures that the limited number of entry slots go to those who place the highest value on the experience. Social benefit can be come from cultural heritage conservation as well. Getting communal support, team work and unity is the example of benefits gained from cultural heritage conservation. Those that contribute strongly in heritage conservation are often more likely to help out others in that same community and establish team works as well. These are the intangible social benefits of cultural heritage and its conservation.

2.3 Conservation of Cultural Heritage

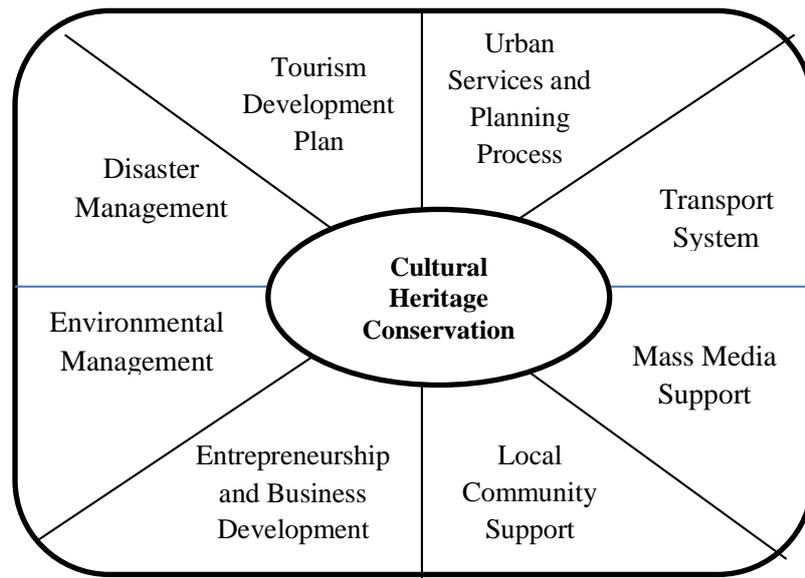
Conservation of cultural heritage involves safeguarding and renovation the heritage through diverse approaches to prove effectiveness in keeping the cultural heritage as close to its original condition as possible for long term. The conserving and managing of cultural heritage has an important role to play in protecting the environment, creating energetic communities and sustaining local economies.

Conserving cultural heritage can lead to a substantial environmental and financial saving, avoids the creation of waste and the need for replacement building materials.

As stated by Heritage and Copithorne (ed.) (2018), collecting, managing, inspection, documentation, displaying, storing, conservation and restoration are parts of the conservation of cultural heritage. Conservation of cultural heritage applies simple ethical guidelines, including minimal intervention, appropriate materials and reversible methods and full documentation of all work undertaken. In addition, protection and caring of artwork and architecture, to conservation of cultural heritage, and protection of a broad set of other cultural and historical works are included in conservation.

For conservation of cultural heritage in an economy, its governance, education and technology play as indispensable role. Governance composes of laws, regulations, codes and standards that guide heritage conservation. Education includes knowledge transfer, awareness raising activities through education institutions, community groups, mass media, and campaigns. Technology comprises technology together with techniques, skills and capacities require for utilizing technologies. Cultural heritage conservation can be realized through implementation of 8 main factors; tourism development plan, disaster management, environmental management, entrepreneurship and business development, local community support, mass media support, transport system and urban services and planning. Figure 2.1 illustrates the major factors associated with the successful conservation of cultural heritage.

Figure (2.1) Factors Associated with Cultural Heritage Conservation



Source: Srinivas (2016)

From the above figure, tourism development and planning efforts not only include economic activities, also promoting heritage conservation efforts. Urban services and planning processes include land use planning, zoning and related urban management processes that influence the character and preservation of old districts, including heritage-related planning regulations. Transport systems comprise planning and development of transportation infrastructure, improving public transport, etc. Mass media support is crucial as they can raise awareness of valuing cultural heritage among local communities and tourists.

Local communities' involvement is one of the most important factors. It is necessary to make agreement of local communities who live in heritage zones for conservation efforts and sense of pride while practicing their employment opportunities and income generation in tourism and related sector. Enhancing entrepreneurship and business development is important in preservation and conservation. Environmental management is crucial as regulations and strategies that promote heritage conservation in fact have a number of externalities, particularly preventing degradation of the local environment. Cultural heritage are usually more vulnerable to disasters such as earthquakes and typhoons. These disasters not only generate risks of deterioration loss but also the communities within the area. Integration of heritage conservation strategies into poverty reduction program and

informal sector development is also a critical factor that increases community involvement and improves their economic standing.

To implement the cultural heritage conservation based on above diagram, it is necessary to take into account the stakeholders' roles. In general, there are three main stakeholders, public sector, private sector and civil society. Public sector includes national, state/ regional and local governments, while private sector composes chambers of commerce, services/trade firms and industrial businesses. Civil society includes INGOs, NGOs, academic institutions, research institutions and community. These stakeholders act in diverse levels of the economy to conserve cultural heritage. For instance, the United Nations acts at the global level to contract national governments to prioritize heritage conservation while regional and state Governments administer the heritage within their respective areas and community and NGOs enhance knowledge and raise awareness of residents on heritage and conservation activities.

Nowadays, heritage conservation has become important fields of academic researches, as well as a common topic in the popular media. Conservation focused on the preservation and interventions through legal protection. At present, conservation is understood as a complex and on-going social process that includes the identification, utilization and caring of the heritage. Previously, clarification and classification of the historical and contemporary values of heritage were initiated. As heritage has come to encompass varied places, the protection of the significance of each new type of heritage presents its own conservation challenges.

Yet, conservation of heritage nowadays has been seen as a complex and continual process that includes determinations about what constitutes heritage, how it is used, cared for, interpreted, and so on, by whom and for whom. It has also become evident that decisions about what to conserve and how to conserve are largely defined by cultural contexts, societal trends, political and economic forces, which themselves continue to change. In the meantime, heritage professionals continue to attempt to accommodate a multiplicity of principles and approaches to the new conservation.

2.4 Valuation of Cultural Heritage

Usually, cultural heritages are considered as missing market prices or that the market price does not fully reflect the willingness to pay or the society's welfare from them. People who experience cultural heritage does not necessarily pay directly to use

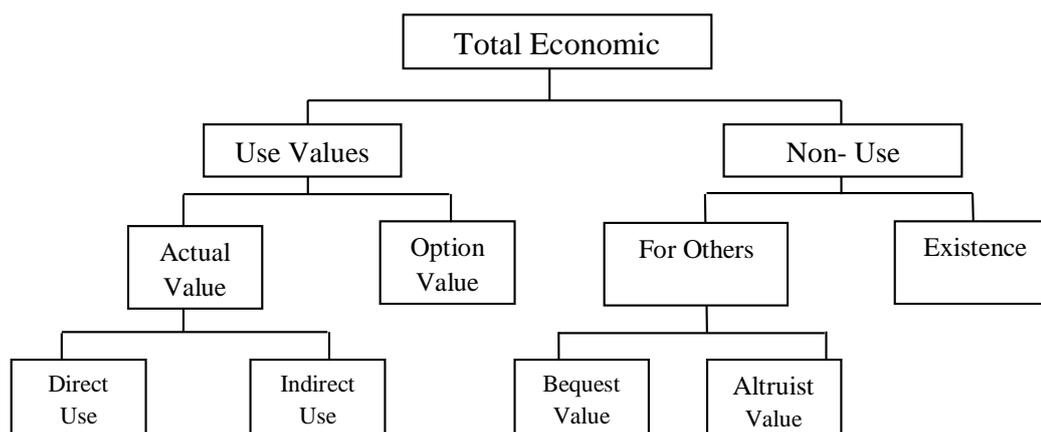
it, yet they will have a value in terms of willingness to pay to stay there, recreational experience from using and visiting. People's willingness to pay may also be motivated by non-use value in terms of contentment/benefits of knowing that our cultural heritage is preserved for themselves and others in the current generation and for future generations.

For cultural heritage, economic valuation approach is used to measure its values. The value that a person gets from enjoying a cultural heritage good is regarded as the largest amount of money that that person would willingly pay to have that opportunity. For a cultural heritage site, the use value that a visitor receives would be defined as the largest amount of money that the visitor would be willing to pay, over and above the actual entry fee to get to the site.

To convert cultural heritage benefits through valuation, welfare is increased after an improvement of cultural heritage asset, into a monetary value, which enables different policies to be appraised and evaluated on a consistent basis. In most cases, willingness to pay (WTP) by community for these welfare-enhancing outcomes are measured and which is called a 'compensating surplus', i.e. the amount of money paid that will leave the individual in his initial welfare position following a change in the good. Since 1980s, empirical research producing economic values or benefits associated with the preservation or restoration of cultural heritage assets have initiated. Since then, several studies have been conducted worldwide investigating the value of a variety of cultural heritage goods, both tangible and intangible.

In order to value the total economic value of heritage, there are two types; use values (direct and indirect use values) and non-use values (bequest values and existence values). These diverse branches of total economic value can be seen in the figure below.

Figure (2.2) Components of Total Economic Value



Source: Nzier (2018)

Under the use value, actual value is the value placed on the resource, directly or indirectly. Option value is the value of the option to use the resource at some point in the future, whether that use is known or unknown. In contrast, non- use values include altruism value, which means value on preserving the resources for the sake of other to use at present even though the person himself have no intention of ever doing so. Among these values, direct-use values are goods and services directly consumed by users while indirect-use values are indirect benefits arising from systems. Bequest value is the value placed on passing on the resource for the use of future generations whereas existence value is the value on knowing that a resource exists, even though no-one may ever use it (NZIER, 2018).

Values on cultural heritage sites or recreational access points are quite often related to direct use. Non-use values are more difficult to assess, and include values to current or future individuals associated with conserving cultural heritage even if the site is not used or will be used by individual. Cultural heritages are sources of economic activity generating utilities, direct or indirect, individual or collective. In addition to the above figure, there are consumptive and non-consumptive values under direct use value. Consumptive activities offer tangible products while non-consumptive values of the cultural heritages include artistic and aesthetic values, educational values, and so forth (Serageldin, 1999)

2.5 Review on Previous Studies

Navrud (2005) studied the valuation of intangible Cultural Heritage Ghana through Contingent Valuation Method (CVM). In Ghana, traditional textile plays an important role in its culture and can be regarded as an intangible culture heritage. This study fills the gap of insufficient valuation on intangible heritage, textile. The study found that willingness-to-pay (WTP) by households for establishing 10.4 USD, while high knowledge group willing to pay more for conserving the textile. The study suggested that all stakeholders should generate programs at the national level for conservation of weaving.

Pietrostefani (2014) studied valuating urban heritage in a development perspective in Lebanon. This study aims to explore the valuation of urban heritage as beneficial for designing policy. The study emphasized on programs and projects of World Bank, French Development Agency and EU on cultural heritage conservation. The study mainly used direct value of both cultural heritage and economic valuation based on the Total Economic Value (TEV). It also applied Vernières grid approach due to its unified and holistic nature in showing the importance of considering for the development of successful urban cultural heritage projects, also for operative valuation.

Sarvarzadeh (et. al.) (2014) assessed the citizens' participation in the Urban Heritage Conservation of Historic Area of Shiraz. Main objective of the study is to examine an indicator-based approach for assessing citizens' participation practices in Shiraz. From surveying 384 respondents, respondents are willing to take part in conservation activities, interested in knowledge transfers and trainings for conservation of cultural heritage and discussion with other stakeholders.

Noor Fazamimah Mohd Ariffin (2015) examined the WTP for and management of cultural heritage in George Town World Heritage Site. Issue concerning local management system towards heritage conservation is studied. The study found that mass tourism and related businesses negatively affect cultural heritage and their sustainability. Also, conflicts have been found between international organizations and local community. CVM approach is used to analyze the WTP for conservation of heritage site. From the study, it was found that households willing to pay RM 57.46 while tourist willing to pay RM 42.54 annually. It was suggested that urgent and intensive efforts are in need to conserve cultural

heritage in setting heritage development plans as well as improvement of local economic and social developments in sustainable manner.

CHAPTER III

CULTURAL HERITAGE IN MYANMAR

3.1 Cultural Heritage in Myanmar

Myanmar is not only endowed with diverse natural resources, also rich in cultural since ancient time. Diverse cultural heritage sites from different eras can be found not only in large urban areas, many can be explored in rural areas as well. In Myanmar, Mandalay is renowned as ancient city where last dynasty of the country resided until 1885. In this section, tangible cultural heritages are presented. These tangible cultural heritage sites compose religious buildings, institutional buildings, Commercial and Industrial Buildings and residential buildings.

In Myanmar, prominent cultural heritage sites are now recognized as UNESCO heritage lists in recent years. These sites are Pyu Ancient Cities (Hanlin, Beikthano and Sri Kestra) in 2014 and Bagan in 2019. Unlike other sites, these cities are archaeological sites that unearthed separately. The Pyu Cities, is located in Mandalay, Magway and Bago Region. These cities developed between 200 BC and AD 900, which expose the Pyu Kingdoms that urbanized for more than 1,000 years. These sites reveal the ancient Pyu's tradition, civilization, development of living styles and arts.

Another UNESCO Heritage Site in Myanmar is Bagan Archaeological Area which reveals invaluable heritage of the very first dynasty of Myanmar. Bagan kingdom was flourished between 11th and 13th Centuries. It is regarded as foundation of Myanmar culture and introduced Theravada Buddhism in Myanmar. In Bagan, Buddhism became mechanism for governance. Economically, Bagan was flourished due to river transport, irrigation and agriculture as well as trading with the surrounding areas. In Bagan heritage site, not only the tangible heritage, also intangible heritages are still maintained. The Bagan Archaeological Area and Monuments has been officially recognized as UNESCO Heritage Site at meeting of the UN's cultural group in Baku, Azerbaijan, which was held in 2019.

Nowadays, there are many other cultural heritage sites which are included in UNESCO Tentative List of Myanmar. These comprise Badah-Lin caves, Mrauk-U Archaeological Area and Monuments, Inlay Lake and Hanthawaddy City. There are many other cultural heritage sites renowned and became tourists' attraction although which are not included in UNESCO lists. These include U Bein Bridge, Pagodas in Yangon, Mandalay and other cities, ethnic villages in States and Regions, etc. Locally, the Ministry of Religious Affairs and Culture is the main responsible entity for conservation of heritage sites followed by the respective State and Regional Ministries, respective city development committees. From the side of local nonprofit organizations, Yangon Heritage Trust (YHT) was prominent, which was founded in 2012 by Dr Thant Myint-U and group. The group mainly intended to conserve and protect the cultural heritage sites in urban Yangon areas which are endangered at present with rapid urbanization. With the efforts of these organizations, cultural heritage sites are conserving with collaborative efforts in Myanmar (Yangon Heritage Trust, 2019).

3.2 Religious Buildings in Mandalay City

Religious buildings include not only pagodas and monasteries, also take into account traditional community halls (Zayat, Dammayon), as well as buildings of other religions such as mosques, churches, Chinese temples and Sikh and Hindu temples. Being a historical city of Myanmar tradition and culture, several pagodas and monasteries were established in Mandalay City during diverse periods and kingdoms. It was observed that most of the religious buildings are located on south western part of the city, where water transportation is available during the ancient time.

Within the Mandalay City Development Committee area, some of the ancient pagodas were built prior to the 19th century. Also, pagodas built during the late Kong Bound Dynasty, mainly in Yadanabon City can be found in different areas within the City. Pagodas within the Mandalay City were built by Myanmar Kings Minshinsaw, King Badon, King Thayawddy, King Bagan, and so forth and in Yadanabon era, the pagodas were built by King Mindon and King Thibaw, who lastly ruled. Before the Yandanabon City, altogether 47 pagodas were built. During that time, Myanmar culture was flourished in Capital City of Mandalay. Since the administration of King Pagan (AD 1046 -1188) from Konbound Dynasty, development efforts were made in 9 districts of wet agricultural lands (Le dwin koe kayaine) and pagodas were built.

After King Bagan, King Mindon and Khig Thibaw built 3 pagodas (Khin Khin Moe and Nyo Nyo, 2015).

Among the ancient pagodas within the Mandalay City, the most prominent pagodas among local people and tourists are Mahamuni Pagoda, Kuthodaw Pagoda, and Sandamuni Pagoda. The Mahamuni pagoda was built in 2500 years ago in Takhine State and moved to Mandalay City. The Kuthodaw pagoda is renowned around the world as the world's largest book. It is due to the establishment of 720 shrines encompassing each marble slab in 720 shrines, inscribed with texts from the Buddhist teachings. A large gilded pagoda resembles the ancient Shwezigon pagoda in Bagan. Sandamuni Pagoda was built in 1874, which is located on the foot of famous Mandalay Hill. There is a large golden stupa surrounded by 1774 shrines, with each containing a marble slab inscribed with texts from the Buddhist teachings.

In Mandalay, Shwenandaw Monastery is built in 19th century with teak wood and traditional wood carvings, which are famous among tourists. Close to the Shwenandaw Monastery is the Atumashi Monastery, which was built in 1857. The Atumashi Monastery was one of the last religious construction projects of King Mindon. Another cultural heritage site in Mandalay City is the Mandalay Hill, where large numbers of monasteries exist. On the top of the Hill, there is Sutaungpyei Pagoda that elaborately tiled patio offering a panoramic view of Mandalay City and the Ayeyarwaddy River.

Pagodas, which were built during the British and Japanese administrations (between 1886 and 1942) were only two due to nationalists' revolutions and wars against British and Japanese. Pagoda built after independence, especially in parliamentary democracy administration (between 1948 and 1962) was only one within the City. There are other religious establishments nowadays regarded as cultural heritage sites. Within the city, there are two mosques located close to Ayeyarwaddy River. Two ancient Hindu temples are on the 35th (A) Street of the City, where fortune tellers are mainly located.

In Myanmar, Zayat are built in all parts of the country during the ancient time to provide accommodations for any people to take rest temporarily and to perform social occasions. In contrast, Dhammayon is for holding Religious occasions, for paying homage to the elders, and meditation centers. Unlike Pagodas, Zayat or Dhammayon built in ancient time cannot be found today. Only few of the old Zayat and Dhammayon can be seen in residential areas.

Then, lists of cultural heritage sites, mainly the religious buildings in all Townships of the Mandalay Regions are shown in Tables below. IN Maha Aung Myay Township, there are altogether 14 sites exists. Within the Chan Aye Thar Zan Township, 24 sites are located whereas 27 sites situated in AungMyae Tharzan Township of the City. In Chan Mya Tharzi Township, there are 9 heritage sites whereas 11 religious heritage buildings are located in Pyi Gyi Tagun Township. Firstly, heritage sites in Maha Aung Myae Township are illustrates in table (3.1).

Table (3.1) Religious Heritage Sites in Maha Aung Myae Township

Sr.	Name	Date of Construction
1	Yatanar Kawtha	1839
2	Mahar Bawhtipin Pagoda	1862
3	Dahat taw Pagoda	1852
4	Shwe in pin kyaung	1895
5	Thar-ka-wun kyaung	1924
6	Mahar Yanar Bone San Mya taung tite	1885
7	Pan Thay Mosque	1868
8	St.John Church	1902
9	Yon Taw Kyi	1879
10	Bahmaw Teik	1280
11	Mahar Min Htin Kyaung	1226
12	Dahattaw Wizaya Pagoda	528
13	Yadanarbontar Pagoda	1243
14	Thartanadaza Kyouttawgyi Pagoda	1311

Source: Mandalay City Development Committee (2019)

Among the 14 heritage sites within the Maha Aung Myae Township, there are 5 Pagodas, 6 monasteries, 1 mosque and 1 church are located. Some of these were established between 6th and 20th century.

Comparing to other Townships, Chan Aye Thar Zan Township has larger numbers of heritage sites as it is the home for 24 religious heritage sites. These heritages were established between the 8th and 20th Century. In this Township, numbers of Cathedral and Churches are larger than other Townships of the Mandalay

City followed by Pagodas. These include 10 Pagodas, 4 Churches and Cathedrals followed 3 Mosques and some other religious heritage buildings. Table (3.2) shows the religious heritage sites of the Township.

Table (3.2) List of Religious Heritage in Chan Aye Thar Zan Township

Sr.	Name	Date
1	Lan Lel Pagoda	1209
2	Joon Mosque	1224
3	Maha Setkyathiha	1875
4	Shin Pin Patlat Yay Sat Lat Pagoda	1208
5	Eain Taw Yar Pagoda	1209
6	Shin Boh Mal Pagoda	792
7	Su Taung Pyae Chan Thar Ya Pagoda	Not Specified
8	Koe Lone Ta Kar Pagoda	1257
9	Maha Lawka Yan Hnain Aung Daw Mu Pagoda	1244
10	Mann Aung Yadanar War Khin Kone Pagoda	1241
11	Su Taung Pyae Pagoda	1217
12	St.Joseph's Cathedral	1933
13	Kelly's Church	1889
14	Shri Satsanayana Hindu Temple	1895
15	St.Fransis Xaviers Church	1886
16	Ernest West Memorial Church	1931
17	Sin Kyone Mosque	Not Specified
18	Mon Tae Ordination Hall	446
19	Malon San Hlu Team	1896
20	Phaya Thone Zu	Not Specified
21	Maha Wai Yan Bon Thar	1922
22	West Kone Yoe Baho Mosque	Not Specified
23	Thingazar kyaung	1868
24	Kyinn Taw Yan Chinese Temple	Not Specified

Source: Mandalay City Development Committee (2019)

Next, religious heritages in AungMyae Tharzan Township are presented in table (3.3) below.

Table (3.3) List of Religious Heritage in AungMyae Tharzan Township

Sr	Name	Construction Date
1	Sandar Muni Pagoda	1867
2	Ku Tho Daw Pagoda	1862
3	Maha Atula Waiyan Atumashi Kyaung Taw Gyi	1859
4	Maha Thakya Marazein Kyaut Taw Gyi Pagoda	1864
5	Ayeik Ma Htwart Pagoda	1064
6	Yatanar Myint Zu	1478
7	Chan Thar Gyi	1144
8	Shwe Bon Thar	Not specified
9	Shwe Kye Myin	Not specified
10	Baung Taw Kya Pagoda	1158
11	Phaya Ni Pagoda	Not Specified
12	Shwe Nan Taw Kyaung	1883
13	Yadanaponsan Kyaung	1858
14	Yaw-minn-gyi Oak Kyaung	1866
15	Mya Nan San Kyaw Palace	1860
16	Mya-nan-san-kyaw city wall	1860
17	Mandalay Moat	1860
18	Nan Myoe Su Taung Pyae Pagoda	.1924
19	Danmika Yarma (Shwe kyin kyaung)	1860
20	Maha Pahtan Thein Taw (Nagarni Thein Taw)	1479
21	Nay win Thein (Shin Araham Thein)	Bagan Era
22	Danmika Yarma Thein Taw (Shwe kyin kyaung)	1860
23	Lawkamarazein Pagoda	160 years ago
24	Lawkatahsaung Pagoda	160 years ago
25	Karli Mal Taw Hindu Temple	80 to 90 years
26	Hin Dusatanni Mosque	1905
27	Tha Htay Tan Mosque	1879

Source: Mandalay City Development Committee (2019)

From the above table, there are 27 religious heritage sites specified comprising pagodas, temples, monasteries, moat, palace, mosque and city walls in Aung Myae

Tharzan Township. These buildings were established between Bagan era and early 20th Century.

Cultural Heritage site from Chan Mya Tharzi Township are shown in table (3.4) below.

Table (3.4) Lists of Religious Heritage in Chan Mya Tharzi Township

Sr	Name	Construction Date
1	Pal Pone Taw Kyaut Sar Win	AD1791
2	Remains Brick Stair of Ar-Thawka Yama Kyaung	AD1790
3	Pin Thar Min Kyaung	Not Specified
4	Moe Htar Thein	AD1864
5	U Pwar Pagoda	AD1848
6	Thar Taw Ya Pagoda	Not Specified
7	Myae Zon Wun Pagoda	AD 1820
8	Sanda Muni Pagoda	AD 1785
9	Maha Muni Pagoda	BC 543

Source: Mandalay City Development Committee (2019)

Unlike other Townships, Chan Mya Thar Zi Township only has Religious Buildings of Buddhist ranging from Pagodas to Monasteries. These buildings were established in more ancient eras, between BC 543 and AD 1800s. Among 9 sites, 5 are Pagodas followed by monasteries and other buildings.

Within the Pyi Gyi Tagon Township, there are 11 heritage sites which mainly include Pagodas and Monasteries, relating to Buddhism. Among them, the majority are pagodas which composes 8 numbers followed by 2 monasteries and 1 Thein. These are shown in table (3.5).

Table (3.5) List of Religious Heritage in Pyi Gyi Tagon Township

Sr	Name	Construction Date
1	Inn Kha Yu Pagoda	Nor Specified
2	Kan Tat Min Pagoda	536,Bagan era, King of Narapatisithu
3	Kan Dhama Yit Pagoda	1241, Kasone La sun 4
4	Lay Myat Hnar Pagoda	c.1176
5	Lay Tat Bo Pagoda	c.1176
6	Chan Thar Ya Pagoda	AD 1881
7	Aung Chan Thar Pagoda	c.1253
8	Pyae Min Thar Kyaung	AD 1839
9	Thara Myin Zu Thein (Tha Kaung Yan Thein)	AD 1855
10	Lawka Mani Sula	AD 1840
11	Tha Mi Taw Kyaung	1204

Source: Mandalay City Development Committee (2019)

3.3 Institutional Heritages of Mandalay City

All institutional heritage buildings were constructed or existed after occupying by the British. Because the British Government wanted to expand their administration in Myanmar, many institutional buildings were constructed. In this category, the subdivisions regarding general administrative offices, education, health care centres, recreation centres and some landmark buildings are presented separately. The most prominent institutional buildings are the Royal Palace, the Palace Wall, the moat, four gates and bridges and Royal Watch Tower. Earlier, there were totally 12 bridges which crossed the moat but at present only 4 could be observed.

The buildings of General Post Office, Court of Justice, Railways Station, Archaeology Department, Library and Museum Department, Headquarters of Construction, Pension Department, Inland Waterways Office, Myanmar Petroleum Product Enterprise, and 11 numbers of Police Stations were newly constructed by the Colonial Government during 1885 to 1948. Since that time, the above mentioned offices had served their respective duties to the British Government. After Independence, only the respective designation, were converted into Myanmar words.

In the Colonial Education Systems, totally 11 High Schools and 1 Middle School had been opened. For Higher Education System, Mandalay University was started as Mandalay Intermediate College in 1925. Various types of disciplines such as arts and science, agriculture, medicine, engineering were provided to the scholars from Upper Myanmar area. Since that time, for healthcare facility, E.E.N.T (Eyes, Ears, Nose and Throat) Hospital, Mandalay General Hospital, Hospital for Infectious Diseases and Hospital for Malaria were built by the British Government. But after Independence, the Parliament Government had tried to develop the study area. Hence, so many training colleges, academy and some high schools were also extended. Moreover, Telegraph Office, Bank (1), (2), Town Hall (1) and Pharmaceutical Store House were erected during the Parliament Government.

Being founded by King Badon in Amarapura Palace, it seemed more near to Amarapura than that of Mandalay. During the reign of King Mindon and Thibaw, only the Royal tombs are left as landmarks in the campus of the palace. Moreover, the newly constructed Myanansankyaw Palace was located at the centre of the campus and it is surrounded by the halls for the queens. During 1885 and 1948, many more institutional buildings had come out around the palace. For the convenient administration by the British Government in Myanmar, many governmental offices such as Police Academy (now Children Hospital), Police Stations, University College, Railways Station, Hospitals, General Post Office were built.

Due to the clusters of residences around the palace, those institutional buildings were concentrated especially south of the moat. It can be assumed that the residential area could not be extended to the south at that time. With the nature of the Inland Waterways Offices and for easily transport of petrol by ships, those offices are located very adjacent to the east bank of the Ayeyarwady. The police stations were spread out in the city, at that time. After Independence, Teacher's Training College, Government Technical Institute (now Central Women's Hospital), Technical High School, East Pwagon Private School (now the campus of Mandalay University of Foreign Languages), the School of Arts, four Basic High Schools and Town Hall (1) had been founded. Even up to 1962, such institutional buildings are located around the Mandalay Palace. Mandalay University was built in 1924 and became an institutional heritage of the city today.

3.4 Commercial and Industrial Buildings

Under the rule of King Mindon, industrial buildings as factories for cannon, mint, saw mill, rice mill, sugar mill, cotton ginning mill, weaving of wearing materials mill, dock yard etc., amounting to more than (50) were constructed by the management of the Crown Prince Kanaung. It was as unlucky as many factories were damaged by the bombings during Second World War.

Up till now, the Royal Mint Factory, Yadanabon Dock Yard and Distillery Plant can be observed; the former one is located in the campus of the Palace. However, the latter two are located on the east bank of Ayeyarwady River and in Amarahtani Ward of Myaukpyin (Mandalay North area), respectively. During the Colonial Period, the economic activities related to trade and commerce had been developed and Mandalay had become a centre for trade, some private enterprises had appeared, e.g. Curtic's building, Thukhawady Press, Ludu Press, Hla Khin and Sons Press and Pwegadaw Indigenous Medicine House.

After independence, some more industrial buildings were also constructed. At that time, Datan Softdrink Factory, Yekhetaung Softdrink Factory, Pyinyunt Press, Ngwese Soap Factory, Tampawady Vermicelli Factory, Aungmyanmarnyunt Oil Mill and Shwepya Blanket Factory or Vest Factory were owned by the private enterprises. Only the Tatmadaw Canning Factory was state owned. But, till now, the development of industrial sector is still lagging behind in the study area.

Before 1859, commercial or industrial buildings could not be found. During 1859 and 1885, there were many industrial and commercial buildings. The Prince Kanaung wanted to develop the nation and he was so much eager to protect the Upper Myanmar from the threats of British Colony. So that he set up more than 50 buildings regarding with industry including arms and weapon factory. During the Second World War, the bombing destroyed almost all factories except Royal Mint, dockyard and distillery plant. The dockyard is located on the eastern-bank of Ayeyarwady.

Due to its important situation, the Royal Mint was located in the compound of Royal Palace. In the Colonial Period, two more pharmaceutical buildings and four printing presses were constructed. It can be also observed that those buildings are located at the southwest corner of the palace. During the Parliament Government Period, two soft drink factories, two printing presses, one vest factory, one soap factory, one vermicelli factory, one cheroot factory, one photo studio and one canning factory were increased and their locations had spread out from the Mandalay Hill.

3.5 Residential Buildings

Many residential buildings which were existed before 1962 are lost because of the wars and the breaking out of careless fires. Whatever the number of buildings will be in the city, they have been collected during the field survey already carried out in May, 2011. According to the wards in Mandalay City, total number of (557) houses were found after the field survey which was finished in December, 2012. The houses which were built up during the Colonial Period were found in small number of wards. Since the time of Yadanabon Period, the Kings allotted to the public to reside around the palace and named as Ashaypyin (east ward), Anaukpyin (west ward), Taungpyin (south ward) and Myaukpyin (northward), totally 54 wards.

Since the time of Myanmar Dynasty in Mandalay City, the residential area was demarcated in square shape along with that of Palace and the residential houses had sprung up. As stated in above, however, almost all houses in that period were ruined or destroyed. Hence, at the time of field survey, the old buildings which were constructed during before Colonial Period could not be collected. Among (5) townships of Mandalay City, the greatest number of residential buildings (before 1962) were found in Chanayethazan Township (with 257 houses) and it is followed by Aungmyaythazan Township (with 155 houses), Mahaaungmyay Township (with 135 houses) and Chanmyathasi Township (with 10 houses).

In Pyigyitagun Township there is no residential building which was constructed or existed before 1962. Hence, regarding with Pyigyitagun Township and residential buildings, it will not be explained or interpreted in foregoing analysis. Many persons of older generation had stated that many residential houses which were existed before 1962 were destroyed by the outbreak of two great fires. Some said that after bombing in Mandalay City during Second World War, many houses were lost, so that the Clock Tower could be clearly seen from the University Estate at that time. Sometimes, it can be found that few numbers of buildings were used as residential-cum-commercial or industrial purposes.

Table (3.6) List of Non- religious Heritage in Mandalay City

Heritage	Types	Established Time	Location
Thudama Zayat	Social	AD 1860	AungMyae Tharzan
National Theater (Upper Myanmar)	Social	AD1995	AungMyae Tharzan
Nay Pyi Taw Cinema	Social	AD 1957 (AD 1992 reconstructed)	AungMyae Tharzan
Nyaung Pin Market	Social	Not Specified	AungMyae Tharzan
Dhama Tharlar	Social	1908	Chan Aye Thar Zan
Kywe Zun Garden(Shyu Khin Thar)	Social	Colonial Era	AungMyae Tharzan
City Park	Social	AD 1997	Chan Aye Thar Zan
Kywe Zun Jetty	Economy	AD 1854	AungMyae Tharzan
Daung Tite	Economy	AD 1865	AungMyae Tharzan
MOB Bank (1)	Economy	After Independence	AungMyae Tharzan
MOB Bank(2)	Economy	After Independence	AungMyae Tharzan
Zay Cho Market	Economy	1903	Chan Aye Thar Zan
Yaw Min Gyi's tomb	Memorial	AD 1883	AungMyae Tharzan
Amataw Quarter(Winn) 's tomb complex	Memorial	May be 130 years old,(Yadanarpon Era)	AungMyae Tharzan
St. Josez Covent School(Now BEHS 8)	Institutional	AD 1866	AungMyae Tharzan
St.Peter's High School(B.E.H.S-11)	Institutional	AD1954	AungMyae Tharzan
B.E.H.S (2)	Institutional	1921	Chan Aye Thar Zan

Source: Mandalay City Development Committee (2019)

Before founding of Yadanabon/ Shwe Myodawgyi, there was a small village so that no residential building was noticed at the present site of Mandalay City.

During Yadanabon Period, the King allotted 54 wards to make the people reside who migrated from Amarapura Old Capital. But due to the wars and breaking out of fires, no building of residence was left. Only very small number of residences which built during 1885 and 1948 are found at the southwest corner of the moat. It might be assumed that so many houses were constructed but mostly were destroyed. The great number of houses could be found in the study area for the period of 1948 and 1962. During this period, houses were also concentrated at the southwest corner of the palace. It can be assumed that, the waterways transportation and railways transportation were important up to the period of Parliament Democracy Government.

3.6 Overview of U Bein Bridge

In Mandalay, U Bein Bridge is renowned as the world's longest teak bridge that curves 1300 yards across Taungthaman Lake in Amarapura Township. U Bein Bridge stretches out for 1.2 kilometers across Taungthaman Lake by using 1086 teak pillars. Not only in Myanmar, U Bein Bridge is believed to be the longest and oldest teak wood bridge around the world, which was built over 150 years ago.

It is located in the old ancient capital of Amarapura, which is just on the outskirts of Mandalay. It becomes one of Myanmar's cultural heritage site and a place for commuting local people as well as commercial place for business firms and vendors. In particular, the bridge plays as crucial role in everyday life of locals with hundreds crossing over by either foot or bicycle to get to work or the local markets. Since becoming a popular tourist attraction, many now make their livelihood from the bridge by offering boat rides, selling food and water or by showing off their impressive knowledge of its history.

Although the Bridge is now a renowned cultural heritage in Myanmar, the history of building the bridge is not positive. U Bein was the man who built the bridge, who was the local mayor at the time, initiated its construction. Historically, he was notorious for many reasons due to his actions on local peoples in Mandalay Yadanabon City. After the Second Anglo-Burmese War, King Mindon decided to move his capital from Amarapura to Mandalay. U Bein made the decision to reuse as much material from Amarapura in the construction of Mandalay, either to save costs, or more likely to preserve his kingdom's history. With the help of elephants to transport the materials, his new capital was officially established in 1859.

During this relocation period, the local mayor of Amarapura, U Bein, was able to save some of the teak wood from the now dismantled Inwa Palace which was once Myanmar's capital city and was built by King Bodawpaya in 1783. Using over 1000 pillars, U Bein began constructing the bridge across Thaungthaman Lake in order to reduce the time it took to get to the monastic school (around a 13 mile walk). This bridge was constructed over 150 years ago, it's an extremely impressive feat of engineering. Apparently engineers measured out the placing of the pillars by counting their footsteps one by one and using traditional scaling techniques.

Strengthening the old teak pillars are important as in rainy season, mainly in August and September, the lake water rises due to the monsoon rains, and often breaches over the top of the bridge. During the summer, between March and April, the pillars appeared above as the lake dries up. The bridge is famous for not only its structure, but also for being a crucial part of the community. The bridge has remained an important passageway for over 150 years, helping children get to school, fishermen to channel their catch and locals to reach important religious sites and markets.

Nowadays, the livelihoods of the locals have changed, with many now relying on tourism for their income. As a result, U Bein Bridge now provides livelihoods of local vendors selling their souvenirs, previously fishermen to take tourists for a ride at sunset, and local entrepreneurs wanting to practice their English by showing off their history of the famous bridge. Along with its unique structure and scenic views, both local and international tourists have high demand to visit the bridge. Tourists usually come to see sunset, walking along the main passageway or watching the iconic view from a fisherman's boat on the lake. There, visitors can capture both the everyday life of local people going about their business, together with the breathtaking landscape as a backdrop.

The bridge is heavily trafficked by local pedestrian traffic, but it's also tourists, especially at sunset. Small wooden boats chartered by tourists flow under and around the bridge and line up on the western side just before the sun lowers behind the silhouette of the bridge. The best time of the day to visit U Bein Bridge in Mandalay is sunset. At sunset every day, there are many travelers and monks choose this bridge as a base to enjoy the spectacular sunset over the lake. Each people have seen the sunset at a different color, some catch a gorgeous orange site, and others are enchanted by the peerless red or violet.

The impressive site of U Bein Bridge covered by the magical light of the sun setting over might be the most magnificent view of Myanmar. The western bank is congested with vendors selling souvenirs, tour drivers killing time, and restaurants prepping food in the hope of catching some of the traffic coming off the bridge after the sun sets. For the number of visitors, there are around 1000 people come and visit the Bridge, both local and abroad.

Taungthman Lake reaches the highest water level during July or August. During this time, there are a lot of visitors going to U Bein Bridge in Mandalay. Walking along the ancient bridge, enjoying the tranquility, watching the monks in silence is likely one of the most memorial experience in the lands of golden stupas. When the water level is high during the rainy season the walkway isn't that far out of the water. But during the winter dry season, when the water level drops markedly, the bridge stands high above the ground and the remaining water of the lake.

The bridge's attraction is not simply being a heritage, but that it remains a central part of the community, with hundreds of locals and saffron-robed monks walking their bicycles home along it, and fishermen going about their daily work in its shadow (although there are increasing numbers of tourists, too). Views of the bridge are most impressive at sunset, and the best photo opportunities are afforded by hiring a boat to get a close up view of the bridge from the water. U Bein Bridge have been busy with many passengers day by day, and become an indispensable part of the locals. Nowadays, U Bein Bridge in Mandalay is a must-see in any Myanmar tours if travelers travel to Mandalay.

The bridge was made of wood completely in ancient time. Nowadays, some pillars were changed by concrete in place of wood in order to strengthen the bridge and to support the old wooden parts. Within more than 150 years, the bridge become deteriorates due to natural (severe weather, floods) and manmade factors (excessive use for daily commuting, irresponsible vendors, etc.). Every day, there are about 1000 visitors at the U Bein Bridge. U Bein Bridge was repaired at a cost of more than K13 million in 2014. The Myanmar Teakwood Company also provided teak for the restoration.

In 2014, heavy rain in monsoon generated rising water level to the bridge floor. As a result, some of the logs and pillars had floated onto the water. Teak wood pillars were replaced with concrete pillars and the original style was lost. Again in 2017, heavy flood affected the Bridge and destroyed concrete pillars, which were repaired in

2014 and some teak pillars. Consequently, the Mandalay Regional Government planned to repair parts of U Bein Bridge which need to be restored by setting a three year target from 2018. Currently in 2019, renovations and conservation efforts are in process until 2020. In addition to these occasional renovations, regular maintenance is needed to conserve the world's oldest teak wood bridge. In addition, public awareness is still low in using and valuing this built cultural heritage.

CHAPTER IV

SURVEY ANALYSIS

4.1 Survey Profile

In this study, survey was conducted to 50 respondents each from residents of four townships of the Mandalay city (Aungmyay Tharzan and Chanmya Tharzi Townships) and nearby Townships, Pathein Gyi and Amarapura Townships, total of 200 respondents were asked to examine their awareness and willingness to pay for conserving U Bein Bridge. In order to get different views of the respondents' awareness and willingness to pay for conservation, Townships with diverse locations and livelihoods are selected to conduct survey. Survey was conducted in rural and urban areas of the four selected Townships (Aungmyay Tharzan, Chanmya Tharzi, Pathein Gyi, Amarapura) in Mandalay Region.

4.2 Survey Design

This study designed to assess the awareness among respondents and to create hypothetical market for the conservation of cultural heritage, U Bein Bridge in particular, from the Mandalay. Survey was conducted in these selected townships and asked residents about their awareness on conservation of heritage and their willingness to pay for these conservations.

From each township, 50 respondents were asked from 4 selected wards (1 ward from each Township). Convenient sampling method is used to explore the value placed by respondents on the conservation of Bridge.

Questionnaire in this study has three main parts, socioeconomic backgrounds of the respondents, their awareness on cultural heritage and conservation of cultural heritage site, in this case, U Bein Bridge, and the amount that responding people willing to pay for the conservation. Under socioeconomic background, age, gender, education, occupation and income are consisted. Respondents' view on cultural heritage and conservation including their perception towards governmental action towards heritage conservation, and respondents' awareness towards conservation of

the Bridge are asked. Then, their value placed on cultural heritage conservation is asked through the amount willing to pay for conservation of the Bridge.

4.3 Survey Results

Based on the questionnaire used in this study, following survey results are obtained.

4.3.1 Characteristics of the Respondents

Socioeconomic condition of respondents play as important role in studying their awareness and value placed on U Bein Bridge. Socioeconomic condition includes age, gender, educational qualification, occupation and monthly household incomes of the respondents from 4 selected Townships of the Mandalay City. Table (4.1) shows the demographic background of the respondents in surveyed areas.

Table (4.1) Demographic Background of the Respondents

Demographic Background	No. of Respondents	Percent
Gender		
Male	106	53
Female	94	47
Total	200	100
Age (Years)		
18- 25	42	21
26- 35	54	27
36 – 45	44	22
46 – 55	36	18
Above 55	24	12
Total	200	100

Source: Survey Data (2019)

From the survey, it can be observed that majority of the respondents are age between 26 and 35 years (27%) followed by 36 and 45 years (22%). The least group are age above 55 years which contribute only 12% of the total. In terms of the

respondents' gender, majority of the respondents (53%) are male. Female contributes only 47 % of the total.

Levels of education among the respondents are studied. Educational qualification is classified as no education, basic 3 Rs (Reading, Writing, and Arithmetic), primary school, middle school, high school, bachelor degree, master degree and PhD. Table (4.2) illustrates the Education levels of the Respondents.

Table (4.2) Educational Qualification of the Respondents

Education	No. of Respondents	Percent
Basic 3Rs	24	12
Primary	32	16
Middle	42	21
High School	38	19
Bachelor	36	18
Master	18	9
PhD	10	5
Total	200	100

Source: Survey Data (2019)

According to the survey results, majority of the respondents (19%) have finished middle school level education followed by 21% of high school graduates and 18% of bachelor degree holders. The lowest group is those who got doctoral degree, i.e. only 5% of the total respondents. This means that most of the respondents from rural areas have lower level of education comparing to those from urban areas of the Mandalay City. Although 12% constitutes in the group of basic 3Rs, there is no one who have no education at all.

Next section is about the economic conditions of the respondents. Economic condition comprises types of jobs respondents currently doing and their monthly household income levels. Occupations are grouped as government staffs, staffs from private businesses, those working in INGOs, local NGOs, CSOs and CBOs, sole proprietor, informal laborers and others. Also, monthly household income is divided

as less than Ks 300,000, between Ks 300,001 and Ks 400,000, between Ks 400,001 and Ks 500,000, between Ks 500,001 and 600,000, and above Ks 500,000. Table (4.3) describes the economic conditions of respondents.

Table (4.3) Economic Conditions of the Respondents

Economic Background	No. of Respondents	Percent
Occupation		
Government Employees	32	16
Private Sector Employees	56	28
INGOs, NGOs, CSOs, CBOs Staffs	30	15
Sole Proprietor	38	19
Informal Job	44	22
Total	200	100
Household Monthly Income		
Less than Ks 300,000	18	9
Between Ks 300,001 and Ks 400,000	42	21
Between Ks 400,001 and Ks 500,000	54	27
Between Ks 500,001 and 600,000	56	28
Above Ks 600,000	30	15
Total	200	100

Source: Survey Data (2019)

When looking at the levels of economic conditions among respondents, majority are private sector employees (28%) followed by doing informal jobs (22%) and sole proprietor (19%). Those who work as INGOs, NGOs, CSOs, and CBOs staffs are the lowest, which contribute 15% of the total.

In terms of the household monthly incomes, majority earned between Ks 500,001 and Ks 600,000 (28%) followed by Ks 400,001 and Ks 500,000 (27%) and 21% of those with income level of Between Ks 300,001 and Ks 400,000. Those who earned less than Ks 300,000 per month contribute only 9%.

4.3.2 Respondents' Awareness on Conservation of Cultural Heritage in Myanmar

In this part, two sub sections are included; one is the respondents' view on governmental action towards heritage conservation and the other is the respondents' view on awareness towards heritage conservation in overall Myanmar are studied.

First part include whether government should raise more funds to deal with heritage conservation, should raise taxes to pay for conservation of heritage more, heritage conservation should be a priority concern of the government, and government should invest in helping people and economy before it spends money on heritage conservation. Likert Scale Approach is used to examine the respondents' perception. In the table, meanings of the scores are as follow:

1= Strongly Disagree, 2 = Disagree, 3 = Neither Agree Nor Disagree, 4 = Agree, 5 = Strongly Agree.

Table (4.4) Respondents' View on Governmental Action towards Heritage Conservation

Statement Concerning Governmental Action	1	2	3	4	5	Mean
Government should raise more funds to deal with Heritage Conservation	28 (14%)	32 (16%)	44 (22%)	54 (27%)	42 (21%)	3.25
Government should raise taxes to pay for more Heritage Conservation	60 (30%)	52 (26%)	40 (20%)	42 (21%)	6 (3%)	2.41
Heritage Conservation should be a priority concern of the government	24 (12%)	34 (17%)	46 (23%)	56 (28%)	40 (20%)	3.27
Government should invest in helping people and economy before it spends money on Heritage Conservation	10 (5%)	36 (18%)	42 (21%)	48 (24%)	64 (32%)	3.6
Government should inform People with current challenges faced in conserving cultural heritage	20 (10%)	30 (15%)	36 (18%)	54 (27%)	60 (30%)	3.52
Government need greater education and knowledge sharing program for conservation of cultural heritage among people	14 (7%)	24 (12%)	30 (15%)	64 (32%)	68 (34%)	3.74
Government should inform People with latest situation of cultural heritage conservation and efforts	16 (8%)	24 (12%)	26 (13%)	64 (32%)	70 (35%)	3.74
Total Mean Score						3.36

Source: Survey Data (2019)

From the survey, total mean score for the views towards Government conservation of cultural heritage in general is explored. For each statement, mean value ranged from 2.41 to 3.74. Among them, statements that gained mean value of 3.74 are “Government need greater education and knowledge sharing program for conservation of cultural heritage among people” and “Government should inform people with latest situation of cultural heritage conservation and efforts”. This means that majority of the respondents highly agreed the statement concerning improving education and knowledge sharing initiatives and enhance information asymmetry of the conservation efforts. In contrast, majority highly disagree the statement that “Government should raise taxes to pay for more heritage conservation”. Statements including “raising more funds for conservation” and “setting cultural heritage as priority role in economy” scored mean value around 3.2, which means majority of the respondents agree.

Then, next part is to observe the respondents’ view of awareness towards heritage conservation. In the table, meanings of the scores are as follow:

1= Strongly Disagree, 2 = Disagree, 3 = Neither Agree Nor Disagree, 4 = Agree, 5 = Strongly Agree.

Table (4.5) Respondents’ View on Awareness towards Heritage Conservation

Statement Concerning Governmental Action	1	2	3	4	5	Mean
Heritage conservation is more important than other environmental concerns	22 (11%)	34 (17%)	50 (25%)	46 (23%)	48 (24%)	3.32
Heritage conservation is the most important among economic concerns.	32 (16%)	56 (28%)	38 (19%)	36 (18%)	34 (17%)	2.86
It is everyone’s duty to ensure that cultural heritage will exist for next generations to enjoy in the future	16 (8%)	24 (12%)	40 (20%)	54 (27%)	66 (33%)	3.65
Citizens should contribute to heritage conservation by making cash donations	18 (9%)	26 (13%)	40 (20%)	62 (31%)	54 (27%)	3.54
Households who earn more income should contribute more to heritage conservation.	22 (11%)	34 (17%)	36 (18%)	52 (26%)	56 (28%)	3.43
Cultural Heritages are important economically for local people	0 (0%)	20 (10%)	46 (23%)	64 (32%)	70 (35%)	3.92
If cultural heritages are not conserve well, this will affect Tourism and related sector of the economy	6 (3%)	20 (10%)	40 (20%)	66 (33%)	68 (34%)	3.85
Total Mean Score						3.51

Source: Survey Data (2019)

In this part, includes seven statements are asked. Total mean score is 3.51 which is close to 4 and greater than their views on Government's actions. For the statement "Cultural Heritages are important economically for local people" got the highest mean value of 3.92 while it was the lowest mean value for the statement "Heritage conservation is the most important among economic concerns" For each statement, mean scores are ranged between, 3.92 and 2.86. This mean that majority of the respondents strongly agree that "Cultural Heritages are important economically for local people" and "If cultural heritages are not conserve well, this will affect Tourism and related sector of the economy". In contrast at the national level, there are many other economic concerns which are more important than that of cultural heritage conservation.

4.3.3 Respondents' Views on Visiting U Bein Bridge

In this section, efforts have been made to know the Respondents' Experiences of Visiting U Bein Bridge, willingness to pay for conservation of the U Bein Bridge and their preferred amount that they wish to pay if there is conservation for U Bein Bridge.

Table (4.6) shows the Respondents' Experiences of Visiting U Bein Bridge. This includes Assessment on Environmental/ surrounding Situation of bridge, Major Reason for Visiting the bridge and Respondents' Value on Bridge are asked.

Table (4.6) Respondents' Experiences of Visiting U Bein Bridge

Experiences of Visiting U Bein Bridge	No. of Respondents	Percent
Number of Times Visiting U Bein Bridge in Past 3 Years		
Less than 5 times	18	9
5 – 7 times	55	28
8 – 10 times	59	30
More than 10 times	68	34
Total	200	100
Assessment on Environmental Situation of the Bridge in Past 3 Years		
Better	67	33
Worse	41	21
Unchanged	55	27
Not Know	37	18
Total	200	100
Assessment on Local Businesses Around the Bridge in Past 3 Years		
Better	45	23
Worse	59	29
Unchanged	66	33
Not Know	30	15
Total	200	100

Table (4.6) Respondents' Experiences of Visiting U Bein Bridge (Continued)

Experiences of Visiting U Bein Bridge	No. of Respondents	Percent
Major Reason for Visiting the Bridge		
To relax	57	29
To enjoy the nature	66	33
Other (shopping, eating out, gathering, photo taking, etc.)	77	38
Total	200	100
Respondents' Value on Bridge		
Peacefulness	42	21
Unique views	89	44
Enjoy culture and tradition	69	35
Total	200	100

Source: Survey Data (2019)

In this question, questions include time limitations of past 3 years as within the past 3 years (2016 - 2019), environmental and economic conditions around the Bridge has changed due to institutional, natural and other man made factors. As almost all residents from Mandalay City and nearby Townships have been visited the U Bein Bridge, the question include never been there, less than 5 times, between 5 and 7 times, between 8 and 10 times and more than 10 times. Yet, there is no one who answered never been there, it was skipped in table. Majority (34%) answered that they have been visited to the Bridge for more than 10 times followed by 30% of the respondents answering between 8 and 10 times in past three years.

For assessment on environmental/surrounding situation of bridge, the answers are given as Better, Worse, Unchanged and Not Know. In this statement, majority (33%) answered better while 27% answered unchanged. For the views on local businesses around the Bridge, most respondents answered unchanged (33%) followed worse, answered by 29% of the respondents. Next statement is asking about the major reason for visiting the bridge that include to relax, to enjoy the nature and other (shopping, eating out, gathering, photo taking, etc.). Majority answered other reasons (38%) followed by to enjoy the nature (33%). Respondents' Value on Bridge includes

Peacefulness, Unique views and Enjoy culture and tradition. From the survey, it was found that majority answered to enjoy unique views (44%) followed by 35% of the respondents who like to enjoy culture and tradition.

Moreover, it is necessary to ask whether the challenges faced by U Bein Bridge are known by respondents. In this section, questions concerning the natural and man-made risks (risks of business firms – large or small and risks of individuals – local people and visitors) are asked. Following table depicts the respondents’ views on major risks of deteriorating U Bein Bridge.

Table (4.7) Respondents’ Views on Major Risks of Deteriorating U Bein Bridge

Top Level of Threats	No. of Respondents	Percent
Threat of flood highly affect the strength and sustainability of the Bridge	77	39
Human activities, mainly large numbers of visitors crossing on the Bridge during vacations	69	35
Human Activities, mainly the vendors and other businesses operating on Bridge explicitly or implicitly	29	15
Threat of other natural factors such as wind or earth quake	25	13
Total	200	100

Source: Survey Data (2019)

The above table shows the Number One Risks that respondents regarded as main source of deteriorating the U Bein Bridge. Among the four types of causes of risks - threat of flood highly affect the strength and sustainability of the bridge, human activities, mainly large numbers of visitors crossing on the bridge during vacations. human activities, mainly the vendors and other businesses operating on bridge explicitly or implicitly and threat of other natural factors such as wind or earth quake – majority answered flood as the highest risks (39%) followed by 35% as human activities – mainly visitors whereas 15% recognized vendors and other business activities of the surrounding areas of the Bridge and industrial zones linked to the

Taungthaman Lake, where the Bridge is located. There is only 13% of the respondents who regarded other natural disasters rather than flood.

In next section, respondents' view on importance of U Bein Bridge and its Conservation efforts are asked through Likert Scale Analysis, where 1 is regarded as strongly disagree, 2 for disagree, 3, neither agree nor disagree, 4, agree and 5, strongly agree. Table (4.8) reveals the respondents' view on importance of U Bein Bridge. In the table, scores are as follow:

1= Strongly Disagree, 2 = Disagree, 3 = Neither Agree Nor Disagree, 4 = Agree, 5 = Strongly Agree.

Table (4.8) Respondents' View on Importance of U Bein Bridge

Statements	1	2	3	4	5	Mean
The economic values of the U Bein Bridge has increased due to cultural tourism	0 (0%)	18 (9%)	40 (20%)	60 (30%)	82 (41%)	4.03
The arrival of tourists has granted economic benefits to the local community in Amarapura Township	10 (5%)	16 (8%)	38 (19%)	64 (32%)	72 (36%)	3.86
Increased in economic benefits of local people from Amarapura Township help improving conservation efforts	44 (22%)	40 (20%)	60 (30%)	39 (19%)	18 (9%)	2.73
Local visitors are willing to contribute for conservation of U Bein Bridge	50 (25%)	42 (21%)	45 (22%)	38 (19%)	26 (13%)	2.74
Tourism development at U Bein Bridge resulted in crowded public places, traffic congestion, air and noise pollution	23 (12%)	30 (15%)	34 (17%)	49 (24%)	64 (32%)	3.49
U Bein Bridge is urgently needed to renovate and conserve for sustainability in future	8 (4%)	20 (10%)	34 (17%)	78 (39%)	60 (30%)	3.81
It is important to conserve U Bein Bridge as its capacity becomes lower	10 (5%)	18 (9%)	42 (21%)	66 (33%)	62 (31%)	3.73
It is important to do conservation of U Bein Bridge as it contributes to the cultural and historic significance of the place	6 (3%)	18 (9%)	38 (19%)	58 (29%)	80 (40%)	3.94
Total Mean Score						3.54

Source: Survey Data (2019)

Total mean score for this part is 3.54, which is favorable and can be regarded as majority agrees the importance and conservation of the U Bein Bridge. Among the 8 statements, mean values are between 2.73 and 4.03. The largest mean value (4.03) is gained by first statement, “The economic values of the U Bein Bridge has increased due to cultural tourism” followed by 3.94 and 3.81 in the statement “It is important to do conservation of U Bein Bridge as it contributes to the cultural and historic significance of the place” and “The arrival of tourists has granted economic benefits to the local community in Amarapura Township”.

The lowest mean scores (2.73 and 2.74) for individual statements are got in statements “Increased in economic benefits of local people from Amarapura Township help improving conservation efforts” and “Local visitors are willing to contribute for conservation of U Bein Bridge” This means that respondents think local people and other visitors do not aware of the conservation of U Bein Bridge.

Finally, before asking the willingness to pay for conservation, respondents’ views on current conservation measures on U Bein Bridge are ask, which is portrayed in table (4.9) below.

Table (4.9) Respondents’ View on Government Conservation Efforts towards of U Bein Bridge

Statements	1	2	3	4	5	Mean
Government is intensively attempted to conserve the Bridge	0 (0%)	10 (5%)	24 (12%)	76 (38%)	90 (45%)	4.23
Government Efforts on conservation of the lake are known by community	6 (3%)	26 (13%)	56 (28%)	50 (25%)	62 (31%)	3.68
Collaboration with local organizations (e.g. MTU) are effective	24 (12%)	20 (10%)	52 (26%)	46 (23%)	58 (29%)	3.47
Collaboration with international organizations are effective	24 (12%)	32 (16%)	60 (30%)	36 (18%)	48 (24%)	3.26
Government educating and knowledge transfer programs are known by community	16 (8%)	18 (9%)	56 (28%)	56 (28%)	54 (27%)	3.57
Government persuadew local people and visitors to actively take part in conservation efforts.	16 (8%)	14 (7%)	48 (24%)	64 (32%)	58 (29%)	3.67
Total Mean Score						3.65

Source: Survey Data (2019)

From the above table, total mean score for the question is 3.65. Each statement concerning government efforts on conservation of the U Bein Bridge in particular has mean score between 3.26 and 4.23. The highest score is get from the first statement, “Government is intensively attempted to conserve the Bridge”. In contrast, lowest score is get for the statement “Collaboration with international organizations are effective”. These result means that respondents knew the efforts of Government in conservation of the Bridge while they do not know the conditions of collaboration with international entities due to their knowledge and information accessibilities.

Respondents’ Opinions on Pay for Conservation of U Bein Bridge

Then, Willingness to Pay for Conservation is explored. In this section, Willingness to Pay of entire sample is calculated based on descriptive approach. Due to the natural and man- made challenges, yearly contribution is asked to respondents to contribute for conservation of the Bridge. At first, set amount of the annual contribution for conservation is Ks 5,000. Then, their desired amount to contribute per annum is also asked, whether the amount is lower or higher than the set amount. The survey data is shown in table below.

Table (4.10) Respondents’ Opinions on Willingness to Pay for Conservation of U Bein Bridge

Willingness to Pay by Respondents	No. of Respondents	Percent
Willing to Pay Ks 5,000 per year		
Yes	172	86
No	28	14
Total	200	100
Is it your desired amount for conservation? (For 172 respondents)		
Yes	124	72
No	48	18
Total	172	100
If “No”, what is your desired amount for yearly contribution? (For 48 respondents only)		
Ks 5,001 – 10,000	18	38
Ks 10,001- 15,000	12	25
Ks 15,001-20,000	8	17
Ks 20,001-30,000	5	10
Above Ks 30,000	5	10
Total	48	100

Source: Survey Data (2019)

When asking respondents on whether they are willing to pay yearly contribution, (86%) of the respondents out of 200 are willing to pay the hypothetical set amount, Ks 5,000 per year. The rest 14% of the respondents rejected to pay annual contribution for conservation. When asking major reasons for contribution, U Bein Bridge is one of the most important cultural heritages in Mandalay and also in Myanmar. When asking to those who answered No, they replied that it is more responsible by the government.

From the 172 respondents (86%) who willing to pay for conservation, additional question is asked to explore their willing amount for conservation. Majority answered higher than the set amount, Ks 5,000. Majority wish to contribute between Ks 5,001 and Ks 10,000 (38%) followed by contributing between Ks 10,001 and Ks 15,000 (25%). There is only 10% of the respondents who wish to contribute more than Ks 30,000 per year for conservation.

CHAPTER V

CONCLUSION

5.1 Findings

The first part of the findings is the socioeconomic conditions of the respondents, It was found that majority of the respondents is age between 26 and 35 years. Majority of the respondents are male. Majority of the respondents have finished middle school level education. Most of the respondents are from private sector and majority earns household monthly income between Ks 500,001 and Ks 600,000.

Then, respondents' awareness on conservation of cultural heritage in Myanmar in general is asked. Total mean score for the respondents' views towards Government conservation of cultural heritage obtained mean values ranged from 2.41 to 3.74. Respondents highly agree on "Government need greater education and knowledge sharing program for conservation of cultural heritage among people" and "Government should inform people with latest situation of cultural heritage conservation and efforts". Majority highly disagree the statement that "Government should raise taxes to pay for more heritage conservation".

When observing respondents' awareness towards heritage conservation, total mean score is obtained as 3.51. Respondents highly agree "Cultural Heritages are important economically for local people" and highly disagree "Heritage conservation is the most important among economic concerns"

Respondents' views on visiting U Bein Bridge include experiences of Visiting U Bein Bridge, willingness to pay for conservation of the U Being Bridge and their preferred amount that they wish to pay if there is conservation for U Bein Bridge are included. Majority have been visited to the Bridge for more than 10 times. Also most respondents answered that they experienced better concerning the environmental condition comparing to past 3 years. Concerning local businesses around the Bridge, most respondents answered unchanged. When assessing the major reason for visiting the Bridge, most respondents answered other reasons, such as photo taking eating out

and other activities. Respondents give high value on Bridge for enjoying its unique views.

When exploring the major risks that respondents regarded as main source of deteriorating the U Bein Bridge, flood plays as key role, which is uncontrollable natural disaster. When observing the respondents' view on importance of U Bein Bridge and its Conservation efforts are asked through Likert Scale Analysis, total mean score is obtained as 3.54. The highest mean value (4.03) is for the statement "The economic values of the U Bein Bridge has increased due to cultural tourism"

When examining the total mean score for the respondents' views on Government conservation efforts, it is 3.65. The highest score is get from the first statement, "Government is intensively attempted to conserve the Bridge" while lowest score is get for the statement "Collaboration with international organizations are effective". When exploring respondents for their willingness to pay for conservation through yearly contribution Ks 5,000, 86% of the answered yes. From these 86%, extra question is asked to discover their willing amount for conservation. It was found that majority wish to pay higher than Ks 5,000, particularly, between Ks 5,001 and Ks 10,000 (38%).

5.2 Recommendations

Findings from the study reveals that majority of the respondents are more or less willing to contribute in conservation of heritage through annual contribution. Yet only few of them regarded it not as part of people's responsibilities. They thought cultural heritage conservation is mainly responsible by the Government. Also majority of the respondents understand the importance of knowledge sharing and education programs for heritage conservation by the Government. It can be regarded that most of the respondents understand the conservation efforts and willing to pay for conservation.

In order to enhance these attitudes among people, it is necessary to upgrade public awareness with the local community and visitors through knowledge transferring and campaign, carrying out researches to understand local community as well as local and foreign visitors and their views of the Bridge, make preparation for the risks of climate change and reducing its impacts on the Bridge, practice collaborating efforts between all stakeholders and Government at different levels to cope with challenges and risks faced by the Bridge, promote the uniqueness of the

Bridge through continuous assessment on the risks factors and the surrounding environment of the Bridge.

In addition, Government should check and control the use of the Bridge, i.e. limiting the numbers of visitors to be in line with its capacity especially during vacation seasons. Giving appropriate information and updated news about the Bridge, enhancing responsible behavior among visitors, fund raising for conservation in addition to Government contributions and external supports, upgrading local facilities around the Bridge in addition to conserving the Bridge, improving transportation and communications and collaboration with diverse stakeholders including private businesses and education institutions are essential for sustaining and conserving the Bridge.

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APPENDIX

QUESTIONNAIRE FOR LOCAL PEOPLE FROM MANDALAY REGION

I. Socioeconomic Background

1. Age _____ years
2. Gender Male Female
3. Educational Qualification No Education Basic 3Rs Primary
 Middle High School Undergraduate Graduate Master PhD
4. Occupation
 Public Sector Private Sector NGOs Informal Sector
 Others _____
5. Household Monthly Income (Ks) Less than 300,000 300,001 – 400,000
 400,001 – 500,000 500,001 – 600,000 Above 600,000
6. Current Place of Resident Urban Rural

II. Views on Cultural Heritage and Conservation

(1 = Strongly Disagree, 5 = Strongly Agree)

7. Respondents' View on Governmental Action towards Heritage Conservation

Statement Concerning Governmental Action	1	2	3	4	5
Government should raise more funds to deal with Heritage Conservation					
Government should raise taxes to pay for more Heritage Conservation					
Heritage Conservation should be a priority concern of the government					
Government should invest in helping people and economy before it spends money on Heritage Conservation					
Government should inform People with current challenges faced in conserving cultural heritage					
Government need greater education and knowledge sharing program for conservation of cultural heritage among people					
Government should inform People with latest situation of cultural heritage conservation and efforts					

8. Respondents' Awareness towards Heritage Conservation

	1	2	3	4	5
Heritage conservation is more important than other environmental concerns					
Heritage conservation is the most important among economic concerns.					
It is everyone's duty to ensure that cultural heritage will exist for next generations to enjoy in the future					
Citizens should contribute to heritage conservation by making cash donations					
Households who earn more income should contribute more to heritage conservation.					
Cultural Heritages are important economically for local people					
If cultural heritages are not conserve well, this will affect Tourism and related sector of the economy					

Experiences of Visiting U Bein Bridge

9. Number of Times Visiting U Bein Bridge in Past 3 Years

- Less than 5 times
 5 – 7 times
 8 – 10 times
 More than 10 times

10. Assessment on Environmental Situation of the Bridge in Past 3 Years

- Better
 Worse
 Unchanged
 Not Know

11. Assessment on Local Businesses Around the Bridge in Past 3 Years

- Better
 Worse
 Unchanged
 Not Know

12. Major Reason for Visiting the Bridge

- To relax
 To enjoy the nature
 Other (shopping, eating out, gathering, photo taking, etc.)

13. Respondents' Value on Bridge

- Peacefulness
 Unique views
 Enjoy culture and tradition

III. Views on Conservation of U Bein Bridge

14. Respondents' Views on Major Risks of Deteriorating U Bein Bridge

- Threat of flood highly affects the strength and sustainability of the Bridge
- Human activities, mainly large numbers of visitors crossing on the Bridge during vacations
- Human Activities, mainly the vendors and other businesses operating on Bridge explicitly or implicitly
- Threat of other natural factors such as wind or earth quake

1. Respondents' View on Importance of U Bein Bridge

Statements	1	2	3	4	5
The economic values of the U Bein Bridge has increased die to cultural tourism					
The arrival of tourists has granted economic benefits to the local community in Amarapura Township					
Increased in economic benefits of local people from Amarapura Township help improving conservation efforts					
Local visitors are willing to contribute for conservation of U Bein Bridge					
Tourism development at U Bein Bridge resulted in crowded public places, traffic congestion, air and noise pollution					
U Bein Bridge is urgently needed to renovate and conserve for sustainability in future					
It is important to conserve U Bein Bridge as its capacity becomes lower					
It is important to do conservation of U Bein Bridge as it contributes to the cultural and historic significance of the place					

2. Respondents' View on Government Conservation Efforts Towards of U Bein Bridge

Statements	1	2	3	4	5
Government is intensively attempted to conserve the Bridge					
Government Efforts on conservation of the lake are known by community					
Collaboration with local organizations (e.g. MTU) are effective					
Collaboration with international organizations are effective					
Government educating and knowledge transfer programs are known by community					
Government persuade local people and visitors to actively take part in conservation efforts.					

IV. Respondents' Experiences of Visiting U Bein Bridge

3. Willing to Pay Ks 5,000 per year

Yes No

4. Is it your desired amount for conservation? (For 172 respondents)

Yes No

5. If "No", what is your desired amount for yearly contribution? (For 48 respondents only)

Ks 5,001 – 10,000 Ks 10,001- 15,000 Ks 15,001-20,000

Ks 20,001-30,000 Above Ks 30,000

Please feel free to suggest your opinion!
