THE ECONOMICS OF PRESERVING A WORLD HERITAGE SITE: THE CASE OF VAT PHOU AND ASSOCIATED ANCIENT SETTLEMENTS WITHIN THE CHAMPASAK CULTURAL LANDSCAPE, CHAMPASAK PROVINCE, LAO P.D.R.

Kaysone Chansina

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

Title of Dissertation	The Economics of Preserving a World Heritage Site: the Case of Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape, Champasak Province, Lao P.D.R.
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Heritage resources are important to society due to their historic, educational, tourist and community value. In order to preserve and maintain these resources for current and future generations, understanding human interactions and values are important. For that purpose, this dissertation utilizes economic tools and techniques to identify factors that influence heritage values, and quantifies the economic values of the general public regarding heritage recreation and preservation. Three empirical studies are presented in this dissertation: Empirical Study 1 measures the economic value of Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape (Vat Phou), using zonal travel cost method (ZTCM); Empirical Study 2 estimates the willingness-to-pay of Lao citizens to preserve the historic structures at Vat Phou, using contingent valuation methodology (CVM); Empirical Study 3 analyzes the relationship between Lao citizens' socio-demographic characteristics and their willingness to pay behavior toward the value of cultural landscape (Vat Phou) by applying an economic application discussed in Empirical Study 1 and 2.

Data used for Empirical Study 1 to quantify the economic valuation of the site and regression analysis, observes a time period from October to December 2011. Sample populations were both domestic and foreign visitors.

Three functional forms of visitor demand were used: linear, semi-log, and double-log models. The zonal travel cost model estimates the average of the annual domestic individual consumer surplus measure ranged from approximately LAK 9,002 to LAK9,654.07, depending on the functional forms used. When aggregated to the total number of domestic individual paid visitors of 2011, the annual benefit estimates range from approximately LAK 296,126,989.40 to LAK 317,551,425.00. While the zonal travel cost model estimates the average of the annual foreign individual consumer surplus measure at approximately USD 20.24. When aggregated to the total number of foreign visitors of 2011, the annual benefit estimate is USD 944,906.34.

A Dichotomous choice contingent valuation (DC CV) survey for Empirical Study 2 was carried out from April to May 2013. The questions were dropped-off to the general public in the capital city of Laos to elicit their willingness to pay for the Historic Structures Preservation Project (all traditional wooden Lao houses, temples and other buildings 50 or more years old in the site). This study explored the question of whether respondents are willing to make a once-only donation to preserve the historic structures at Vat Phou and to prevent collapse of the structures. The study found that the mean willingness to pay of respondents is LAK 36,239.75 or 1.26% of average monthly income of respondents. (LAK7,860.00 = USD1.00, Exchange Rate date 29/04/2013) With the logit model, the factors which strongly affected individuals' willingness to pay were the bid amount, the age and salary of respondents. While the gender, status, education, job, the number of family members and the number of working people per household have no effect on the probability of "Yes" responses. This study does not provide the total value of Vat Phou, but it shows the great value of the site in terms of individuals' willingness to pay for its preservation and hence is important information for policy makers in deciding how to preserve the site efficiently.

Empirical Study 3 investigating the relationship between Lao citizens' socio-demographic characteristics and their financial supportive behavior toward the value of the cultural landscape preservation. The study focuses on eliciting the viewpoints of Laotians visitors and non-visitors regarding cultural landscape preservation as well

as their willingness to give financial support for cultural landscape preservation and environmental protection.

Results indicated that the socio-demographic factors of Lao citizens, both visitors and non-visitors have influence in their awareness of the importance of the cultural landscape, and affected their willingness to support preservation efforts.

Although there are some differences in perceptions among respondents regarding the Vat Phou preservation approach, more successful functioning and management of the site can be achieved by understanding the public's motivation toward cultural landscape preservation and by integrating them into future preservation policies.

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Kaysone Chansina

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ABBREVIATIONS

Abbreviations	Equivalence
EEPSEA	Economy and Environment Program for South East Asia
EFTEC	Economics for the Environment Consultancy
ETL	Enterprise Telecommunication Lao
EVRI	Environmental Valuation Reference Inventory
HATCH	Historical Art, Traditional Crafts and the Heritage Booklet
ICOMOS	International Council on Monuments and Sites
ITCM	Individual Travel Cost Method
LAK	Lao Currency
Lao PDR	Lao People's Democratic Republic
LSBC	Lao-Singapore Business College
LTD	Lao Telecommunication
NAPPA	National Academic of Politics and Public Administration
NGO	Non Government Organization
NIDA	National Institute of Development Administration
NMA	Napoli Musei Aperti
OECD	Organization for Economic Cooperation and Development
OECO	Oversea Economic Cooperation Operator
OLS	Ordinary Least
RP	Revealed Preference
SD	Standard Deviation
SP	State Preference
TCM	Travel Cost Method
UKD	United Kingdom Dollar
UNESCO	United Nations Educational Scientific and Cultural Organization
UNWTO	The United Nations World Tourism Organization
USD	U.S Dollar

VPP	Vat Phou Preservation
WH	World Heritage
WHS	World Heritage Site
WTA	Willingness to Accept
WTP	Willingness to Pay
WTS	Willingness to Sale
ZTCM	Zonal Travel Cost Method

CHAPTER 1

INTRODUCTION

1.1 Background and Rationale

1.1.1 Heritage and International Tourist Arrivals Worldwide

Heritage can be referred to as a legacy from the past, influencing the way people live today, and what people pass on to future generations (UNESCO, 2010: 1). According to the World Heritage Convention (June, 2010: 1), 187 locations have been ratified as World Heritage Sites (WHSs) in 151 countries, including 911 properties, forming part of the cultural and natural heritage which the World Heritage Committee considers as having outstanding universal value (Appendix A, B, and C). These include 704 cultural, 180 natural, and 27 mixed properties. Most cultural and natural sites are located in Europe and North America, accounting for 48% of the total number of WHSs worldwide, followed by 22% in Asia and the Pacific, 14% in Latin America and the Caribbean, 9% in Africa, and 7% in the Arab States (UNESCO, 2010: 2). These may be landscapes, places or buildings but all are considered to have outstanding universal value, from the point of view of history, art, or science, which we must pass on to future generations as an irreplaceable source of life and inspiration. Places on the list include unique and diverse sites such as Machu Picchu, the Pyramids of Egypt, and places like Stonehenge and Westminster Palace in the United Kingdom. What makes the concept of World Heritage exceptional is its universal application which reflects the social and economic history of their particular community and the interface with the natural setting. The concept of cultural landscapes has been added to the World Heritage List.

International recognition of cultural landscapes was adopted by the World Heritage Committee in 1992 (UNESCO, 2010: 2). Importantly, they are at the

interface between nature and culture, tangible and intangible heritage, biological and cultural diversity. Cultural landscapes are culturally significant, they represent the way in which people lived, worked, events and places through time, and how they organized to meet the need and cope as members of society in general and their community in particular.

They are a symbol of the growing recognition of the fundamental links between local communities and their heritage, people and their natural environment and are fundamental to people's identity.

By 2009, there were 66 cultural landscapes inscribed on the World Heritage (WH) list worldwide. Most of them are living cultural landscapes, less relics and associative types (Mitchell, Rossler and Tricaud, 2009: 3). To date, the World Heritage Cultural Landscapes are accounted for about 9% of the total Would Heritage Site in the world or 85 properties with 4 transboundary (1 delisted property) on the World Heritage List, of which 12 properties are located in Africa region, 4 properties are located in Arab States, 47 properties are located in Europe and North America region, 5 properties are located in Latin America and the Caribbean, and 20 properties are located in Asia and the Pacific region (UNESCO, 2014: 1).

As WHSs cover many attractive and unique objects, including built elements, literature, visual art, buildings, customs, rituals, and objects of everyday use (The World Bank, 1999: 5), many countries consider a WHS as a key tourism destination and expect that WHSs will become resources to promote social and economic development.

According to the UNWTO (2013: 4), worldwide international tourism has rebounded strongly since the Global Financial Crisis. The preliminary data for some 150 destination countries indicated that total international tourist arrivals in 2011 were 995 million people, an increase of 4.8% when compared to 2010. Arrivals growth was positive in all world regions, led by a robust performance of emerging economies expanding at 8% compared to 5% in advanced economies, of which 14% were in the Middle East, a rapid growth region, followed by 13% in Asia and the Pacific, 7% in the Americas, 6% in Africa and 3% in Europe.

At world regional level, international tourist arrivals to Europe in 2011 were 516.4 million people (51.6%), the biggest percentage share of the international

tourism market, followed by 218.2 million people (22.6%) to Asia and the Pacific, 156.0 million people (15.8%) to the Americas, 49.9 million people (5.1%) to the Africa, and 54.9 million people (5%) to Middle East. The world change in percentage compared to 2010 was 4.8%.

As a consequence, the international tourism receipts in 2011 in Europe were USD466.7.5 Billion (42.6%), the biggest percentage share of the international tourism market, followed by USD298.6 Billion (30.1%) to Asia and the Pacific, USD197.9 Billion (9.8%) to the Americas, USD46.4 Billion (4.4%) to the Middle East, and USD32.7 Billion (3.1%) to Africa. The world change in percentage compared to 2010 was 4.7%.

In Southeast Asia, international tourist arrivals in 2011 were 77,268 million people or 36.2% of the Asia and the Pacific region tourist arrivals. In comparison to 2010, this was a 10.4% increase. A significant proportion of the visitors to these countries, are attracted to World Heritage Sites, particularly the Angkor Temple complex in Cambodia and the Town of Luang Prabang in the northern part of Laos, followed by Ban Chiang in Thailand, and Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape in southern part of Laos (UNWTO, 2011: 8).

1.1.2 Heritage and International Tourist Arrivals in Laos

Lao People' Democratic Republic (Lao PDR or Laos), one of the world's least developed countries, located in South East Asia region, has recognized tourism as one of the most significant sectors for economic development since 1986 (open door policy). The government has identified and declared the implementation, development and promotion of cultural, natural and historical tourism as to foster the growth in tourism together with other service sectors. The government has also dedicated its efforts in developing infrastructures such as road to link all northern, central and southern parts.

Although Laos has it disadvantages in terms of its location compared to its neighbors, less popular destinations for tourists, low international recognition and international access, no direct flights to Laos leave from the principal developed nations, there are still many advantages that facilitate the development of tourism in

Laos. Laos has abundant natural and cultural resources (Lao PDR et al., 1998: 1). Laos has its borders share with popular tourist destinations such as China, Thailand, Vietnam Myanmar and Cambodia. Travel agencies can easily provide package tours that combine these countries with Laos. In addition, Laos offers attractive and unspoiled natural environments such as mountainous area, and the Mekong River which flows from north to south of the country is abundant wildlife and freshwater dolphins. Moreover, Laos is rich in well preserved architectural heritage, temples and home to multiethnic groups living in every part of the country. Recently, in Laos there are total of 849 natural sites, 435 cultural sites and 209 historical sites that spread out among 18 provinces. More significantly, Laos is also home to two World Heritage sites, namely Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape (Vat Phou), located in Champasak province in the southern part of Laos, and the Town of Luang Prabang, located in Luang Prabang province in the northern part of Laos.

As a consequence, the tourism sector rapidly grew from 1993 to 2012 and the number of tourist arrivals to Laos has rapidly increased and increases constantly with an average growth rate of 20.07% and with the average number per year of 984,342 tourists. In the same period, the average revenue per year was about USD 150 million. The number of tourist arrivals to Laos continued increasing in 2012 when it reached over 3,330,000 tourist arrivals and generated a total of USD514 million to GDP (Tourism Development Department, 2012: 2). In addition, between 2008 and 2012, the average revenue from tourism (USD 368.92 million or 18.55% of total revenue) was second only to revenue generated by the mineral exports (USD 932.74 million or 46.41%) (Table 1.1).

According to the Tourism Development Department, Ministry of Information, Culture and Tourism (2012: 22) it is projected that from 2013 to 2020 the number of tourist arrivals to Laos will increase from 3,429,966 to 4,517,352 people respectively. Follows by the projection of the revenue from tourism of USD 518,369,064 in 2013 and USD 688,533,41 in 2020. A significant proportion of the visitors to Laos are attracted to two World Heritage Sites for recreational and visiting purposes, (Tourism Development Department, 2012: 15).

Table 1.1 Revenue from Tourism and Major Exports, 2008-2012 (in Million USD)

Year	2008	2009	2010	2011	2012
Minerals	801.9	539.4	1061.2	1237.2	1024
Tourism	275.2	267.7	381.6	406.1	514
Electricity	97.1	274.5	288.9	341	254
Agricultural Products	47.9	77	100.3	140	177
Wood Products	59.3	46	37.1	43.7	72
Coffee	15.6	13.8	19.8	23.4	69
Handicrafts	3.4	4.7	3.9	4.6	0.38
Garments	255	141.7	167.3	197.4	-
Other Industries	30	31.1	113.6	134	161

Source: Tourism Development Department, MICT, 2012.

The focus of this study is Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape, which was adopted by UNESCO as the second world heritage site of Laos in 2001. The first world heritage site of Laos is the Town of Luang Prabang, and it was adopted by UNESCO in 1995. Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape (Vat Phou) is valued for its cultural and natural landscape, whilst the Town of Luang Prabang is important for its cultural history and natural surroundings (Figure 1.1).

Figure 1.1 From left to right: View of Vat Phou, View of Luang Prabang Town

Vat Phou World Heritage Site meets specific criteria which give this site greater value and priority over Town of Luang Prabang. Vat Phou site management progress has fallen behind if compared to Town of Luang Prabang. Three major areas considered to have contributed to this lack in management progress are summarized as: (1) lack of empirical study on the recreational for use value of the site; (2) limitation and unsustainability of supportive funds for the site preservation and conservation; (3) lack of evidence on public financial supportive behavior toward their world cultural landscape.

This introduction sets out to evidence the reasons for this prioritization. The factors which support these criteria and make this site take precedence over Luang Prabang WHS have been identified as follows: they include the site's ranking for annual tourist visits and growth; its vulnerability due to the lack of site and resource management and protection strategies; and its unique position regarding research and development potential – there is a lack of study, documentation, data and analysis of the benefit and impact of tourism; and relevant because the lack of empirical data and research has a direct impact on the site's resources and tourist management and budget as well as policy making, implementation and management; long term sustainability of inter-agency grants once they have expired is in doubt.

First, Vat Phou is a highly popular tourist site, which is placed higher up the ranking than Town of Luang Prabang.

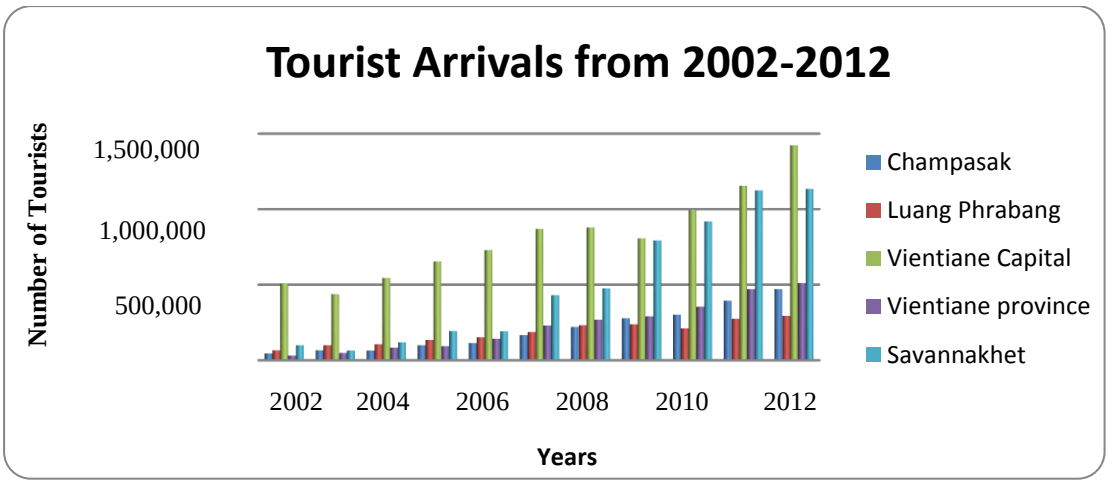

Figure 1.2 Tourists Number to Luang Phrabang and Vat Phou 2002-2012
Source: Department of Tourism Development, 2009.

From 2002 to 2012 (Figure 1.2), the number of tourists visited Vat Phou is ranked as forth in the list for tourist arrivals to Laos with the average of 201,653 visitors per year, whereas the Town of Luang Prabang is ranked fifth for tourist arrivals to Laos with the average number of 181,035 tourists per year. Whilst the first, the second and the third destinations of tourist arrivals to Laos are Vientiane Capital, Savannakhet and Vientiane Province respectively. However, since Vientiane Capital, Vientiane province and Savannakhet provinces are the main gates into Laos, either by land and by air, it is not surprising that the number of tourist arrivals are higher than other provinces.

Vat Phou has a higher average tourist growth rate than Town of Luang Prabang. By analyzing only the two WHS destinations, the average growth rate of visitors visited Vat Phou from 2002 to 2012 was about 27.45% per year, and the average growth rate of visitors visited Town of Luang Prabang was 17.29% per year (Tourism Development Department, 2012: 16). The two sites are vertically managed by the Department of World Cultural Heritage, the Ministry of Information, Culture and Tourism (MICT), and horizontally managed by the local government authority. Each year, the two sites need to received the budget from the government to be managed and preserve the sites of about LAK 1,800 million per year per site.

Even though Vat Phou is a more popular site for tourists and has experienced a rapid growth rate, the lessons learnt from Town of Luang Prabang have not yet been put into practice at this site. It is considered of great importance that environmental and resource management and protection plans are developed for Vat Phou. There are management strategies and an environmental protection plan in place Luang Prabang to preserve the uniqueness Town of Luang Prabang. Since Town of Luang Prabang is the first WHS of Laos (1991), it is popular destination to both domestic and international tourists. As a consequence, the rapid increase in visitors to Luang Prabang resulted in development pressure and critical stress on both the environmental and the historical cultural resources of Luang Prabang and threatens to overwhelm them. In solving that pressure, the government of Laos, together with stakeholders and inter-governmental organizations have been working hard on establishing and implementing management strategies and environmental protection plans.

Second, There is a very significant lack of documentation and analysis regarding the impact of tourism, resource management and planning to conserve heritage sites at Vat Phou. Whereas, Luang Prabang has a large number of management strategies, and a preservation plan have been published and implemented at the site. To name a few: a publication of UNESCO (2004) on Tourism and Heritage Site Management in Luang Prabang, Lao PDR. The publication identifies and measures the type of impacts from tourism, both positive and negative and suggest on the management side how to deliver an overall strategy that manages tourism in the site in order for tourism becomes a positive force for heritage conservation as well as contributing to the improvement of the quality of life of the town's inhabitants.

There is a severe shortage of comprehensive statistical data available to measure demand for recreation or to assess any need for particular types of tourism at Vat Phou WHS. Any studies carried out have not been publicized or disseminated widely. Empirical studies on the willingness to pay (WTP) of local residents, their motivation and behavior toward site preservation and landscape value have yet to be conducted. These areas of research seemingly lack attention and recognition from researchers in Vat Phou. There are few publicly available studies on the subject of empirical analyses relating to the management of Vat Phou WHS. For instance, two

researchers attempted to undertake an empirical study on tourist behavior towards Vat Phou. Namely, the work of Khoun-aphay (2012: 1-11) on the consumption of tourism in Vat Phou, and the Engelhardt et al (1999: 1-27) case study on the protected zone of Vat Phou. The outcomes of the research have not been publicized widely.

On the other hand, there are many empirical works relating to the economic activities in Luang Prabang WHS which are publicly available. To name a few: (1) a study of Morimoto (2001: 22) on the topic of "A Stated Preference Study to Evaluate the Potential for Tourism in Luang Prabang, Laos". The case study aims to estimate the value of tourism resources around Luang Prabang using conjoint analysis, and to predict the responses of tourists in order to identify new potential tourist attractions. The result of the study indicated that the development of tourism is an important strategy for the economic improvement, providing a number of economic benefits in the region. The study also found that the costs for trekking and for a village tour should not exceed USD3.50 and USD2.50 respectively. (2) a working paper of Ashley (2006: 89) on the topic of "Participation by the poor in Luang Prabang tourism economy: Current earnings and opportunities for expansion". The study aims at estimating whether tourist expenditure goes, and whether poor and poorest people in the area are earning incomes from tourism. The finding indicated that both semi-skilled and un-skilled people are earnings income in many different parts of the tourism economy. The finding suggested that a pro-poor tourism strategy should comprise many different types of interventions. (3) a study of Suntikul (2008: 14) on the Impact of Tourism on the Monks of Luang Prabang. The study found that Monks were far less likely to express their feeling a negative impact on their way of life from tourism. (4) a joint working paper of Southiseng and Walsh (2008: 45-65) entitled "Study of Tourism and Labour in Luang Prabang Province". The finding of the study suggested that the necessity of increases in employment in the service sector, particularly, in the accommodations, restaurants and tour operator services.

Third, Vat Phou WHS suffers from a limited budget which restricts site preservation. The national budget allocated for Vat Phou management has been very little as it competes with other development programs, such as infrastructure improvement, education, public health care, or even military spending. In addition, the entrance fee to access Vat Phou Temple complex has been set very low compared

to the amenities of the site such as impressive views of cultural structures and natures at Vat Phou. To enter Vat Phou Temple Complex, for example, the entrance fee per person for Lao nationality has been set of LAK 5,000 and LAK 35,000 for foreign visitors. (The official exchange rate, date 15/7/2013 was US$1= LAK 7,797.00)

Several project proposals, which focus on preserving individual sites, have been submitted to UNESCO, but they do not address the issue of financial impact to the local or national economy or value benefits. Although Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape is operated under government financial support and inter-governmental funding like Town of Luang Prabang, budget constraints limit the possibility of preserving the cultural landscape. Thus, serious attention is being given to encourage the general public to support the preservation plan. According to the office of the UNESCO Regional Advisor for Culture in Asia and the Pacific (2010), currently, there are still a number of projects for which funding is being sought, namely the project of Interpretation and Site Enhancement at Vat Phou, the Interpretation and Site Enhancement at Tomo Temple, the Interpretation and Site Enhancement at Nang Sida Temple, the Interpretation of the Champasak Cultural Landscape, the project of Historic Structures Inventory, the project of HATCH Program Development: Support for Traditional Crafts, and the Heritage Booklet for Lao School Children. Each project has an identified specific cost for its implementation by the office of the UNESCO Regional Advisor for Culture in Asia and the Pacific. The amount of each project is USD 4,500; USD 3,300; USD 3,200; USD 3,000; USD 8,500; USD 1,850; USD 10,000 respectively, a total of USD 34,350. However, the estimation of the benefits of these projects, including the recreational use value and the motivation of financial support from non-use value of the site has not been addressed.

Inter-agency and Lao government projects under the preservation and protection plan do not consider strategically the long-term impacts or sustainability once financial support has been withdrawn. The question of how much local residents have been involved in project consultation and how much they will support the continuance of projects once project funding terms are completed remains unanswered. This paragraph outlines some of the projects and activities.

There has been increasing activity within the Vat Phou preservation and protection plan, which targets the preservation of art, architecture, monuments, religious heritage, social interaction and lifestyle of local people in the geographical region. For example, the training project in Museology in the Exhibition Hall, the project of archaeological maintenance and management surrounding the site, the on-site conservation project, the project for the development of interpretive strategies, and the project of updating the action plan (UNESCO, 2010). These activities are included in the overall project and co-financed by inter-governmental agencies and the Lao government, and are co-funded by international and local organizations such as:

1) the co-financed project between Italian-Japanese-Lao governments on the restoration of the principal monuments of the Vat Phou archaeological sites aimed at preventing the loss of architectural material and damage by water erosion, the conduct of archaeological research on the monuments, enhanced visibility, and to conduct training in the conservation of stone artifacts and mapping;

2) the coordination and cooperation between the site managers of the protected site and the policy-makers and administrative officials in on-site training on archaeological maintenance and management;

3) the cooperation of the Asian Development Bank (ADB) and the National Tourism Authority of Lao PDR on the reproduction of promotional materials and construction of a visitor center at Vat Phou which aims to enhance the understanding of the integrated value of the Champasak Cultural Landscape and promote cultural tourism experiences for Lao and international communities;

4) the UNESCO and ADB projects on the interpretive video aims to provide visitors with an overall sense of the cultural landscape using a digital flyover technique as well as the use of a 3-D model for the Vat Phou temple to provide a high level of understanding of both the overall landscape and the temple. The project also includes an interpretive model, a heritage trail, heritage signage and dedicated website. However, from a long-term development perspective, it is still unclear how residents view and support the sustainability of such protection projects, cultural and ecological integrity in relation to future generations who would live in their adopted area.

Thus, based on the existing evidence it is found that although Vat Phou has advantages over the Town of Luang Prabang in terms of tourists numbers, the growth rate of tourism, and the earning share to GDP from tourism. When the issues related to the level of preservation and management of the site are looked at, Vat Phou management progress has fallen behind when compared to the Town of Luang Prabang. The issues that can be found in Vat Phou WHS can be summarized into three major areas: (1) lack of empirical study on the recreational for use value of the site; (2) limitation and unsustainability of supportive funds for the site preservation and conservation; (3) lack of evidence on public financial supportive behavior toward their world cultural landscape.

As a consequences it is questioned, whether the site of Vat Phou worth to the public in order to receive continuing support from them. While options to increase sites' revenue remain unclear because of the lack of information on demand parameters and user costs. This information is relevant and useful for decision makers, especially at the local level. In addition, if it is, what is an appropriate way to promote fund raising from the public to preserve Vat Phou as a national project and what factors influence public motivation to support their unique WHS as Vat Phou.

1.2 Research Objectives

In order to find out the significant value of this site, it is essential to investigate its use value and non-use value, including the motivation of both visitors and local residents, their supportive behavior and potential of fund raising from the public in terms of the following features:

1.2.1 To estimate existing tourism consumer surplus of Vat Phou

1.2.2 To estimate the willingness-to-pay of Laotians for the historical structures preservation at Vat Phou

1.2.3 To analyze the factors that determine Laotians' level of financial support for the preservation of Vat Phou.

1.3 Scope of the Study

To accomplish the objectives of the study, the scope for each individual objective has been defined as follows:

1.3.1 Domestic and international visitors visiting Vat Phou during the survey conducted, from October to December 2011 were randomly selected as a sample population for consumer surplus estimation.

1.3.2 Laotians living in Vientiane Capital were randomly selected as sample respondents to the willingness-to-pay study, conducted in between April and May, 2013.

1.3.3 Laotians visitors' and non-visitors' socio-demographic characteristics and their financial supportive behavior data that were derived from the consumer surplus and willingness-to-pay studies were used to analyze their relationship and factors influences.

1.4 Significance of the Study

The Temple Complex of Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape were selected as the study site because firstly, it was listed by UNESCO as the second World Cultural Heritage Site of Laos in 2001.

Secondly, by comparing the first WHS Town of Luang Prabang and Vat Phou in terms of average annual visitors numbers, the average annual visitors visited Vat Phou from the period of 2002 to 2009 were considerably higher than the average annual visitors visited Luang Prabang. Similarly, by looking at the growth rate of visitors in the same period, the average growth rate of visitors visited Vat Phou was much higher than the average growth rate of visitors visited Town of Luang Prabang, but less attention from the researchers in terms of economic valuation study.

Thirdly, since it has been a WHS, the Government of Laos has been working on a site action plan, including management, conservation, preservation and use of national heritage. The specific objectives under consideration by the Government

include the stabilization of ancient standing buildings and other structures, and a particular effort made to bring the hydrological situation under control, both in preventing flash floods and the undercutting of buildings, and in restoring the ancient system of water management as far as possible.

However, preserving Vat Phou and the Champasak cultural landscape is not only a monumental task, but also environmental conservation and historical preservation. It needs supportive action from many parties involved, not just funding from the government budget and inter-governmental cooperation, but also contributions from local communities for sustainable development.

Moreover, Vat Phou is of concern to the management authorities as to whether it has enough economic value to contribute to citizens' welfare in the case of inadequate assistance from the government or international funding. More significantly, these areas of research seemingly lack attention and recognition from researchers either.

1.5 Contribution of the Study

Thus, the main purpose of this study is to contribute to the knowledge of the economic valuation of intervention at the WHS at Vat Phou. The information from this economic analysis will help both local and central managers involved in site management. This research is expected to report the results of the zonal travel cost method (ZTCM), contingent valuation method (CVM), and the relationship between Lao citizens' socio-economic characteristics and their financial supportive behavior toward cultural landscape value. The study will apply the technique to both users and non-users of the site, making the scope of this research unique. It is highly expected that estimates of this kind are of value to both policy makers and managers of cultural institutions at both local and national levels. For example, to policy makers, the research can provide a measure of the extent to which policies supporting cultural heritage sites are consistent with community expectations. To managers of cultural heritage sites, the research can provide empirical guidance on the relative value that the wider community places on the services and facilities provided by the sites. As

sites are actively reacting to community valuations of the benefits they offer to both visitors and non-visitors, the research findings will help managers make more informed decisions on programs and activities that better reflect community expectations.

1.6 Content Coverage

The structure of this paper is divided in to seven chapters. The first chapter is the introduction, covering the background and rationale of the study, research questions, objective of the study, scope of the study, significance of the study and the expected contribution of this study. The second chapter is a literature review. The third chapter describes the Vat Phou study site, and discusses issues related to site management. Chapter Four then presents Empirical Study 1, the economic valuation study of Vat Phou: evidence from the zonal travel cost method. Chapter Five presents Empirical Study 2, the willingness-to-pay study to value the integrity of Vat Phou historic structures (All traditional wooden Lao houses, temples and other buildings 50 or more years-old at the site), using CVM. Chapter Six presents Empirical Study 3, an investigation of the relationship between Lao citizens' socio-demographic characteristics and their financial supportive behavior toward cultural landscape preservation and environmental protection, and chapter seven is the conclusion and recommendation.

CHAPTER 2

LITERATURE REVIEW

This chapter outlines appropriated policy instruments for preserving outstanding world heritage sites, particularly in the cultural landscapes of Asia, the Pacific and in South East Asia as in the case of Vat Phou. This chapter then presents the concepts of economic valuation for WHSs and reviews the methodologies for non-market valuation, focuses on travel cost methodologies and contingent valuation methods. This begins with the recognition of established international instruments for WHSs management: convention, charter, and operational guidelines. Then this chapter explores a review of related policy instruments that have been successfully implemented in heritage sites worldwide. The last section of this chapter then presents the review of methodologies applied in this dissertation. The details for each section are presented as follows:

2.1 Economic Policy Instruments for WHSs Management

Since the WHSs cover a complex reality and many definitions (UNESCO, 2010: 1) it is important that the management of heritage sites for them to remain of outstanding universal value with their material, physical evidence and non-material associations, naturally this is a challenge for the site managers.

According to Mitchell, Rossler and Tricaud (2009: 86), the common issues that can be expected to occur in the management of many world heritages worldwide can vary in detail and application. First, issues arise depending on the types and category of the site. Secondly, considerations regarding the social and economic environment of the place cannot be avoided. These considerations relate to tangible objects conservation treatments, new techniques for managing essential

components in the designated sites, and the allowance for the insertion of new elements such as building, structures, earth works, plantation...and new users; and issues relating to coping with impacts caused by threatening processes and events or developments external to the site, which affect or threaten the integrity of the designated sites. Examples of external developments, in the case of landscapes are: implementation of farming and forestry policies, road construction, investigations into occurrence of natural resources, including "user pays" concepts and other external income to ensure the economic viability of operations to maintain the values of the cultural landscape. In some cases, especially, cultural landscapes that reside within communities, issues arise relating to communities' support and limitations in participating in maintaining heritage values within the cultural landscape.

Institutional problem is another issue of WHS management. First, the problem related to defining purpose and resolving and raising awareness of interdependence between organizations. Second, the problems that involve sharing information to stakeholders, dispersion of more balanced power among organizations, selecting solutions to problems and building shared visions. Third, the process of implementation of strategy or plans and the institutionalization of the management structure. Borobudur site in Indonesia for example, faces issues of institutional problems. According to Kausa, Nishikawa and Nishimura (2011: 37-39), the first institutional problem Borobudur faces is a lack of legal framework that specifies in detail how the site is being a WHS. There are at least three main organizations involved in the site management, the central government body, the local government, and the state-owned enterprise, which has the dominant position in making decisions related to tourism. However, the decree fails to specify any coordination mechanisms and distribution of revenue between the three organizations. Thus, these three organizations have not coordinated well in tackling problems in the area. Second, there is no clarity about the main actor who will lead the initiative for sustainable development of the communities surrounding the site. There are some assistance programs from the local governments, but there is a lack of continuity and long-term vision.

Some other issues related to the WHS management are included: a lack of awareness and general education about their value to society; and the need for specific

training for staff working on the site. More significant issues relating to the management of tourism are to ensure continuing visitor access to, and appreciation of the site without seriously impacting the outstanding universal value.

In addition, the experience proves that cultural heritage contributes to the life of community. Heritage can be an income-generating vehicle. Thus, policy instruments for preserving heritage should therefore be reference documents, as well as support for both groups and individuals who are interested in contributing to history and culture through their activities in the discovery and protection of heritage in general (Arpin and Bergeron, 1999: 70).

As noted by the EU (quoted in Endreson, 1999: 15), groups and individuals can be divided into many parties. Private enterprise for example can be the mainspring of tourism, but for the site's sustainable development it requires public sector to be directly involved in establishing necessary policies and legislative framework by coordinating with other administrative levels of competence and various stakeholders. There are many good practices of establishing necessary policies appearing in the literature. In South Africa for example, policy instruments for preserving their heritage involved three parties such that tourism should be government led, private sector driven, and community based.

UNESCO (2004) indicated that policies represent the development of a planning process. They represent objectives that set out in the plans to be achieved. There are a number of referenced documents that can be seen as guidelines and handbooks for managing world heritage appearing in literature. The main guidelines are UNESCO handbooks for conservation and management of World Heritage Sites. The handbook for World Heritage Cultural Landscapes for example, written by Mitchell, Rossler and Tricaud in 2009 has the purpose of filling the gap between two groups of those preparing nominations (including management systems and plans) of their cultural landscapes for inscription, and those managing cultural landscapes already inscribed on the World Heritage List. The handbook also focuses on promoting good practices in the management of all cultural landscapes, using World Heritage lists and potential cultural landscapes as examples. The other purpose of the publication is to also assist others managing large, complex properties, landscapes of local or regional significance and other sites at the interface of nature and culture.

In short, policy for heritage management is identified as fundamental to understand the impact and its influence at multiple levels. In terms of financial support, policy determines what gains funding and what does not. In relation to the conservation, it determines what is conserved and what it is not. At national level, policy affects national legal structures by influencing the heritage sector. At the local level, it influences local authority policy, etc. (Mignosa and Rizzo, 2004; Rizzo and Mignosa, 2006).

Based on the literature review, a number of policy instruments implications were proposed in the heritage studies by researchers. These implications are resulting from the studies of economics of preservation for heritage sites, the heritage tourism studies, the heritage collaboration and partnership studies, and the heritage conservation studies. The policy instruments that relate to the preservation of the studies included the policy that emphasizes on partnerships with the purpose of increasing the site revenue; the policy on carrying capacity for sustainability; and the fund management policy associated with conservation initiatives. In some case, the policy instruments include command and control approaches. These approaches can be seen in the form of taxations such as tax deductible and tax incentive for stakeholders. Finally, there appears a zoning policy, this policy can be seen in the form of project. The project is prepared with funding from supportive organizations. More implications of each policy are presented as follows:

2.1.1 Implications of Partnerships Policy Instrument

In the study on changing market for heritage tourism in England, Markwell, Bennett and Ravenscroft (1997 quoted in Chhabra, 2009: 308), placed a policy that emphasises on partnerships. The policy has the purpose of increasing net income and promoting a strong customer base.

Other paper on partnerships instrument were written by Hassan (2000 quoted in Chhabra, 2009: 308). He argued that partnerships are needed to formulate strategies compatible with the market needs and economic viability.

In addition, Silberberg (1995 quoted in Chhabra, 2009: 308) also has proposed a partnership policy in his study with the purpose of increasing attendance. He argued that partnership instruments can lead to a generation of revenue that meets operating

expenses. To be more specific of partnerships studies, Aas, Ladkin and Fletcher (2005 quoted in Chhabra, 2009: 308), for example, provided conceptual framework to test the effectiveness of ongoing partnerships. They explored five aspects of collaboration between heritage conservation and heritage in UNESCO-sponsored Norwegian project. The criteria used were: "channels of communication between the heritage and tourism groups, generating income for heritage conservation and management, involving local community in decision making and tourism activities, and assessment of the extent and success of stakeholder collaboration" (Aas et al., 2005: 31-35 quoted in Chhabra, 2009: 308). However, the authors noted a number of barriers in regard to leadership, initiative, direction and effective communication techniques between stakeholders.

Another partnership policy was discussed by Likewise, McKercher, Ho and Du Cros (2004 quoted in Chhabra, 2009: 308). Their study attempted to identify the significance of partnerships between the cultural heritage management sector and the Hong Kong Tourist Board, by using seven different relationships among these two sectors. The results of their study indicated that partnerships are rare and usually conflicting in heritage institutions.

2.1.2 Implications of Carrying Capacity Policy Instrument

It is found that a carrying capacity policy instrument is established at cultural and natural heritage sites only in case those sites are overused or in some cases, those sites are in some way negatively impacting either the attraction sites themselves or the local residents. In some casews the policy is established when the site is crowded in order to try to determine the number of visitors. In China for example, many world heritage sites in Beijing, have determined the maximum number of visitors per day in order to avoid crowding the sites.

Endresen (1999: 22) indicated that, in practice, to estimate a carrying capacity instrument it requires strong assumptions, indicators and standards. Indicators can be selected at least up to eight scales. One important indicator can be visitor perceptions on crowds. Possible standards can be set with an average of five or less scales. Then, if the average estimation indicated that the level of crowding exceeds five, the management should take action. The implementations can be either limiting the

number of visitors or dispersal of visitors. Another indicator and standard for doing carrying capacity estimation can be developed based on the sites' resource conditions or based on the factors that affect the sites. For example, one indicator may be carbon dioxide levels in an enclosed environment containing limestone formations. In short, indicators and standards for carrying capacity instruments are based on what some individuals or groups' perceptions are considered to be a priority, and it also depends on an agreement or acceptance of all stakeholders and their supporting the management actions.

In addition, the policy instruments that emphasize on carrying capacity can also be seen in different levels of management (central and local levels) for the successful achievement of sustainability of the study sites. For instance, Saarinen (2006 quoted in Chhabra, 2009: 311) has discussed the concept of carrying capacity control at the central level. The author has divided carrying capacity control into six subtypes: physical, economic, perceptual, social, ecological and political. He has identified three traditions that reflect various expressions and basics of the sustainability concept on a local level: resource-based tradition, activity-based tradition and community-based tradition. He argued that tradition implied "that sustainability is, or can be defined through a negotiation process, which indicates that the limits of growth are socially constructed". He however warned that the community-based discourse is not problem-free and objective, but is laden with power relations. In other words, host communities are not monolithic, rather they comprise of different groups with different and sometimes conflicting dispositions. This implies that local communities play an important role in terms of involvement and benefits, thus, it is very crucial for planners of the site to carefully plan for negotiation and participation processes.

2.1.3 Implications of Zoning Policy Instrument

An example of effective planning efforts for zoning and environmental management plans for heritage sites can be seen in the case of Angkor, located in Cambodia, a World Heritage site inscribed since 1992. It is a golden egg for Cambodia and it is one of the greatest tourist attractions in Southeast Asia. Recently,

it became a worldwide tourist center with an average tourist number of 2.5 million per year (Tashiro, 2010: 83).

The development of zoning Angkor or ZEMP (Zoning and Environment Management Planning) was initiated as a project with funding from many international organizations in order to manage, protect the site and to control other related areas of management such as urban planning, rural development, natural environment and tourism. Thus the zoning has incorporated multiple disciplines for archaeology, hydrology, ecology, urban development and rural development. There are many reasons why conservation policies need to be implemented in Angkor. First, there are many monuments in Angkor area, each has a different level of significance and the sites were protected as World Heritage sites with the policy strictly prohibiting local activities. Secondly, there are lack of human resources, budgets, and difficulties posted by task coordinations between international organizations and the government. Finally, the government organizations are lacking experience working with UNESCO's.

Although ZEMP were prepared over a short term due to the political and economical situation at a time, it played an important role in the management of Angkor, and it is effectively the basis of current regulation for its protection, as it determines the zones and boundaries for protecting the archaeological heritage sites. It includes the first legal framework, the management and the development of guidelines.

Another promising example of zoning policy instrument for heritage site management is a Master Plan for management of Borobudur Temple, an ancient and magnificent Buddhist temple, located in Central Java province, Indonesia. The site became a WHS in 1991 and it is the most important tourist destination in Indonesia, with average visitors of about two million people per year (Kausa, Nishikawa and Nishimura, 2011: 33). The plan divided Borobudur site into five zones based on its structure and level of significance. The zoning included Sanctuary zone, Archaeological part zone, Land-use regulated zone, Historical scenery preservation zone, and National archaeological park zone. Although there were some issues related to the site management such as institutional problems, which hinder the main

organizations, the zoning policy is a legal framework that can emphasis the right of organizations in managing each zone.

Zoning policy implications can be also seen in the study of assessing the existing conditions of the cultural historic site of Ban Sakhla community, the oldest community in the central region of Thailand, located in Samutpakarn province. The author, Chonlavit Sutunyarak (2008: 56) has divided the management plan of the study site into four zones based on historical value, aesthetic value, scientific value and social value in order to encouraging heritage tourism in the community and to protect the town's heritage character and way of life as living history. The stakeholders involved in the management plan included the government agencies, Temple authorities, and local residents. Government agencies in this term are the municipality, the Tourism Authority of Thailand, which plays the role of providing basic infrastructure, developing policies and management, encouraging and promoting tourism activities and conserving all heritage values. Temple authorities take role of cultural tourism into the community. Lastly, local residents are the key persons to take the role of conservation and tourism in the community to keep environment of the site clean. The study has proposed numbers of management for cultural heritage tourism to the site, including the interpretation program, setting a visitor service center, signage improvement and development, developing potential media, transportation management, and homestay programs, local museum, and setting up visitors activities, conservation program.

2.1.4 Implications of Fund Management Policies

According to Vines (2005: 42-43 quoted in Chonlavit Sutuniyarak, 2008: 175), there are eight possible sources of funding that are associated with heritage site conservation. These sources of funds include the establishment of a heritage fund. This form is generally allocated from the government tax or supported from the corporate sponsorship. The second possible source is from tourist revenue raising strategies. This form can include a hotel tax, an entrance to heritage area fees, a visitor entry taxes at airports, a visitor center entry fees, and service taxes. The third source is special events marketing, for example, locations for films can be used as a basis for revenue collection. The fourth one is the provision of low-interest loans or grant

monies to assist with conservation activities. The fifth one is international and private funding sources such as funds from WB, Ambassadors, private industry donations and sponsorships. The sixth one is free expert conservation advice. The seventh possibility source of funds is known as relaxation of certain requirements, for example tax incentives, or property taxes that may be waived for a period of time if a building is conserved. Transfer of density rights is another example, which includes the sale of extra density to another site where a historic building is conserved. Waiving of off-street parking requirements in exchange for conservation of the building fabric is another example. The last possible source of funds is heritage conservation awards. This way of fund raising is an important part of any community participation program, and is a positive approach for promoting best practices for conservation.

However, the success of fund management depends on how the funds themselves are formulated. There is a clear need to develop a fund management model that is capable of being enhanced in the long term and become self-sustaining. This model also needs full support from many parties in society: local communities in the area, local, central, and private organizations to ensure its success in implementing the site's core management plan.

Funding management for heritage sites in Thailand for example, the government is offering agencies service as incentives or supplements (Chonlavit Sutunyarak, 2008: 158). The local municipality spends revenues from a dedicated funding source or general appropriations. These dedicated funding sources include property taxes, real-estate transfer taxes, and even one-time environmental fines and budget surpluses. However, according to Chonlavit Sutunyarak finding, the public funding provided by the government and other authorities is increasingly inadequate.

In Sri Lanka, on the other hand, financial policy instruments for heritage preservation meet more success. The government has established heritage funds call The UNESCO Cultural Triangle project or the Sri Lanka’s Central Cultural Fund, the country’s principal archaeological heritage management organization. The project runs in five World Heritage sites in Sri Lanka. The project has developed a funding arrangement based largely on entrance fee. The fee is USD7.50 per site or with a total of USD32.50 for all sites. The fee has concessions for residents, students, researchers, and so on. The revenue from the fees go to the Central Cultural Fund with exclusive

expenses on research, conservation, preservation and public information, maintenance and general management. However, since this fund is a project type, it can be successfully implemented in the short term period, when the project has finished, problem of sort in supporting funds may occur and preservation process may be stuck somewhere.

Taxation policy is another policy that can be seen often in heritage management plans. This policy was successfully implemented in Belize, for example. The policy was implemented by the Protected Areas Conservation Trust (PACT). It is the Trust that is independent from government agencies. PACT involves a USD3.75 conservation fee for all foreign visitors, which is added to the pre-existing USD11.25 airport departure tax. The average foreign tourist per year was estimated about 140,000 visitors, means that this implemented program is expected to generate more than USD500,000 annually. Since this trust is independent from the government agency and it is supervised by a board that comprises of both governmental and nongovernmental representatives, PACT funding can be used for a variety of purposes within the natural and cultural resource arena. The activities included training, environmental education, protected area planning, and institutional support. More importantly, this trust is not intended to replace core government funding and the final program differs substantially from the initial proposal. The trust was successfully implemented in Belize as it was a five year period of development and Belize's tourism is heavily dependent on natural and cultural attractions and there is clearly justification of those fees. However, this approach may not be successfully implemented in other countries, but if we look at the preservation purposes, this approach represents an excellent example of creative trust funds for natural and cultural protection, particularly to the case of Vat Phou.

Trust for nature and culture conservation still can be seen in many quarters. The form of trust can be illustrated as development cooperation. The King Mahendra Trust for Nature Conservation in Nepal for example, has the purpose of sharing fee revenue at Royal Chitwan National Park with local communities. This form of trust illustrates how revenue from entrance and related fees at attractions can be used to fund community projects, thereby providing tangible conservation-related benefits to local residents. Other countries such as Spain and Japan also have Trusts that are

called Tourism Attraction Fund. The funds were supported by hotel occupancy tax that were collected on arrival or when registering at hotels. The purposes of revenue was to be earmarked for the maintenance of national parks and the restoration of damaged tourists sites. In Japan, the revenue is also used for marketing and for local improvements (such as better streets, lighting, and sports fields), as well as support for cultural programs, artists, tour guide training, workshops, travel for local artists and musicians, and many other items related to cultural tourism.

In Madagascar, on the other hand, the protected area management agency (ANGAP) shares half its national park entrance fees to fund projects in local villages in order to support local communities. Similarly, the revenue sharing programs (revenue from entrance fees) have also been implemented in Kenya and Zimbabwe.

There also exist other forms of voluntary or mandatory revenue mechanisms. UNESCO suggested that a donation program for Hue be implemented and could involve recognizing donations via names on roof tiles, bricks, and plaques.

The discussion above has focused on how to generate revenue through tourism and channel it into agency funding for site protection and/or into local communities. However, such revenues can also promote CHM through other means. For example, tax breaks and incentives have been used effectively in OECD countries to encourage private sector conservation activities. Though such systems are subject to abuse, they can be valuable tools for CHM.

In the case of cultural heritage in Asia for more specifics, the majority of funding mechanisms for promotion, conservation and preservation even for personnel are still government funding. The government funding might have many advantages in those countries. The government funding is sufficient to cover the expenses related to only certain nature and mixed heritage properties, but it does not cover the expenses related to the site conservation and management on the whole.

Based on the literature review, it is considered by most site managers in the Asian region as insufficient to address the challenges of conservation and management of their World Heritage sites. In the case of West-Central Asia for example, the often limited character of government funding does not allow for any long-term planning in the preservation of World Heritage, and forces the site

managers to search for additional funding at the local or international level (UNESCO, 2004: 141).

Thus, various funding mechanisms are being used by the Asian countries, including Laos to ensure proper budget allocations to their World Heritage properties. A secure means of collecting funds for their world heritage properties is admission fees, followed by entrance fee. In some cases, admission fees are the first source of funds for world heritage management, before government funding. In China, in the Republic of Korea and in Japan for example, the revenues from tourism are often allocated to the restoration of the site itself, and the government funds are allocated for the re-investment of an immediate investment gains.

Other funding mechanisms include funds from the Army (in the case of certain natural heritage properties in India and Nepal), funds from the private sector, grants and donations, loans at national and international levels, funds from business income and investment gains, or even bilateral or international assistance, etc. In Sri Lanka for example, the budget for World Heritage is administered jointly by the Archaeological Survey Department (ASD) and by the Central Cultural Fund (CCF). 75% of the income of the CCF, mainly from entrance fees and grants, is spent on heritage protection and related measures, while the ASD ensures adequate funding of the site management authorities. None of these mechanisms should be put aside a priori, and countries are encouraged to consult with the local stakeholders and site managers to establish a financial plan to ensure sustainable resources for the long-term conservation and promotion of World Heritage properties.

According to UNESCO (2004), admission fees should not be considered simply as a way to ensure minimum funding for a World Heritage property: for endangered properties, or for fragile properties, the existence of a significant entrance fee can be used to monitor visitor pressure onsite and act as a deterrent to the development of mass tourism within the protected area. Entrance fees need to be developed as an alternative to government funding, since most of the funding received from local or national government authorities is intended to pay for the management authority’s staff and premises.

The challenge, then, is to take a leadership role in coordinating across ministries despite unfavorable power balances. Though there is no easy solution to this challenge, development cooperation agencies can help by supporting the tourism and culture nature ministries, both in terms of funding and in terms of policy and rhetoric. Coordination across ministries and departments within ministries can be promoted through establishment of working groups, boards, and other fora. Specific projects requiring (and funding) coordination for effective implementation (and receipt of donor assistance) can help stimulate this process.

[File understanding world...] In sum up, management a WHS cannot be achieved by policies and programmes of heritage alone. It requires intervention of heritage protection into comprehensive or larger scale planning programmes that involve many parties or stakeholders. According to ... In Asia and the Pacific, only 11 states Parties consider that their policies for the conservation and protection of Heritage Sites are comprehensive and are effectively implemented. In most other States Parties, the policies exist, but with some deficiencies in implementation.

The best example of intervention programmes into the policy of sustainable development is Town of Luang Prabang. The success of conservation of heritage and its implementation improves the conservation of the heritage and adequate conservation of the town, makes the town attract more economic benefits from tourism, these are then being distributed to the local communities rather than to foreign investors. Need more evidences to confirm a best practice.

2.2 Economic Values

Economic values can be interpreted in several different ways. First, value is an essential concept in economics, though used in distinctly different way from that of conservation discourse. Economic values are expressed in price whereas cultural values are classified as significant or not (Mason, 2008: 306). Further, economic value is derived from individualized benefits tradable in markets; cultural values are by definition held collectively as well as individually. Second, the concept of value stems from the idea that heritage conservation yields both private benefits and public benefits, which is to say use (market) values and non-use (beyond-market) values. If

conservation yielded mostly private benefits, economic logic would suffice as a discourse about heritage value, relying on market price (as with the real estate markets for historic houses).

There are numbers of economic valuation studies that discuss the terms of economic values. Following the working definitions and discussions on value terms of Adamowicz et al. (1991: 423-429); Saker and McKenney (1992: 6); Draker (1997: 4-6); Condon and White (1994); Klemperer (1996: 418-447); Bishop (1999: 3); Dlamini (2007: 103-105), value can be categorized into two aspects: market value and non-market value (Figure 2.2).

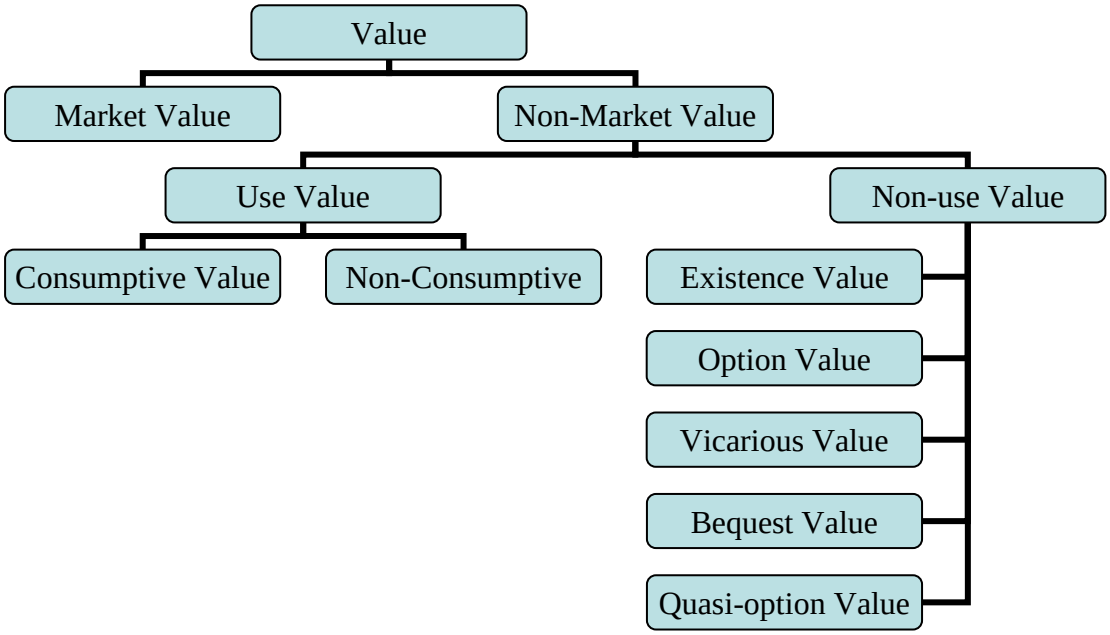

Figure 2.1 The Structure of Non-Market Valuation Techniques
Source: Sarker and McKenney, 1992: 6.

Market values can be determined in the market place through the interaction of demand and supply (Sarker and McKenney, 1992: 5). In some cases, market values are also defined as values in exchange and can be measured from direct and indirect expenditure effects. Non-market values can be describle as attiributed by individuals to goods and services for which there is no explicit market, or in other world, other goods and services, market prices either do not exist or only capture a small part

of the total value. The scheme proposed in this analysis highlights the non-market values. Non-market values can be further divided into use and non-use values.

Use value refers to the benefits a user obtains either directly or indirectly from participating in an activity such as visiting a national park, hunting, fishing, bird watching etc... There are two types of use value: consumptive and non-consumptive values. Consumptive values or in some cases known as extractive value refers to those preferences associated with an activity that actually consumes or extracts environmental resources. Extractive use value can be seen in the context of a forest, for example, extractive use value that would be derived from timber, from harvest of minor forest products such as fruit, herbs, or mushrooms and from hunting and fishing. Similarly, in the coral reef, use values can include the harvesting of shells and catching of fish. In the case of Vat Phou and Associate Ancient Settlement within the Champasak Cultural Landscape, extractive use value can be derived from fishing, harvesting of minor forest products such as fruits herbs, mushrooms, rice cultivation...Non-consumptive values are those preferences associated with an activity that does not affect the resource. For example, individuals who go hiking or camping, enjoy bird-watching or appreciate a view at a lookout in the forest receive a direct use value but do not actually consume any of the forest resource. Similarly, in the coral reef context, non-consumptive use of the reef is by scuba divers. In the case of Vat Phou, non-consumptive values can be derived from individuals taking pictures, groups or businesses use Vat Phou's view as logos for the t-shirts, key holders, and other souvenirs for tourists etc...

According to Pagiola and Dixon (1998: 4.), all of the benefits that an individual can obtain from both consumptive and non-consumptive values are real, can be measured, and have values, even if the consumption by one individual does not reduce the consumption by another. Economists call this as non-rival consumption, and these goods are classified as public goods. Consumptive use, particularly is the easiest to value as it usually involves observable quantities of products whose prices can usually also be observed. While, non-consumptive use is often more difficult to value as both quantities and prices may not be observed.

Non-use value can be referred to the situation where an individual does not presently utilize goods but still values them. Within the category of non-use values are existence, option, vicarious, bequest, and quasi-option values.

Existence value refers to the value an individual places on the existence of a good or service even though he or she does not involve using it in any way, whether directly or indirectly. In other world, it is the value that individuals derive from the knowledge that something exists, even if they never plan to use it. For example, some individuals may value the existence of rainforests around the world, even though they never see them and may never visit one. Similarly, some people place a value on the existence of blue whales, or of the panda, even if they have never seen one and they probably never will see them, but if they became extinct, many people would feel a definite sense of loss. Existence values are quite controversial and capturing them in economic analysis is a challenging task (Sarker and McKenney, 1992: 5). Similar to the view point of Pagiola and Dixon (1998: 4) in that measuring non-use value is often considerable more difficult than measuring use value. They argue that, non-use value is the most difficult type of value to estimate, since in most cases it is not, by definition, reflected in people's behaviour and is thus wholly unobservable. In addition, they argue that many services often do not enter market at all, so that their "price" is also extremely difficult to establish. A good example is the case of measuring the visual aesthetic benefits that provided by a landscape which knows as a non-rival in consumption, which mean that they can be enjoyed by many people without detracting from the enjoyment of others.

Option value refers to the value obtained from maintaining the option of taking advantage of something's use value (whether extractive or non-extractive) in the future. An example of extractive values is commercial and subsistence fishing, while an example of non-extractive values is catch-and release sport fishing or wildlife viewing. Bishop (1982) has classified that it is different between option price and the expected benefits of a recreation service. Option price is defined as the maximum amount consumers, with uncertain supply, are willing to pay for an option to have resources or services available in the future. The focus of option value is on individual decision making behaviour under uncertainty whereas for quasi-option value the focus is on the public sector decision-makers who are evaluating public policies or projects

under uncertainty (Freeman, 1986: 5). Example, individuals who expect to visit a particular site would be willing to pay for an option that would guarantee their future access to the site.

Vicarious value refers to the value that occurs when individuals derive satisfaction simply from knowing certain rare species and environmental amenities that still exists via pictures, descriptions and accounts made available through the various media. For example, the amenities species such as spotted owl, pine martens, peregrine falcons, etc. and the amenities of environment like old-growth forests. There exists also vicarious consumption. Krutilla and Fisher (1975: 142) indicate that for the vicarious consumption case there is no motive other than the mere knowledge of the existence or preservation of a natural environment. And because of this characteristic, vicarious values arc often recognized as a variant of existence values in the economics literature (Sarker and McKenney, 1992: 6).

A bequest value is the value derived from the desire to pass on values to future generations. In a forestry context, a bequest value could occur when an individual is willing to pay for the preservation of natural biodiversity and/or wilderness so that his children or grandchildren would have opportunity to enjoy the forest in a less disturbed slate. Bequest value generally depends on the uncertainty associated with supplying "unique and irreplaceable" natural environments for future generations. Bequest value is different from existence value in that it is manifested by perceived inter temporal and inter dependent preferences (Brookshire et al., 1987). This essentially means that people in the present think that people in the future will desire these things as they themselves do. In Vat Phou case, local people in the present willing to pay for the preservation of historical structures and temples so that their children would have opportunity to visit them in the future.

Concepts such as option value and bequest value can be linked to the notion of "safe minimum standards" (Ciriacy-Wantrup, 1968: 39). Policies such as implementing buffer strips and land withdrawals for reserves and wilderness are related to uncertainty of supply for unpriced resources to future generations.

Finally, the concept of quasi-option value, introduced by Arrow and Fisher (1974: 315), is very different from that of option value. Quasi-option value can be defined as the value of the opportunity for obtaining better information by delaying a

decision they may cause irreversible changes. This decision problem can be seen in the case of forest whether to harvest a particular forest site or to preserve it. The decision is based on the assumption of no new information, the decision-maker may be able to generate an expected value for preservation. While recognizing that new information is in the offing, he obtained an expected value for preservation. The difference between two information is the quasi-option value, knows as the expected value of better information conditional on choosing preservation at the present time (Hanemann, 1984: 25).

2.3 The Economic Value of Cultural Heritage

The fundamental concept underlining any assessment of the significance or worth of cultural heritage is the concept of economic value. The question is, what is the value of heritage and how can we assess it to make sense for public sector decision making. Throsby (2007: 4) argues that the well-known categories that can identify the economic value of heritage are clearly spelt out in heritage economic literature. They correspond to the ways in which individuals experience the sites, either by direct use or by indirect use or as a beneficial externality.

Direct use (use value) can be a value that accrues to individuals, households or firms through the direct consumption of heritage services (Throsby, 2007: 3). The forms of experience can be through the ownership of heritage assets or the enjoyment of the services of a heritage site by either living, working within the site or visiting the sites. These values can be observed and they are reflected in the market process.

Indirect use (non-use values) is the second aspect that accrues to individuals as use value. But they are not reflected in market processes since they are derived from those attributes of cultural heritage that are classifiable as non-rival and non-excludable public goods. There are three categories of indirect use: existence value, option value and bequest value. Existence value can be referred to as the individual's value of cultural heritage simply because it exists. Option value refers to the individual wish to preserve heritage assets in order to leave them open for future consumption. Finally, bequest value refers to the individual's willingness to pass on the heritage assets to the future generations.

The third type of value of cultural heritage experienced by individuals is beneficial externalities. It stands somewhat apart from use and non-use categories.

Mason (2008: 304) states that there exist different values of heritage assets: economic values, social values and environmental values. Economic values in his point can be interpreted as mentioned by Throsby (2007: 3): use value and non-use value. Following his argument, use value can be referred to those readily tradable on markets and translatable into price. Non-use values are defined as those for which markets do not exist. Social values of heritage in his point of view refer to the collective use of it for other than heritage reasons. While environmental value is defined as heritage's role in the natural landscape or ecological systems.

Schumann (2012: 4) defines economic value as referring to not only what people actually contribute to the economy, but also including what people are willing to pay (or give up). Schumann states that economic value is simply the estimation of what something is worth. Draker (1997: 4-6) states that there are two ways to measure economic value. The first is to measure from the amount of money that an individual is willing to pay to obtain goods, called willingness to pay (WTP). The second is to estimate from the amount of money that an individual is required for compensation to give up goods, called willingness to accept (WTA) or willingness to sell (WTS).

2.4 Method for Non-Market Valuation

Drawing on the literature, there are two valuation approaches for non-market goods and services, the revealed preference (RP) and stated preference (SP) methods (Figure 2.3).

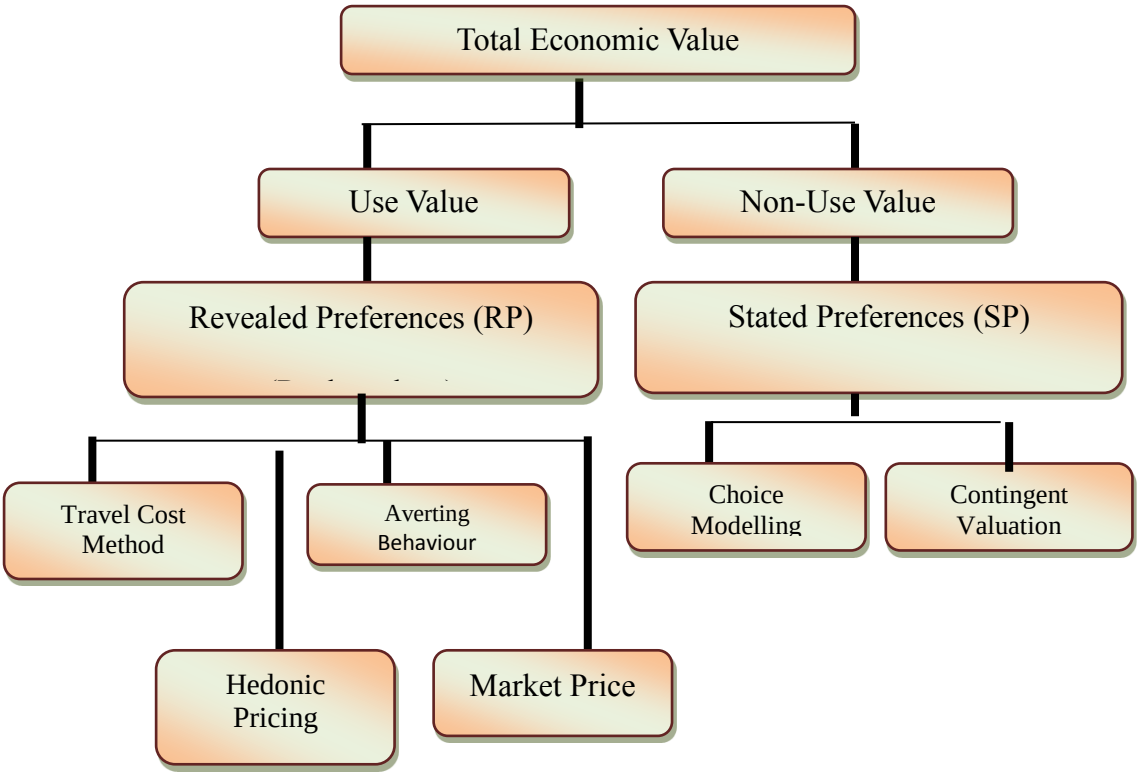

Figure 2.2 Review of Valuation Methods

Source: Sarker and Mckenney, 1992: 6; Condon and White, 1994.

Revealed preference methods draw statistical inferences on values from actual choices people make within markets (Boyle, 2003b: 259), while stated preference methods attempt to induce an individual to state their preferences through their behavior in hypothetical markets (McConnell and Walls, 2005: 29-30). The common revealed preference methods used for non-market valuation included hedonic pricing, travel cost, averting behavior and market pricing methods.

In short, hedonic pricing method has been used in the field of environmental economics to provide an estimate of the value of environmental amenities and urban goods that affect prices of market goods such as housing. The method was first used by Court in 1939, but its popularity of use is in early 1960s with the work of Griliches (McLoughlin, Kaminski and Sodagar, 2006: 13). The most common vehicle for the studies are reasonable efficient in responding to environmental changes and so can be good indicators of value. Hedonic pricing method is relatively straightforward method and uncontroversial to apply as it is based on actual market prices and fairly easily

measures data such as data on the residential property sales and the characteristics of those properties for the case of property market as an example. The technique has been also applied to cultural heritage, particularly in United Stated and Australia (McLoughlin, Kaminski and Sodagar, 2006: 13). In United States for example, the method has been used by Clark and Herrin in 1997, to evaluate the value and benefits of the creation of historical preservation district in Sacramento, California. The results suggest that the districts have a positive impact on residential property prices in four out of the six districts surveyed. In Australia, Deodhar (2004: 5) uses the method to value historic properties in Sydney's upper north. The results indicated that heritage-listed houses were found to command a price premium over unlisted houses. He summarize that the historical significance of the heritage properties was considered to have had a beneficial influence on price.

However, the hedonic pricing method has some limitations. According to Bennett (2000: 38), the hedonic price method cannot be used to measure non-use values or off-site values. He argues that any benefits that could be inferred or measured are constrained to goods that are related to the property or similar markets, and non-use values can be a significant feature of cultural heritage sites. In addition, in terms of proximity to market, many heritage sites do not have a large number of residential properties near them. In these cases the number of sale transactions would be too small to be statistically viable (McLoughlin, Kaminski and Sodagar, 2005: 13). Thus, based on the limitation of the method, this paper is considered not to apply the method to value a World Heritage cultural landscape (Vat Phou). It will be consider other categories from reveal preference and state preference methodologies as prioritize to this analysis.

Stated preference methods, on the other hand, are survey-based approaches to elicit information from individuals pertaining to costs and benefits. Stated preference methods are mostly used to value some public goods which have very poor or no market proxies. The common stated preference techniques included choice modeling and contingent valuation methods. State preference methods have been used for more than 40 years. During this period, over 2000 studies have been conducted in regards to real world problems, ranging from water quality, wilderness preservation, health care and food safety (Carson, 1999: 3; Stevens, 2005: 189). SP methods have also been

used to elicit consumer preferences and to measure willingness to pay for goods and services, including cultural assets such as arts, theatre, museums, broadcasting, archeological sites, libraries and heritage assets (Noonan, 2002: 3).

This study employs both reveal preference and state preference methods. This study will specify the work and implications of TCM and CVM. The discussion in this work will be devoted to the TCM and CVM as follows:

2.4.1 Travel Cost Method (TCM) and its Implications

Travel Cost Method is widely use in the field of "Environmental Economics" to provide non-market valuations of recreation sites, etc. (Navrud and Ready, 2002: 15).

To the knowledge, the historical origins of the method can be trace back as far as 1947 when Hotelling proposing a new method to US National Park Service for measuring recreational benefit provided by recreation sites that could be derive from the travel expenses of visitors. His suggestion was to measure differential travel rates and distance traveled. His model was not used by National Park Service at that time. However, the method was used and developed by other researchers such as Clawson and Knetsch in the late 1950s (Clawson and Knetsch 1966 quoted in McLoughlin, Kaminski and Sodagar, 2005: 15). They developed and modified travel cost method known as zonal travel cost method (ZTCM) to estimate outdoor recreation. The purpose of ZTCM was to use zone of origin to calculate demand curve. The demand curve that creates by the ZTCM obeyed demand theory with an inverse relationship between visitation rate and travel cost. Cost and rate of visitation to the recreational site was obtained from each individual zone. However, they found that the ZTCM has some problems, as visitation to resource site depends on more than distance alone. The distance factors can be included travel cost, income and time, which time is further depends on individual characteristics of the visitor. They indicated that, visitors to a recreation site may be visiting other recreation sites during the trip purposes will inflate resulting recreational values. In addition, socio-economic demographics factors of individual are also important component and may be also influencing the recreational values. Missing these information may resulting in suffering of TCM estimation.

To cope with biases of ZTCM from Clawson and Knetsch (1966), Brown and Nawas (1973) developed a modification of TCM, where the dependent variable was the number of trip per household or individual. This method known as individual travel cost method (ITCM). The ITCM incorporated travel time, travel costs, and socio-economic characteristics such as age, gender, education and income as a function of visitation to a site. They assumed that a visitor to a recreational site will determine the number of trips they take to a site based on maximization of their satisfaction and enjoyment level.

The TCM has been thoroughly tested and refined by economists worldwide to assess the economic value of a wide range of public resources such as water quality, saltwater and freshwater beaches, as well as forests and cultural heritage for more than twenty-five years (Sohngen et al., 1999: 3). Although the model has some limitations, it found to be a reasonably accurate way to estimate empirical demand functions and benefits of recreation.

The underlying assumption of the TCM is that the amount individuals are prepared to pay to travel to a site is a reflection of the value of the good and services provided by that site. For example, Martin (1994) used the ZTCM to assess the use value for the museum of Civilization in Quebec. As a result of his calculation, a consumer surplus for Quebec was USD5,148 million, giving as an average consumer surplus per visitor was USD8.39. When add to the entry fees and other net revenues, a total use value of USD6.002 million was determined.

A decade later Bedate et al. (2004) used the ZTCM to estimate the demand curve for three different cultural heritage sites in the Castillsay Leon region in Spain. These included the case study of a historical village of Uruena, a Museum of Burgos in the provincial capital, and a historic Cathedral of Palencia. The payment tool is a increasing in tax rate. As a result, the study found that the demand curve of an element from historic heritage allows some different applications. The first application indicated that the demand curve gives rise to calculating the consumer surplus, which indicates the individual maximum willingness to pay for using the good. The second one is that, the demand curve allows forecasting the effect of a tax rate that support grant or simply the price fixing of entry charges for policy makers. Last application from the study indicates that the change in the quality of the site could be assessed

either to improve or to deteriorate the site. In the same year, Poor and Smith (2004) also undertook a ZTCM to analyze St Mary's City in southern Maryland, USA to estimate the consumer surplus welfare measure of the site by analyzing three year of visitor sample data to compare three functional forms of visitor demand. As a result of the study, the annual individual consumer surplus measures to the cultural heritage site of Maryland ranged from USD8.00 to USD19.26, depending on the functional forms used. The average annual benefit estimates of individual paid visitors rang from approximately USD75,492 to USD176,500.

There have also been some significant Australian applications. For example, Ulph and Reynolds (1981: 221) used TCM to estimate the recreational value of Warrumbungle National Park and obtained a value of AUD 100/visitor per day; Knapman and Stanley (1991: 71) adopted the method to measure the recreational value of Kakadu National Park; Sinden (1990: 98-112) used TCM to estimate the benefits of day-use recreation and camping along the Ovens and King Rivers in north-eastern Victoria; Beal (1995: 21-26) used the method to study the demand for the Girraween National Park in Queensland and estimated a choke price (the price at which all demand is stifled) as AUD 47.23; Bennett (1996: 1-21) estimated the recreational value of the Dorrigo and Gibraltar Range National Parks in Australia with TCM method; and Herath (1999: 31-44) used the method to estimate the community value of Lake Mokoan in Victoria. Prayaga et al. (2006: 403-420) used ZTCM to estimate consumer surplus in Queensland (Australia). The survey were conducted in 1998 and 2002, and found AUD 34.87 per visitor.

Examples of applications in Asia included those by Dixon and Hufschmid (1986) estimated the value of Lumpini Public Park in Thailand; Francisco and Glover (1999: 1-278), who use TCM estimated tourism value of Cuc Phuong National Park in Vietnam; and Nam and Hong Son (2001: 7-58) determined the recreational value of the coral-surrounded Hon Mun Islands in Vietnam. In 2003, Parumong, Cal and Mizokami, used ITCM to calculate the value of two cultural heritage in Cebu (Philippines) and got the value at PHP260.19 per visitor. Similar to Alberini and Longo (2006), used ITCM to estimate the amenities of four cultural heritages in Armenia. The consumer surplus per visitor was calculate at AMD18,440. The differences of consumer surplus calculation might reflect the tremendous cultural and

social value that individuals attach nowadays to blockbusters exhibitions. When look at the comparison of the sensitivity of the estimated demand function to price throws up contradictory results. For example, Poor and Smith (2004), obtained a practically identical demand function of unitary elasticity (–1.074) to that obtained in his study. Parumog et al. (2003) however, estimated a highly price-elastic demand function with an average value for both sites of –6.896. Both studies consider culture as an inferior good, obtaining negative income elasticities (–0.749 and –6.393) in both instances.

Since TCM came into the spotlight, it has undergone drastic changes and refinements in terms of its application and the model employed. Firstly was the zonal travel cost method (ZTCM) in which visitors are grouped into different categories or zones based on certain similar characteristics such as geographical origin. This is the first form of the travel cost method. Secondly, was the individual travel cost model (ITCM), used for unique recreational sites, where an individual visits one site on multiple occasions to experience its attributes (Ward and Loomis, 1986: 165-177).

The zonal travel cost methodology uses relatively straightforward demand models that, given certain research objectives, can indeed perform as well as individual based models such as TCM (Hellerstein, 1995: 620-630). According to Ward and Loomis (1986: 165-177), the major advantages of ZTCM are that it requires less intensive data collection procedures, it adjusts for the frequency of visitation from zones with varying populations by dividing the number of zonal visits by zonal population, and zones further from the sites typically have fewer visitors, thus allowing for the inverse price-quantity demand relationships to be realized. In addition, the greater aggregation in terms of the number of zones typically produces a more appropriate model, which explains a greater percentage of variation in use of a site. However, the ZTCM has limitations. The major limitation of ZTCMs is the loss of data variation due to zonal averaging. This loss of variation may result in insignificant demographic variables, which are then dropped from demand model estimation procedures. Georgiou et al. (1997: 167) stated in their view that “the zonal model is statistically inefficient, since it aggregates data from a large number of individual observations into a few zonal observations. In addition, the zonal model treats all individuals from within a zone as having the same travel costs, when this is often clearly not the case”. Similar to the ITCM, they argued that “… (a) model

requires that there is variation in the number of trips individuals make to the recreational site in order to estimate the demand function". So the application of the ITCM would face difficulty when the variation is very small or when individuals do not make several trips to the recreational site. Thus, if a visitor visits a site only once per year, it would not be possible to run a regression function. Some evidence from the literature can be discussed. For example, the results of the study of DeShazo (1997) on estimating the recreational value of Khao Yai National Park in Thailand show that the mean value of the number of visits per year was 1.88, the R-squared value from three functional forms were very low compared to the standard format, with an average of 0.1, which reflected that the number of visits was too small to support the estimation. However, the drawback of ITCM is not a problem for the ZTCM, which uses the number of trips per capita from each zone as a function of the travel cost.

In addition, there is still some evidence of employing TCM by other researchers, such as the study of Leeworthy (1990) to evaluate the recreational demand by tourists for saltwater by using the TCM show that the daily consumer surplus per visitor is about USD 34.00. The work of Clough and Meister (1991: 115-125) uses a ZTCM to value Whakapapa Skilield in New Zealand by focusing on allowing for multiple site visitors. Their findings show that the CS per person, per visit for the site is USD 174.00 and USD 147.00 for winter and summer visitors, respectively. They however claim that these figures are too high compared to estimates obtained from previous studies. As a consequence, they use some robust means to adjust these figures to the tone of USD 124.00 and USD 66.00 per person for winter and summer visitors respectively. Other researchers include Chen et al. (2004: 398-406), who also employ ZTCM in their studies. Similar to the study conducted by Clough and Meister (1991: 115-125), Navrud and Mungatana (1994: 5-30) applied the same ZTCM to value wildlife viewing in Kenya, although they went a step further to employ the CVM as well. Their results suggested that average recreational value per visitor, per day ranged from USD 114.00 to USD 120.00 for non-resident visitors who stayed in Kenya for an average of 21.6 days and USD 68.00 to USD 85.00 for resident visitors from Kenya.

Thus, based on the evidence above, the ZTCM is employed in this study in order that the regression function can be run (see Chapter 4).

2.4.2 Contingent Valuation Method (CVM) and its Implications

1) The Contingent Valuation Method

The contingent valuation method (CVM) is a survey-based methodology. It has been employed for eliciting values people place on goods, services, and amenities. It utilizes hypothetical market where an individual can bid on the market good. According to Boyle (2003: 111-169), the first CVM study was conducted by Davis (1963) to estimate the benefits of outdoor recreation, specified in value of big game hunting in Maine park by personally interviewed 121 hunters and recreationists for his doctoral dissertation. His results discovered that willingness to pay values were a function of the users' income, length of stay, and acquaintance with the area. Davis' technique was quickly applied to other economic studies. In 1974, Hammack and Brown employed CV to valuing waterfowl hunting, but using different technique (mail survey technique). Since then application of CVM estimated values found were commonly compared to values estimated with other non-market techniques (travel cost method). In 1979, for instance, Water Resources Council (1979) publishes a document that set federal guidelines for evaluation techniques, which CVM listed as one of three methods to be used. In the late 1980s and early 1990s, the U.S Army Corp of Engineers (ACOE) adopted the CVM and published a series of handbooks that described the appropriate framework for the CVM procedure (Moser and Dunning, 1986; Vincent et al., 1986; Hansen and Badger, 1991; Hansen et al., 1990, Mills et al., 1993).

However, the first cultural CVM studies were conducted only in the 1980s, and the recognition of the first substantial wave of CVM studies in this field came on the heels of the NOAA report in 1993 (Noonan, 2003: 1-43). The illustrative applications of CVM to estimate benefits which have been published included different field topics. For example, in Arts Area, in early 1980s, Thompson et al (1983: 22-90) applied CVM to measure community benefits from Australian arts projects by using surveys of random households and of art patrons. As a results, their analysis of estimating a mean willingness to pay among all Kentucky households rang

from ADS6.00 to ADS27.00 depended on their scenarios of increasing the arts performance such that: to increase the performances by 25%, or to avoid a 25% or 50% decrease in the number of performances. While the estimated a mean willingness to pay among arts patron households ranges from ADS61 to ADS132. Consumer demand for arts performances in large part follows a predictable pattern. The likelihood of respondents agreeing to make the donation that is requested rises as the size of the donation decreases. The likelihood is higher to avoid a 50% decline in performances than to avoid a 25% decline in performances. The mean WTP rises with income, and arts patron households have a much higher WTP than all households. WTP rises with on-site use factors such as frequency of attendance. The WTP also rises for arts patrons households with off-site use such as watching arts events on television or reading about the arts in newspapers and magazines.

In the same period, still some other researchers have also used CVM technique to value arts performance. Throsby and Withers (1986: 307-327), who presented a bias in the CVM survey by asking about private arts consumption behavior. Morrison, William and West (1986: 57-72) presented the results of a telephone survey on 463 Canadian residents about their willingness to pay for public expenditure for performing arts in Ontario, Canada. They concluded that the ultimately the value of art cannot be expressed in monetary terms.

Regarding historical sites, several studies have been presented in literature; for instance, Pollicino and Maddison (2001: 131-148) applied CVM to value the benefits of cleaning Lincoln Cathedral, by randomly asking WTP questions to inhabitants of the city of Lincoln and the surrounding area. The hypothetical proposes were the willingness to pay for a change in the frequency of a cleaning cycle from 40 years to 10 years. The change was illustrated by photographs which showed the same aspects of the Cathedral half-way through the two cleaning cycles. Individuals were also asked questions regarding their attitudes towards air pollution in general and its impact on the Cathedral in particular. As a results of their study income and a variable indicating distance from the site were best factors predicted household willingness to pay. The mean willingness to pay range from £15 to £23 per household per annum for those living Lincolnshire. They indicated that, aggregating these values over the number of households in Lincolnshire suggests the annual

damage inflicted by air pollution on the appearance of the building so far as soiling is concerned was valued between £0.4m and £0.6m. They concluded that different solutions to the problem of starting point bias were explored and are shown to yield similar estimates of willingness to pay.

Grosclaude and Soguel (1994: 279-287) applied CVM to value the damage to buildings of historical cultural value by traffic-caused air pollution in Neuchatel, Switzerland. Individuals survey techniques were used in their study to elicited the level of individual financial contribution to a fund set up to support the maintenance of pre-tested historic buildings. As a results, a valuation function to predict willingness to pay responses was estimated.

Similarly, Garrod et al. (1996: 423-430) applied CVM to investigate public preferences for the renovation of historic building in Grainger Tow area of Newcastle upon Tyne in the form of taxes system. The member of the public were asked how much they would be willing to pay, in extra council taxes towards the renovation and restoration of those buildings and which way the public would wish their money to be allocated across different areas of town. As a result of their study, local people had a strong preference for renewing historic areas and that in general they preferred to contribute towards the improvement of the most degraded areas.

CVM has also been used to value other types of significant assets such as theatres, museums, heritage assets, archeological sites, broadcasting, libraries, and sport. However, Noonan (2002; 43) argues that the most visible applications are those for natural resource damage assessments such as the Exxon Valdez oil spill. Research by Throsby (1986: 13) shows that the vast majority of CVM applications have been undertaken for the purpose of assisting in policy evaluation. CVM is also used by most federal agencies with environmental responsibilities and by many other state agencies in America. According to Cason (1999: 5), CVM studies have been conducted in over 50 countries around the world. The studies were supported by a range of organizations from local government agencies to the international organizations. One indication of the increasing use of CVM is demonstrated by searching the internet for Environmental Valuation Reference Inventory (EVRI). It is a large online database, and currently it is being assembled by Environment Canada, as a cooperative venture undertaken with the European Union, the U.S. E.P.A., the

environmental protection agencies of Chile and Mexico, The World Bank, and the Economy and Environment Program for South East Asia (EEPSEA) (EVRI, 2011: 2). As of March 2011, that database contained 2015 studies based upon stated preferences, 860 studies based upon revealed preferences, and 640 studies based upon actual market pricing method.

It is found from the literature that the form of willingness to pay that derive by CVM technique can be included open-ended WTP question format (directly calculation) or double-bounded close-ended WTP question (indirectly using a statistical model). open-ended question format tends to produce numerous non-responses and protest bids (Desvousges et al., 1983). It requires the respondent to answer a series of dichotomous-choice bid formats until an upper-bid amount was reached. While a dichotomous bidding response was used to help improve the biases associated with the open-ended question format. The former question format was first developed by Hanneman (1984: 332-341). While the later format was developed by Bishop and Hellerstein (1979: 620-630). They has improved a dichotomous bid format and made the elicitation process easier on the respondent. From then on, a dichotomous bidding format known as single-bounded dichotomous-choice question format. This technique used one bid question (yes or no to single bid amount) that was easier on the respondent but required a much larger sample size (Hanneman et al., 1991: 1255-1263).

In addition, it is found that CVM's survey formats are depended on what information needed and budget constraints of the survey agency (Pollock et al., 1994). Types of CVM surveys generally are conducted in three formats: face-to-face, mail or telephone. The commonly used was a combination of an on-site face-to-face survey formats, followed by a telephone or mail surveys. Each survey format has its strengths and weaknesses that researchers must consider during their survey design as the CVM questions often involve complex and intricate scenarios that likely benefit from visual aides and careful description. Fist, on-site face-to-face interview survey provides motivation to the interviewee to complete the survey and providing opportunity for necessary descriptions and visual aides. The presence of the interviewer also allows any unclear scenarios to be discussed and reduces the amount of unusable data collected. In contrast on-site face-to-face surveys are expensive,

requiring many man-hours to obtain proper sample sizes. Second, telephone and mail surveys are less expensive technique and use less number of man-hours compared to the previous technique. However, telephone and mail surveys are impersonal and lack motivation for the respondent to complete the survey and therefore, risk to larger non-response rates. The surveys that involve lengthy scenarios, in addition, respondents may rapidly loose interest and not give their full attention to the survey, potentially biasing WTP estimating. Another concern that has been expressed is that WTP estimates which are derived from the CVM may not accurate estimates as real as consumers would spend. This is particularly true for individuals who have never visited a site (Mitchell and Carson, 1989). For instance, Loomis et al. (1997: 1187-1193) tested the robustness of the dichotomous choice WTP for maintaining in-stream flow by challenging respondent's affirmative answers. The survey concluded to elicited visitor's WTP appeared to be well informed and robust. Only 7 percent of the respondents reduced their per-trip bid amount.

Other issues that can be found from CVM study were the biases. One of the most common was the strategic bias, which occurred when a respondents gave an overly high or low payment because he/she believed that it was in his/her best interest to do so. Brookshire et al. (1976: 325-346) and Rowe et al. (1980: 1-19) attempted to discover if strategic bias had occurred within their studies. To show there was no strategic bias, the WTP distribution was confirmed to be normal. If there had been extreme WTP values within the distribution, the distribution would have been skewed towards those extremes. The distribution would have been skewed if a fraction of the population gave low WTP estimates while the remaining population answered truthfully. Another bias was associated with vehicle of payment. Studies often describe different payment vehicles: income taxes, entrance fees, licensing fees, sales tax, and utility bills (Pollock et al., 1994). There is evidence that these types of payment vehicles will influence the WTP amount. For example, a respondent is often willing to pay more for an increase in entrance fees than an increase in taxes for similar services (Mitchell and Carson, 1989).

The limitations and biases of CVM are well understood (Mitchell and Carson, 1989). Newer techniques, such as the double-bounded dichotomous-choice

technique, have improved the statistical efficiency of WTP estimates and reduced biases associated with the survey format (Hanneman et al., 1991: 1255-1263).

2) The Use of CVM to Value Cultural Heritage

Throughout the past two decades, the estimation of the economic value of cultural heritage sites has drawn the attention of researchers and policy makers around the world. The empirical research on valuing these sites using stated preference techniques covers a considerable range of topics. The scope of these studies is vast, ranging from the restoration or preservation of local sites to the valuation of UNESCO World Heritage sites. Contingent Valuation Method is commonly used to elicit the values of significant sites such as traditional cultural monuments: castles, cathedrals, royal theatres, monasteries, museums, marble monuments, and historical buildings, as well as cultural landscapes including stone towns, caves and archaeological parks around the world (Navrud and Ready, 2002: 5-30).

In the region of Europe, for example, using CVM, researchers attempted to value WHSs, namely: the historical building of Warkworth Castle in Grainger City, Newcastle, England (Garrodet al., 1996: 423-430); Italian museums or Rivoli Castle in Italy (Scarpa, Sirchia and Bravi, 1998: 234); a prehistoric cave painting in the Peak District, England (Coulton, 1999); a picture library in the U.K. (EFTEC, 2000); The British Museum in England (Maddison an Foster, 2001); Stonehenge in England (Maddison and Mourato, 2002: 118-140); Lincoln Cathedral in England (Pollicino and Maddison, 2001:131-148); the Fes Medina in Morocco (Carson, Mitchell, and Conaway, 1997: 118-140); Durham Cathedral in England (Garrod and Willis, 2002: 44-67); Bulgarian monasteries in Bulgaria (Mourato, Kontoleon and Danchev, 2002: 68-142); Campi Flegrei archaeological park in Napoli, Italy (Riganti and Willis, 2002: 142); Nidaros Cathedral in Norway (Navrud and Strand, 2002: 31-39); the World Heritage Museum in the Alto Douro Wine Region, France (Fonseca and Robelo, 2010: 339-350); Lake Sevan in Armenia (Leplante, Meisner and Wang, 2005: 41).

Pollicino and Maddison (2002: 53-66), for instance, estimated the impact of air pollution in Lincoln Cathedral in the east of England, using double bounded dichotomous-choice technique. The payment vehicle they used was an

increase in annually paid household taxes to pay for the shorter cleaning cycle from the 40-year cleaning cycle to the 10-year cleaning cycle. As a result of their study, the mean willingness to pay was UKP 49.77 per household per year. Socio-economic variables were included in the model, however, only income and the dummy variable for local people, were significant.

Willis (1994: 267-278) used CVM to examine individuals' maximum willingness to contribute to the preservation project of a cathedral located in Northumbria, England, where no charge is paid for entry. The study applied an open-ended WTP approach by providing a payment card to the respondents in order to elicit the maximum charge that they were willing to pay for entrance to the site. The result of the study reported that the mean stated WTP was UKP 0.77 per individual.

Bravi, Scarpa and Sirchia (2002: 184-212) employed CVM using a single-bounded discrete-choice to examine users' willingness to pay (WTP) for two modern art galleries in Turin, Italy: the Galleria Civica and Rivoli Castle. The study interviewed a total of 1323 users of the Galleria Civica and 854 of the Rivoli Castle. Although the two museums are under substantially different forms of management, the study targets provide similar services to similar consumer groups. As a result of the study, the mean WTP estimation (USD 28.00 and USD 33.00) for both museums has highlighted the existence of a sizeable consumer surplus, which could be exploited by adequate access pricing.

Garrot and Willis (2002: 40-67) attempted to estimate three distinctive character and historical cultural heritage sites in the North East of England: Warkworth Castle, Durham Cathedral and Newcastle's Grainger Town. The study measured the WTP of visitors to enter the first site by asking their maximum WTP, and then offered a ticket at the price they had stated. Then the study continued asking 97 potential visitors the same criterion. The study reported that 54 of them did not consider themselves as potential visitors on the day interviewed. This did not prove to be a sufficient test for those considering entering. This implies that half the respondents will choose the goods, whilst the other half keeps the money to spend on other things. Similarly, the study of the second site asked 92 respondents for their WTP to avert the introduction of an admission charge; 51 percent stated they had made no voluntary contribution for their visit, whilst the average reported contribution

made by the remaining 49 percent was UKP 0.43. As the level of contributions falls short, it implies that the result was similar to the first site.

Navrud and Stand (2002: 31-39) estimated the value of visitors to the Nidaros Cathedral in Trondheim, Norway. The purpose of their study was to preserve and restore the site. The authors applied CV survey techniques on both local and foreign visitors to the cathedral in the summer of 1999. The study contacted a total of 237 visitors, with only 48 percent willing to be interviewed in person. The study found that the WTP of Norwegians is clearly higher (USD 51.00) compared to foreign visitors (USD 45.00), which is due to the far greater proportion of foreign respondents stating zero WTP to restore the cultural monument (34 to 49%), compared to Norwegians respondents (9 to 20%).

In other regions such as North America, numerous WHSs attracted researchers to conduct economic valuation estimations. Examples of these studies include: research by Boxall, Englin and Adammowicz (2002: 105-140) to value the Aboriginal Rock paintings at Nopiming park in Canada, and also in Canada, Martin (1994: 255-270) determined the size of museum subsidies of Musee de la Civilisation in Quebec. In the United States, Morey et al. (1997: 159-183) conducted an economic valuation of cultural resources called the Marble Monuments in Washington DC; and Holt, Elliott and Moore (1999: 89-109) valued St. Louis Libraries.

In addition, as WHSs in Asia and the Pacific accounted for 22% of the total number of WHSs worldwide in 2010 (UNESCO, 2010: 1), interest was also generated for researchers to value significant sites. Empirical studies have been conducted on: the cultural heritage of grazing the Australian alps in Australia by Lockwood, Tracey and Klomp (1996: 357-370); the historic temples of Thailand by Udomsak Seenprachawong (2006: 39); the My Son WHS in Vietnam by Tuan (2006: 62); WHSs such as Angkor Heritage Site in Siem Reap Province, Cambodia by Prachvuthy (2007: 30); Penang Island in Malaysia by Chan (2009: 25); the Rural Borobudure in Jakarta, Indonesia by Kausar and Krisnandhi (2010: 195); the Chitwan National Park in Nepal by Cook (2011: 168).

For instance, Udomsak Seenprachawong (2006: 13-22) used a CVM with close-end technique to value ten historic temples in the central region of Thailand. The payment vehicles used were the amount of a one-time surcharge in

income tax and a one-time voluntary contribution (donation). Furthermore, the research explored respondent's choice whether are able to identify their values for two temples versus their values for ten temples. As a result of the study, respondents did pass the scope test such that respondents wish to pay more for a greater number of restored temples. An individual is willing to pay THB214 for a one-time income tax surcharge, and THB243 for a voluntary donation to finance the preservation program of ten historic temples. In relation to the socio-economic variables, income and education level were significant with the economic theory such that respondent with a higher income had a higher WTP than a respondent with a lower income, and a respondent with a higher educated pay higher than those with the lower educated.

Similarly, Tuan (2006: 1, 18-25) applied a single bounded dichotomous choice of CVM to estimate the economic value of a World Heritage Site of My Son Sanctuary in Vietnam by proposing a restoration and preservation plan for the site. The payment vehicle for this study was an entrance fee for visitor, and tax for non-visitors. As a result of the study, the mean WTP estimates vary among groups of respondents such that foreign visitors to My Son would be willing to pay USD8.78 per person and Vietnamese visitors mean WTP was $1.67 per person).

Some studies have surveyed value for abstract purposes, such as preserving a local historic landmark in a medium-sized U.S. city (Kling, Revier and Sable, 2004: 2025-2042); Lake Sevan in Armenia (Laplante, Meisner and Wang, 2005: 41); San Rock Art in the Ukhahlamba Drakensberg WHS in South Africa (Topp, 2009); Mexican archeological sites (Beltran and Rojas, 1996: 463-478); the Royal Theatre in Copenhagen, Denmark (Hensen, 1997: 1-28).

These CV studies presented differing results, however some consistent findings emerge from the studies that have been conducted to date. Navrud and Ready (2002: 5) stated that although similar goods were evaluated, the type of benefit estimated is usually different from the sample frame used, making it difficult to draw meaningful comparisons between studies. To be precise, few results of empirical CV studies can be mentioned:

Carson et al. (1997: 118-140) investigated public preferences for the rehabilitation program of the Fez Medina in Morocco. A survey was conducted on both use and non-use values of the site, and obtained data from both tourists and those

visiting for other purposes. A target sample of 600 was questioned in order to obtain information on the current condition of the site and the targets for specified improvements, such as the regeneration of the appearance of the buildings, surrounding streets, improvements to infrastructure, public spaces and monuments, as well as preserving Medina's traditional character and cultural heritage for future generations, and to enhance and promote the city's productivity and vibrancy. A WTP amount was proposed to visitors when they registered at a local hotel. As a result, the study reported that each visitor to Fez Medina was willing to pay USD 70, while other visitors to Morocco were willing to pay USD 30 each.

Santagata (2000: 181-204) used CVM to determine the value of Napoli Musei Aperti (NMA), and cultural public goods in Naples, Italy. The study elicited WTP of a final usable sample total of 500 people by asking respondents using both formats; single bound discrete choice and open-ended questions as to whether or not they agreed to make a donation to maintain the NMA. Only 468 people were fully response to the survey question, of which 226 respondents or 48% answered negative to the payment principal question, and 242 (52%) respondents answered positive to the payment principal question. As a result, both techniques appear to have a reasonable size format.

Salazar and Marques (2005: 69-77) applied CVM to obtain the social benefits that stem from the restoration of an old Arab tower in the Valencia Region of Spain. The study randomly interviewed 252 individuals by initially distinguishing between average and high-end consumer groups of cultural goods. The study found that the mean willingness to pay is considerably higher for the second group. The study then employed both parametric and non-parametric approaches, and found that these yielded similar results. Finally, the study used two equations estimated in order to ratify the results obtained from a theoretical point of view.

In reviewing the literature, it is interesting to note that the sampled populations in some empirical CVM studies consist almost exclusively of those living in close proximity to the site. For example, the research of Pagiola (1999) on valuing the benefits of investments in cultural heritage, in the city of Split, Croatia, reported that Croatians' citizens stated their willingness to pay higher than foreign tourists. Similarly, a study by Navrud and Strand (2002: 31-39) on the social costs and benefits

of preserving and restoring the Nidaros Cathedral in Norway, indicated that among sampled visitors, national visitors stated their WTP as higher than that of foreign visitors. Further, a working paper by Beltran and Rojas (1996: 463-478) on the topic of 'Diversified funding methods in Mexican archeology' concluded that by comparing a WTP between local citizens and foreign visitors to the study site, local citizens are more willing to pay higher amounts than other parties; a study by Pollicino and Maddison (2001: 131-148) on valuing the benefits of cleaning Lincoln Cathedral has also reported that, British citizens within the city stated higher monetary contributions than residents living outside the city.

In contrast, many studies have presented an irrelevant WTP comparison between local and foreign visitors. From the available evidence in the literature, most of these studies were focused on sites in the European region. For example, a study by Maddison and Foster (2001: 1-24) on valuing congestion in the British Museum; a research paper of Harless and Allen (1999: 59-69) on the topic of 'Using the contingent valuation method to measure patron benefits of reference desk service in an academic library in Virginia'; a study conducted by Hansen (1997: 1-28) on the willingness to pay for the Royal Theatre in Copenhagen as a public good in Denmark; a study of Willis (1994: 267-277) on the topic 'What price for Durham Cathedral' in Northumbria; a research paper by Grosclaude and Soguel (1994: 279-287) on valuing damage to historic buildings using a contingent market; the study of Hett and Mourato (2000) on sustainable management of Machu Picchu using a stated preference approach; a study conducted by Lockwood, Tracey and Klomp (1996: 357-370) on analyzing conflict between cultural heritage and nature conservation in the Australian Alps using a CVM approach; a research paper published by Boxall, Englin and Adamowicz (1998: 25-27) on valuing undiscovered attributes by combining revealed-stated preference analysis of North American aboriginal artifacts; a study of Throsby and Withers (1986: 307-321) on the strategic bias and the demand for Arts support in Sydney.

In addition, as far as the economic evaluation of cultural public goods is concerned, there are still numerous researchers interested in investigating and valuing these significant goods. For instance, Grosclaude and Soguel (1994: 279-287) assessed these values for selected local historic limestone buildings' maintenance in

Neuchâtel, Switzerland; Martin (1994: 255-270) valued the ‘Musée de la civilisation’ in Quebec; Hansen (1997: 1-28) measured the total value of The Royal Theatre in Copenhagen; Carson et al. (1997) valued the benefits to visitors and non-visitors of preserving and improving conditions in Fez Medina (Morocco); Morey et al. (1997: 159-183) estimated the benefits of reducing acid damage to a discrete subset of outdoor marble monuments in Washington, D.C.; Scarpa et al. (1998: 233-234) estimated the access value to the Contemporary Art Museum of the Castellodi Rivoli (Turin); Whitehead, Chambers and Chambers (1998: 137-154) investigated the preservation value of a historic building located in St. Genevieve, Missouri; Roche (1998: 14-17) valued the benefit of the restoration of the Colon Theatre in Buenos Aires, Argentina.

The above valuation studies show that the WTP technique estimates the value of both use and non-use resources, particularly for cultural and natural heritage, in the context of preservation and restoration.

In sum up, there are a number of reasons why most researchers are interested in applying economic valuation techniques to the cultural arena. First is the improvement of the valuation techniques themselves. Second is the increased recognition of the attention paid to cultural public goods. Third is the increased recognition of the trade-offs inherent in the public provision of cultural goods. Finally, the development of the cultural CVM literature presents important background information about the value of different cultural goods. It also points to trends and suggests future directions for research in the economic valuation of cultural goods. Finally, it indicates some of the methodological issues that are particular to the cultural context, and how some of these have been addressed in practice (Noonan, 2002: 2).

Taking all the points raised in this literature review into consideration, this research has decided to employ CVM for valuing Vat Phou, the WH cultural landscape in Champasak Province, Lao P.D.R, regardless of some drawbacks of CVM. First CVM is the improvement of the valuation techniques themselves. Second, the development of the cultural CVM literature presents important background information about the value of different cultural goods. It also points to trends and suggests future directions for research in the economic valuation of cultural goods.

Finally, it indicates some of the methodological issues that are particular to the cultural context, and how some of these have been addressed in practice (Noonan, 2002: 2).

CHAPTER 3

THE STUDY SITE

3.1 Resources

Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape (Vat Phou) is located in Champasak province, Lao P.D.R (Figure 3.1).

Figure 3.1 Location of Vat Phou Site

Source: UNESCO, 1999.

The site is a remarkably well-preserved and planned landscape, which is more than 1,000 years old. It represents development ranging from the 5th to 15th centuries, mainly associated with the Khmer Empire. The site is unique as it was shaped to express the Hindu vision of the relationship between nature and humanity, using an axis from mountain top to river bank to lay out a geometric pattern of temples, shrines and waterworks extending over some 10 kilometers (Figure 3.2).

Figure 3.2 Some High light of Vat Phou Property
Source: UNESCO, 1999.

The site covers a total of 390 square kilometers (Figure 3.3). It was adopted by UNESCO as the second world heritage site of Laos in 2001. The inscription includes

not only the Vat Phou temple complex but also the sacred mountain of Phou Kao, the Hong Nang Sida temple and the city of Lingapura, the ancient roadway that once led to Angkor, Thao Tao, Tham Lek, Vat Oubmung, the Tomo temple, the ancient city of Shrestrapura, Champasak and the Island of Don Deng (Figure 3.3).

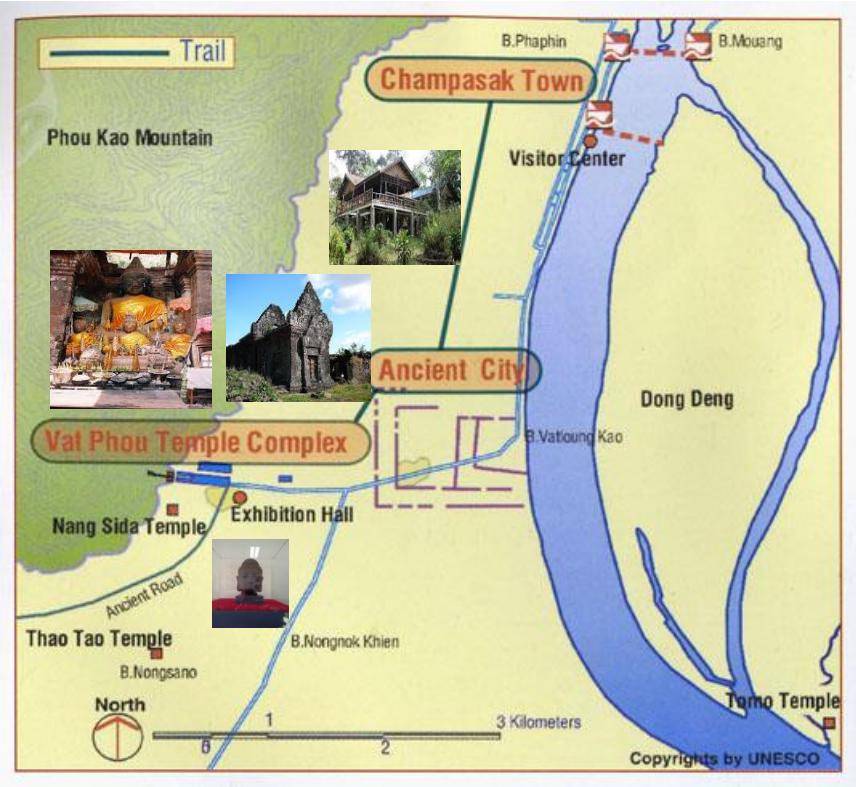

Figure 3.3 Map of World Heritage Site of Vat Phou Property
Source: UNESCO, 1999.

The Site is divided into 4 protected zones, namely the Champasak Cultural Heritage and Cultural Landscape Protection Zone (Zone 1); the Sacred Environment Conservation Zone (Zone 2); the Archaeological Conservation Zone (Zone 3) and the Monument Management Zone, with increasing levels of protection and direct management for known concentrations of archaeological sites and monuments, or for the conservation of other significant values (Zone 4), (Figure 3.4). Each zone consists of significant features as follows: Zone 1 consists of the whole World Heritage Site, and its primary purpose is to protect the landscape of the site and to preserve as much

as possible of the symbolic landscape created by the builders of Vat Phou. Zone 2 comprises Phou Kao Mountain as the natural feature on which the whole landscape was focused. Zone 3 covers areas of known archaeology of high importance and requires special attention in order to protect these sites. It includes three areas around Vat Phou and Lingapura, the ancient city, and Tomo respectively. Zone 4 includes the areas which are under the direct control of the site manager.

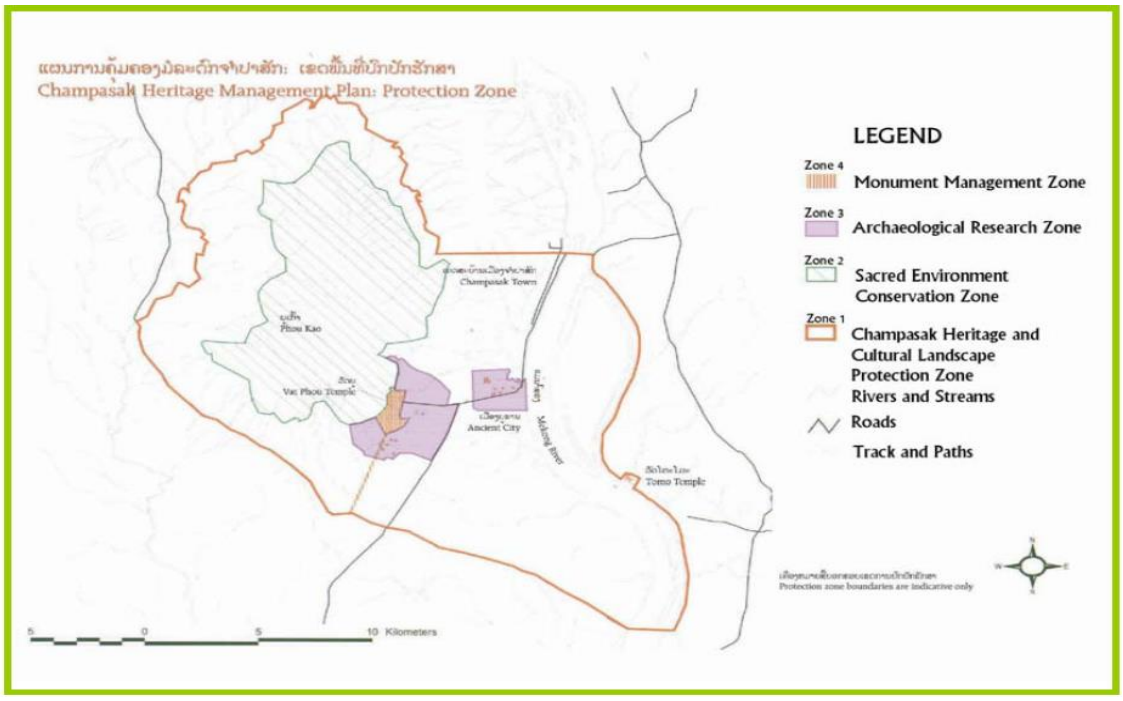

Figure 3.4 Map of World Heritage Site Protection Zones

Source: UNESCO, 1999.

3.2 Accessibility

Figure 3.5 From left to right-Bridge cross Mekong River-Highway to Vat Phou
Source: Sell Taking Picture, 2014.

There are a number of ways to access to Vat Phou. First, those visitors who take their own car or tour bus can travel to Champasak province, then cross the bridge to take the new highway to Champasak district and straight to the site (Figure 3.5). The travel time via the highway is approximately 35 minutes.

Second, those visitors who wish to take public transportation can take a bus from the bus station in Pakse district (capital city of Champasak province) to the site or they can also travel through Ban Muang by taking route number 13 south where there is a ferry. Visitors can then take the ferry across the Mekong River to Ban Phaphin for further travel to the site. The total travelling time for this route is approximately 45 minutes.

Figure 3.6 From left to right-Public Bus along route 13 and Ferry to Ban Phaphin
Source: Sell Taking Picture, 2013.

The ferry service is operated daily by local people. The fee depends on the size of vehicles. For example, the pick-up truck fee is LAK 25,000 (USD 3.10), (LAK 7,860.00 = USD 1.00, Exchange Rate date 29/04/2013) small bus is LAK 35,000 (USD 4.45), and 6-wheel vehicle is LAK 45,000 (USD 5.72).

The highway is currently sufficient to accommodate the number of vehicles traveling to Champasak district. The ferry can be seen as an unofficial control measure for the number and size of vehicles entering Champasak district.

3.3 Tourism Facilities and the Local Community

In Champasak province there are currently about 43 hotels, 182 guesthouses, 8 resorts, and 28 local restaurants. Compared to the last 5 years, the number of these facilities has increased by 18, 29, 6, and 13 respectively (CGAO, 2010: 1-18). There are some three to five star hotels located in capital city of Champasak that can receive more than 100 guests per night. These hotels included the Champasak Palce Hotel (Figure 3.7), the Grand Hotel and the Champasak Hotel (Figure 3.8).

Figure 3.7 The Champasak Palace Hotel

Figure 3.8 From left to right-Champasak Grand Hotel and Champasak Hotel

However, tourist facilities (accommodation and services) in the community nearby at Vat Phou are consequently limited because, as yet, there are no excessive pressures on the landscape, except during the three-day Vat Phou Festival in February. Most of the accommodations are traditional guess house and home stay that can accommodate visitors maximum of no more than 10 people each (Figure 3.9)

Figure 3.9 Guess House in Champasak Distric (near by Vat Phou Temples Complex)

Most visitors who stay overnight are westerners and usually spend about 2-3 nights in the community. Moreover, there is limited public transportation within the community. To travel around the community and around Champasak district, visitors can rent bicycles or motorcycles.

Even with limited tourism activity, (Figure 3.10) local people are beginning to realize an economic benefit from tourism activity. Tourism activities at Vat Phou help generate extra income to the local community, especially at the Vat Phou Temples Complex and where most elderly people sell flowers and incense for LAK 5,000 (USD 0.60) per set to visitors who wish to pray for luck and success in the live (by believing). The community decides among themselves for a group of 5 to 6 people to sell flowers at the different locations within the site. According to the local community leader, this group of people are taking turns; one group can sell for a week, then another group can sell in the following week. A small amount of the revenue from selling flowers and incense is given to a community fund for maintaining local temples in their community. No portion of the revenue is given to

Vat Phou Temples Complex; however, these people contribute back to the tourist site by cleaning up at the end of the day.

Figure 3.10 Representative of Local People at Vat Phou Temles Complex

There are a number of souvenir shops and restaurants surrounding the site and along the highway to serve visitors.

Figure 3.11 Souvenir shops along the road to Vat Phou Temples Complex

There has been renovated and enlarged the area near by the entrance section where there is an Exhibition Hall and area for tourists to take a rest (Figure 3.11).

Figure 3.12 Entrance to Vat Phou Monument Area

3.4 Socio-economic Characteristics of Tourists at Vat Phou

Since Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape was adopted by UNESCO as the second world heritage site of Laos in 2001, it has been in high demand for recreational and visiting purposes. Tourism and recreation are means of accomplishing the presentation element of the goal of the site. Visiting Vat Phou Monument is one of the primary activities associated with tourism and recreation at the site. The standing monument area is the most tourist attractive part of the site. More than two hundred thousand visitors from both international and domestic destinations visit the area each year for recreational and visiting purposes. These visitors possibly make enormous sacrifices in terms of travel cost, time and other associated expenses and they have varying interests which could be one or more of the following; sightseeing, meetings, picnics, or for spiritual

purposes. Owing to these enormous sacrifices that visitors to this site make, it is evident that this site has substantial value.

Immediately after Vat Phou and associated ancient settlements within the Champasak Cultural Landscape were recornized as a World Heritage Preservation site in 2001 by UNESCO, the number of visitors to the site soared by 87 percent per year (CGAO, 2005: 1-18). Vat Phou has become one of the most popular tourist destinations in Laos, particularly in the southern part of Laos, attracting about 249,395 Lao and foreign visitors per year, excluding those who visit the Vat Phou Festival annually in February. Foreign visitors are largely Thai and European.

From the data of the Office of Cultural Heritage, Champasak province, the pick season for tourists to visit Vat Phou is in between November to April. The average number of visitors who visit Vat Phou during the period of 2002 and 2010 are more than five times greater compared to the period between 1991 and 2001 (Figure 3.13 and 3.14).

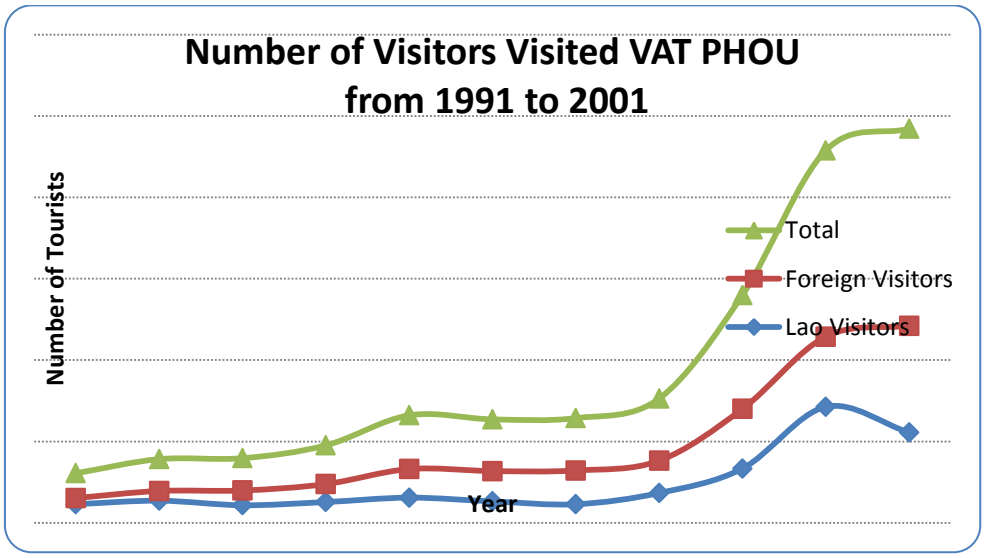

Figure 3.13 The Number of Visitors Visited Vat Phou from 1991 to 2001
Source: Office of Cultural Heritage, Champasak Province, 2010.

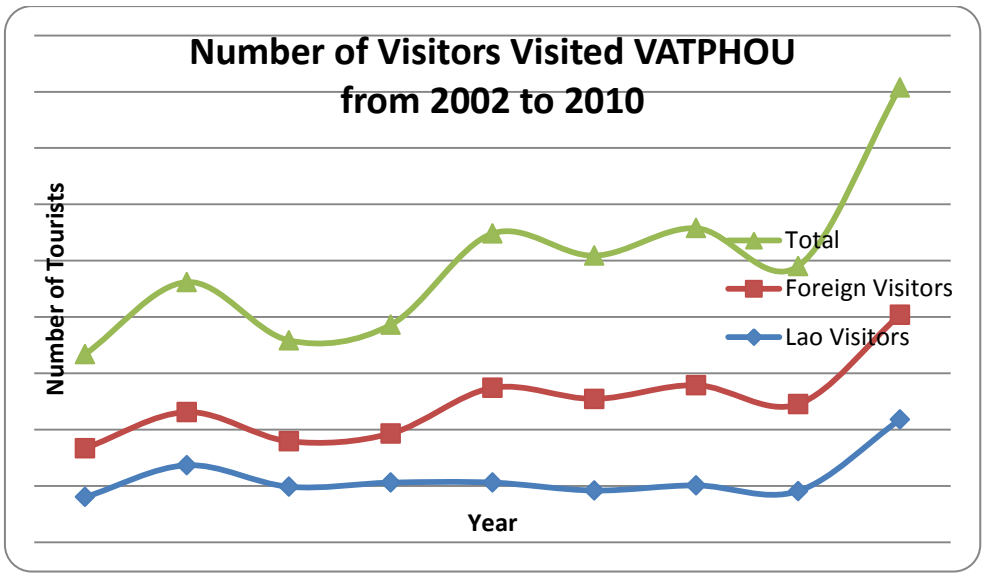

Figure 3.14 The Number of Visitors Visited Vat Phou from 2002 to 2010
Source: Office of Cultural Heritage, Champasak Province, 2010.

Figure 3.13 and 3.14 show that firstly, the total number of visitors to Vat Phou increased in both periods. Secondly, in both periods, foreign visitors are more interested in visiting Vat Phou compared to Lao visitors. This number can indicate that international visitors are beginning to become an important part of the economy around the site. As a result, heritage listing has already attracted investment in the area and is an important component of tourism promotion in southern Laos. Particularly from 1998 to 2001, including the 'Visit Laos Year' and the pre-declaration of Vat Phou as a World Heritage Site, the total number of visitors increased significantly, from about 18,000 persons in 1998 to nearly 50,000 people in 2001.

During the period of 2002 to 2010, the number of visitors also increased, but with some fluctuation. The main factors which influenced the fluctuation were the terrorist attacks on September 11, 2001 in the United States and the spread of the SARS epidemic in Asia in the first quarter of 2003. Visitor's numbers recovered in 2004 to 2006, then gradually increased in 2009 before reaching 180,000 visitors for the first time.

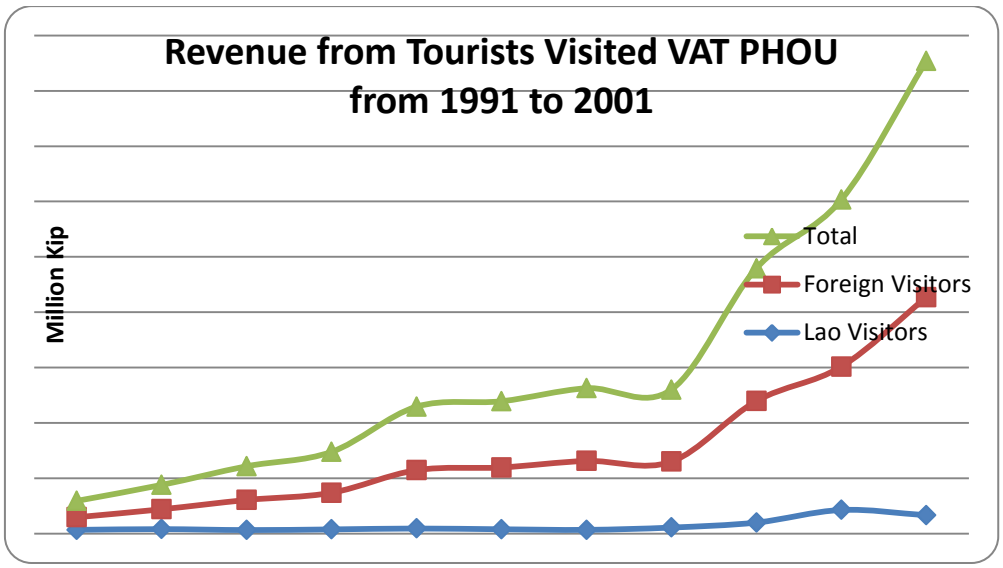

Figure 3.15 Revenue from Tourists Visited Vat Phou from 1991 to 2001
Source: Office of Cultural Heritage, Champasak Province, 2010.

The average revenue per year during the period of 2002 and 2010 was LAK 1,027,542,222 (or USD 128,442.78) despite of political instability in some countries in the region and the world economic turmoil that affected the whole region (Figure 3.16).

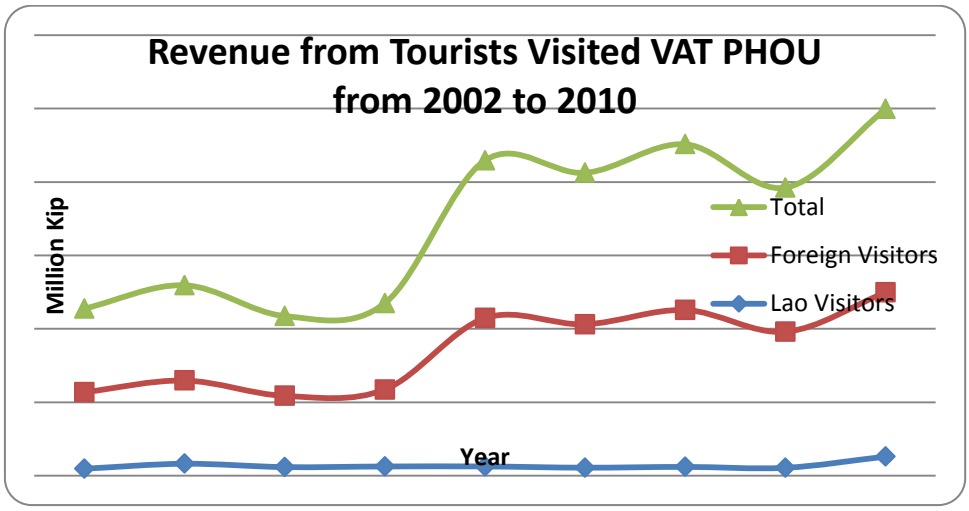

Figure 3.16 Revenue from Tourists Visited Vat Phou from 2001 to 2010
Source: Office of the Cultural Heritage, Champasak Province, 2010.

3.5 Management and Preservation Problems

The decision making for the site management involves numbers of stakeholders. Through vertical line, the site is managed by the Department of World Cultural Heritage, Ministry of Information, Culture and Tourism. Through horizontal line, the site decision making is depended on three levels: national, provincial and district levels.

At the national level, the site is manages by Inter-Ministerial Coordinating Committee (NIMCC) (Appendix A). There are Ministry of Finance, Ministry of Public works and Transport, Ministry of Science and Technology, Ministry of Agriculture and Forestry, Ministry of Education and Sports, Ministry of Natural Resources and Environment.

At provincial level, there are Provincial Service of Tourism, Provincial Service of Education, Provincial Service of Agriculture and Forestry, Provincial Service of Finance, Provincial Service of Public work and Transport, Provincial Service of Information and Culture.

The site management is also involve district committee such as the representatives of Phonthong and Patumphone district, District Service of Education, District Service of Agriculture and Forestry, District Service of Finance, District Service of Public work and Transport, District Service of Information and Culture, Head of villages located in the site, and local communities.

Since the site management decision making is involve many parties both vertical and horizontal lines, the plan making process takes 5 year period (Figure 3.17). In addition, the adoption of each management plan is based on the terms of the 1997 Decree of the President of the Lao PDR on the Preservation of Cultural, Historical and Natural Heritage No 03/PR. The first Management Plan of Vat Phou was adopted by the government of Lao PDR in 1998 by Note number 2692/PMC. The Action Plan (2000-2004) was published in 2000 in both Lao and English versions. The Action Plan was a comprehensive and detailed document dealing with all aspects of the World Heritage Site and its management, as well as describing the site and assessing its significance. The Action Plan also includes sections on data and research, details on boundaries and zonings, details on conservation and enhancement

of the site, access and tourism, community awareness, involvement, and implementation process (Vat Phou Action Plan 2005-2010).

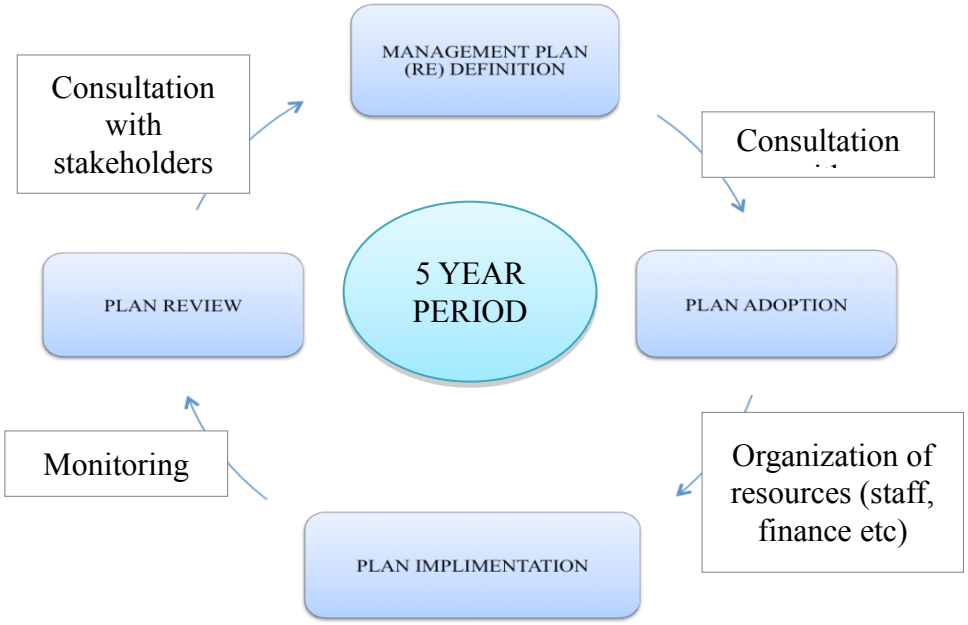

Figure 3.17 The Plan-Making Process for Vat Phou
Source: Vat Phou Site Management and Training Center

According to the Vat Phou Action Plan (2005-2010), only tourism has positive achievement. This is reflected in the number of businesses, particularly, the number of quest houses and restaurants have been started to meet the needs of tourists.

The concerning issues that mention by ICOMOS during the first Action Plan implementation, and need urgent address are included "the stabilization of ancient standing building and other structures, and particular effort made to bring the hydrological situation under control...". The issues also includes a negative effect that caused by a north-south highway construction, a construction of a new visitor center which could affect the main axis of the site at Vat Phou. Other serious issues are a lack of sufficient qualified staff at the site to support the implementation of the Action Plan, and a lack of any means of coordinating the activities of different government departments due to the limited time for NIMCC meeting. In the Action Plan for 2005-2010, moreover, the Would Heritage Committee and its professional advisor are

concerned about the whole cultural landscape, not just about monument at Vat Phou temples complex as the outstanding universal value which its own might not make it as a World Heritage Site. Thus the issue affecting the site can be included the pressures on standing structures, the pressures on buried archaeology, environmental pressures, future development pressures, tourism and site development pressures, the issue about public awareness and understanding, funding limitation, resources and capacity development. To prevent those pressures, the committee has prioritized management plan by proposing protection projects for each zone based on its significance. To protect the pressures on standing structures for example, the surveys were carried out by Italian Archaeological Mission to preserve the structures. There have been major achievements by implementing the project on this area. The construction of a high level drainage channel of hydrological management to remove surplus water from the site during the rainy season by the Japanese has also begun. However, to date, the problem of erosion by the river running along the north side of the site is still remaining. Moreover, the pressures on buried archaeology is the big issue that has not been addressed, particularly, the construction of new building without consultation with the World Heritage Site staff, rice cultivation in the site area (Zone 4). Environmental pressure lastly, is another concern, particularly the impact of river erosion which cannot be prevented and measures. Moreover, little involvement from local communities in protection and sustainable projects in the site use through economic projects. According to the small talked to the local people living in the site, there have been some meeting with the local community and the two tourism-based projects should also contribute in this area, but the implementation process has not been regularly address.

Coordination, Funding, Resources and Capacity Development are other serious issues. The funding of the World Heritage Site for example, has been varied and come from different sources: a share of admission income (50%), Italian government, Japanese government and national budget. The estimate annual budget for the site management is approximately LAK 1,800 million. However, the annual budget that can be allocated for the site restoration and preservation is about only LAK 50 million or 2.7% of the annual budget per year. The remaining budget is used for administrative activities such as staff salary, training, and office administration.

Most of preservation projects that have carried out in the site are funded by inter-agency financial support.

Thus, although Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape is operated under government financial support and inter-governmental funding, budget constraints limit the possibility of preserving the cultural landscape. Inter-agency and Lao government projects under the preservation and protection plan do not consider strategically the long-term impacts or sustainability once financial support has been withdrawn, which is reflected that a serious attention is being given to encourage the general public to support the preservation plan. The question of how much local residents have been involved in project consultation and how much they will support the continuance of projects once project funding terms are completed remains unanswered. This paragraph outlines some of the projects and activities. There has been increasing activity within the Vat Phou preservation and protection plan, which targets the preservation of art, architecture, monuments, religious heritage, social interaction and lifestyle of local people in the geographical region. For example, the training project in Museology in the Exhibition Hall, the project of archaeological maintenance and management surrounding the site, the on-site conservation project, the project for the development of interpretive strategies, and the project of updating the action plan (UNESCOBKK, 2013). These activities are included in the overall project and co-financed by inter-governmental agencies and the Lao government, and are co-funded by international and local organizations such as (1) the co-financed project between Italian-Japanese-Lao governments on the restoration of the principal monuments of the Vat Phou archaeological sites aimed at preventing the loss of architectural material and damage by water erosion, the conduct of archaeological research on the monuments, enhanced visibility, and to conduct training in the conservation of stone artifacts and mapping; (2) the coordination and cooperation between the site managers of the protected site and the policy-makers and administrative officials in on-site training on archaeological maintenance and management; (3) the cooperation of the Asian Development Bank (ADB) and the National Tourism Authority of Lao PDR on the reproduction of promotional materials and construction of a visitor center at Vat Phou which aims to enhance the understanding of the integrated value of the Champasak

Cultural Landscape and promote cultural tourism experiences for Lao and international communities; (4) the UNESCO and ADB projects on the interpretive video aims to provide visitors with an overall sense of the cultural landscape using a digital flyover technique as well as the use of a 3-D model for the Vat Phou temple to provide a high level of understanding of both the overall landscape and the temple. The project also includes an interpretive model, a heritage trail, heritage signage and dedicated website. However, from a long-term development perspective, it is still unclear how residents view and support the sustainability of such protection projects, cultural and ecological integrity in relation to future generations who would live in their adopted area.

Thus, based on the existing evidence from Vat Phou management issues, this dissertation attempts to investigate its use value and non-use value, including the motivation of both visitors and local residents, their supportive behavior and potential of fund raising from the public in order for policy makers to over come the limitation and unsustainability of supportive funds for the site preservation and conservation. The following chapters present empirical studies on economic valuation of Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape. Empirical Study 1 presents the economic valuation study of Vat Phou: evidence from the zonal travel cost method; Empirical Study 2 presents the willingness-to-pay study to value the integrity of Vat Phou historic structures (All traditional wooden Lao houses, temples and other buildings 50 or more years-old at the site), using CVM; and Empirical Study 3 presents an investigation of the relationship between Lao citizens' socio-demographic characteristics and their financial supportive behavior toward cultural landscape preservation and environmental protection as follows:

CHAPTER 4

EMPIRICAL RESULTS OF ZTCM STUDY

This chapter employed zonal travel cost method (ZTCM), aims estimating the economic value of Vat Phou and Associated Ancient Settlements within the Champasak Cultural Landscape (Vat Phou), Champasak province, Lao P.D.R by measuring the total consumer surplus of visitors within a certain period of their visit, to address specific needs for possible future protection and improvement.

Data used to quantify the economic valuation of the site and regression analysis, observes a period of one year from October 2010 to October 2011. Three functional forms of visitor demand were used for both domestic and foreign visitors: linear, semi-log, and double-log models as follows:

4.1 Methodology

The general ZTCM in this empirical study involves a two-step procedure. First, a visitor demand function which is referred to as estimating the trip-generating function (TGF). This general function is expressed as follows:

$$V_i = f(TC_{i,} Si) \quad (4.1)$$

Where:

V_i is the number of visits of i^{th} zone, adjusted for the zonal population

TC_i is the average total cost of the trip which includes the total travel cost from the place of origin (the 'i' zone) to Vat Phou, cost of food and beverages, accommodation, and other miscellaneous expenditure.

Si is a vector of socioeconomic variables for zone 'i'

The number of visits per zone ‘i’ adjusted for the zonal population, determined based on Herath (2004: 263-273) as follows:

$$V_i = [(v_i/n)*Ni*1000)]/Pi \quad (4.2)$$

Where:

v_i is the number of visitors from zone ‘i’ per year

n is the total number of visitors interview

N_i is estimated number of visitors of the zone ‘i’

P_i is the total population of the zone ‘i’

According to Freeman (1993: 93-102) inferring wage rates by dividing household income by an estimate of hours worked will introduce measurement error as this can be estimated only for a fixed number of hours worked. In addition, according to McConnel (1992: 29-30), the inclusion of on-site time creates problems of spending more time at the site enhancing the value of a visit, while simultaneously increasing the cost. Thus this model excludes the opportunity cost of travel time and the on-site time spent because the data collection was provided by average net income per month rather than the hourly wage-rate of each visitor.

The second step uses the regression results from the first step to derive a total demand curve for the site and illustrates the estimated total visits from all zones (Q) or (V), given a set of variable travel costs (P) or (TC), which is expressed as a typical demand function:

$$Q = f(P) \text{ or } V = f(TC) \quad (4.3)$$

The idea of a consumer surplus is a central tenet of the travel cost method. The importance of CS in the TCM lies in the fact that it actually represents how much a visitor values a trip or visit to a recreational site. So invariably, the CS represents the recreational use value attached to a recreational site. According to Sohngen et al. (1999: 12), the CS is the additive value above travel cost that individuals get by visiting a recreational site each season/year. In ordinary economic terms, the CS is defined as the difference between the estimated demand prices and the actual

expenses that the visitor incurs during the whole trip. Alfred Marshall elucidates more on this by saying that "The price which a person has to pay for a thing can never and seldom come up to that which he would be willing to pay rather than go without it, so that the satisfaction he gets from its purchase generally exceeds that which he gives up in paying away its price; and he thus derives from the purchase a surplus satisfaction. The excess of price which he would be willing to pay rather than go without the thing, over that which he actually does pay, is the economic measure of this surplus satisfaction. It may be called a consumer's surplus." (Ndichia, 2007).

To illustrate the concept of the CS, this study considered adapting the concept from Sohngen et al. (1999: 1-13) as follows:

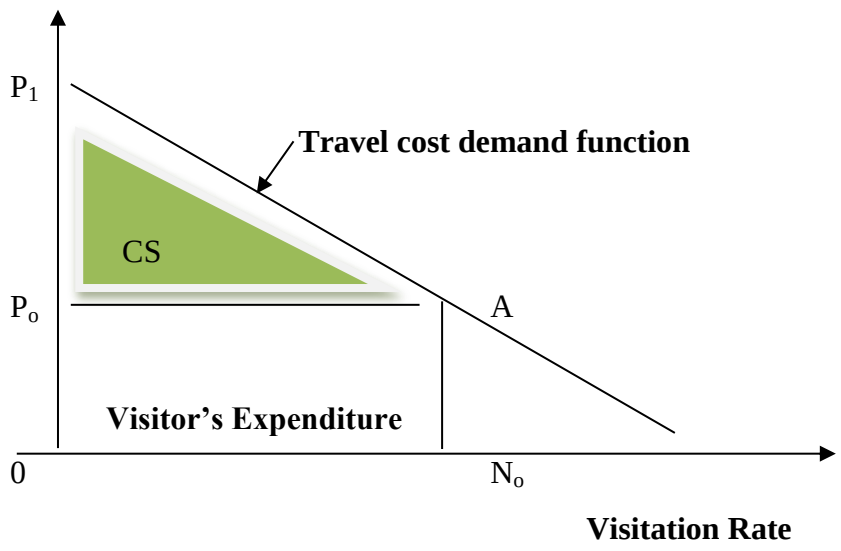

Figure 4.1 Travel Cost Demand Function and Consumer Surplus

Source: Sohngen et al., 1999: 12.

From Figure 4.1, it can be indicated that the CS is the area represented by AP_oP_1, which can be easily calculated.

There are two ways of calculating CS. First is to calculate by employing the tools of calculus if the travel cost demand function is specified parametrically through an appropriate function form.

Suppose we have a travel cost demand function form from equation (4.1), CS can be derived by taking the integral value of the demand function i.e.

$$CS=\int_{P0}^{P1} f(TC)dPi \tag{4.4}$$

Where CS is consumer surplus

P_0 is choke price, calculated from intercept divided by beta or slope when f(TC)=0

P_1 is the average travel cost per zone

TC is travel cost

This method of calculation can be only applied when the data is in such a way that ordinary least square (OLS) regression or any other appropriate estimation procedures can be applied directly to obtain the travel cost demand function.

The second is calculated where the number of trips is an exponential function of the travel cost and other variables such that CS = -1/β, where β is the coefficient of the total travel cost (TC) variable obtained when the maximum likelihood estimation is applied to the models. It is noted that the sign of β should be negative as it must be consistent with expectations in a demand model. Therefore, the CS per trip estimates should always be positive.

4.2 Survey Design and Data Descriptive

A questionnaire was designed during October 2011 and December 2011. The questionnaire consists of three parts: (1) travel cost information, (2) questions to determine each visitor's socio-economic characteristics and (3) the questions related to respondents' supportive behaviour toward Vat Phou preservations.

The first part consisted of thirteen questions, related to the journey of the visitors such as country and/or city of origin of the respondents, their means of transportation, and how much they spent on their trip. For those who were foreigner visitors, we also asked the entry point into Laos and how they travelled to the site. The questions also included the number of persons accompanying and how many dependent persons accompanied the visitor to the site, the purpose of visit, frequency of visits per year, activities on the site, expenditure on the site, costs incurred on the site, and the estimated total cost during their holiday in the region.

In the socio-economic characteristics section, the questions included their age, gender, status, nationality (for foreign visitors), educational background, occupation status as well as net monthly income. The question on age asked “How old are you?”. The data set age variable is treated as a continuous variable. While gender and status variables are treated as dummy variables, which consisted of two options: i.e. male = 1 and female = 0, married = 1 and single = 0. There was a question on the nationality of the foreign visitors and it was set as a continuous variable. The educational background question consisted of ten options, ranging from never attended school, and elementary schooling to university education (undergraduate and postgraduate education). In the data set, the representative options are two options such that, undergraduate level and below are set as 0, postgraduate level and above are set as 1. Similarly, there were ten options in the occupational level question, and two representative options are shown in the data set such that, government staff is set as 1, and others are set as 0. Finally, in the data set, the representative options of income were set, rank from USD1,000.00 to USD 10,000.00 (Appendix E).

Finally, part three of the questionnaire asked respondents' willingness to financial support for Vat Phou management and their reasons for being supported (not support) to the management of the site. Definition of variables in the data set is defined in Appendix F.

4.3 Data Collection Procedure

4.3.1 Secondary Data Collection

The secondary data was collected from the Tourism Research Division, Tourism Development Department (TDD), Ministry of Information, Culture and Tourism (MICT); the Department of World Heritage, MICT; and Vat Phou Management Office. The total number of visitors to the site by country was taking from the site management office. All tourists data used in this empirical study was based on the 2010-2011 data collection.

4.3.2 Primary Data Collection

During the design phase, the questionnaire was pilot-tested. The on-site survey for this work was carried out in the first two weeks of October 2011. A pilot-tested survey was performed with 25 domestic visitors and 25 foreign visitors. We did this in order to identify areas where questions produced unexpected results. Thereafter, minor adjustments were made and translation of the questionnaire into a Lao-language version was deemed necessary since the pilot study was conducted using only the English version of the questionnaire. The on-site survey was then fully conducted at Vat Phou from mid October to December 2011. Individual visitors were chosen as respondents for the interviews. Samples were taken using two approaches. The first approach involved directly interviewing (on-site interviews). The second approach involved handing the questionnaire to visitors at the rest area surrounding the site and asking them to complete the forms. The sample population comprised of both domestic and foreign visitors. The sampling technique implemented during the on-site survey was the random sampling technique. By this, every five individuals randomly filled-in the questionnaire as well as being interviewed. The random sampling was somewhat biased as only individuals from the age of 16 and above were targeted. This was necessary as we expected that the individual equal and over 16 years of age would more clearly understand the purpose of the study. However, many visitors refused to answer questions due to their limited time available, especially those who were part of a group tour.

During the entire period of the on-site survey, 396 questionnaires were completed, and that is the number which is used for this empirical study, of which 140 questionnaires were completed by domestic visitors that can be classified into 31 zones, and 256 questionnaires were completed by foreign visitors from 32 zones (Table 4.1).

Table 4.1 Summary of Zone and Respondents

Description	Local Visitors	Foreign Visitors
Zones	31	32
Respondents	140	256

4.4 Data Analysis

The data generated from the survey was recorded with the aid of Microsoft Excel. The variables used and their full meanings are present in Appendix F. Based on the generated Excel file, descriptive statistics of some of the key variables were computed with the aid of Excel. The final data set was then transferred to Stata/SE 11.1 for further statistical analysis through regression.

The total travel cost for each individual was computed by the sum of the travel cost and other costs obtained from the questionnaires, including a round trip to the site, accommodation during the stay, food and beverages, souvenirs, entertainment, local transportation, entrance tickets and on-site expenses. The cost of on-site time has been excluded as it was somewhat difficult to determine the exact time spent at the site for each visitor.

The travel cost in this case refers to the transport cost or fuel cost (for domestic visitors using their own vehicles) to travel to the site. The cost of fuel was estimated based on the average of 16 Km/l measurements. In the case of a group tour or visitors using the same vehicle, the fuel cost was divided by the group size in order to obtain the travel cost per person. The travel cost for each visitor was multiplied by two in order to get a round trip travel cost. In the case of an individual who stated a number of dependent persons, this is also included in the travel cost of that individual

respondent. In the case of multiple-site visitors, their travel cost was divided by the number of sites they intended to visit. In addition, those foreign visitors who did not provide the travel cost data, but indicated where they were from, the travel cost was calculated based on the distance multiplied by cost per Km. Travel distances have been computed from the starting point to the city where the site is located. In the case of single destination visitors total travel costs were the appropriate cost to include. However, for those who had combined trips, i.e. multi-purpose or multi-destination visitors, a proportion of the total cost was assigned according to the relative importance of the site in question, in relation to the other sites visited.

The above computation of the total travel costs seem appropriate as it is based on the information directly revealed by visitors.

The summary of the socio-economic characteristics of respondents was divided into two different sets. One set is a summary of domestic visitors and the other is a summary of foreign visitors as follows:

4.4.1 Data Analysis of Domestic Visitors

The data for domestic visitors obtained from the questionnaires can be classified into 31 zones (districts) or with a total of 140 respondents (Appendix G). The number of respondents was spread out over the zone across the country and the adjust number of domestic visitors per zone can be classified accordingly (Appendix H). In relation to the socio-economic characteristics of domestic visitors, almost 63% of domestic visitors interviewed were males. The average age is about 40 years. Our domestic respondents have very high education levels, and almost 73% of them have a university degree or higher title. More than half of our domestic respondents are married, and the average household size is 5.2 persons, of which 2.3 people in the family are already employed. The average income per respondent is about LAK 4,290,229. (LAK 8060 = USD 1.00, exchange rate as at 29 September 2013) Finally, about 35% of respondents work as government staff, and 34% are employed in the private sector. Staff employed by state-owned enterprises, accounted for 13% of domestic respondents (Appendix I).

4.4.2 Data Analysis of Foreign Visitors

The data for foreign visitors obtained from the questionnaires can be classified into 32 zones (countries) or with a total of 256 respondents (Appendix J). The number of respondents was spread out over the zone across the world and the adjust number of foreign visitors per zone can be classified accordingly (Appendix K).

In relation to the socio-economic characteristics of foreign visitors, almost 61% of foreign visitors interviewed were males. The average age is about 31 years. More than half of our domestic respondents are married, and the average household size is 1.58 persons, of which 1.28 people in the family are already employed. The average income per respondent is about USD 1,699.42. Finally, the majority of the foreign respondents (31.64%) are working in private companies, follows by those who work as self employed (10.94%), and about 8.98% are working in the government sector. It is interesting to note that however, about 69 respondents or about 26.95% are students (Appendix L). And from the observation these group of people are those who just graduated college and university and take chance to go abroad for holiday before starting to find a job.

4.5 Econometric Regression

Apart from the travel cost variable, it was decided to include socio-economic variables in the regression function since it could be expected that demand for visits to the site would be influenced by any of these variables. Thus, the econometric models for both domestic and foreign visitors' demand equation is defined as follows:

$$V_i=\alpha + \beta_1 TC_i + \beta_2 WORKMEMi + \beta_3 MEMi + \beta_4 INCOME_i + \beta_5 JOB_i + \beta_6 EDU_{i+} \beta_7 STATUS_i + \beta_8 AGE_i + \beta_9 GEN...+ \varepsilon_i \quad (4.5)$$

Where:

V_i = The number of visits per zone 'i' adjusted for the zonal population

TC_i = Travel cost per zone 'i'

$WORKMEM_i$ = Average working members in the family per zone 'i'

MEM_i = Average members in the family per zone i

$INCOME_i$ = Average household income per zone i

JOB_i = Average occupation per zone i

EDU_i = Average education level per zone i

$STATUS_i$ = Average status of respondents per zone i

AGE_i = Average age per zone i

GEN_i = Average gender per zone i

α is the intercept, the βs are the regression parameters and εi is the error term indicating each zone.

Stata 11.1 has been used to perform ordinary least squares (OLS) regression analysis to estimate the first stage demand curve for the recreation experience, that is a per- capita visitation as a function of travel costs, that are expected to increase as the distance between the zonal origin and destination increases.

Three different functional forms have been tested, initially with all variables included. However, nearly all socio-economic variables appeared to be highly insignificant.

Thus it was decided to proceed with a model that only includes total travel costs as independent variables resulting in the following model:

$$V_i = \alpha + \beta TC_i + \varepsilon_i \quad (4.6)$$

Three different functional forms were used to estimate the econometric model of Vat Phou visitor demand, including the linear, the semi-log form where the dependent variable is transformed by taking the natural logarithm, and the double-log forms where both the dependent and continuous independent variables are transformed by taking the natural logarithms as follows:

1) Linear Model:

$$V_i = \alpha + \beta TC_i + \varepsilon_i \quad (4.7)$$

2) Semi-Log Model or Log-Linear Model:

$$\ln V_i = \alpha + \beta TC_i + \varepsilon_i \quad (4.8)$$

3) Double-Log Model:

$$\ln V_i = \alpha + \beta \ln TC_i + \varepsilon_i \quad (4.9)$$

Where:

'**i**' is the number of zonal (observations)

Vi equals the number of visitors per zone per 1000 zonal population

$\mathbf{TC_i}$ is the travel cost from zone 'i'

$\boldsymbol{\varepsilon_i}$ is the normally distributed, random-error component with a mean of zero and a variance

The parameters to be estimated is β.

Following the demand theory, it is expected travel costs to be inversely related to the number of visitors. It is also expected there will be a positive relationship between the number of visitations and income for this cultural heritage site as indicated by numerous cultural heritage studies globally (Ready and Navrud, 2002: 11).

4.6 Econometric Results and Welfare Estimates

In order to obtain the econometric results, the OLS was employed to Equation (4.7; 4.8; 4.9). The regression was divided into two sets based on the two data sets: a domestic visitors' data set and a foreign visitors' data set. As a result of regressions, these can be summarized as follows:

4.6.1 Regression Result of Domestic Visitors

The OLS estimation results for functional forms presented in Equation 4.5 are included in table 4.2:

Table 4.2 Variables Summary Statistics

Variable Name	Mean	Standard Deviation
V	.0080532	.0054543
TC	1257284	462281.5
WORKMEM	2.78917	.9192512
MEM	5.159396	1.321452
INCOME	4366549	3456146
JOB	.3141065	.2877662
EDU	.7393497	.277086
STATUS	.5958781	.3103223
AGE	39.34999	6.851369
GEN	.650512	.2561641

The following Table (4.3) presents results of the regression of three functional forms in the equation (4.7; 4.8; 4.9): linear, semi-log and double-log.

Table 4.3 Regression Results for Alternative Functional Forms

Variables Name	Linear Coefficient estimate	P-value	Semi-log Coefficient estimate	P-value	Double-Log Coefficient estimate	P-value
Intercept	.0148766	0.000	-3.934097	0.000	4.916602	0.168
TC	-5.43e-09	0.009	-8.94e-07	0.001	-.7149307	0.008
F-statistic	0.0092		0.0010		0.0076	
R-squared	0.2116		0.3158		0.2212	

Table 4.3 shows that a joint F-test of the explanatory variables indicated that all linear, semi-log and double-log models were significant overall at the 1% level. As expected, the price or travel cost coefficient estimate of each of the three model specifications, was consistent with demand theory, in that the quantity of visitors per 1000 zonal population was inversely related to price or travel cost. The coefficient estimate associated with the travel cost variable was significantly different from zero at a 10% level for the linear and semi-log models, and at the 1% level for the double-log model. Double-log Elasticity coefficient estimates provide information with regard to the visitor responsiveness to a very small change in prices (travel cost components) , and this information can be useful to site administrators. Price elasticity coefficient for each of the models are present in table 4.4. For the linear and semi-log models, the elasticity coefficients are evaluated at the variable means, while for the double-log model, the elasticity coefficients are beta coefficient. The price elasticity coefficients for the three models are -.0062 ; -.9377; and -.80365 respectively, indicating a near unit elastic demand at 1% increase in travel costs which results in a corresponding 1% decline in the number of visits to Vat Phou per 1000 zonal population, especially the indicators from the semi-log and double-log models. As such, administrators at Vat Phou should recognize that the price elasticity of demand for the site may be slightly elastic in that the number of visitors is somewhat responsive to a change in price, and that if they were to increase the admission price (which is one of components of the travel cost) they may experience a reduction in associated revenues, as would be expected with a cultural heritage site.

Table 4.4 Price Elasticity Coefficient Estimates

Functional Form	TC Price Elasticity
Linear*	-.0062
Semi-Log*	-.9377
Double-log**	-.80365

Note: * Elasticities evaluated at variable means and beta coefficient

** Elasticities are beta coefficients

From the estimate regression, this section estimates the consumer surplus from demand functions estimated by OLS. The result of calculation both, individual visitor and aggregate welfare measures for each model are summarized in table 4.5. The annual consumer surplus estimates for domestic individual visitors are LAK 9,654.07; LAK 9,129.97; and LAK 9,002.74 for the linear, semi-log and double-log models respectively. The estimated aggregate annual consumer surplus benefits for visitors to Vat Phou for the linear, semi-log and double-log models are LAK 317,551,425; LAK 300,312,103; and LAK 296,126,989.4 respectively.

It is important to note that the functional form chosen for the visitor demand equation can have a significant influence on the visitor welfare benefit estimates. In this case, the linear model welfare estimate slightly exceeds both the semi-log and double-log models. Given the double-log model specification yielded the more robust regression estimates, it is expected the corresponding welfare estimates to be the more reasonable choice. However, given the absence of TCM-based visitor benefit estimates of cultural heritage sites elsewhere, comparative analysis is not feasible (Poor and Smith, 2004: 226). It is also important to note that TCMs which estimate the non-market valuation methods must be employed to estimate the non-use external benefits associated with a cultural heritage site (Ready and Navrud, 2002: 7).

Table 4.5 Consumer Surplus Estimates for the Vat Phou

Year	Linear		Semi-Log		Double-Log	
	Individual visitor (LAK)	**Total (LAK)***	**Individual visitor (LAK)**	**Total (LAK)***	**Individual visitor (LAK)**	**Total (LAK)***
2011	9,654.07	317,551,425	9,129.97	300,312,103	9,002.74	296,126,989.4

Note: *Average individual expenditure by visitors to Vat Phou was LAK 1,257,284.00

4.6.2 Regression Result of Foreign Visitors

The following Table (4.6) and Table (4.7) present summary of variable statistical of foreign visitors, and results of the regression of three functional forms in the equation (4.7; 4.8; and 4.9): linear, semi-log and double-log respectively.

Table 4.6 Variable Summary Statistics

Variable Name	Mean	Standard Deviation
V	446.8721	836.3215
TC	1523.735	656.4695
INCOME	1699.427	1332.186
JOB	.0969318	.247453
AGE	30.30338	7.12295
GEN	.5976982	.34178474

Table 4.7 Regression Results for Alternative Functional Forms

Variables Name	Linear Coefficient estimate	P-value	Semi-Log Coefficient estimate	P-value	Double-Log Coefficient estimate	P-value
Intercept	1204.494	0.002	4825.113	0.011	5.9524	0.149
TC	-.5380235	0.031	-706.7401	0.006	-.5493	0.319
F-statistic	0.077		0.019		0.517	
R-squared	0.1615		.2378		0.044	

Table 4.7 shows that by applying the three functional form regressions to the foreign visitors' data set, socio-economic variables have no influence on the number of visitors per zone, per 1000 zonal population. A joint F-test of the explanatory variables indicated that both linear and semi-log models were significant overall at the 10% level and 5% level respectively, whereas the double-log model was not significant overall. As expected, the price or travel cost coefficient estimate of each of the three model specifications was consistent with demand theory, in that the quantity of visitors per 1000 zonal population was inversely related to price or travel cost. The coefficient estimate associated with the travel cost variable was significantly different from zero at a 10% level for the linear model and at the 5% level for the semi-log models, while it was not significant for the double-log model. This is contradicted by the notable advantages of using the semi-log and double-log functional forms in that minimizing the problem of heteroskedasticity and eliminating the potential problem of negative trip prediction, which can occur using a linear functional form (Loomis and Cooper, 1990). In addition, only the coefficient estimates of the income variable for the linear and semi-log models indicated a positive relationship between income and quantity of visitors per 1000 zonal population, while the coefficient estimates of income variable for the double-log model indicated an inverse relationship between income and the quantity of visitors per 1000 zonal population. This result contradicts the previously referenced cultural heritage site valuation studies. One possible explanation may be the remote, rural location of the site, which may not be as

attractive to higher income, urban individuals. Another possible explanation may be the very different incomes among the zones. Moreover, the coefficient estimate associated with income was not significant in all three functional forms.

Thus, based on the poorly fitting semi-log and double-log models, it was decided not to calculate the elasticity coefficient estimates for foreign visitors.

The consumer surplus for each individual foreign visitor was calculated by using data regression from only the linear model. As a result, the CS of each foreign visitor was USD 20.24, where the amount the average individual visitor paid for 2011 was USD 1,699.42. The estimated average aggregate annual CS benefit for foreign visitors to Vat Phou for the linear model is USD 286,613.76.

4.7 Financial Supportive Behavior toward Vat Phou Preservation

In the last part of the survey questionnaire the respondents were asked about their supportive behavior to help preserve historic structures and protect environment at the Site. The question was asked "In order to help preserve historic structures and protect environment at Vat Phou heritage site are you willing to pay environmental fee as part of your visit ?" The bid amount were set equally value for both domestic and foreign visitors. There were five choices of bid for each visitor, rank from USD 1.00 to more than USD5.00 (Appendix: E). As a results, the majority of foreign visitors willing to pay for environmental protection fee, accounting for 77.34% of total foreign respondents, with the average contribution of USD2.01. Similarly, most of domestic visitors are also aware of the important of environmental protection at the WHS of Vat Phou (77.85%) and wish to contribute their extra money with the average per person of about LAK19,500.00 or USD2.44.

4.8 Conclusions and Future Research

Cultural heritage sites typically possess public goods characteristics, and thus non-market valuation methods must be employed to measure the benefits that they provide to visitors. The main purpose of this chapter was to apply a revealed preference zonal travel cost methodology to estimate both domestic and foreign visitor benefits associated with a cultural heritage site, namely Vat Phou and Associate Ancient Settlements within the Cultural Landscape (Vat Phou), located in southern Laos (Champasak province). The study result shows that consumer surplus welfare estimates can vary significantly depending on the functional form used to estimated visitor demand of both domestic and foreign visitors in that, firstly, the annual average domestic visitor CS estimates for the linear model was LAK 9,654.07 (USD 1.2), followed by LAK 9,129.97 and LAK 9,002.74 for the semi-log and double-log models respectively. The estimated price elasticity coefficients for Vat Phou can provide important information to site administrators, local and central government bodies involved in site management. The study found through price elasticity of demand estimates that domestic visitors to Vat Phou are slightly responsive to price change and thus, increasing the admission price could result in a reduction in total admission revenues.

Secondly, the annual average foreign visitor CS estimates that can only be based on the linear model was USD 20.24. Due to the poorly fitting semi-log and double-log models that apply to foreign visitor data, this study could not define the price and income elasticity coefficient estimates for foreign visitors.

Although estimates of domestic visitor benefits are informative, recalling one major concern with TCMs is that they estimate visitor-use benefits only, and in the case of cultural heritage sites, non-use benefits may be substantial (Ready and Navrud, 2002: 7). In order to further investigate the non-use value of benefits associated with world heritage sites such Vat Phou, an additional non-market valuation technique is employed in the following chapter, of which the contingent valuation method is used, as it is the most logical choice. Therefore, another area of

this research paper regarding the value of the benefits to society provided by Vat Phou was the conduct of a CVM study (Chapter 5)

CHAPTER 5

EMPIRICAL RESULT OF WILLINGNESS TO PAY FOR HISTORIC STRUCTURES PRESERVATION AT VAT PHOU

This Chapter presents an empirical study of WTP for the historic structures preservation project at Vat Phou by those Lao citizens living in the capital city Vientiane. Surveys have been conducted in Vientiane to assess the magnitude of their willingness to donate to historic structures preservation project at Vat Phou.

The 'Historic Structures Inventory' project is one of the preservation projects for Vat Phou that has not yet been implemented due to the limitations of the government budget and supporting funds from the public. The objective of the project was to determine, evaluate and preserve historical buildings and the standing vernacular historic structures within the site as potential contributing components to the cultural landscape of the Champasak Heritage and Cultural Landscape Protection Zone.

It would be difficult to predict precisely the effects of the Action Plan. However, the consequences of the project are expected make for some improvement:

A. All traditional wooden Lao houses, temples and other buildings 50 or more years old in the town of Champasak will be mapped, photographed and recorded descriptively.

B. There would be historical information about each structure

C. The information about each structure will be incorporated into the project's GIS and database

D. Those structures will then be subject to the protective restrictions of the Champasak Heritage Management Plan

E. Some seriously at risk structures will be then renovated by retaining the same structures.

Figure 5.1 Some Seriously at Risk Structures

This project has an identified specific cost for implementation by the office of the UNESCO Regional Advisor for Culture in Asia and the Pacific (2005). The estimation of project cost is about USD34,350.00. Thus in all likelihood there would be a cost to the Lao population in Laos in implementing this Protection Plan.

Financial support from different groups of Lao would be necessary to help finance this plan by making donations.

To implement the Action Plan, a Vat Phou Trust Fund would be established. The citizens of Laos would be asked to pay a once-only donation into the Trust Fund. The only purpose of the Vat Phou Trust Fund would be to finance the implementation of the action plan.

The Fund would be managed and administered by a Board of Governors comprising various government sectors so as to minimize any possible conflicts of interest. The board would consist of the Governor of Champasak province, representatives of the Ministry of Culture and Tourism, the Vat Phou Authority Management, the Mayor of Champasak district, and representatives of the Cultural office of Champasak district. The board would also include community groups from villages in Champasak district as well as local residents of the Vat Phou area. The activities of the board would be completely transparent. An independent auditing of the board would be performed annually, and made public. A summary of the total financial transactions would be widely and publicly available.

5.1 Methodology

5.1.1 Contingent Valuation Method

The Contingent Valuation Method is a direct survey approach which is able to estimate a consumer's preference or their WTP for a specified change or improvement of goods or services through a hypothetical scenario presented to respondents for valuing. Normally, there are two types of CV questions: open-ended and referendum CV questions. Open-ended CV questions ask respondents to state their WTP or Willingness To Accept (WTA) compensation for a specified change or improvement, while a referendum CV or dichotomous choice (DC) elicitation provides respondents with the option to provide a "Yes" or "No" to imply the adoption of a random utility function. Dichotomous questions help avoid some biases in answering such as outliers, but require complicated statistical treatment (OECD 1995). In addition, the DC form of the CVM is easy to administer, has no intricate bidding schemes, respondents do not have to concoct an exact value, which makes this approach more

market-like and it allows analysis which is consistent with utility theory (Draker, 2000). However, it is important to make the hypothetical question as realistic as possible to avoid hypothetical bias, best described by the statement "ask a hypothetical question get a hypothetical answer" (Seller, Stoll and Chavas 1985). Based on the stated benefits, the DC contingent valuation method is the chosen approach. A dichotomous choice WTP question was used with 12 bids.

5.1.2 Modeling

In this study, dichotomous choice CV was used to measure individual-level values for maintaining the historic structures at Vat Phou by preserving it in its original form or condition. Since the general public was assumed not to have any property rights to the structures, a WTP measure was used.

To illustrate the basic idea of DC contingent valuation by considering an individual's WTP, this study has borrowed the functional form of McConnell (2002). The basic model for analyzing answers from DC questions in a CV study is the random utility model.

Supposing that the individual derives utility from participation in supporting the preservation project at Vat Phou and form money income. To represent support, the subscript indicator i is introduced, where i=0 is the initial state and i=1 is the final state of the historic structures in the question. The initial state is the current state of historic structures without the project. The final state is a hypothetical state assuming that the proposed preservation plan for the historic structures as present in the scenario of the questionnaire is carried out. Income is denoted by Yj, and other observable attributes of the individual which might affect his/her preference (e.g. age, education, family size, etc) are denoted by vector Z.

The indirect utility function for respondent j is expressed as follows:

$$Uij = Ui\ (Yj, Zj, \varepsilon ij)\ i=0,1 \qquad (5.1)$$

εij is a component of unobserved preferences of the respondents.

Since there is a change from state '0' to state '1', there will be another attribute called the quality of the historic structures Q, which should be included in the model. Thus, the utility function in both states can be rewritten as follows:

$$U_{0j} = U_0 (Yj, Zj, Q_0, \varepsilon ij) \quad (5.2)$$
$$U_{1j} = U_1 (Yj, Zj, Q_1, \varepsilon ij)$$

Supposing that respondents are asked whether they are willing to pay Aj to change from state "0" to state "1"; if the answer is "Yes", their utility in state "1" must be higher than that in state "0" as shown in the equation below.

$$U_{1j} (Yj - Aj, Zj, \varepsilon_0 j) > U_{0j} (Yj, Zj, \varepsilon_0 j) \quad (5.3)$$

The probability for answering "Yes" is the probability that respondents think they will be better off in state "1" although they have to pay Aj.

$$Pr(Yesj) = Pr\{U_{1j} (Yj - Aj, Zj, \varepsilon_0 j) > U_{0j} (Yj, Zj, \varepsilon_0 j)\} \quad (5.4)$$

A crucial assumption is that, although the individual knows his/her utility function Uij with certainty, it contains some components which are unobservable to the econometric investigator and are treated by the investigator as stochastic; these serve to generate the stochastic structure of the statistical binary response model. These unobservable components could be characteristics of the individual or attributes of the donation/not-donated alternatives or both. Thus, to the economist U_{0j} and U_{1j} are random variables with some probability distribution and with means V_{0j} (Yj, Zj, ε_0j), and V_{1j}(Yj, Zj, ε_1j), which depend on the observable characteristics of the individual through given parametric functions. The probability of saying 'Yes' can be written as:

$$Pr(Yesj) = Pr\{V_{1j} (Yj - Aj, Zj, \varepsilon_0 j) > V_{0j} (Yj, Zj, \varepsilon_0 j)\} \quad (5.5)$$

Supposing that the utility function is linear, we can write:

$$V_1j(Yj - Aj, Zj) = \alpha_1 Zj + \beta_1(Yj - Aj) \quad (5.6)$$

$$V_0j(Yj, Zj) = \alpha_0 Zj + \beta_0 Yj$$

$$V_1j(Yj - Aj, Zj) - V_0j(Yj, Zj) = (\alpha_1 - \alpha_0)Zj + \beta_1(Yj - Aj) - \beta_0 Yj$$

With the assumption that the marginal utility of income is constant between state "0" and state "1", β_1 equals β_0, so we have:

$$V_1j - V_0j = (\alpha_1 - \alpha_0)Zj - \beta Aj \quad (5.7)$$

Denoting $\alpha = (\alpha_1 - \alpha_0)$, we can rewrite the equation as follows:

$$V_1j - V_0j = \alpha Zj - \beta Aj \quad (5.8)$$

The probability for answering "Yes" will be:

$$Pr(Yesj) = Pr(\alpha Zj - \beta Aj + \varepsilon j > 0) \quad \varepsilon j = \varepsilon_1 j - \varepsilon_0 j \quad (5.9)$$

To estimate the random utility model with a linear utility function, we ran a logit model with Yes/No responses to the WTP question as the dependent variable, and the bid and other household characteristics as the explanatory variables as follows:

$$Pr(Yesj) = a_0 + a_1 bid + \Sigma aiXi \quad (5.10)$$

5.1.3 Variables to be Measured

In this study, three groups of variables (Appendix: J) were included to reflect WTP of Lao citizens for historic structures preservation at Vat Phou. The first set of variables (Gender, Age, Education, Income, Household size, and Charity) were individual specific variables that measure the socio-economic variability among the respondents. The second set of variables (Past use, Current use and Future use) was included to measure the use or potential use factors of the site. The last set of variables (Plan knowledge, Media and Certainty; i.e. have they heard of plan or Vat Phou in the news) was also included. The purpose of including these variables is to

capture the relative visibility of the plan and awareness of the site among the population. A respondent's attitude towards preservation of historic structures was also assumed to influence his/her WTP. Five variables were included to account for these attitudes: (i) the respondent's opinion regarding the importance of preserving historic structures; (ii) the respondent's opinion regarding the change of the historical, cultural and symbolic value of Vat Phou by preserving historic structures; (iii) the respondent's opinion regarding the change of the value of WHS for recreational use associated with preserving historic structures; (iv) the respondent's opinion regarding the realistic of the trust fund to implement the action plan; (v) the respondent's reasons for determining their maximum amount to donate to the action plan was also included in the survey questionnaire.

Knowledge of previous studies has found that income, education, and household size have impacts on WTP for historic resources (Carrot, 1996: 423-430; Whitehead, Chambers and Chambers, 1998: 137-154; Garrod and Willis, 2002: 44-67; Mourato, Kontoleon and Danchev, 2002: 68-104; Riganti and Willis, 2002: 142; Santagata and Signorello, 2002: 238-246; Kling, Revier and Sable, 2004). A general conclusion drawn from the studies in Navrud and Ready (2002: 3) indicate that positive values for historic resources are typically held by wealthier and more educated segments of the population. Thus, education and individual income were expected to increase WTP for preserving the historic structures of Vat Phou. With individual income, a positive relationship also supports the theoretical validity of a WTP model (Whitehead, Chambers and Chambers, 1998: 137-154).

Whitehead, Chambers and Chambers (1998: 137-154) have found that WTP had an inverse relationship with family size, suggesting that less disposable income is available for donating to historic preservation. On the other hand, variables such as sex and age were expected not to have an effect on predicted WTP (Noonan, 2002: 14).

According to Navrud and Ready (2002: 9) knowledge of historic resources, previous donations made to preservation organizations, interest in cultural heritage, and belief that historic places should be preserved are often important factors in cultural valuation studies. Thus, in this study, respondents' knowledge, attitudes, and behavior were expected to influence their WTP.

5.2 The Questionnaire Design

The CVM questionnaire used in this study had four main parts. The first part was the personal information of the respondents such as gender, age, educational background, occupation and monthly income as well as the number of members in the family. The second part asked for information related to the use and the standing of Vat Phou, consisting of three questions about the use of Vat Phou: past use, current use and future visits to Vat Phou; two questions related to Vat Phou and the media. Part three of the survey questions asked about the charitable habits of respondents. The last section of the questionnaire was designed to obtain WTP information to the proposed project of preserving Vat Phou. In this part, information about the cost of the action plan and the plan implementation was also provided. Respondents were asked to assume making a once-only donation for the project to a trust fund established for the implementation of the action plan, administered by a board of governors comprising various and reputable interest groups so as to minimize any possible conflict of interest.

The survey question in this part included a dichotomous choice question to prevent the future loss of the historic structures, a level of certainty of respondents which stated their WTP intention; followed by a question asking them for maximum willingness to contribute to the project if they refuse the DC question.

The DC question was "If you were asked to donate_____ Kip to the Vat Phou Trust Fund to support the significant historic structures preservation at Vat Phou, a World Heritage Site, would you willing to contribute?"

The twelve bids used in the WTP question were obtained through pretest. A pretest was held in Vientiane with four different income groups ranging from no income to high income earners. Each group was made up of 30 people. The bids were then revised and finalized for use in the questionnaire. The final twelve bids were: LAK 20,000; 30,000; 40,000; 50,000; 60,000; 80,000; 100,000; 120,000; 150,000; 200,000; 250,000; 300,000. (USD 1.00 = LAK 7,550.00)

Follow-up questions were asked to assess the respondents' judgment of support of residents for the action plan, the feasibility of reaching the target of the action plan, the change of the historical, cultural and symbolic value of the site with

the protection of its cultural historical structure, and their confidence in the trust fund management and in the implementation of the action plan. There were total of 32 questions in this survey (Appendix Q).

5.3 Sample Respondents

In order to construct a sample of individuals in the capital city of Laos, we firstly selected 17 organizations from different sectors, including government agencies, state-owned enterprises and private companies, by sending a request letter to the head of each organization to ask for participation in this academic survey. The letters were also sent to educational institutions, where short-term training courses for general staff and government officers from different parts of the country are conducted. We did this in order to capture as much as possible a variety of respondents. In the request letter, we explain the purpose of the study, its significance and the reasons why we approached them including a sample of the questionnaire and the instructions how to answer the questions. In the last section of the letter, we requested they provide the number of staff wishing to participate in the survey and the due date for response to the request letter. Within two weeks, we received responses from ten organizations. The organizations that wished to participate in the survey included the National Academy of Politics and Public Administration, the Ministry of Labor and Social-Welfare, Sengsavanh Business College, Lao-Singapore Business College, the Com-Center Educational Institute, Lao Telecommunications Ltd., Enterprise Telecommunication Lao (ETL), and two textile manufacturers.

5.4 Method of Data Gathering

In this empirical study, a mail survey (drop-off) was employed as the questionnaire included a long description of the project and respondents needed to have sufficient time to read and complete the questions. Although, this system of surveys generate relatively lower response rates and less reliable information than do personal interviews (Boyle, 2003: 112), mail surveys can present better descriptive information than by using other types of survey instruments such as telephone and

internet surveys. This study was not considered to conduct personal interviews due to its prohibitive cost, although it was advocated by Mitchell and Carson (1989: 902) and NOAA's Blue Ribbon Panel (NOAA, 1993: 38) as an instrument which generates greater reliability. This study was considered inappropriate as an internet or telephone survey, again due to expense and the likelihood it would not be representative of the general population because of lack of internet access (Dillman, 2000: 9).

As a result of the acceptant letters with the number of participants from each organization, a total of 1,212 surveys were mailed (drop-off) to the ten organizations on 2 April 2013. To improve the response rate, a pen was included for each sample to the same address as an incentive to return the survey. A short note on the contact persons, the collection date and time was also included in each envelope.

5.5 Analysis and Results

In this section, the statistical summary is first presented, followed by the estimation of the WTP amount using the dichotomous choice methods that were described in the methodology section. Then, the function forms that are shown in section 5.1 were used to estimate logit curves, and the WTP was estimated using the mean method. The details of each result are presented as follows:

5.5.1 Statistical Summary

The surveys to determine the WTP for preserving project at Vat Phou were completed at the end of May 2013. A total of 1,115 surveys were returned, of which 1,099 could be used for the analysis of WTP.

Profile of Respondents

Among the respondents, nearly half were females (43.95%) answering the questionnaires (Appendix R). This could be explained by the fact that the proportion of females working in an organization is equivalent to the male number. The average age was 32.84 years-old, while the biggest proportion of respondents' age is in between 26 to 35 years-old, accounting for 38.58%. There were two reasons for this. Firstly, some organizations gave the task of answering questions to their younger staff. Secondly, some organizations gave the task of answering questions to those staff

who were higher educated. In addition, due to the survey questions being distributed to general staff in an organization, and we did not indicate that only staff could answering to the question, respondents may have taken the question home to answer, and those who have family (wife or children who are already educated) may have been given the task of answering for their family in order to complete the questionnaire.

In relation to occupation, the highest percentage of respondents are government agencies staff, accounting for 51.32%, of which 8.46% belong to military forces; followed by staff working in private organizations, and staff working in state-owned enterprise agencies, accounting for 13.01% and 12.19% respectively as well as those who are working as labourers, accounting for 10.46%. About 52 respondents are businesspersons, accounting for 4.73%, 46 respondents are students, accounting for 4.19% and only 17 people are housewives. In our returned questionnaires, we also found a total of 26 people who indicated as others, accounting for 2.37% of the total sample.

It was found that more than two-thirds of the respondents originally came from provinces, 41.31% of respondents came from the northern part of Laos, and 30.39% originally came from the southern Laos. The surveys also included questions on the family size of the respondents and the number of working persons in each family. It was found that the average number of family members of respondents was about 5 persons per family, and the average number of members who earn an income was 1.38 people.

In respect to income, the average individual monthly income of the respondents is approximately LAK 2,880,008 or USD 366.00.

Respondents who hold a Bachelor Degree made up the largest proportion, accounting for 33.58%, followed by those who hold Diploma, College and Masters Degrees, accounting for 19.75%, 19.38%, and 8.28% respectively. In our sample, we found the number of respondents who hold a Secondary certificate accounted for 8.55% of total respondents, and 63 who hold a Postgraduate degree, accounting for 5.73% of respondents. Only nine people hold a Ph.D. Degree accounting for 0.82% of total respondents, and 2 others, accounted for 0.18%.

In our sample, 50.14% of the respondents have seen Vat Phou, and 88.72% of the respondents indicate that they may visit Vat Phou in the future for recreational purposes. It is interesting to note that, among the respondents, only 175 people visited Vat Phou during the previous 12 months, accounting for 15.92% of total respondents.

In respect to the question of hearing the preservation plan at Vat Phou, 50.50% of respondents stated that they had heard a little, and 24.02% had heard a lot, while 25.48% had never heard about any preservation plan at Vat Phou (Table 5.1).

Table 5.1 Respondents' Past, Current, and Future Use of Vat Phou (percent)

No.	Statements/Questions	Yes	No	No Comment
1	Have you ever seen Vat Phou in your life?	50.14	49.86	0
2	Have you visited Vat Phou in the last 12 months?	15.92	84.08	0
3	Do you think your household will ever visit Vat Phou in future?	88.72	10.28	0

Similar to the question about the preservation plan, hearing news about events at Vat Phou on TV, radio or in the newspaper in the previous 12 months, 10.28% of respondents indicated that they had never heard about it. While 42.13% had heard a few times (or 1 to 5 times), 29.12% had heard several times (or 6 to 10 times), 8.46% had seen or heard many times (or 11 to 20 times) and 8.83% of respondents had heard more than 20 times (Table 5.2).

Table 5.2 Respondents' Attitude Toward News of Vat Phou (percent)

No	Statements/Questions	0	1	2	3	4	5
	How often have you heard about Vat Phou on TV, the radio, newspapers, magazines, or by community groups in the 12 months	1.8	10.28	42.13	29.12	8.46	8.33

Note: 0 = Don't know, 1 = Never; 2 = A few times (1-5); 3 = Several times (6-10); 4 = Many times (11-20); 5 = More than 20 times.

In relation to the question testing respondents' knowledge about the preservation project at Vat Phou (Table 5.3), more than half of them have never heard about this preservation project. Only 24% of respondents have heard about the project. This is reflected to the limitation of the project plan to the public.

Table 5.3 Respondents' Attitude Toward Preservation Plan at Vat Phou (percent)

No	Statements/Questions	0	1	2
	Have you ever heard about Preservation Plan in Vat Phou?	50.50	24.02	25.48

Note: 0 = Never heard, 1 = A little bit; 2 = A lot;

Among the sample respondents, more than half of them (52.50%) have donated to official cultural preservation projects in Laos. Only 24.57% have donated to NGO projects, and 50.50% have donated to government projects. It is interesting to note that there is rarely an official request for donations from the general public for government and NGO projects. Thus, Lao people are not familiar with being asked to

donate to government projects and NGO organizations, especially with set the price amount. They are usually faced with asking for cultural restoration and construction, but with volunteer amount. Some wish to donate considerable amounts of money Buddhist Temples, as they strongly believe in the merit gained by donating money or items to support their religion (Table 5.4).

Table 5.4 Attitude toward Donation Information (percent)

	Statements/Questions	Yes	No	No Comment
1	Did you ever make a donation to any cultural protection and restoration fund?	52.50	47.50	0
2	Did you ever make a contribution to a protection organization or NGO?	24.57	75.43	0
3	Did you ever make a donation to relief efforts or projects in Laos?	50.50	49.50	0

In relation to the change in historical, cultural and symbolic values of Vat Phou by preserving its historical structures, most respondents believe that with the Vat Phou protection action plan, the historical structures, cultural and symbolic value of the site as well as the quality of Vat Phou for recreational use would be improved. The results indicated that 32.21% of respondents stated that there would be a significant improvement by implementing this project. Only 11.28% indicate that there would be no change in the value of historical structures. Over half of the respondents (51.59%) state that despite this project, there would be little improvement in cultural and structure value, while others (25.11%) indicate that there would be no change in the structural value. Only four respondents (0.36%) believe that structural value would be significantly worsened by implementing this preservation project.

More importantly, the survey questionnaire included questions about the ability of the trust fund management to collect money from respondents and appropriately fund the action plan if it were to be implemented only by the government (Table 5.5). The results show that more than half (56.41%) of respondents agree there would be no problem collecting public donations, while over

one quarter (27.84%) indicate that there would be some problems, but that it was still possible to be collected. Only a few people (15.74%) state that there will be a lot of problems and that the intent of the fund is unrealistic.

Table 5.5 Respondents' Attitude Toward Donation Means (percent)

No	Statements/Questions	0	1	2
	How realistic do you think it is for the Trust Fund management to collect donations from you as you may have agreed?	15.74	56.41	27.84

Note: 0 = a lot of problem, 1 = no problem, it can be collected; 2 = some problems but still can do;

Few respondents (about 10.83%) state that it would be very easy to reach the target of implementing this action plan, while more than a third (35.85%) indicated that it would be easy to reach the target of implementing this action plan, a similar proportion to those who were ambivalent about the ease of reaching the target of the action plan (34.39%). However, a number of respondents indicated that it would be difficult to reach the target of implementation (13.74%), while a further 2.64% of respondents state that it would be very difficult. Of the remainder, 2.55% could not decide whether or not it would be easy to implement the action plan (Table 5.6).

Table 5.6 Respondents' Attitude Toward the Project Implementation (percent)

No	Statements/Questions	0	1	2	3	4	5
1	Do you think that the governing board of the Trust Fund as described can do a good job in managing the implementation of the action plan?	2.91	0	8.10	34.12	47.41	7.46
2	Do you think that if the action plan were to be implemented only by the government, it would be appropriately implemented?	1.82	1.00	18.84	34.94	28.57	14.83
3	With your understanding of the management system in Laos, do you think that the action plan as described can be finally implemented?	2.55	1.09	8.46	37.22	43.31	7.37

Note: 0 = Don't know;1 = Definitely not; 2 = Probably not; 3 = Neutral; 4 = Probably yes; 5 = Definitely yes;

In addition, based on the scenario that the project will involve many parties in the board of the trust fund as described in the background to the study, we were able to explore the respondents' opinions and how they feel that the governing board will perform the task of managing the implementation of the action plan. The results of the survey show that only 7.46% of respondents firmly believe the governing board could manage implementation of the plan well, 8.10% state a lack of confidence in the board, and 2.2% gave no opinion to the question. While almost half (47.41%) expressed a degree of confidence in the board's ability, and 34.12% state a neutral opinion. It is interesting to note that there were zero respondents indicating that the

governing board of the trust fund could definitely not do a good job in managing the implementation of the action plan (Table 5.6). Last but not least, among respondents, only 7.37% state that the action plan can be definitely implemented, 43.37% indicate that it can probably be implemented. Few (8.46%) indicate that the action plan would probably not be finally implemented, while one-third (37.22%) state a neutral position to the question.

Lastly, we found that 61.60% of respondents wish to have more information related to the action plan before making a decision on how much they might donate. Most of the information that they would like to obtain amounts to a detailed appraisal of the merits of the project, the rationale of the project, a feasibility study, detail of the preservation plan, project objectives, the project's action plan, the planned outcome of the project, the provision of infrastructure, the names of the major funding agencies, assurances that the implementation of the project would be transparent, photographic evidence of progress at each stage, details of financial planning, and a plan for monitoring, controlling and evaluating the outcome of the project. Some 74.61% of respondents indicate that it would be easier for them to make a decision on their willingness to donate to the action plan if more information on the concerns listed above could be provided.

5.5.2 Willingness to Pay Analysis

1) The Bid Curve

This subsection demonstrates the distribution of 'Yes' and "No' responses relating to amounts which might be donated and the estimation of mean WTP for the preservation project.

Table 5.7 shows a relationship between the bidding prices and willingness to pay of the respondents. Potential bids range from LAK 20,000.00 (or about USD 3.00) to LAK 300,000.00 (about USD 33.00). We found that the response size of each bid is nearly the same (averaging 91.58%). "Yes" responses decreased continuously as the bid price increases. Conversely, "No" answers increase as the bid price increases. The average "Yes" response was about 62.69%, while the remaining 37.31% stated "No". As a result, it can be stated that demand for the project has a negative relationship with the price of the bid.

Table 5.7 Distribution of Responses by Bid Amount (in LAK)

Bid Amount	**Total Survey**	**Total Responses**	**WTP**	**WTP (%)**	**Not WTP**	**Not WTP (%)**
20,000	101	91	84	92.31	7	7.69
30,000	101	89	82	92.13	7	7.87
40,000	101	86	71	82.56	15	17.44
50,000	101	94	71	75.53	23	24.47
60,000	101	93	70	75.27	23	24.73
80,000	101	80	61	76.25	19	23.75
100,000	101	91	59	64.84	32	35.16
120,000	101	95	57	60.00	38	40.00
150,000	101	91	48	52.75	43	47.25
200,000	101	89	34	38.20	55	61.80
250,000	101	101	16	15.84	85	84.16
300,000	101	99	10	10.10	89	89.90
Total	1212	1099	663	61.31	436	38.69

2) Logit Regression Analysis

The model used for the logit regression is as follows:

$$Pr(Yes)=a_0 + a_1bid + a_2gender + a_3age + a_4status + a_5edu + a_6job + a_7salary + a_8hhsize$$

The results (Table 5.8) show that socio-demographic characteristics such as gender, status, education, occupation, the number of family members and the number of working people per household have no effect on the probability of “Yes” responses, while the bid, age of respondents, and monthly salary were statistically significant. In addition, the signs of the coefficients were as expected. The higher the bid, the lower the probability of a “Yes” response. Older people however are more willing to contribute to the preservation project.

The result also shows that respondents who already have family, and those who work in the government sector paid less attention to the preservation project and were less willing to contribute to it.

Table 5.8 Logit Regression Results

Variables	Description	Coefficient	P-value
Bid	Bid	-9.94e-07***	0.000
Gender	Gender of respondent	.153669	0.334
Age	Age of respondent	.0297939***	0.007
Status	Marital status of respondent	-.0920575	0.635
Edu	Education level of respondent	.3101195	0.136
Job	Occupation of respondent	.0110386	0.953
Salary	Monthly income of respondent	1.61e-07***	0.001
Hhsize	The number of family members	.0252793	0.540
Adult	The number of working people per family	.0653725	0.303
Cons	Constant	-1.045354	0.002

Note: ***significant at 1%, **significant at 5%, *significant at 10%

3) Estimating Mean WTP

The mean WTP was estimated by using the following formula:

$$\text{MWTP} = -\left(\frac{a_0 + \sum a_i \overline{X}_i}{a_1} \right)$$

Where:

The mean WTP calculated in the logit regression was LAK 36,239.75 or 1.26% of average monthly income of respondent.

5.5.3 Reasons Why Respondents were Willing/Unwilling to Donate

There were many reasons given for being willing to donate to the preservation project (Table 5.9). Among the respondents who answered "Yes" to the WTP question, most of them wanted to preserve the cultural structures of Laos for young generations (24.51%) and for the structures to attract foreign visitors (19.52%) to visit the unique cultural structures on the site. Some (13.01%) wish to preserve them as Lao traditional symbolic structures.

Table 5.9 Reasons for Respondents' Willingness to Donate

Reasons	Number of Respondents	Percentage of Respondents
Contribution to the project is the responsibility of all Lao citizens	35	5.28
To be a part of cultural preservation projects	51	7.69
To see the social benefits as a whole	55	8.30
To preserve them for younger generations	162	24.43
To develop the site to become more attractive to visitors	129	19.46
To help develop the country	59	8.90
To preserve Lao traditional symbolic structures	86	12.97
To be proud of a nation that it is rich in cultural structures	63	9.50
Other reasons	23	3.47
Total respondents who answered "Yes"	663	100.00

There are a variety of reasons that respondents are willing to donate to the project; for example, they wish to donate because they want to be a part of the cultural preservation project (7.72%), they wish to see the social benefits as a whole by preserving their cultural structures (8.32%), and to be proud of a nation that is rich in cultural structures (9.53%).

However, nearly 39% of respondents are not willing to support the project (Table 5.10). Among the respondents answering "No" to the WTP question, most of them indicated that they earn limited income (36.30%). Other reasons included the uncertainty about the project's implementation (12.33%), uncertainty about the project's transparency (7.08%), and do not trust the management team (6.62%). Some (13.24%) thought that it should be the government's responsibility since the site is governed by the government board. Others (6.39%) indicate that they already pay an entrance to the site, and that income should be utilized in the preservation project at Vat Phou.

Table 5.10 Reasons for Respondents' Non-willingness to Pay

Reasons	Number of Respondents	Percentage of Respondents
I have limited income	159	36.47
I think it is the government's responsibility	58	13.30
I feel uncertain about the project's implementation	54	12.39
I disagree with the payment methodology with a set amount of donation	18	4.13
I already pay an entrance fee to the site	28	6.42
I feel uncertain about the project's transparency	31	7.11
I feel uncertain about the management team	29	6.65
I think it is a development project, not a donation project	21	4.82
Other reasons	38	8.72
Total respondents who answered "No"	436	100

5.5.4 Commonalities in the Opinions of Respondents

Most of the comments from the respondents agreed with the purpose of the project. Respondents generally believe that it would be useful if the project could be

implemented and they wish to continue supporting the project. Some have suggested the project should include consideration of community involvement in the project, and that any document promoting the project should be well prepared in order to elicit public interest in supporting the project. The project leader should announce the action plan widely through the media in order to attract more general public participation in the project. In addition, a number of respondents state that preservation projects are the only way to help conserve or maintain cultural structures for younger and future generations. They also propose that it would be very attractive site to tourists if the project covers all types of cultural structures of Lao tradition and become a special zone for tourists.

Only one respondent disagreed with the project, especially the point relating to donations from the public. He believes that this type of project should be propose to the organization involve in Vat Phou management such as the government of Laos. He also argued that the amount of donations should provide to the government agency to be managed, then whenever the project needs that money, they should budget it through the Lao National Assembly in order for transparency of the use of fund. The project should be in the government action plan (Argument from one respondent during the survey conducted).

Since this empirical study is about the preservation of cultural structures by asking public willingness to pay, the survey included questions about the certainty of respondents in stating the amount they are willing to donate. The results found that 32.67% of respondents were very certain of their statements, 30.48% are moderately certain and 27.66% are neutral. Only 1.73% of respondents are very uncertain as to the amount they might donate, and the remainder of respondents (1.82%) did not provide their thoughts on this question.

5.6 Conclusion and Policy Implications

Vat Phou has great value in terms of the cultural landscape and historic structures. Particularly, the site has significant historic value to the Lao people. This study estimated the willingness to pay of individuals in Vientiane Capital of Laos for the preservation of historic structures at Vat Phou, investigated why people were

willing or unwilling to donate to that preservation. From this analysis, some policy implications can be drawn to support the preservation project on the site. The study employed the CVM with the single-bounded dichotomous choice question format. The sample comprised 1099 individuals, living in the capital city of Laos. The study found that the mean WTPs estimated by logit regression were LAK 36,239.75 or 1.26% of average monthly income of respondents.

There were many reasons why people were or were unwilling to donate to a preservation fund. Generally, most of them wanted to preserve the cultural structures of Laos for younger and future generations. Individuals who were not willing to contribute to the fund thought that it was the government's responsibility since the property belongs to the government sector. Many did not trust the management team to handle the fund.

In the logit regression model, an individual's willingness to pay was negatively dependent on the bid and positively related to the monthly income and ages at the 90% level of confidence. Other socio-economic variables of respondents such as status and occupation have statistically effected their WTP at the 90% and 95% level of confidence respectively. However, it is interesting to note that respondents' gender, education, household size and number of working people in a household have not affected their WTP. The signs of these coefficients were negative related to the dependent variable.

Although this study does not give the total value of Vat Phou, it shows the great value of the site in terms of individuals' willingness to contribute towards a preservation project and is therefore useful information for governments in deciding how to preserve the site efficiently.

CHAPTER 6

WHO IS IN THE MARKET ANALYSIS: EVIDENCE FROM RESPONDENTS' SOCIO-DEMOGRAPHIC CHARACTERISTICS AND THIER "YES" SAYING

This study is an empirical analysis of public socio-demographic characteristic and their supportive behavior toward world cultural landscape preservation and environmental protection (Vat Phou). The study focuses on Lao citizens visitors' and non-visitors' value aimed at identify which groups of respondents are potentially supportive groups in the market analysis for Vat Phou preservation and environmental protection projects.

6.1 Methodology

To the knowledge, plentiful theories have been applied to explore residents' supportive behavior towards development, especially in the sense of tourism development. Those theories included (1) theory of social exchange, (2) theory of social impact, (3) theory related to place or community attachment, (4) reasoned action theory, (5) value-attitude model, (6) Irridex' model, (7) stakeholder theory, and (8) emotional solidarity theory. For instance, those researchers who applied the social exchange theory, included Andereck, Valentine, Knopf and Vogt (2005: 1056-1076); Jurowski and Gursoy (2004: 296-312); Látková and Vogt (2011: 50-67); Madrigal (1993: 336-353); McGehee and Andereck (2004: 131-140); Wang and Pfister (2008: 84-93). The researchers who have successfully applied the theory of social impacts included Ap (1992: 665-690); King, Pizam and Milman (1993: 650-665); Korca (1998: 193-212); Milman and Pizam (1988: 191-204); Perdue, Long and Allen (1990:

586-599). Those who applied a theory related to place or community attachment included Cui and Ryan (2011: 604-615); Vargas-Sánchez, Plaza-Mejía and Porras-Bueno (2009: 373-387); McCool and Martin (1994: 29-34); Lee and Allen (2000: 173-185). In the literature, there are still appeared the evidence of using different theory and models related to the residents attitude. For instance, Kwan and McCartney (2005: 177-187) applied reasoned action theory in their study on mapping resident perceptions of gaming impact; Lindberg and Johnson (1997: 402-424) implemented value-attitude models in their study on modeling resident attitudes toward tourism on Oregon Coast Community (USA); Vargas-Sánchez et al. (2009: 373-387) used the Irridex model to examine residents' attitudes toward the development of industrial tourism in the former mining community; Nicholas, Thapa and Ko (2009: 309-342) utilized stakeholder theory in their paper work on the residents' perspectives of a world heritage site (The Pitons Management Area, St Lucia); Woosnam (2011a: 615-626) applied emotional solidarity theory in his studies on comparing residents' and tourists' emotional solidarity with one another.

Among these theories, social exchange theory and social impact theory are most frequently used. These theories have been used to frame studies using a variety of variables. According to Brougham and Butle (1981: 569-590) significant differences in residents' attitudes are identified and related to personal and locational characteristics, with tourist contact, length of residence, age, and language being major explanatory variables. However, Socio-demographic variables are the main factors that have been used widely in studies of residents' attitudes towards tourism, including residents' attitudes and perceptions towards economic, environmental and social impacts. These socio-demographic variables have been used as explanatory variables.

The following sections review the causal relationships that have been tested between socio-demographic and other variables, attitudes towards, and support for WHS preservation in the literature.

Patterns in the results of most research concerning socio-demographic variables and other variables such as attitudes towards WH development are found to be both with significantly related and unrelated. For example, when considering gender, multiple studies found no relationship between gender and attitudes toward

WH including residents' perceptions towards economic, environmental and social impacts from the WH preservation (Cui and Ryan, 2011: 604-615; Madrigal, 1993: 336-353; McGehee and Andereck, 2004: 131-140; Perdue et al., 1990: 586-599). Similar to gender, age was usually found to have no relationship to perceptions of attitudes with a few exceptions including the studies by McGehee and Andereck (2004: 131-140), Weaver and Lawton (2001: 439-458), and Kuvan and Akan (2005: 691-706). Level of education yielded multiple results across several studies, indicating an unclear pattern. In several of the studies under consideration, level of education was found to have no relationship to resident attitudes toward WH preservation (Hao, Long and Kleckley, 2010: 627-640; Korca, 1998: 193-212; Madrigal, 1993: 336-353; McGehee and Andereck, 2004: 131-140; Perdue et al., 1990: 586-599). Contrary to these studies, Kuvan and Akan (2005: 691-706), Perdue et al. (1990: 586-599), and Látková and Vogt (2011: 50-67), found it to be a significant predictor of residents' attitudes toward WH preservation. When testing income, most studies found no relationship (Hao et al., 2010: 627-640; Korca, 1998: 193-212; Látková and Vogt, 2011: 50-67; McGehee and Andereck, 2004: 131-140), but again other studies found varying results, including the work of Williams and Lawson (2001: 269-290), and Kuvan and Akan (2005: 691-706).

In addition, according to McGehee and Andereck (2004: 134) younger the respondents are the higher their perceptions toward negative impact of landscape preservation. Moreover, regarding to the role of gender in expressing perceptions toward preservation of cultural landscape, men and women have equally opportunities to express their view point, however, most studies concluded that women perceived higher negative feeling of landscape preservation than men (Pizam and Pokela, 1985).

In relation to the relationship between the level of education and perception, some researchers have found that those residents who are less educated are more likely to perceive negatively the economic effects of landscape preservation. On the other hand, those who are well-educated are more concerned about the environmental and social benefits of landscape preservation (Androitis and Vaughan, 2003: 172-185; Teye, Sonmez and Sirakaya, 2002: 668-688).

Moreover, the value of perception studies is not only justified in the literature in order to identify factors that influence attitudes and behavior, but is oftentimes

closely connected to economic valuations, such as willingness to pay (Togridou, Hovardas and Pantis 2006: 308-319; Baral, Stern, and Bhattarai 2008: 218-227; Baranzini, Faust and Huberman, 2009: 370-376). In addition, the understanding of various economic instruments is often viewed as essential in order to develop management policies which would secure more funding and would help the protected area in achieving financial sustainability (Jones et al. 2011).

This study analyzes the socio-demographic factors that influence behaviours which are connected to an economic valuation such as (WTP). The study is focusing on the behaviours of both domestic visitors and non-visitors toward specific cultural landscape preservation (Vat Phou). The study utilize the implications of economic valuation methodologies to identify the relationship between respondents' socio-demographic characteristics and their WTP for World Cultural Landscape preservation and environmental protection in Vat Phou site.

6.2 Questionnaire Design

The economic valuation survey questionnaires were designed to be answered either by domestic' visitors or non-visitors, first in order to capture the inherent similarity and differences between the two groups and ensure a more appropriate basis for the comparison between domestic' visitors and non-visitors. Second, to collect information based on which characteristics and influencing factors of the two investigated groups can be identified. The identical questionnaire of both versions consisted of sets as follows:

The first set of the questions pertained to the respondents' socio-economic and demographic characteristics. Multiple choice (one answer from 2 to 10 answer choices) and short answer questions asked individuals to provide information regarding their gender, age, place of birth, marital status, educational background, occupation, monthly income and household members. These profiles will not only provide a solid basis for comparison between visitors and non-visitors, but also serve as a tool for linking the two major types of respondents to their characteristic behaviours and WTPs.

The following set of the questions explored respondents' general knowledge of Vat Phou and the preservation projects on the site. Attitude and perception questions focused on various issues related to Vat Phou preservation issues. Willingness to pay was obtained with the use of a dichotomous payment principle question, which asked respondents to state if they would be willing to donate (a once-only donation) of a certain amount to support preservation within the site by selecting one representative project among various projects that were presented by the site management team.

In the next set of questions, respondents were asked to provide a set of statements that had to be rated on the five Liker-style point scale (1 = least important/uncertain to 5 = most important/very certain), in terms of the statement's importance in giving a positive answer to the "Yes" saying question.

The particular set of questions for visitors included questions to gauge their overall attitudes toward the site in terms of satisfaction, involvement in on-site activities and their use of cultural and natural resources located within the site.

The concluding part of both versions included opinion questions. To the visitors, the question asked to discuss their most positive and most negative experience related to their use/visit to Vat Phou. To non-visitors the question was required them to discuss the most important benefits from the existence of the site. The second group of questions gave respondents the opportunity to express their suggestions for possible changes, which would improve the effectiveness of Vat Phou.

6.3 Sample Respondents

This study has defined respondents as Lao citizens, both visitors and non-visitors; visitors in this study can be referred to as Lao citizen visitors who visit the site during the conduct of the on-site survey (October-December 2011). Non-visitors in this study can be defined as Lao citizens who do not visit the site yet. These non-visitors included those who plan to visit the site in the future, and those who have no intention or desire to visit the site. This means that the sample respondents of this study are both from on-site and off-site. On-site respondents are those who hold

existing values and off-site respondents are those who do not hold existing values alone.

6.4 Data Collection Procedure

Data collection for this study was accomplished with the implementation of a specially designed questionnaire that applied to the valuation surveys as multi-purpose surveys that were carried out during the ZTCM study from October to December 2011 at Vat Phou, and during the CVM study in Vientiane capital from April to May 2013, using a stratified proportionate random sampling technique. The sampling population was composed of Lao citizens who were both visitors and non-visitors to above-mentioned location.

6.5 Econometric Model

The linear equation commonly used for a regression analysis is

$$Y = a + bx_1 + cx_2 + dx_3 + \ldots, \quad (6.1)$$

Where Y is the dependent variable ("Yes" saying) and x1, x2, x3, …are the independent variables (socio-economic factors), and a, b, c, …are the coefficients of the respondents variables.

In this study, multiple regression analysis was used, firstly to examine the residents' socio-demographic variables against their "Yes" saying, and secondly to examine the residents' attitude toward cultural heritage preservation at Vat Phou.

6.6 Findings of the Analysis

The findings of this chapter are divided into three parts. The first part provides the demographic characteristics of the respondents as both Lao citizens' visitors and non-visitors in comparison. The second part presents the relationship between Lao

citizens' socio-economic characteristics and their "Yes" saying approach. The third part presents results of the respondents' attitude, knowledge and awareness of Vat Phou as follows:

6.6.1 Demographic Characteristics of the Respondents

From the total of 1,239 respondents, there were 924 non-visitors and 315 visitors, representing 74.57% and 25.42% respectively. The age group of respondents was divided into 5 groups (Table 6.1).

Table 6.1 Age Groups of Respondents

Age Group	Total Respondents		Visitors		Non-Visitors	
	Total	**%**	**Total**	**%**	**Total**	**%**
15-25	314	25.34	77	24.44	237	25.65
26-35	466	37.61	104	33.02	362	39.18
36-45	289	23.33	70	22.22	219	23.70
46-55	144	11.62	41	13.02	103	11.15
>55	26	2.10	23	7.30	3	0.32
Total	**1,239**	**100**	**315**	**100**	**924**	**100**

The first group is aged equal to or below 25 years (25.34%), the second group is aged from 26 to 35 years (37.61%), followed by a groups aged from 36 to 45 years (23.33%), 46 to 55 years (11.62%), and above 55 years (2.10%). The overall average age of respondents was 33.60 years-old. The mean age for non-visitors is 32.97 years, while the mean age of visitors is 35.45 years.

It is interesting to note that the majority of both groups of respondents belong to the age categories of 26-35 years, accounting for 37.61% of the total respondents. The majority of visitors belong to the age category of 26-35 years, accounting for 33.02% of total visitors, and the majority of non-visitors belong to the same age group (26-35 years), accounting for 39.18%. The distribution of the respondents' gender is fairly even. The number of female and male respondents is nearly equal such that,

males consisted of 43.18 % of total respondents, and female respondents 56.82% (Table 6.2).

Table 6.2 The Distribution of Respondents' Gender

Gender	Total Respondents		Visitors		Non-Visitors	
	Total	**%**	**Total**	**%**	**Total**	**%**
Males	535	43.18	139	44.13	396	42.86
Females	704	56.82	176	55.87	528	57.14
Total	**1,239**	**100**	**315**	**100**	**924**	**100**

Table 6.3 Respondents' Marital Status

Status	Total Respondents		Visitors		Non-visitors	
	Total	**%**	**Total**	**%**	**Total**	**%**
Single	543	43.83	153	48.57	390	42.21
Married	696	56.17	162	51.43	534	57.79
Total	1,239	100	315	100	924	100

Similarly, the proportion of single and married respondents in this study is similar. Married respondents cover 56.17% of the total respondents and 45.83% are single respondents (Table 6.3).

In relation to the level of education (Table 6.4), the proportion shows a quite good educational attainment of the respondents. Almost (35%) of the respondents had achieved an education level of Bachelor degree, and 6.05% of the respondents had achieved a post-graduate degree or above. By classifying respondents' level of education from primary school to PhD level, the analysis has found that the biggest proportion of respondents are those who hold a bachelor degree, accounting for 34.54%; followed by those who graduated with diploma and college degrees, accounting for 18.81% and 18.48% respectively.

Table 6.4 Respondents' level of Education

Education	Total Respondents		Visitors		Non-Visitors	
	Total	**%**	**Total**	**%**	**Total**	**%**
Primary school	51	4.12	19	6.03	32	3.46
Secondary school	105	8.47	24	7.62	81	8.77
College degree	229	18.48	33	10.48	196	21.21
Diploma degree	233	18.81	38	12.06	195	21.10
Bachelor degree	428	34.54	132	41.90	296	32.03
Post-graduate degree	75	6.05	24	7.62	51	5.52
Master degree	107	8.64	44	13.97	63	6.82
PhD	9	0.73	1	0.32	8	0.87
Others	2	0.16	0	0.00	2	0.22
Total	**1,239**	**100**	**315**	**100**	**924**	**100**

With regard to the respondents' occupation (Table 6.5), the analysis has found that respondents share is nearly an equal proportion between government and non-government staff such that 60% are respondents who work in private and non-government organizations, and 40% of respondents work with government agencies. Among the non-government respondents, a large percentage of them are private staff (14,12%), followed by staff working in the state-owned enterprise (12.75%) and general workers (10.81%).

Table 6.5 Respondents' Occupation

Occupation	Total Respondents		Visitors		Non-visitors	
	Total	**%**	**Total**	**%**	**Total**	**%**
Government staff	504	40.68	89	28.25	415	44.91
SOE staff	158	12.75	49	15.56	109	11.80
Private staff	175	14.12	66	20.95	109	11.80
Military	103	8.31	21	6.67	82	8.87
Businesspeople	64	5.17	25	7.94	39	4.22
Retired	0	0.00	0	0.00	0	0.00
Laborer	134	10.82	39	12.38	95	10.28
Housewife	19	1.53	4	1.27	15	1.62
Students	51	4.12	13	4.13	38	4.11
Unemployed	4	0.32	0	0.00	4	0.43
Others	27	2.18	9	2.86	18	1.95
Total	**1,239**	**100**	**315**	**100**	**924**	**100**

Table 6.6 Respondents' Monthly Income

Income	Total Respondents		Visitors		Non-visitors	
	Total	**%**	**Total**	**%**	**Total**	**%**
0-1,000,000	96	7.75	20	6.35	76	8.23
1,000,001-2,000,000	509	41.08	99	31.43	410	44.37
2,000,001-3,000,000	304	24.54	66	20.95	238	25.76
3,000,001-4,000,000	124	10.01	34	10.79	90	9.74
4,000,001-5,000,000	123	9.93	56	17.78	67	7.25
>5,000,000	83	6.70	40	12.70	43	4.65
Total	**1,239**	**100**	**315**	**100**	**924**	**100**

The last socio-demographic variable of respondents in this study is their income per month (Table 6.6). The analysis has divided the respondents' incom into six groups, from a group of up to LAK 1,000,000 to a group of more than LAK 5,000,000. (Exchange rate as at 31 October 2013, USD 1.00 = LAK 7,889) There is a LAK 1,000,000 difference between each group. As a result, the largest group included those with a monthly income of LAK 1,000,001 to 2,000,000 (41.08%); followed by the group of LAK 2,000,001 to 3,000,000 (24.54%); the group of LAK 3,000,001 to 4,000,000 (10.01%); LAK 4,000,001 to 5,000,000 (9.93%); LAK 0-1,000,000 (7.75%) and above 5,000,000 (6.70%). The overall average of respondents' monthly income was LAK 2,990,928.

6.6.2 Respondents' Socio-demographic and "Yes" saying Approach.

This study has also investigated the relationship between socio-demographic factors of respondents and their "Yes" saying to support Vat Phou preservation projects in order to provide information that could be used later for various interventions on Vat Phou. The logit regression was used (Table 6.7).

Table 6.7 Logit Regression Result

Variables	Description	Coefficient	P-value
gender	Gender of respondent	.5153143***	0.000
age	Age of respondent	.0362338***	0.000
status	Marital status of respondent	.0766858	0.665
edu	Education level of respondent	.2217066	0.200
job	Occupation of respondent	.1649704	0.319
income	Monthly income of respondent	1.64e-07***	0.000
hhsize	The number of family members	.0202315	0.590
cons	Constant	-1.892539***	0.000

Note: *** significant at 1%, ** significant at 5%, and * significant at 10%

From Table 6.7, the socio-demographic variables included respondents' gender, age, marital status, level of education, occupation, monthly income and numbers of family members were used. In this case, "Yes" saying is a dependent variable and socio-demographic factors are independent variables. The results show that socio-demographic factors of respondents such as gender, age and income are statistically significant to their "Yes" saying for Vat Phou preservation, while status, education, occupation, and family member's variables of both visitors and non-visitors have no effect on their "Yes" saying.

By comparing the socio-demographic variables between visitors and non-visitors in regard to their "Yes" saying for Vat Phou preservation, the results found as follows:

Table 6.8 Respondents' Age and their "Yes" saying for Vat Phou Preservation

	Visitors			**Non-Visitors**		
Age Group	**Total**	**"Yes" saying**	**% of "Yes" saying**	**Total**	**"Yes" saying**	**% of "Yes" saying**
15-25	77	25	32.76	237	170	71.53
26-35	104	82	79.03	362	196	54.01
36-45	70	54	77.14	219	147	67.32
46-55	41	36	88.89	103	65	63.33
>55	23	23	100	3	2	50
Total	**315**	**220**	**69.98**	**924.00**	**579**	**62.68**

Table 6.8 comparing the "Yes" saying among the age groups of respondents. The study found that young people who were non-visitors within the age group of 15-25 years-old are more willing to pay for preservation Vat Phou (71.53%) compared to visitors within the same age group (32.76%), while, older visitors within the age group 46-55 years- old are more willing to pay for preservation Vat Phou (88.89%) compared to non-visitors within the same age group (63.33%). These results imply that young people who have not been to Vat Phou yet and those older people who

have visited the site view it as very important to preserve the site for future generations. However, the overall percentage of "Yes" saying of both visitors and non-visitors share a similar proportion of about 63% of the total respondents in each group.

In relation to the respondents' monthly income that should directly affect their "Yes" saying for the preservation project, the study found an overall positive relationship between respondents' income and their "Yes" saying attitude such that the proportion of respondents who earn a greater salary wish to contribute more to the preservation project at Vat Phou (Table 6.9). However, by comparing visitors and non-visitors, the study found that visitors with high salary per-month were more willing to contribute their money to the preservation project (96.43%) than non-visitors with the same monthly income (67.37%).

Table 6.9 Respondents' Income and Their "Yes" saying for Vat Phou preservation

	Visitors			**Non-Visitors**		
Income	**Total**	**"Yes" saying**	**% of "Yes" saying**	**Total**	**"Yes" saying**	**% of "Yes" saying**
0-1,000,000	20	7	33.33	76	50	65.91
1,000,001-2,000,000	99	47	47.54	410	245	59.66
2,000,001-3,000,000	66	39	59.46	238	158	66.55
3,000,001-4,000,000	34	26	76.47	90	61	67.29
4,000,001-5,000,000	56	54	96.43	67	45	67.37
>5,000,000	40	36	90	43	22	50.79
Total	**315**	**209**	**66.34**	**924**	**581**	**62.84**

Since the gender of respondents has no influence on their overall "Yes" saying approach, the study found that the proportion of respondents' "Yes" saying of both visitors and non-visitors are similar (Table 6.10).

Table 6.10 Respondents' Gender and their "Yes" saying for Vat Phou Preservation

	Visitors			Non-Visitors		
Gender	**Total**	**"Yes" saying**	**% of "Yes" saying**	**Total**	**"Yes" saying**	**% of "Yes" saying**
Males	139	106	76.14	396	290	73.21
Females	176	93	52.87	528	261	49.48
Total	**315**	**199**	**63.14**	**924**	**551**	**59.65**

There were some differences in marital status between visitors and non-visitors (Table 6.11). Non-visitors who are not married tend to pay more attention to Vat Phou preservation (67.36%) compared to visitors with the same status (50%). Conversely, visitors who are already married tend to pay more attention to Vat Phou preservation (81.48%) compared to those non-visitors with the same marital status (59.19%).

Table 6.11 Respondents' Status and their "Yes" saying for Vat Phou Preservation

	Visitors			Non-Visitors		
Status	**Total**	**"Yes" saying**	**% of "Yes" saying**	**Total**	**"Yes" saying**	**% of "Yes" saying**
Single	153	77	50	390	263	67.36
Married	162	132	81.48	534	316	59.19
Total	**315**	**208**	**66.19**	**924**	**579**	**62.64**

Table 6.12 Respondents' Education and their "Yes" saying for Vat Phou Preservation

	Visitors			**Non-Visitors**		
Education	**Total**	**"Yes" saying**	**% of "Yes" saying**	**Total**	**"Yes" saying**	**% of "Yes" saying**
Primary school	19	4	20	32	5	14.63
Secondary school	24	6	23.08	81	34	42.55
College degree	33	4	11.76	196	74	37.56
Diploma degree	38	24	61.9	195	133	68.2
Bachelor degree	132	108	82.19	296	232	78.32
Post-graduate degree	24	14	58.33	51	36	69.84
Master degree	44	39	89.29	63	50	79.12
PhD	1	1	100	8	7	88.89
Others	0	0	0	2	2	100
Total	**315**	**200**	**63.34**	**924**	**572**	**61.92**

In relation to educational level (Table 6.12), the analysis found that residents who hold a Bachelor degree or above, both visitors and non-visitors, tended to give greater importance to the preservation project and were more willing to contribute to the project compared to other group that achieved a lower educational level.

Lastly, by analyzing the residents' occupation and their "Yes" saying approach (Table 6.13), the study found that both visitor (82.24%) and non-visitor (81.12%) respondents who are working in private organizations had the highest proportion of "Yes" responses to contributing to the preservation project compared to other groups of occupations, followed by those who are working in government agencies 78.18% of visitors and 69.43% of non-visitors.

Table 6.13 Respondents' Occupation and Their "Yes" saying for Vat Phou Preservation

	Visitors			Non-Visitors		
Occupation	**Total**	**"Yes" saying**	**% of "Yes" saying**	**Total**	**"Yes" saying**	**% of "Yes" saying**
Government staff	89	70	78.18	415	288	69.43
SOE staff	49	31	64	109	61	55.97
Private staff	66	58	88.24	109	88	81.12
Military	21	17	81.82	82	63	76.34
Businesspeople	25	12	46.15	39	21	53.85
Retired	0	0	0	0	0	0
Laborer	39	4	10	95	12	13.04
Housewife	4	0	0	15	6	41.18
Students	13	7	50	38	25	65.22
Unemployed	0	0	0	4	4	100
Others	9	4	42.86	18	12	69.23
Total	**315**	**202**	**64.18**	**924**	**581**	**62.88**

6.6.3 Respondents' Perceptions and Attitudes Towards Vat Phou

In this section, the researcher examined residents' perceptions and attitudes to support for the Vat Phou preservation (VPP) area as a World Heritage site.

Firstly, the study asked residents to rank the most important items at Vat Phou that needed to be preserved and protected. There were seven items included in this decision. The respondents were required to rank their opinion based on a five point Likert-style scale ranging from 1 to 5, where 1 = Not important, 2 = A little important, 3 = Somewhat important, 4 = Quite important, 5 = Extremely important (Table 6.14).

Table 6.14 Attitudinal Statements Toward Maintaining Items at Vat Phou

How important do you feel it is to maintain and protect the following items at WHS?	**Visitors**		**Non-Visitors**	
	Mean	SD	Mean	SD
Historical and cultural structures	4.61	.502	4.80	.457
Scenic views	4.64	.481	4.71	.515
Mountains	4.66	.476	4.62	.608
Old traditional houses	4.76	.442	4.78	.495
Temples	4.77	.421	4.75	.518
Heritage Villages	4.73	.496	4.78	.996
Open fields located near the WHS	3.97	.787	4.67	.641

Note: 1 = Not important, 2 = A little important, 3 = Somewhat important, 4 = Quite important, 5 = Extremely important

Based on the mean score of each item (Table 6.14), both visitors and non-visitors felt that all items at Vat Phou need to be preserved and protected. By comparing visitors and non-visitors, the results show that the mean score of each items elicited from non-visitors was slightly higher than the mean score from visitors, particularly when we asked both groups of residents to rate the preservation of open fields near the WHS, we found that non-visitors tended to give more importance to preserving that area (with a mean score of 4.67) compared to visiting residents (with mean score of only 3.97) who felt that the area should not be preserved. This might be due to the fact that the area may directly affect visitors in terms of cultivation and business activity purposes as some activities may be restricted by UNESCO regulations.

Secondly, to measure the attitudes of both visitors and non-visitors towards VPP, the study uses descriptive statistical analysis. This measurement scale consists of two main items: Level of Involvement and attitude toward cultural and environmental change in the future. Each item consists of different attitudinal statements such as: the Level of Involvement consists of 3 attitudinal statements and Culture and Environment consists of 5 attitudinal statements. Respondents were asked

to provide answers on each attitudinal statement, which was measured by a 5-point Likert scale ranging from 1 to 5, where 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree (Table 6.15). Statistical descriptive analysis and the Friedman Test were used to prove the respondents' answers.

Table 6.15 Attitudinal Statements Toward Involvement in Vat Phou Preservation

To what extent do you agree or disagree with the following statements?	Visitors		Non-Visitors	
	Mean	**SD**	**Mean**	**SD**
Attitudes Towards Involvement				
I believe Vat Phou preservation is important, so the site can be preserved for future generations and for future archaeological investigation	4.63	.485	4.18	.843
I should be involved in the management of Vat Phou	3.13	.800	3.59	.972
Any preservation of this site is important to me	3.43	.907	3.97	.926
Attitude Toward Culture and Environment of the site				
The historical and cultural structures at Vat Phou must be valued and preserved	4.75	.435	4.17	.843
The site environment must be protected now and in the future for the benefit of future generations	4.74	.439	4.19	.841
It is important to restore the structure of the site to its original condition	4.61	.502	4.80	.457
The site preservation will result in substantial economic gains through tourism activities	4.64	.481	4.71	.515
The site preservation will create jobs in the community	4.66	.476	4.62	.608

Based on the mean score of each statement (Table 6.15), both visitors and non-visitors tend to strongly agree that site preservation will create jobs in the community (mean = 4.66 for visitors and mean = 4.62 for non-visitors) and will result in substantial economic gains through tourism activities (mean = 4.64 for visitors and mean = 4.71 for non-visitors). They also strongly agree that it is important to restore the structure of the site to its original condition (mean = 4.61 for visitors and mean = 4.80 for non-visitors). There were slightly different feelings among visitors and non-visitors related to the statements that the historical and cultural structures at Vat Phou must be valued and preserved (mean = 4.75 for visitors and mean = 4.17 for non-visitors), and the site environment must be protected now and in the future for the benefit of future generations (mean = 4.74 for visitors and mean = 4.19 for non-visitors). The mean score differences among the two types of respondents may indicate that visitors are more aware of the historical, cultural and environmental value of the site compared to non-visitors.

6.7 Conclusion

This chapter sought to explore the attitudes and perception of domestic visitors and non-visitors in order to understand the socio-demographic factors that influence their support for the Vat Phou as a World Heritage Site as well as their support for the preservation.

The finding of this study highlights the interplay of variables that affected respondents' perspective about the Vat Phou and their ultimate support for preservation projects.

Firstly, among the socio-demographic characteristics of both visitors and non-visitors, age and salary were found to have significant direct impact on attitude and perception of Vat Phou and their support for Vat Phou preservation. It is unsurprising that the elder ages of respondents, the more supportive they be of the Vat Phou preservation. Hoyos et al. (2009: 2376) reported that the more age of respondents, the more positive perception they are about supporting site management given that gender, status, what level of education, and how many people living in the family that they have to cover the expenses. This sentiment is in sync with the findings of this

study which suggest that the elder age, the more positive perception on Vat Phou and supportive for the site preservation.

This finding bode well for the sustainable development of the site and indicate that manager and policy makers should adopt a sustainable approach to Vat Phou preservation.

Salary was also found to have a significant direct relationship with perception and willingness to support for the Vat Phou preservation.

In short, the findings of this study indicate that local residents, both visitors and non-visitors held decisive attitudes toward the project's role in Vat Phou preservation. First, their socio-demographic characteristic has to some extent influence to their decision of supporting the preservation. Second, their perception and attitude toward preservation is positive. There are only minority of respondents who disagree to the preservation. Thus, the study confirms the usefulness of social exchange theory in explaining residents' attitude and perception toward world heritage preservation and protection in Champasak province.

This study can be further expanded by use of additional variables with respect to other stakeholder involvement and sustain cultural landscape development, in general, as well as in the context of the Vat Phou preservation.

Finally, although this study did not reveal many negative perceptions, it was undertaken at a relatively early stage in the life cycle of the Vat Phou as a WHS. Patterns of attitudes towards preservation may change with additional growth of social and economic development. It is therefore important that longitudinal research examining residents' perspectives be undertaken to assess potential changes.

CHAPTER 7

CONCLUSION AND POLICY IMPLICATION

7.1 Discussion on the Empirical Results

This dissertation addressing three issues considered to contribute to the management progress of a World Cultural Landscape in Lao PDR, namely Vat Phou and Associated Ancient Settlement within the Champasak Cultural Landscape: (1) lack of empirical study on the recreational for use value of the site; (2) limitation and unsustainability of supportive funds for the site preservation and conservation; (3) lack of evidence on public financial supportive behavior toward their world cultural landscape.

First, to address the recreational use value of the site, a zonal travel cost method was carried out between October and December 2011. Second, a contingent valuation method was also carried out between April and May 2013 to estimate the value of historical structures at Vat Phou. The third empirical study was an investigation of the relationship between Lao citizens' socio-demographic characteristics and their financial supportive behavior toward cultural landscape preservation and environmental protection. This study aims to verify Lao citizens who are in the market analysis in order for policy makers to identify the potential source of fund raising to overcome the limitations and the unsustainability of supportive funds for the site preservation and conservation. The following section discusses the empirical results of these studies:

7.1.1 Empirical Results of TCM (ZTCM) Study

The aim of employing a zonal travel cost method (ZTCM) was to estimate the economic value of Vat Phou and Associated Ancient Settlements within the

Champasak Cultural Landscape (Vat Phou), Champasak province, Lao P.D.R by measuring the total consumer surplus of visitors within a certain period of their visit to address specific needs for possible future protection and site improvements.

Secondary data was collected to quantify the economic valuation of the site during a period of one year from October 2010 to October 2011. Primary data was obtained from an on-site survey between October and December 2011. The sampling technique implemented during the on-site survey was the random sampling technique of every five visitors, aged above 16 years old. A total of 396 questionnaires were completed, and used for this empirical study. 140 of the total number of questionnaires were completed by domestic visitors, and can be classified into 31 zones. 256 questionnaires were completed by foreign visitors from 32 zones. Stata 11.1 was used to perform ordinary least squares (OLS) regression analysis to estimate the first stage demand curve for the recreation experience, that is a per-capita visitation as a function of travel costs, which are expected to increase as the distance between the zonal origin and destination increases. At first, socio-economic variables were included in the regression analysis. However, nearly all socio-economic variables appeared to be highly insignificant. Thus, the final econometric regression included only travel costs as an independent variable. Three different functional forms were used to estimate the econometric model of Vat Phou visitor demand, including the linear, the semi-log where the dependent variable is transformed by taking the natural logarithm, and the double-log forms where both the dependent and continuous independent variables are transformed by taking the natural logarithms.

The results of OLS regression analysis using the three functional forms indicated that, the liner model regression analysis for both domestic and foreign visitors performed better than the other two forms. This implies that the functional form chosen for the visitor demand equation can have a significant influence on the visitor welfare benefit estimates. However, given the absence of TCM-based visitor benefit estimates of cultural heritage sites elsewhere, comparative analysis is not feasible (Poor and Smith, 2004: 226). It is also implies that TCMs which estimate the non-market valuation methods must be employed to estimate the non-use external benefits associated with a cultural heritage site (Ready and Navrud, 2002: 7).

First, the annual consumer surplus estimates for domestic individual visitors are LAK 9,654.07; LAK 9,129.97; and LAK 9,002.74 for the linear, semi-log and double-log models respectively. The estimated aggregate annual consumer surplus benefits for visitors to Vat Phou for the linear, semi-log and double-log models are LAK 317,551,425; LAK 300,312,103; and LAK 296,126,989.4 respectively. This total consumer surplus implies that Vat Phou can preserve its value, and the generate use-value of Vat Phou provides a guideline for the possible increase in the admission fee and makes a strong argument for preserving the area. In addition, a joint F-test of the explanatory variables indicates that all linear, semi-log and double-log models used for domestic visitors estimation were significant at the 1% level overall . This implies that the price or travel cost coefficient estimate of each of the three model specifications, is consistent with demand theory, in that the quantity of visitors per 1000 zonal population is inversely related to price or travel cost. The coefficient estimate associated with the travel cost variable is significantly different from zero at a 10% level for the linear and semi-log models, and at the 1% level for the double-log model. The coefficient of the zonal income variable is significant from zero only for two model specifications: the linear and the semi-log model at the 10% levels, while it is not significant for the double-log model. These variables show that the models applied to estimate the consumer surplus has proved to be viable and appears to be relatively easy to implement, and may thus provide a practical alternative to other methods applied in travel cost modelling.

Furthermore, the estimated price elasticity coefficients for Vat Phou provide important information to site administrators, local and central government bodies involved in site management. Firstly, the travel cost model of the actual trips to the site pegs the coefficient on price at –0.0062 for the linear functional form, -0.9377 for the semi-log model, and -0.8036 for double-log model. This implies that through price elasticity of demand estimates that domestic visitors to Vat Phou are slightly responsive to price change and thus, increasing the admission fee could result in a reduction in total admission revenues. Although estimates of domestic visitor benefits are informative, recalling one major concern with TCMs is that they estimate visitor-use benefits only, and in the case of cultural heritage sites, non-use benefits may be substantial (Ready and Navrud, 2002: 7).

Second, the annual average foreign visitor CS estimates based only on the linear model was USD 20.24. Due to the poorly fitting semi-log and double-log models that apply to foreign visitor data, this study could not define the price elasticity coefficient estimate for foreign visitors. In addition, by applying the three functional form regressions to the foreign visitors' data set, socio-economic variables have no influence on the number of visitors per zone, per 1000 zonal population. A joint F-test of the explanatory variables indicated that both linear and semi-log models were significant overall at the 10% level and 5% level respectively, whereas the double-log model was not significant overall. However, as expected, the price or travel cost coefficient estimate of each of the three model specifications was consistent with demand theory, in that the quantity of visitors per 1000 zonal population was inversely related to price or travel cost. The coefficient estimate associated with the travel cost variable was significantly different from zero at a 10% level for the linear model and at the 5% level for the semi-log models, while it was not significant for the double-log model. This is contradicted by the notable advantages of using the semi-log and double-log functional forms in that minimizing the problem of heteroskedasticity and eliminating the potential problem of negative trip prediction, which can occur using a linear functional form (Loomis and Cooper, 1990).

Lastly, this empirical study is also investigated respondents about their supportive behavior to help preserve historic structures and protect the environment of the site. As a result, the majority of foreign visitors willing to pay environmental protection fee, accounted for 77.34% of total foreign respondents, with the average contribution of USD2.01. Similarly, most of domestic visitors are also aware of the importance of environmental protection at the WHS of Vat Phou (77.85%) and wish to contribute extra money with an average per person of about LAK19,500.00 or USD2.44.

Thus, despite the fact that the zonal travel cost method is still subject to a substantial number of problems, the present study seems to resolve some of the uncertainty surrounding its results. Provided that the travel cost method has the potential to become an even more promising tool in future policy-making for natural and cultural resources in Laos.

7.1.2 Empirical Results of CVM Study

The purpose of applying CVM was to place a value on the preservation of historic structures at Vat Phou by estimating an individual's willingness to pay for the preservation project and investigate why they were willing or unwilling to donate to that preservation project. In this study, the single-bounded dichotomous choice question format was used to measure individual-level values for maintaining the historic structures at Vat Phou by preserving it in its original form or condition. As the historic structures are the most famous in the site, it is deserves to be selected as the case study in this study. The sample population for this empirical study were individuals, living in Vientiane, the capital city of Laos. Three groups of variables were used to reflect WTP of Lao citizens for historic structures preservation at Vat Phou: socio-economic variables, the use or potential use factors of the site, and the plan knowledge, media and certainty was also included. The DC question was "If you were asked to donate___ Kip to the Vat Phou Trust Fund to support the significant historic structures preservation at Vat Phou, a World Heritage Site, would you be willing to contribute?". The twelve bids were used: LAK 20,000; 30,000; 40,000; 50,000; 60,000; 80,000; 100,000; 120,000; 150,000; 200,000; 250,000; 300,000. (USD 1.00 = LAK 7,550.00) A mail survey (drop-off) was employed as the questionnaire included a long description of the project and respondents needed to have sufficient time to read and complete the questions. A total of 1,212 surveys were mailed (drop-off) to ten organizations on 2 April 2013. The completed surveys were gathered at the end of May 2013. A total of 1,115 surveys were returned, of which 1,099 could be used for the WTP analysis and this is the number used in this empirical study, 43.95% of which were responses from females. This could be explained by the fact that the proportion of females working in an organization is equivalent to the male number. The average age was 32.84 years-old, while the biggest proportion of respondents' were aged between 26 to 35 accounting for 38.58% of 1,099 total. Most of the respondents are government agency staff, 51.32%, of which 8.46% belong to military forces; followed by staff working in private organizations, and staff working in state-owned enterprise agencies, 13.01% and 12.19% respectively. Those who are working as laborers accounted for 10.46%. About 52 respondents are businesspersons, accounting for 4.73%, 46 respondents are

students, accounting for 4.19% and only 17 people are housewives. In our returned questionnaires, we also found a total of 26 people who indicated themselves as others, accounting for 2.37% of the total sample. More than two-thirds of the respondents originally came from different provinces, 41.31% of respondents came from the northern part of Laos, and 30.39% originally came from the southern Laos. The average number of family members of respondents was about 5 persons per family, and the average number of members who earn an income was 1.38 people. While the average individual monthly income of the respondents is approximately LAK 2,880,008 or USD 366.00. Respondents who hold a Bachelor Degree made up the largest proportion, accounting for 33.58%, followed by those who hold Diploma, College and Masters Degrees, accounting for 19.75%, 19.38%, and 8.28% respectively. In our sample, we found the number of respondents who hold a Secondary certificate accounted for 8.55% of total respondents, and 63 who hold a Postgraduate degree, accounting for 5.73% of respondents. Only nine people hold a PhD Degree accounting for 0.82% of total respondents, and 2 others, accounted for 0.18%.

The function forms used to estimate logit curves, and the WTP was estimated using the mean method. The study found that the mean WTPs estimated by logit regression were LAK 36,239.75 or 1.26% of average monthly income of respondents. This implies that, Laotians living in Vientiane the capital of Laos put a value on the preservation of historic structures at Vat Phou to some extent. Thus, it suggests that the contingent valuation technique (a one time donation) would be a reliable non-market valuation technique, first because the good is well defined, and second, the structure of the survey design is sound.

In addition, although, there were a number of reasons why people were or were unwilling to donate to a preservation fund, the common suggestion was to preserve the cultural structures for the younger and future generations. A minority of individuals, who were not willing to contribute to the fund, thought that it was the government's responsibility since the site is government property. Many did not trust the management team to handle the fund.

Furthermore, in the logit regression model, an individual's willingness to pay was negatively dependent on the bid and positively related to the monthly income and

age at the 90% level of confidence. Other socio-economic variables of respondents such as status and occupation have statistically effected their WTP at the 90% and 95% level of confidence respectively. While respondents' gender, education, household size and number of working people in a household did not affect their WTP. The signs of these coefficients were negative related to the dependent variable.

Although this study does not give the total value of Vat Phou, it shows the great value of the site in terms of individuals' willingness to contribute towards a preservation project and is therefore useful information for governments in deciding how to preserve the site efficiently.

7.1.3 Empirical Results of Who is in the Market Analysis

The analysis sought to explore the attitudes and perception of domestic visitors and non-visitors in order to understand the socio-demographic factors that influence their support for the Vat Phou as a World Heritage Site as well as their support for the preservation.

The finding of this study highlights the interplay of variables that affected respondents' perspective for the Vat Phou and their ultimate support for preservation projects.

Firstly, among the socio-demographic characteristics of both domestics' visitors and non-visitors, gender, age and income were found to have significant direct impact on attitude and perception of Vat Phou and their support for Vat Phou preservation. It is unsurprising that the older the respondents are, the more supportive they are of Vat Phou preservation. Hoyos et al., (2009: 2376) reported that the higher the age of respondents, the more positive the perception they have for supporting site management given that, status, level of education, and number of family members that they have to cover the expenses. This sentiment is in sync with the findings of this study which suggest that the higher the age, the more positive perception on Vat Phou and supportive for the site preservation.

This finding bodes well for the sustainable development of the site and indicates that managers and policy makers should adopt a sustainable approach to Vat Phou preservation.

Income was also found to have a significant direct relationship with perception and willingness to support for the Vat Phou preservation.

In short, the findings of this study indicate that Lao citizens, both visitors and non-visitors held decisive attitudes toward the project's role in Vat Phou preservation. First, their socio-demographic characteristics influence their decision of supporting the preservation to some extent. Second, their perception and attitude towards preservation is positive. There is only a minority of respondents who disagree to the preservation. Thus, the study confirms the usefulness of social exchange theory in explaining residents' attitude and perception toward world heritage preservation and protection in Champasak province.

This study can be further expanded by use of additional variables with respect to other stakeholder involvement and sustain cultural landscape development, in general, as well as in the context of the Vat Phou preservation.

Finally, although this study did not reveal many negative perceptions, it was undertaken at a relatively early stage in the life cycle of the Vat Phou as a WHS. Patterns of attitudes towards preservation may change with additional growth of social and economic development. It is therefore important that longitudinal research examining residents' perspectives be undertaken to assess potential changes.

7.2 Conclusion

There are three major components to the conclusion of the discussion above. The first component outlines the conclusions of the economic valuations, the second concludes the responses of Lao citizens and the final point provides a socio-economic justification.

Firstly, the economic valuations of World Heritage Sites in general, and in Laos, particularly aim at estimating the value of standing structures of the site by proposing preservation and/or protection projects to maintain the quality of those historic structures. This dissertation demonstrates that both revealed preference and stated preference economic valuation methodologies can be used to value the cultural landscape of Vat Phou, located in Champasak province of Laos. The results indicate the success of using those techniques (ZTCM and DC CVM) in estimating the value

of the whole site and even with some individual parts of the standing structure at the site. It is important to understand that, the values estimated for the two types of study may capture quite different kinds of benefits. ZTCM studies, provide an estimate of the CS of individuals on the value of the integrity of the site. DC CVM, capture a more comprehensive set of benefits, estimating individual willingness to pay for the preservation project of the site. Both studies generally show that there is value to preserving the cultural landscape of Vat Phou.

Secondly, domestic respondents, both used and non-used respondents expressed a positive attitude towards the preservation projects at Vat Phou to maintain the quality of the historic structures and preserve them for future generations. There is only a minority of respondents who disagreed with the preservation. Thus, the study confirms the usefulness of social exchange theory in explaining residents' attitude and perception towards world heritage preservation and protection in Champasak province.

Lastly, socio-demographic characteristic of respondents has to some extent influenced their decision of supporting the preservation of Vat Phou. According to the findings, age and income variables were found to have significantly direct influenced respondents supportive behaviors. The higher the age, the more willingness to support the site preservation.

7.3 Policy Implications

There are several policy implications resulting from the research carried out concerning the preservation and protection of the Vat Phou site. The implications include possible changes to admission fee policies to take into account the financial needs of the site; financial management and raising of fund for the Vat Phou site as well as the long-term financial sustainability of the preservation of Vat Phou.

First, the increase of entrance fees at Vat Phou should be earnestly considered. Vat Phou is a popular tourist site with more than 200 thousand visitors every year. However, approximately LAK1,800 million is required to maintain the quality of the

site every year. This figure is equivalent to LAK9,000 (USD1.11) per visitor, but entrance fee is LAK5,000 per visitor, and half of the total revenue goes to the government, irrespective of the financial needs of Vat Phou. Thus, based on the finding, the current entrance fee policies should be evaluated to determine an increase in entrance fee to maintain the existing quality of the cultural structures and natural environment and could demonstrate the rational for public information. The findings support the site management policy of differentiating admission fees according to characteristics of the site and consumer background, which has been taken into consideration by the site management team. The findings also indicate that the estimated economic value provides enough justification for the Vat Phou management team to increase admission fee in order to maintain the quality of the historic structures and natural environment at the landscape and thereby avoid the degradation of the site, should the government reduce or withdraw financial support as the findings also indicate that the site provides a considerable use and preservation value for citizens.

According to the abundant consumer surplus found in ZTCM which identifies that the current entrance fees are considered cheap, it is auspicious opportunity to use the increase of entrance fee as one instrument to raise funds for heritage preservation. Based on the empirical results, it is suggested that the concept of differentiation in entrance fees among different groups of visitors can be applied to the site.

With the concept of pricing differentiation in entrance fee among different groups of visitors, the policy cannot be only used to accumulate more funds to preserve the historic structures at Vat Phou, but this incentive policy can also be a tactical scheme to motivate tourists especially those who have not visited the site may be interested to visit them.

The empirical result of this study has also found that the mean willingness to pay for historic preservation is much more than the current entrance fee. This reflects that there is still a prodigious consumer surplus in the utilization of historic structures of the site. Thus, it is an excellent opportunity for the relevant policy makers to review the prospects in increasing entrance fees for visiting the site to gain more revenue so that such incremental revenue can be used for the historic preservation.

In addition, based on the findings from the relationship regression between respondents' social-demographic characteristic and their WTP to preserve historic structures, it is found that pricing differentiation policy can be applied in different ways such as pricing by age group and pricing by occupation such as:

1) By occupation: from the empirical findings, working respondents, both in the government and in the private sectors had the higher proportion of "Yes" responses to contributing to the preservation project compared to other groups of occupation, while students had the least proportion of "Yes" contribution due to their lower income compared to working respondents. Thus, it is suggested that the relevant authorities of the site can consider of setting entrance fees by using a pricing differentiation among different groups. It is provided that different occupation must charge different entrance fees. Working visitors can be charged higher than students. Visitors who come as a family or who come as a group tour can be charged by giving incentive to the groups. For example, package deals for groups and families.

2) By age group: older (retired) groups can be charged half of the entrance fees compared to the other groups. According to the empirical results, the biggest proportion of visitors is retired.

Second, the alternative of fund raising policy for Vat Phou management should be considered in order for sustainable development of Vat Phou. The findings can be relevant and useful for decision makers, especially at the local level to promote public government funding to preserve Vat Phou as a national project. Inter-agency and Lao government projects under the preservation and protection plan do not consider strategically the long-term impacts or sustainability once financial support has been withdrawn.

One alternative form of fund raising for this site is suggested that membership concept can be applied in order to increase funds for the site preservation. It is also to promote the site to the public in the long run. The potential targets of membership can be government organizations, universities, state owned enterprises, NGOs both local and international. The forms of membership approach that can be applied include allowing Vat Phou' logo to appear in the membership' products; provide the signage that indicates membership name or organization as sponsor to the site preservation and protection.

Apart from membership concepts of fund raising, numerous considerations for financial and business models can also be suggested, such as charging for specific exhibitions, developing exhibitions with the potential to tour and so gain extra revenue, or more imaginative models such as sharing development costs in return for a percentage of the revenue.

Last, with respect to stakeholders involvement and sustain cultural landscape development, in general, as well as in the context of the Vat Phou preservation, it is necessary to form a Trust fund for Vat Phou. The main goal of the Vat Phou Trust fund should focus on helping strengthen the work concerning the site preservation and the specific strategies given by the Central and Local government to protect World Heritage site of Vat Phou.

According to the empirical study and the interviews of authorities of the site, to achieve the goal of preservation of Vat Phou, one appropriate management scheme is to promote the heritage site and to implement the preservation program at the same time with the sustainability principle, and it is necessary to have many stakeholder's participation. Their involvement in promoting the site will boost the site reputation faster than other means of promotion.

Thus, the partners of the Trust fund shall include the representatives of the site management team, the local government authorities, the representative of the District authorities, the leaders of the communities, and the representative of mass organizations in the area. The board of directors of the Trust can be appointed from the representatives from all the above mentioned parties.

The memorandum of association for the Trust fund regulates the function of the trust fund which should act as an independent body under Lao law.

The Trust fund shall focus it activities by supporting and facilitating the heritage management and contributing to innovative projects at the site; mobilize funds from bi-and multilateral sources to secure transparency and visibility, and facilitate assistance for the site preservation efforts.

Finally, since the Trust is one of the basic elements of understanding cooperation and conflict among stakeholders in the heritage preservation process and it is the glue which holds communities and societies together, the trust fund shall have sustainability plans for the site projects. Trust is a 'collective attribute' based on the

relationships between people within a larger social system rather than just the individual recipients, thus, in order to operate the Thrust fund in Vat Phou it requires a sufficiently common set of values between stakeholders. The Trust fund shall act as a centre, supporting the follow up of the government strategy in the site management.

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APPENDICES

Appendix A

World Heritage List

Region	Number of State Parties in region	World Heritage Properties	Cultural Landscape Properties
Africa	33	94	12
Arab States	18	75	4
Asia and the Pacific	35	221	21
Europe and North America	49	460	46
Latin America and the Caribbean	25	131	5
Total	**160**	**981**	**88**

Source: UNESCO, 2014.

Appendix B

World Heritage Cultural Landscape in Asia and the Pacific

Country	World Heritage Cultural Landscape	Year(s) of Inscription
Afghanistan	Cultural landscape and archaeological remains, Bamyan Valley	2003
Australia	Uluru-Kata Thuta National Park	1987, 1994
Azerbaijan	Gobustan Rock Art Cultural Landscape	2007
China	- Lushan National Park - Mount Wutai - West Lake Cultural Landscape of Hangzhou - Cultural Landscape of Honghe Hani Rice Terraces	2009
India	Rock Shelters of Bhimbetka	2003
Indonesia	Cultural Landscape of Bali Province: the Subak system as a manifestation of the Tri Hita Karana Philosophy	
Iran	- Bam and its Cultural lanscape - The Persian Garden	2004
Japan	- Sacred Sites and pilgrimage Routes in Kii Mountain Range - Iwami Ginzan Silver Mine and its Cultural Landscape	2004 2007
Kazakhistan	Petrogoglyphs Within the Tamalgy Archaeological Landscape	2004
Kyrgyzstan	Salaiman-Too Sacred Mountain	2009
Lao PDR	Vat Phou and Associated Ancient Settlements Within the Champasak Cultural Landscape	2001
Mongolia	Orkhon Valley Cultural Landscape	2004
New Zealand	Tongariro National Park	1990, 1993
Philippines	Rice Terraces of the Philippine Cordillera	1995
Papua NG	Kuk Early Agricultural Site	2008

Vanuatu	Chief Roi Mata's Doma	2008

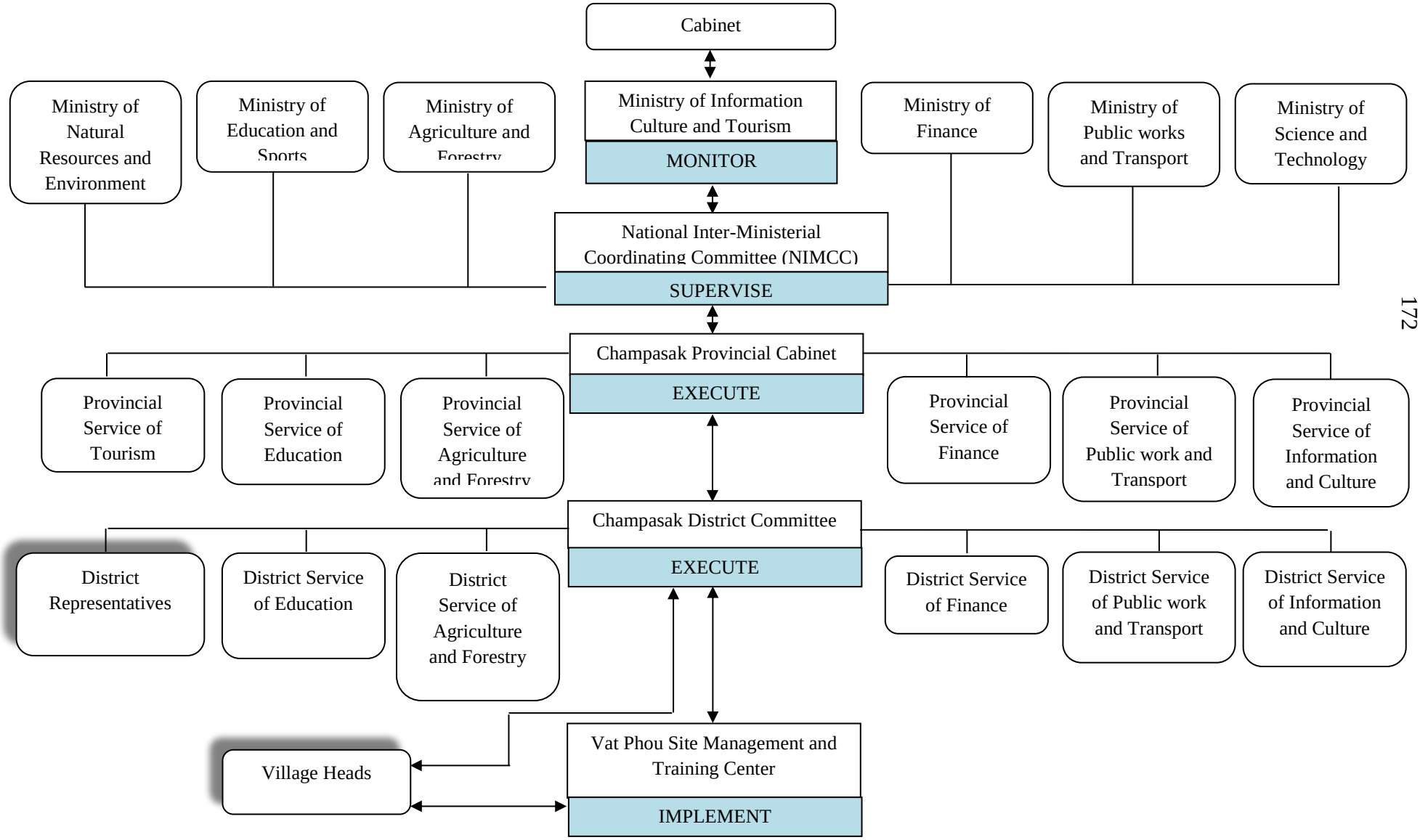
Appendix C

World Heritage Properties in South-East Asia Countries

Country	World Heritage Properties	Cultural Landscape Properties
Indonesia	8	1
Vietnam	7	0
Thailand	5	0
Philippines	5	1
Malaysia	4	0
Cambodia	2	0
Laos	2	1
Total	**33**	**3**

Source: UNESCO, 2014.

Appendix D
Structure of Approval and Interrelationship between Government and other Stakeholders



Appendix E

Questionnaire on ZTCM

ECONOMIC VALUATION OF VAT PHOU

TO BE COMPLETED BEFORE EACH INTERVIEW
Date_____Time _____No. of refusals prior to this interview_____ Comments: _____

Instruction:

I am conducting an economic valuation survey as part of my PhD dissertation. Your opinion and the information provided will be used for academic purposes only. Therefore, your honest response is essential for the success of this dissertation. Would you mind answering a few questions? It will take about ten to fifteen minutes**.**

I. Travel Cost Information

1. What country and city are you come from?
   Country_____City_____
2. How did you come to Lao PDR? and How did you come to CHAMPASAK? Could you please provide the detail?
   _____
   _____
3. Are you traveling alone?
   ❑$_1$ Yes ❑$_0$ No

   If no, how many people are travelling with you on this trip_____

4. In the past Five years, how many times have you visited VAT PHOU, including this trip?_____ times

5. Was VAT PHOU, the main reason why you visited Lao PDR?
   ❑$_1$ Yes, (go to 5.1) ❑$_0$ No, (go to 5.2)

   5.1. If Yes, what is your purpose visiting VAT PHOU?
   (a) Vacation or holiday ❑ (c) Study and research ❑
   (b) Work ❑ (d) Other reason ❑_____

   5.2. If No, what other places did you visit or plan to visit?
   _____

6. What activities have you participating at VAT PHOU, and how long do you spend time for each activity.

	Time spend	Cost
1. Local art and culture 2. Walking tracks 3. Temples 4. Exhibition hall 5. Relaxation 6. Picnic 7. Local food	_____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____
Total recreational activities in VAT PHOU		

7. Would you please rate the following aspects of your visit to VAT PHOU (Circle)

1. Access to places of interest	5	4	3	2	1	0
2. Parking availability 3. Sign posting **to** the area	5	4	3	2	1	0
4. Historical information availability	5	4	3	2	1	0
5. Signage **within** the area 6. Environment at the site	5	4	3	2	1	0
7. Walking tracks 8. Maintenance of the attractions	5	4	3	2	1	0
9. Drinking water 10. Waste Disposal	5	4	3	2	1	0
11. Cleanness of the place 12. Food services and souvenirs	5	4	3	2	1	0
	5	4	3	2	1	0
	5	4	3	2	1	0
	5	4	3	2	1	0
	5	4	3	2	1	0
	5	4	3	2	1	0

5-very good, 4-god, 3-average, 2-poor, 1-very poor, 0-not applicable

8. Overall, how much did you enjoy your visit to VAT PHOU?
   1) I am enjoying very much ❑
   2) I am very enjoy ❑
   3) I am enjoying ❑
   4) I am not very enjoy ❑
   5) I am not enjoying at all ❑

9. In addition to VAT PHOU, which places of Champasak did you visit or are you going to visit?
   (a) Tadfan Waterfall ❑ (c) Tadsuam Resource ❑
   (b) Siphandone ❑ (d) Khonphapheng ❑
   Please specify the name of other places_____

10. How long are you staying/will stay in CHAMPASAK? _____days
11. Could you please estimate your average expenditure per-day in CHAMPASAK on the following items?

	In LAK	In US$
1. Accommodation	_____	_____
2. Food and beverage	_____	_____
3. Entertainment	_____	_____
4. Local transportation	_____	_____
5. Others		
Total Expenditure per day?	_____	_____

What about other expenditure during your stay in CHAMPASAK such as:

	In LAK	In US$
1. Souvenirs	_____	_____
2. Entrance tickets	_____	_____
3. Others	_____	_____
Total Expenditure ?	_____	_____

12. What is your next destination before you go back to your country?
    _____

II. Visitor's Attitudes towards WTP information

13. In order to help protect the environment and improve visitor facilities are you willing to pay en environmental fee as part of your visit? (in the form of additional payment to the admission fee). The actual admission fee is _____USD.
    ❑ Yes (go to 13.1) ❑ No (go to 13.2)

13.1. If yes, how much will you be willing to pay for the above improvement and development?
   (a) US$ 0.50 ❑
   (b) US$ 1.00 ❑
   (c) US$ 1.50 ❑
   (d) US$ 2.00 ❑
   (e) US$ 2.50 ❑
   (f) US$ 3.00 ❑
   (g) US$ 3.50 ❑
   (h) US$ 4.00 ❑
   (i) US$ 4.50 ❑
   (j) US$ 5.00 ❑
   (k) US$ 6.00 ❑
   (l) Other amount ❑ _____

13.2. If no, what is the major reason that you said no?
   (a) I do not care about the improvement ❑
   (b) It cost too much already to visit the site ❑
   (c) The money would be wasted ❑
   (d) Not enough information ❑
   (e) Other reasons ❑ _____

14. To what extent do you agree or disagree with the following statement?

Attitudinal Statements	1	2	3	4	5
Attitudes Towards Involvement					
I believe Vat Phou preservation is important, so the site can be preserved for future generations and for future archaeological investigation					
I should be involved in the management of Vat Phou					
Any preservation in this site is important to me					
Attitude Toward Culture and Environment at the site					
The historical and cultural structures at Vat Phou must be valued and preserved					
The site environment must be protected now and in the future for the benefit of future generations					
It is important to restore the structure of the site to its original condition					
The site preservation will result in substantial economic gains through the tourism industry					
The site preservation will create jobs in the community					

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

15. How important do you feel it is to maintain and protect the following type of WHS?

Attitudinal Statements	1	2	3	4	5
Historical and cultural structures					
Scenic views					
Mountains					
Old traditional houses					
Temples					
Heritage Villages					
Open fields near the WHS					

1 = Not important, 2 = A little important, 3 = Somewhat important, 4 = Quite important, 5 = Extremely important

16. If you had to comment on the quality and state of the site, what will that comment be? (Please use just one or two words such as good, poor, satisfactory etc) _____

17. In your opinion, what improvements need to be address to make the site more attractive? _____

18. Do you have any intention to visit the site sometime in the future?
    ❑ Yes ❑ No

19. Will you recommend a friend, loved one or relative to visit this site?
    ❑ Yes ❑ No

III. Personal Information and Demographic Characteristics of visitors

20. Gender: ❑ Male ❑ Female

21. How old are you?: …….years

22. Are you married? ❑ Yes ❑ No

23. What is your nationality?…….

24. What is your educational background?

(a) Never attend school ❑
(b) Elementary school ❑
(c) Primary school ❑
(d) Secondary school ❑
(e) College or technical school ❑
(f) Under graduate degree ❑
(g) Post graduate ❑
(h) PhD ❑
(i) Above PhD ❑
(j) Others ❑…….

25. What is your occupation?

(a) Government official ❑
(b) Private Enterprise Owner ❑
(c) Worker in industry ❑
(d) Military/policeman ❑
(e) Unemployment ❑
(f) Staff in the state-enterprise ❑
(g) Part-time staff ❑
(h) Housewife ❑
(i) Retired ❑
(j) Student ❑

26. What is your approximate net MONTHLY income in USD?

(a) 0-1,000 ❑
(b) 1,001-2,000 ❑
(c) 2,001-3,000 ❑
(d) 3,001-4,000 ❑
(e) 4,001-5,000 ❑
(f) 5,001-6,000 ❑
(g) 6,001-7,000 ❑
(h) 7,001-8,000 ❑
(i) 8,001-9,000 ❑
(j) 9,001-10,000 ❑
(k) More than 10,000 ❑

THANK THEM FOR THEIR TIME AND CONCLUDE INTERVIEW

Appendix F

Definition of Variables in the ZTCM Data Set

Variables	Definitions
AGE	Estimated average age of the respondent
GEN	Gender (male=1, female =0)
STATUS	Respondent's marital status (married = 1, single = 0)
EDU	Level of respondent's education (undergraduate and below = 0, postgraduate and above = 1)
JOB	Respondent's occupation (government staff = 1, others = 0)
MEM	Family member
WORKMEM	Working people in the family
INCOME	Approximate net monthly income
VIS	Visitor (Domestic = 1, Foreigner = 0)
DES	Destination (Vat Phou only = 1, others = 0)
DEPERS	Number of dependent persons whose travel cost is covered by the main respondent
NUD	Number of destinations to be visited
TSOS	Time spent at the site
PAS	Party size
ONSEX	On-site expenses
TC	Total travel cost
V	The Number of visits per zone 'I' adjusted for the zonal population

Appendix G

Zone of Origin (Domestic Visitors)

Zone	Administration District	Zone Code	Distance (Km)	Population
1	Champasak	CPS	7	63,205
2	Pakse	PS	30	89,748
3	Phonethong	PT	43	97,185
4	Samakkhixay	SMKX	54	124,000
5	Khong	KHONG	60	83,758
6	Thateng	TT	144	95,000
7	Lamarn	LM	145	23,750
8	Kaysone Phomvihane	KSPVH	220	59,400
9	Thakhek	TK	312	40,888
10	Maypakgneum	MPG	420	50,968
11	Paksxane	PX	420	36,571
12	Xaythany	XTN	480	168,684
13	Phonehong	PH	486	35,923
14	Naxaithong	NXT	490	67,483
15	Xaysetha	XST	501	101,092
16	Sisattanak	SSTN	503	75,134
17	Chanthabouly	CTBL	504	62,305
18	Sikhottabong	SKTB	505	101,919
19	Hadxaifong	HXF	520	87,927
20	Thoulakhom	TLK	559	32,923
21	Keo odom	KUD	565	38,000
22	Kham	KHAM	571	29,333
23	Vangvieng	VV	577	25,000
24	Sangthong	ST	580	32,859
25	Xay	XAY	632	41,857
26	Xamneua	XN	643	38,000

27	LuangPrabang	LPB	670	36,000
28	Xayabury	XYBL	680	33,363
29	Namtha	NT	822	32,000
30	Huoixai	HX	832	32,000
31	Phongsaly	PSL	837	24,857

Appendix H

Adjusted Number of Domestic Visitors per Zone

Zone	Administration District	Zone Code	Number of Respondent	Total Number of Visitors per Year
1	Champasak	CPS	6	821
2	Pakse	PS	5	728
3	Phonethong	PT	5	701
4	Samakkhixay	SMKX	2	690
5	Khong	KHONG	3	679
6	Thateng	TT	2	654
7	Lamarn	LM	6	639
8	Kaysone Phomvihane	KSPVH	4	611
9	Thakhek	TK	1	594
10	Maypakgneum	MPG	7	554
11	Paksxane	PX	5	544
12	Xaythany	XTN	8	532
13	Phonehong	PH	3	513
14	Naxaithong	NXT	6	522
15	Xaysetha	XST	7	651
16	Sisattanak	SSTN	5	499
17	Chanthabouly	CTBL	9	603
18	Sikhottabong	SKTB	7	443
19	Hadxaifong	HXF	8	413
20	Thoulakhom	TLK	5	399
21	Keo odom	KUD	2	378
22	Kham	KHAM	5	354
23	Vangvieng	VV	4	324
24	Sangthong	ST	9	256
25	Xay	XAY	2	116

26	Xamneua	XN	2	89
27	LuangPrabang	LPB	2	76
28	Xayabury	XYBL	3	69
29	Namtha	NT	3	60
30	Huoixai	HX	2	59
31	Phongsaly	PSL	2	51

Appendix I

Socio-economic Characteristics of Domestic Visitors

Age	Frequency	Percentage
Oldest	63	
Youngest	20	
Mean	39.59	
16-25	23	16.43
26-35	40	28.57
36-45	35	25.00
46-55	18	12.86
>55	24	17.14
Marital Status		
-Single	59	42.14
-Married	81	57.86
Education		
-Primary school	4	2.86
-Secondary school	5	3.57
-College degree	7	5.00
-Diploma degree	21	15.00
-Bachelor degree	62	44.29
-Post graduate degree	12	8.57
-Master degree	28	20.00
-PhD	1	0.71
-Others		-
Occupation		
-Government staff	35	25.00
-State-owned enterprise staff	13	9.29
-Private sector staff	34	24.29
-Military	10	7.14

-Businesspeople	4	2.86
-Retired	13	9.29
-Labourers	4	2.86
-Housewives	16	11.43
-Students	8	5.71
-Unemployed	0	-
-Others	3	2.14
Monthly Income (in LAK)		
-Maximum amount	75,000,000	
-Minimum amount	500,000	
Mean	4,290,229	

Appendix J

Zone of Origin Foreign Visitors

Zone	Distance (Km)	AdministrationCountries	Population
1	1,129	Thailand	65,926,261
2	1,611	Vietnam	88,780,000
3	1,665	Cambodia	13,395,682
4	3,451	Indonesia	237,641,326
5	3,639	Taiwan	23,332,705
6	4,049	India	1,210,193,422
7	4,427	China	1,354,040,000
8	4,855	Korea	50,004,441
9	5,742	Japan	127,340,000
10	8,022	Israel	8,002,300
11	8,203	Russia	143,369,806
12	8,672	Austria	8,489,482
13	8,994	Scotland	5,296,000
14	8,994	Slovania	2,059,864
15	9,406	Sweden	9,566,945
16	9,579	Australia	23,010,937
17	9,630	Denmark	5,602,628
18	9,652	Poland	38,533,789
19	9,663	Czech	10,516,125
20	9,742	Germany	65,635,000
21	9,812	Norway	5,063,709
22	9,968	Italy	59,530,464
23	10,312	Holand	16,785,200
24	10,375	Switsland	8,036,900
25	10,390	Belgium	11,151,495
26	10,654	France	65,635,000
27	10,740	NewZealand	4,467,850

28	11,320	Spain	47,059,533
29	14,264	Canada	35,056,064
30	15,067	USA	315,791,000
31	15,156	UK	63,181,775
32	15,376	Ireland	4,585,400

Appendix K

Adjusted number of Foreign Visitors per Zone (2010-2011)

Zone	Administration Countries	No of Respondents	Total of Visitors
1	Thailand	5	26643
2	Vietnam	2	362
3	Cambodia	1	769
4	Indonesia	1	35
5	Taiwan	1	23
6	India	1	68
7	China	1	437
8	Korea	4	293
9	Japan	7	807
10	Islael	4	76
11	Russia	2	196
12	Austria	3	320
13	Scotland	2	135
14	Slovania	1	61
15	Sweden	5	196
16	Australia	23	1418
17	Denmark	1	213
18	Poland	1	179
19	Czeck	3	143
20	Germany	17	1795
21	Norway	1	59
22	Italy	1	826
23	Holand	21	1201
24	Switsland	19	663
25	Belgium	9	877
26	France	30	5404

27	NewZealand	9	187
28	Spain	8	464
29	Canada	6	536
30	USA	18	1150
31	UK	41	1083
32	Irland	7	57

Appendix L

Socio-economic Characteristics of Foreign Respondents

Gender	**Frequency**	**Percentage**
Males	155	60.55
Females	101	39.45
Age		
Oldest	75	
Youngest	15	
Mean	31.42	
16-25	99	38.67
26-35	99	38.67
36-45	24	9.38
46-55	21	8.20
>55	13	5.08
Occupation		
Government staff	23	8.98
Private sector employees	81	31.64
Businesspeople	3	1.17
Labourers	27	10.55
Students	69	26.95
Self employed	28	10.94
Unemployed	20	7.81
Others	5	1.95

Appendix M

Variables Description for CVM study

Variable	Description/Question	Type	Coded	Expe-cted sign
Dependent Variable				
WTP (dependent variable)	"If you were asked to donate x LAK, would you support the plan?"	Discrete	0=No/DK 1=Yes	
Bid	Bid amount (LAK)	Discrete	20,000; 30,000 40,000; 50,000; 60,000; 80,000 100,000;150,000 200,000; 250,000;300,000	
Demographic Variables				
Gender		Dummy	0=Female 1=Male	
Age		Continuous		(+)
Education		Categorical	0=Never attended school 5=Elementary (grades1-5) 10=Primary (1-9) 12=Secondary (1-12) 14=College or technical school 16= Undergraduate degree 18=Post graduate degree 20=PhD and Above	
Occupation		Categorical	0=Unemployment 5=Student 10=Worker in industry	

			12=State-enterprise staff 14=Government officer 16= Private Enterprise Owner 18=House wife 20=Retired	
Income		Continuous		(+)
Household size		Continuous		(-)
Charity		Dummy	0=No 1=Yes	
Potential use variables				
Past use	"Have you ever visited Vat Phou in your life?'	Dummy	0=No 1=Yes	(+)
Current use	"Have you visited Vat Phou in the past 12 months?"	Dummy	0=No 1=Yes	(+)
Future use	"Do you think you or your household will ever use the site for recreational purposes in the future?"	Dummy	0=No 1=Yes	(+)
Attitude and Knowledge Variables				
Plan knowledge	"Have you ever heard about this Action Plan?"	Categorical	0=No 1=I have heard a little bit 2=Yes, I have heard a lot	
Implement	"With your understanding of the management system in Laos, do you think that the action plan as we described before can be implement?"	Categorical	0=Don't know 1=Definitely not 2=Probably not 3=Neutral 4=Probably yes 5=Definitely yes	
Board	"Do you think that the governing board of the Trust Fund as we described before can do a good job in managing the implementation of the action	Categorical	0=Don't know 1=Definitely not 2=Probably not 3=Neutral 4=Probably yes	

	plan?'		5=Definitely yes
Easiness	"The target of this action plan is to preserve historic structures. How easy or difficult do you think it will be to reach this target by implementing this plan?"	Categorical	0=Don't know 1=Very difficult 2=Difficult 3=Neutral 4=Easy 5=Very easy
Symbol	"How would you project the change of the historical, cultural and symbolic value of Vat Phou with preserving historic structures in the site?"	Categorical	0=Don't know 1=A lot worse 2=A little worse 3=No change 4=A little improvement 5=A large improvement
Recreate	"How would you project the change of the value of WHS for recreational use associated with preserving historic structures?"	Categorical	0=Don't know 1=A lot worse 2=A little worse 3=No change 4=A little improvement 5=A large improvement
Media(Vat Phou)	"How often have you heard about environmental problems with Vat Phou on radio, newspapers, magazines, TV or by community groups in the last 12 months?"	Categorical	0=Don't know 1=Never 2= A few times (1-5) 3=Several times (6-10) 4=Many times (11-20) 5=More than 20 times

Appendix N

CVM Questionnaire

Researcher: Kaysone Chansina (Ms), a PhD Candidate in Economics at the School of Development Economics, National Institute of Development Administration (NIDA)

Dear Sir/Madam,

We are conducting academic research for a doctoral dissertation. We will mainly ask questions on your preference of contributions to the preservation project "Historical Structure Inventory" at Vat Phou. The whole questionairre may take you about 15 minutes to answer. In agreeing to participate in answering you will greatly improve the prospects for academic purposes.

Your options and information provided are very important as the outcome of this research will be a useful addition to academic literature of Laos. Information you provide will be completely confidential. All professional data will only be used for scientific research and will not be related to any third party.

We highly appreciate your participation in this research.

Part I: Personal Information

1. Gender: ❑ Male ❑ Female
2. Age: …….years
3. Place of birth…….Current living city……
4. Marital status ❑ Single ❑ Married ❑ Widowed/Divorced/Separated
5. Educational background:
   - ❑ Never attended school
   - ❑ Elementary (5 years of schooling)
   - ❑ Primary (9 years of schooling)
   - ❑ Secondary (12 years of schooling)
   - ❑ College or technical school
   - ❑ Undergraduate degree
   - ❑ Post-graduate
   - ❑ Master degree
   - ❑ PhD and Above
   - ❑ Other…
6. Occupation
   - ❑ Government/agencies official
   - ❑ State-owned enterprise staff
   - ❑ Private Owned staff
   - ❑ Military/policeman
   - ❑ Business person
   - ❑ Retired
   - ❑ Laborer
   - ❑ Housewife
   - ❑ Student
   - ❑ Unemployed

❑ /semi-unemployed

7. Monthly income including salary and other sources ……..…..(Kip)
8. Number of members living in the same household…….person (s)
9. Number of members in the family working with salary-paid ……person (s)

Part II: General Information related to Vat Phou

10. Have you ever seen Vat Phou in your life? ❑ Yes ❑ No
11. Have you visited Vat Phou in the past 12 months? ❑ Yes ❑ No
12. Do you think your household will ever visit Vat Phou in the future? ❑ Yes ❑ No
13. How often have you heard about Vat Phou on TV, the radio, newspapers, magazines, or by community groups in the 12 months?
    - ❑ Never
    - ❑ A few times (1-5)
    - ❑ Several times (6-10)
    - ❑ Many times (11-20)
    - ❑ More than 20 times
14. Have you ever heard about Preservation Plan in Vat Phou?
    - ❑ I have heard a little bit
    - ❑ Yes, I have heard a lot
    - ❑ No

Part III: Donation Information

15. Did you ever make a donation to any cultural protection and restoration? ❑ Yes❑ No
16. Did you ever make a contribution to a protection organization or NGO? ❑ Yes❑ No
17. Did you ever make a donation to relief efforts or projects in Laos? ❑ Yes ❑ No

Part IV: WTP Information

<u>Consequences of Vat Phou Preservation Action Plan</u>

Project name: "Historic Structure Inventory"

To meet the target, the action would be to determine and evaluate the standing vernacular historic structures within the site as potential contributing components to the cultural landscape of the Champasak Heritage and Cultural Landscape Protection Zone.

Before making a decision on whether to support such an action plan, it would be helpful to know what all the consequences of protecting and preserving a culturally and historically significant site would be to the culture and the economy. However, it would be difficult to predict precisely the effects of the Action Plan. Presented below is a general description of some of the expected consequences of the protection plan:

1. All traditional wooden Lao houses, temples and other buildings 50 years-old or older in the town of Champasak will be mapped, photographed and recorded descriptively.
2. There would be historical information recorded about each structure
3. The information about each structure will be incorporated into the project's GIS and database
4. Those structures will then be subject to the protective restrictions of the Champasak Heritage Management Plan

Costs of the Action Plan

In all likelihood there would be a cost to the Lao people in implementing this Protection Plan, financial support from different groups of Lao would be necessary to help finance this plan by making donations.

Plan Implementation

To implement the Action Plan, a Vat Phou Trust Fund would be established. The citizens of Laos would be asked to pay a once-only donation into the Trust Fund. The only purpose of the Vat Phou Trust Fund would be to finance the implementation of the action plan.

The Fund would be managed and administered by a Board of Governors comprising various government sectors so as to minimize any possible conflicts of interest. The board would consist of the Governor of Champasak province, representatives of the Ministry of Culture and Tourism, the Vat Phou Authority Management, the Mayor of Champasak district, and representatives of the Cultural office of Champasak district. The board would also include community groups from villages in Champasak district as well as local residents of the Vat Phou area. The activities of the board would be completely transparent. An independent auditing of the board would be performed annually, and made public. A summary of the total financial transactions would be widely and publicly available. You can thus have complete trust in the allocation of the money only and specifically toward protecting and preserving Vat Phou.

Considering your current income, as well as your expenses for housing, food, utilities, clothing, entertainment, savings, etc., please think about how much you would be willing to donate, onetime, to support the Protection Action Plan. Assume that your one time donation would be collected by a group of people delegated by the Trust Fund management.

18. If you were asked to donate_____ Kip to the Vat Phou Trust Fund, would you support the plan to preserve significant structures of World Heritage?

❑ 1 Yes ❑ 2 No ❑ 0 I don't know

19. If you unwilling to pay the set amount, what then would be the volunteer amount you are willing to donate to prevent a further losing of the historical structures? _____ Kip

20. How certain or sure are you of your stated willingness to donate in question 18?

❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
Very Uncertain	Moderately Uncertain	Neutral	Moderately Certain	Very Certain

21. The target of this action plan is to preserve historical structures. How easy or difficult do you think it will be to reach this target by implementing this plan?

❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 0
Very Easy	Easy	Not easy	Difficult Not difficult	Very difficult	Don't Know

22. How would you project the change of the historical, cultural and symbolic value of Vat Phou by preserving historical structures?

❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 0
A lot worse	A little worse	No change	A little improvement	A large improvement	Don't Know

23. How would you anticipate the change of significant structures by preserving them?

❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 0
A lot worse	A little worse	No change	A little improvement	A large improvement	Don't Know

24. How would you unticipate the change in the value of the structures by preserving them?

❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 0
A lot worse	A little worse	No change	A little improvement	A large improvement	Don't Know

25. How would you expect the change of the value of WHS for recreational use associated with preserving historical structures?

❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 0

A lot worse	A little worse	No change	A little improvement	A large improvement	Don't Know

26. Do you think that the governing board of the Trust Fund as we described before can do a good job in managing the implementation of the action plan?

❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 0
Definitely Not	Probably Not	Neutral	Probably Yes	Definitely Yes	Don't Know

27. How realistic do you think it is for the Trust Fund management to collect donations from you as you may have agreed?

❑1 No problem, it can be collected

❑2 There will be some problems, but still possible

❑3 There will be a lot of problems and it is not realistic

❑0 I don't know

28. Do you think that if the action plan were to be implemented only by the government, it would be appropriately implemented?

❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 0
Definitely Not	Probably Not	Neutral	Probably Yes	Definitely Yes	Don't Know

29. With your understanding of the management system in Laos, do you think that the action plan as we described before can be finally implemented?

❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 0
Definitely Not	Probably Not	Neutral	Probably Yes	Definitely Yes	Don't Know

30. Would you like to have more information on anything before making your choice on how much to donate (For example, if you have any uncertainty about the plan, cultural impact, environmental impacts, the trust fund, income, etc).

❑ 2 No, I do not need any more information

❑ 0 Don't know / Not sure

❑ 1 Yes (**Go to question** 30.1)

30.1 What additional information would you like to have?

_____

_____

30.2 If we were able to provide more information on the items you listed above, would you be more certain about your willingness to donate or make your decision any easier?

❑ 1 Yes ❑ 2 No ❑ 0 I don't know

31. What are the major reasons determining the maximum amount you are willing to donate for the Action Plan? (even if your willingness to donate is zero)?

_____

_____

32. Other comments please welcome:

_____

_____

Part V: Questions on Attitudes and Perception

33. To what extent do you agree or disagree with the following statement?

Attitudinal Statements	1	2	3	4	5
Attitudes Towards Involvement					
I believe Vat Phou preservation is important, so the site can be preserved for future generations and for future archaeological investigation					
I should be involved in the management of Vat Phou					
Any preservation in this site is important to me					
Attitude Toward Culture and Environment of the site					
The historical and cultural structures at Vat Phou must be valued and preserved					
The site environment must be protected now and in the future for the benefit of future generations					
It is important to restore the structure of the site to its original condition					
The site preservation will result in substantial economic gains through the tourism industry					
The site preservation will create jobs in the community					

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

34. How important do you feel it is to maintain and protect the following type of WHS?

Attitudinal Statements	1	2	3	4	5
Historical and cultural structures					
Scenic views					
Mountains					
Old traditional houses					
Temples					
Heritage Villages					
Open fields near the WHS					

1 = Not important, 2 = A little important, 3 = Somewhat important, 4 = Quite important, 5 = Extremely important

Appendix O

The Socio-demographic Characteristics of the Respondents in CVM

No	Characteristics	Frequency	Percentage
1	**Gender:**		
	Males	616	56.05
	Females	483	43.95
2	**Age:**		
	Oldest	56	
	Youngest	16	
	Mean	32.84	
	16-25	295	26.84
	26-35	424	38.58
	36-45	254	23.11
	46-55	120	10.92
	>55	6	0.55
3	**Place of Birth**		
	Northern part of Laos	454	41.31
	Capital city	309	28.12
	Southern part of Laos	334	30.39
	Others	2	0.18
4	**Marital Status:**		
	Single	484	44.04
	Married	615	55.96
5	**Educational Background:**		
	Primary school	41	3.73
	Secondary school	94	8.55
	College degree	213	19.38
	Diploma degree	217	19.75
	Bachelor degree	369	33.58
	Postgraduate degree	63	5.73
	Master degree	91	8.28
	PhD	9	0.82

	Others	2	0.18
6	**Occupations:**		
	Government staff	471	42.86
	State-owned enterprise staff	134	12.19
	Private staff	143	13.01
	Military	93	8.46
	Businesspeople	52	4.73
	Retired	0	-
	Laborers	115	10.46
	Housewives	17	1.55
	Students	46	4.19
	Unemployed	2	0.18
	Others	26	2.37
7	**Monthly Income (in LAK):**		
	Maximum amount	100,000,000	
	Minimum amount	0	
	Mean	2,880,008	
8	**Number of family members:**		
	Biggest family	15	
	Smallest family	1	
	Mean	4.99	
9	**Number of working members in a family**		
	Biggest family	9	
	Smallest family	0	
	Mean	1.38	

Appendix P

Regression Result of ZTCM

1. Linear Form: Domestic Visitors

```
. cd "C:\Users\Sony\Desktop"
C:\Users\Sony\Desktop

. insheet using dataset1.txt
(11 vars, 31 obs)

. reg   vri tci

      Source |       SS       df       MS              Number of obs =      31
-------------+------------------------------           F(  1,    29) =    7.78
       Model |   .00018883     1   .00018883           Prob > F      =  0.0092
    Residual |  .000703662    29  .000024264           R-squared     =  0.2116
-------------+------------------------------           Adj R-squared =  0.1844
       Total |  .000892493    30   .00002975           Root MSE      =  .00493

------------------------------------------------------------------------------
         vri |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         tci |  -5.43e-09   1.95e-09    -2.79   0.009    -9.41e-09   -1.45e-09
       _cons |   .0148766    .002601     5.72   0.000     .0095568    .0201963
------------------------------------------------------------------------------
```

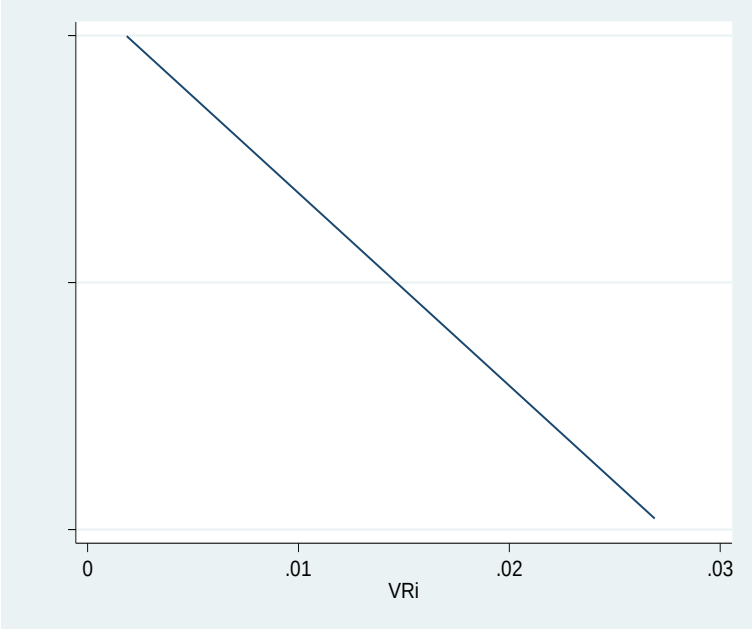
2. Semi-log Form : Domestic Visitors

```
. reg  lnvri tci

      Source |       SS       df       MS              Number of obs =      31
-------------+------------------------------           F(  1,    29) =   13.39
       Model |  5.11879734     1  5.11879734           Prob > F      =  0.0010
    Residual |   11.088807    29  .382372656           R-squared     =  0.3158
-------------+------------------------------           Adj R-squared =  0.2922
       Total |  16.2076044    30  .540253479           Root MSE      =  .61836

------------------------------------------------------------------------------
       lnvri |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         tci |  -8.94e-07   2.44e-07    -3.66   0.001    -1.39e-06   -3.94e-07
       _cons |  -3.934097   .3265187   -12.05   0.000    -4.601903   -3.266292
------------------------------------------------------------------------------
```

3. double-log Form : Domestic Visitors

```
. reg  lnvri lntci

      Source |       SS       df       MS              Number of obs =      31
-------------+------------------------------           F(  1,    29) =    8.24
       Model |   3.5855047     1   3.5855047           Prob > F      =  0.0076
    Residual |  12.6220997    29  .435244817           R-squared     =  0.2212
-------------+------------------------------           Adj R-squared =  0.1944
       Total |  16.2076044    30  .540253479           Root MSE      =  .65973

------------------------------------------------------------------------------
       lnvri |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       lntci |  -.7149307   .2490896    -2.87   0.008    -1.224376   -.2054852
       _cons |   4.916602   3.477118     1.41   0.168    -2.194903    12.02811
```

4. Graphic Tci and Vri



5. Linear Form: Foreign Visitors

```
. insheet using reginter4.txt
(7 vars, 32 obs)

. reg  vri tci

      Source |       SS       df       MS              Number of obs =      32
-------------+------------------------------           F(  2,    29) =    2.79
       Model |  3501919.16     2  1750959.58           Prob > F      =  0.0778
    Residual |  18180521.7    29  626914.543           R-squared     =  0.1615
-------------+------------------------------           Adj R-squared =  0.1037
       Total |  21682440.9    31  699433.577           Root MSE      =  791.78

------------------------------------------------------------------------------
         vri |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         tci |  -.5380235   .2376437    -2.26   0.031    -1.024059   -.0519875
      income |   .0365908   .1171051     0.31   0.757    -.2029161    .2760978
       _cons |   1204.494   362.0158     3.33   0.002     464.0882    1944.899
------------------------------------------------------------------------------
```

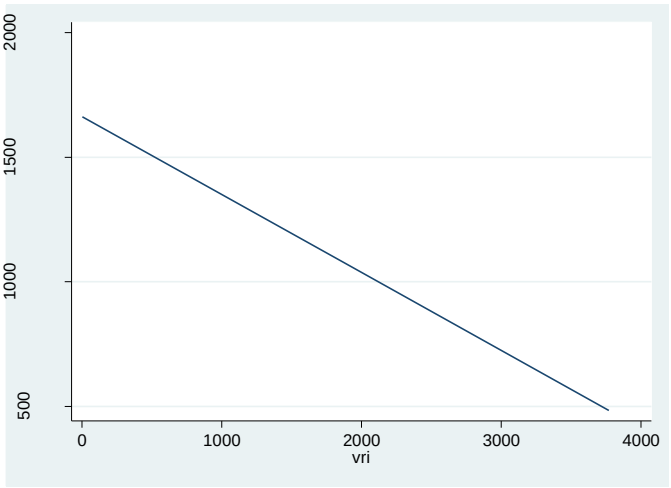
6. Semi-log Form :Foreign Visitors

```
. reg  vri lntci lnincome

      Source |       SS       df       MS              Number of obs =      32
-------------+------------------------------           F(  2,    29) =    4.52
       Model |  5156643.88     2  2578321.94           Prob > F      =  0.0195
    Residual |    16525797    29   569855.07           R-squared     =  0.2378
-------------+------------------------------           Adj R-squared =  0.1853
       Total |  21682440.9    31  699433.577           Root MSE      =  754.89

------------------------------------------------------------------------------
         vri |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       lntci |  -706.7401   240.5797    -2.94   0.006    -1198.781   -214.6994
    lnincome |   98.33653   196.7206     0.50   0.621    -304.0022    500.6752
       _cons |   4825.113   1781.432     2.71   0.011     1181.676     8468.55
------------------------------------------------------------------------------
```

7. double-log Form : Foreign Visitors

```
. reg  lnvri lntci lnincome

      Source |       SS       df       MS              Number of obs =      32
-------------+------------------------------           F(  2,    29) =    0.67
       Model |  3.89919257     2  1.94959629            Prob > F      =  0.5178
    Residual |  83.9614769    29  2.89522334            R-squared     =  0.0444
-------------+------------------------------           Adj R-squared = -0.0215
       Total |  87.8606694    31  2.83421514            Root MSE      =  1.7015

------------------------------------------------------------------------------
       lnvri |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       lntci |  -.5493751   .5422728    -1.01   0.319    -1.658448    .5596973
    lnincome |    .400967   .4434131     0.90   0.373    -.5059147    1.307849
       _cons |   5.952482   4.015393     1.48   0.149    -2.259918    14.16488
------------------------------------------------------------------------------
. reg  lnvri lntci lnincome, r

Linear regression                                       Number of obs =      32
                                                        F(  2,    29) =    0.51
                                                        Prob > F      =  0.6057
                                                        R-squared     =  0.0444
                                                        Root MSE      =  1.7015

------------------------------------------------------------------------------
             |               Robust
       lnvri |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       lntci |  -.5493751   .6400735    -0.86   0.398    -1.858472    .7597221
    lnincome |    .400967   .4695169     0.85   0.400    -.5593028    1.361237
       _cons |   5.952482   4.525417     1.32   0.199    -3.303035      15.208
------------------------------------------------------------------------------
```

8. Graphic Tci and Vri of Foreign Visitors



Appendix Q

Regression Result CVM Analysis

```
. logit  wtp  gender age status edu job salary hhsize adult bid

Iteration 0:   log likelihood = -738.15556
Iteration 1:   log likelihood = -637.51325
Iteration 2:   log likelihood = -633.97853
Iteration 3:   log likelihood = -633.89586
Iteration 4:   log likelihood = -633.89582

Logistic regression                             Number of obs   =       1099
                                                LR chi2(9)      =     208.52
                                                Prob > chi2     =     0.0000
Log likelihood = -633.89582                     Pseudo R2       =     0.1412

------------------------------------------------------------------------------
         wtp |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      gender |    .153669   .1589426     0.97   0.334    -.1578528    .4651907
         age |   .0297939   .0110229     2.70   0.007     .0081893    .0513984
      status |  -.0920575   .1938508    -0.47   0.635    -.4719981    .2878832
         edu |   .3101195   .2078541     1.49   0.136     -.097267     .717506
         job |   .0110386   .1867772     0.06   0.953    -.3550381    .3771152
      salary |   1.61e-07   4.71e-08     3.41   0.001     6.82e-08    2.53e-07
      hhsize |   .0252793   .0412415     0.61   0.540    -.0555525    .1061111
       adult |   .0653725   .0634342     1.03   0.303    -.0589561    .1897012
         bid |  -9.94e-07   1.59e-07    -6.24   0.000    -1.31e-06   -6.82e-07
       _cons |  -1.045354   .3374008    -3.10   0.002    -1.706647   -.3840604
------------------------------------------------------------------------------
```

```
logit  wtp  gender age status edu job salary hhsize adult bid, r

Iteration 0:   log pseudolikelihood = -738.15556
Iteration 1:   log pseudolikelihood = -637.51325
Iteration 2:   log pseudolikelihood = -633.97853
Iteration 3:   log pseudolikelihood = -633.89586
Iteration 4:   log pseudolikelihood = -633.89582

Logistic regression                               Number of obs   =       1099
                                                  Wald chi2(9)    =      83.04
                                                  Prob > chi2     =     0.0000
Log pseudolikelihood = -633.89582                 Pseudo R2       =     0.1412

------------------------------------------------------------------------------
             |               Robust
         wtp |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      gender |    .153669   .1532253     1.00   0.316    -.1466472    .4539851
         age |   .0297939   .0117187     2.54   0.011     .0068257     .052762
      status |  -.0920575   .1860606    -0.49   0.621    -.4567295    .2726145
         edu |   .3101195   .2076929     1.49   0.135     -.096951      .71719
         job |   .0110386   .1789775     0.06   0.951    -.3397508    .3618279
      salary |   1.61e-07   5.98e-08     2.68   0.007     4.33e-08    2.78e-07
      hhsize |   .0252793   .0414737     0.61   0.542    -.0560077    .1065662
       adult |   .0653725    .063547     1.03   0.304    -.0591773    .1899224
         bid |  -9.94e-07   2.05e-07    -4.85   0.000    -1.40e-06   -5.92e-07
       _cons |  -1.045354   .3501697    -2.99   0.003    -1.731674   -.3590338
------------------------------------------------------------------------------
```

Appendix R

Regression Result of Laotians' WTP and Socio-demographic Variables

```
logit  wtp gender age status edu occupation income member workmember

Iteration 0:   log likelihood = -816.34835
Iteration 1:   log likelihood = -747.63353
Iteration 2:   log likelihood = -743.01775
Iteration 3:   log likelihood = -742.93708
Iteration 4:   log likelihood = -742.93707

Logistic regression                               Number of obs   =       1237
                                                  LR chi2(8)      =     146.82
                                                  Prob > chi2     =     0.0000
Log likelihood = -742.93707                       Pseudo R2       =     0.0899

------------------------------------------------------------------------------
         wtp |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      gender |   .5153143    .144777     3.56   0.000     .2315566     .799072
         age |   .0362338   .0092952     3.90   0.000     .0180155     .054452
      status |   .0766858   .1770902     0.43   0.665    -.2704047    .4237763
         edu |   .2217062   .1731285     1.28   0.200    -.1176194    .5610318
  occupation |   .1649704   .1656168     1.00   0.319    -.1596326    .4895735
      income |   1.64e-07   4.16e-08     3.95   0.000     8.27e-08    2.46e-07
      member |   .0202315   .0375566     0.54   0.590     -.053378     .093841
  workmember |   .0919025   .0574098     1.60   0.109    -.0206188    .2044237
       _cons |  -1.892539   .2922452    -6.48   0.000    -2.465329   -1.319749
   ------------------------------------------------------------------------------
```

BIOGRAPHY

NAME	Chansina Kaysone
ACADEMIC BACKGROUND	Bachelor's and Master's Degree in Physic and Computer, Pedagogychesky Institute, Varonesh, Russia in 1993. Master's Degree in International Business Administration, Flinders University, Adelaide, Australia in 2007
PRESENT POSITION	Head of Information Technology Division, Documentation Center, National Academy of Politics and Public Administration (NAPPA), Vientiane, Lao PDR
EXPERIENCES	Received a scholarship from Russian government during study Bachelor and Master programs in Physic and Computer, Varonesh, Russia Received a scholarship from Australian government during study Master in International Business Administration, Adelaide, Australia

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Lecturer in Business Administration Topics and Economics at NAPPA