Willingness to Pay for Recreational Activity (Chairlift): A Case Study of Rawal Lake View Park, Islamabad

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DECLARATION

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Abstract

Recreational activities have positive effect on the mental and physical health of people. Pakistan has rich potentiality for tourism because of its rich heritage, culture, versatile geography, variable environment, diverse biological patterns, and history. To promote the tourism industry in Islamabad, the capital development authority (CDA) decided to revive a decade-old plan to install a chairlift in the Rawal Lake View Park, Islamabad. However, there is a need to investigate the response of visitors regarding chairlift. What are the socioeconomic factors affecting willingness to pay for chairlift and final bid for installing chairlift at Rawal lake view park? we have collected data from 178 visitors. A well-structured questionnaire was employed to collect data from the field. We used simple bidding game but in iterative way to find maximum willingness to pay of visitors. While survey 30% of the respondents were not willing to pay while 70% of the respondents were willing to pay for chairlift and the highest bid recorded during survey was Rs1000. Age, Family size, Education, Distance from home to RLVP, Number of dependents, working members, Public Transport, Previous experience and Using public transport or own transport were found statistically significant factors affecting WTP and final bid of visitors for installing chairlift at RLVP. It has been found through cost and benefit analysis that if government initiate this project, it will give positive benefits as revenues to government. Moreover, recreational activities promote tourism industry in the country.

Chapter 1: Introduction

Background:

Recreational activities have positive effect on the mental and physical health of people. The term "recreation" refers to the activities and experiences of people which helps them to exercise, relax and have fun, whether outside or indoors (Hanif et al., 2018). There are mainly two types of recreation namely "active" and "passive" recreation. Active recreation requires more physical involvement for instance sporting activities like soccer, basketball, swimming, tennis and hockey. On the other hand, passive recreation requires less physical activity. It may include riding, fishing, picnicking, bicycling and advance equipment in parks like chairlifts and water fountains etc.(Cetinkaya et al., 2017).

Newly established recreational facilities promote tourism and support the sustainable economic growth. Moreover, flourishing tourism helps to grow other sectors of economy affiliated with tourism like transport, accommodation and shopping (Hwang & Lee, 2019). Developing countries can attract foreign exchange and reduce the unemployment levels in the economy due to job creation by tourism sector (Shahzad et al., 2017).

The direct contribution of tourism sector to GDP of Pakistan was 930.9 PKR. It was 2.9% of total GDP in 2017 moreover, tourism sector created 1493000 jobs in Pakistan it becomes 2.5% of total employment moreover visitor's tourism places of Pakistan generated exports revenue up to 9.7 billion PKR which becomes 3.7% of total exports in 2017. Tourism sector enhanced the investment capacity of the economy by 410.4 billion PKR which becomes 9.1% of total investment (World Travel & Tourism Council, 2018). Nevertheless, Pakistan has been facing numerous challenges to increase the economical contribution of this fruitful industry. These challenges are significantly related to security threats both internal and external due to border tensions and terrorism. Therefore, domestic tourism has potential to become the best choice to enhance economic contributions of the tourism sector (World Travel & Tourism Council, 2018).

Pakistan has rich potentiality for tourism because of its rich heritage, culture, versatile geography, variable environment, diverse biological patterns, and history. Tourism has developed as a major tool for creation of considerable economic gains. There are various tourism destinations in Pakistan i.e. Gilgit Baltistan, Swat, Malam Jabba, Kalam, Shangla, Balakot, Kaghan, Naran, Ayoubia, Murree, Chitral, Hunza, Rawal lake and Neelam valley, mountainous ranges, historical zones and archaeological sites (Davis et al., 2017).

Planning for building recreation facility implies a need to acquire and/or create places where both active and passive recreation can occur, such as parks, sports fields, and open spaces. The opportunities for recreation that exist within every city may depend on many things, including the characteristics of the community and the natural environment, but every city administration should have a variety of recreational areas, spread throughout the community and serving a range of interests (Ward Thompson, 2013).

Establishment of the recreational sites must consider the amount of land that the community desires to set aside for recreation and the most appropriate locations for these areas. In many instances, recreation areas can be combined with the protection of natural resources (Nahuelhual et al., 2013). The location of these areas should also take into account convenience to residents, especially disadvantaged areas where transportation may be an issue.

According to research it has been identified that best tourism policies are those which promote recreational activities hence reduce the health costs and increase the well-being of a city's population. Recreation is one of the easiest and most fun ways to fit physical activity and stress relief into a busy life, and, when there are a variety of recreational opportunities, it is more likely that residents will find one that suits their interests. It is the responsibility of the State governments to provide places where outdoor recreation can occur. Since not every resident enjoys the same types of recreation, it is imperative that communities, and the State, provide diverse opportunities for a variety of recreational activities. The comprehensive planning process allows communities to consider their recreational preferences, acknowledge their current and future needs related to recreation and the opportunities for expanding and strengthening the recreational offerings provided with the city administration.

To promote the tourism industry in Islamabad, the capital development authority (CDA) decided to revive a decade-old plan to install a chairlift in the Margallah Hills and engaged an international consultant to evaluate and check feasibility of the project. The Capital Development Authority (CDA) will put in for expressions of interest from national and international consultants to conduct technical and financial study for the proposed project of chairlift installation at Rawal dam.

Rawal lake in Islamabad is an artificial reservoir that was constructed to provide the water for the twin cities of Rawalpindi and Islamabad. Korang River along with 43 other small tributaries originated from Margallah Hills from the inflow of this reservoir or lake which has a total area of 8.8 km². Rawal Dam is constructed at the outlet stream of the lake. As far as its location is

concerned, Rawal Lake is centered within an isolated part of a village called Malpur, Margallah Hills National Park and Bani Gala.

Rawal Lake View Park (RLVP) is a recreational site which has various recreational activities. Capital Territory, Pakistan. It runs under the administration of the Capital Development Authority. This park also contains Pakistan's largest bird cage. It was a great step to promote tourism by establishing chairlift in the capital. However, there is a need to investigate the response of visitors regarding chairlift. The success of the project depends on the response of visitors towards establishment of chairlift project.

Problem statement

Developing countries like Pakistan are facing numerous challenges when it comes to increasing the economic gains from tourism industry. These problems and challenges are directly and significantly related to security threats both internal and external due to border tensions and terrorism. Therefore, domestic tourism has potential to become the best choice to enhance economy by contributions provided by the tourism sector to promote tourism industry in Pakistan.

Capital development authority (CDA) decided to restart and reevaluate a very old plan to install a chairlift facility in the Margallah Hills. This plan was first analyzed around a decade ago by government officials and the government also engaged an international consultant to evaluate and check feasibility of the project. Unfortunately, project was delayed due to lack of interest by administrative authorities.

Now again Capital Development Authority (CDA) will put in for expressions of interest from national and international consultants to conduct technical and financial study for the proposed project of chairlift installation at Rawal dam. The CDA selected 1 site for the installation of chairlift from Murree road to Rawal Lake View Park (RLVP). The total length of the chairlift would be approximately 1.7 kilometers with installation of the starting point at an area near convention center besides Murree road. This information has been collected by a concerned official. "As per the rough estimates, the cost of the project will reach up to Rs. 90 crores" the official added. The chairlift installation plan in the capital (Islamabad) was first analyzed in 2002 and the estimated cost of the project was Rs 500 million. "At that time, the CDA board had given approval for the project, also an amount of Rs. 500,0000/- was set aside for consultation fee for project assessment and feasibility analysis," said a senior CDA official. As per the original PC-I prepared in 2003 for RLVP chairlift, there were to be sixty cable cars and the project was supposed to be finalized and launched within one year.

On the other hand, chairlift that was built in Murree and its neighboring areas is significantly attractive for national and international tourists. Chairlift was installed about fifteen kilometers in Murree town, originated from Ghulehrra Gali and reached up to Patriata top at the altitude of about 7,500 feet from the sea level. Patriata was one of the most remote, underdeveloped and backward villages of the Murree region. As chairlift was installed in Patriata, local residents got employment opportunities, entrepreneurship opportunities, and other sources of livelihood. Patriata is visited by national and international visitors in the entire year but their influx is maximum during midsummer season.

The Murree chairlift is the largest and most sophisticated chairlift in Pakistan. Mohsin Fazil, general manager Patriata chairlift said "Tourist influx reaches up to one million every year as per an official. Tickets sold every year reach up to 0.5 million which generate around Rs. 260/- million. Out of this amount, Rs50 million is spent as operational cost and management cost which include salaries of the staff". It would be a great initiative if the government decides to install this project in other areas.

In order to attract local and international tourist such facilities need to extend to other possible areas such as Rawal lake view park. This is one of most potential area for chairlift project. However, it demands economic evaluation prior to start the project which is not available and present study is attempting to fill this gap by providing such economic evaluation by doing cost benefit analysis. Local tourists and visitors play vital roles in success of project because they are the major consumers in domestic tourism. Hence, it is necessary to understand the characteristics of coming visitors' whether they are willing to pay for chairlift at RLVP or not. Thus, this study evaluates the role of selected social, economic and demographic features of visitors in domestic tourism participation and behaviors.

It is a fact that tourism is driven by expenditure of tourists hence this economic activity can be enhanced by understanding capacity of tourists' expenditure during their visit to certain tourist spot. It is of vital importance to analyze the revenue that can be generated from tourism destinations so that proper marketing strategies and policies can be generated. In addition to this, the examination and understanding of participation in recreational activities along with tourism is very important for understanding demand of tourism. Various social and economic factors of visitors control their participation in tourism and expenditure on recreational and tourism facilities. The socio-economic factors that we have included in this study are (A) income, (B) education, (C) occupation, (D) age, (E) number of family members earning, (F) total number of dependents and

adults in one household and use of public transport to reach recreational destinations. This study also examines the prospective role of the contributing factors on the final bid offered by tourists for installing chairlift on lake view park. Demography and demographic factors were also considered in this study because of the increasing population growth and manner in which it is transforming. "Baby boom" phenomenon is being witnessed by Pakistan because if increasing number of youths. more than 53% of Pakistan's population is comprised of youth. This youth is mainly of age group less than 24 years. Youth is always enthusiastic for recreation, adventure sand tourism activities; this will be further analyzed in this research work. Finally, with the aim to explore cost and benefit analysis of installing chairlift tis also part of this research.

Beside economic problems there were also other problems doing this research for instance while during survey asking question to the respondents from different educational backgrounds in a way to get actual response according to the question asked was difficult task. Moreover, getting data from officials of Murree chairlift and information on decade old chairlift plan and Rawal lake view park from CDA officials was difficult without the help of some friends from government officials that would be not possible for a common researcher. Time constraint for completing thesis was also great challenge during the research this problem further worsen due to non-availability of funds for collecting data however it was managed with the help of my supervisor guidance.

Objectives of research

1. To investigate socioeconomic factors affecting willingness to pay for the installation of chairlift in Rawal Lake View Park, Islamabad.
2. To investigate socioeconomic factors affecting maximum willingness to pay for the installation of chairlift in Rawal Lake View Park, Islamabad.
3. To evaluate the financial feasibility of installing the chairlift in Rawal Lake View Park, Islamabad.

Significance of Study

The Capital Development Authority (CDA) tried to hire foreign agencies for consultation of feasibility and success of the chairlift project at Rawal Lake View Park. Managers reported that CDA had allocated 500 million for this purpose. This study can provide some insight for CDA and other interested departments to achieve their goal. However, there was no financial aid available to complete this research. Due to which this research may lack in some areas like small sample size, access to government officials and official data sources for instance, project documents etc.

Despite all of these problems this research may provide a background for analysis and feasibility of the project. Firstly, in this study we will estimate the effect of socio-economic factors on willingness to pay for installing chairlift as a recreational activity at lake view park. Visitor's participation and motivation for installing chairlift at lake view park can be viewed.

Secondly, the already available literature tells about the importance of recreation and other facilities related to tourism and traveling in determining expenditure capacity this study will portray the important role of persons social and economic condition in determining their willingness to pay for chairlift installation in Rawal Lake,

Third, the study also uses more techniques and specifications to provide the true analysis of visitors' willingness to pay for installing chairlift. The study uses survey data to estimate all models and gave more robust and fruitful results. It is an evident fact Pakistan is an significantly emerging economy and its tourism industry has been facing serious threats which can be reduced by establishing new recreational sites like the one described in this research work

Chapter 2: Literature Review

In this chapter, complete description of the studies and research that has been done to analyze different aspects needed for this study. Different aspects of tourism, recreational facilities, wetlands, Rawal Lake, and chairlifts are deeply analyzed to finalize methodology that is described in the next chapter.

Theoretical background

We have tried to explore how visitors will take their decisions regarding the utilization of newly established recreational activity (chairlift) at Rawal lake view park. The nature of study relates it to economic theory of "consumer behavior". There have been studies on tourism topic using "consumer's utility theory" as theoretical background. Researchers established tourism demand using consumer utility theory moreover, they tried to develop models and incorporating decisions regarding time, budget and decisions to travel or not (Morley, 1992). Advance level technologies and facilities at tourist points make them more competitive. Understanding this competition and rivalry among recreational sites make it difficult to model and forecast consumer demand. This can be done by using consumer utility theory. Moreover, after establishing the impact of tourism

on economic growth the topic of tourism gained huge importance in research field (Luis N. Pereira, 2014).

It is also observed that natural environments and ecosystems are under threat due to industrialization this natural environments and ecosystems can be protected by promoting ecotourism. However, there is a need to analyze consumer behavior regarding this kind of tourism.

Impact of recreation and tourism on economy

Recreation activities play important role in economy as it involves volunteer expenditure. Tourism in Pakistan had faces ups and downs because of variations in peace and stability within country. Tourism or recreation can be defined as movement for a purpose. It is the social, economic or cultural aspects that involve the movement of humans to other countries/sites far from their homes for a personal, business or professional objective. It is a multivariate activity which has significant capacity for creation of jobs because of its labor-intensive nature, revenue generation/creation through tax collection mainly from the hotel sectors, earnings of huge foreign exchange and economic development of the country.

Tourism sector acts as a generator of fast and elaborative revenue activity, and aids in alleviation of poverty in any area along with peace maintenance. It is also described as the biggest voluntary transfer of money from rich nations to poor nations and from rich people to poor. This transfer of money helps in regulating economy with a nation's economic sectors (Mitchell, 2012).

In the last few decades, tourism has gained global prominence in various economies worldwide because of increasing interest of general public and increasing awareness about importance of tourism. Tourism and recreation may also be a source of income to parents, children, students, by providing job opportunities and entrepreneurship resources (Jucan & Jucan, 2013).

Tourism globally aids the countries at the micro-level to increase/enhance the degree of family income by the following two means. 1st is that It promotes efficacy through advanced/high level competitions among different companies affiliated with tourism and. 2nd is that It helps in the utilization of thriftiness of scale in native/old tourism companies. Tourism development enhances family income and jobs in the formal and informal fields of the destination country. It also alleviates poverty and enhances family income of the poor (Oh, 2005)

 Growth in this tourism sector can play a vital role in the economic development of low-income and middle-income economic setups; Although, similar situations are not noticeable for developed countries. This industry became a major economic set-up as it contributed around USD 7.6 trillion

to the world's economy that is around 10.2 % of the world's Gross Domestic Product (GDP) because of mass movement/travelling of tourists that account for around 1.2 billion to various destination around the globe and also generated 292 million jobs which can be considered as one in every ten jobs around the globe only in year 2016 only. There is a reciprocator affiliation between global trade and global travelling (Maestu et al., n.d.).

Tourism can provide immense opportunities to entrepreneurs and it also generates jobs for poor in their own native areas. As per the study of The UNWTO (united nation world tour organization) it is estimated that the tourism business can provide around 296 million new jobs globally by 2019. Tourist expenditure signifies an injection of new cash into the economic setup of the any country (World Tourism Organization (UNWTO), 2020).

The World Travel & Tourism Council (WTTC) has also predicted that the tourism sector has been growing and glowing continuously at the rate of 4 % every year which is faster than other financial services such as the transport and manufacturing industry (World Economic Forum, 2017). This helps in development of healthy economy as tourism has least impact on environment also it plays positive impact on human development and social strengthening.

Tourism has a variability of monetary influences. It also increases the activities of other sectors which include hotels, wholesale trade, road transport retail trade, restaurants, air transport, communications, and labor sector which include tourist guides, porter, cook, etc. all of these sectors are secondarily related to tourism. A tourist spot initiation is the first phase in tourism creation and then are installed all other services in a certain tourist spot. (Arshad et al., 2018). It is an immense means of support for development of infrastructure and cultural and peace and concordance (Wood et al.,2004). These primary and secondary servicers create variable opportunities irrespective of particular expertise.

Types of tourism and Recreation in Pakistan

Pakistan possesses great potential for tourism because of diversity in heritages and culture, rugged mountains, deserts, seashores, natural and artificial lakes, rivers seem attractive to tourists. Pakistan has been facing serious problems in tourism mainly because of terrorism and unstable peace situations. Pakistan's tourism sector is re-growing since eradication of terrorism. Pakistan's demography is so variable that it possesses immense tourism opportunities. Some of the main types of tourism are described below which are mainly contributing in Pakistan's tourism sector:

Religious tourism

As it is evident by the word, it is basically travelling to sacred places that can be a holy building, a shrine, any worship building or place affiliated sightseeing for gratification. This type of tourism has long lasting impact as it strengthens social development and provides more international opportunities. this tourism sectors attracts people who are otherwise not willing to spend money on tourism. (Yeoman, 2008). This type of tourism involves a person's belief or exchange of religious knowledge with others. It helps in giving a very positive image of nation all around the world (Kasim, 2011). Pakistan has its religious followers of three major religions which include Islam, Buddhism and Hinduism, is also it is the birthplace for the religion of Sikhism. Pakistan has significant importance not only in Islamic heritage but it is similarly significant in heritage of other religions. Gurdwaras at Nankana Sahib and Hasanabdal are remarkably attractive for sikh community as it has affiliation with Guru Nanak who was the founder of Sikhism, his worship places such as seem remarkably attractive for the Sikh community around the globe. There are numerous shrines of significant personalities (Saints and Sufis) in Pakistan, that attract significant pilgrims from within the country and the world. These shrines include shrine of Bahauddin Zakaria Hazrat Baba Farid Uddin Ganj-e-Shakar, Mian Mir Lal Shahbaz Qalandarin, , Shah Hussain, Shah Abdul Latif Bhattai and Data Ganj Bakhsh Ali Hujwairi, Religious tourism also contributes in development of any country economic setup (Rasul et al., 2016).

Archaeological and historical tourism

Indus valley civilization has its major part in Pakistan. it is one of the world's oldest civilizations. Pakistan is also the home of ancient archaeological setups of various old civilizations such that Gandhara civilization of Buddhists such as Takht Bhai and Pushkalavati, Indus Valley civilizations which include Mohenjo-Daro and Harappa which are the 5000 year-old cities, along with the Mughal Empire remains (Fakhar, 2008).

Gandhara civilizations belong to Mahajanapada ancient kingdom which was located in north-east of Pakistan with Afghanistan. Zend Avesta reports that, Gandhara was the 6th attractive place on in the world. Main cities of this kingdom were Purushapura which is the current Peshawar which was also known as city of men. Other places are also archeologically important i.e. Varmayana which is the present Bamyan, and Takshashila which is the presently called Taxila. The remains /collections of this Gandhara Civilization are preserved in different Pakistan's museums.

Indus Valley Civilization dates back to the Bronze Era, which was locate on an area of around 1.2 million km^2 with a population of around 5 million Their cities were designed in a highly

sophisticated manner which can be evaluated by remains on these sites. It is evident by their buildings, proper sewage systems, properly organized buildings, high zone areas, central big baths, stupas and proper streets along with canals. Archeologists are still researching to fin main causes of destruction for these highly civilized cities. These people were culturally diverse and had several traditions., festivals, customs. Besides this, the historical sites of the Mughal Empire are also of great importance for tourism.

Ecotourism

Ecotourism is a type of tourism that is linked with the environment and ecology. This type of tourism is considered as a main type to develop mean of alleviating poverty in world that can also match the standards provided by UN's Millennium Development Goals. Ecotourism is mostly affiliated with environmental factors and available natural resources. Ecotourism inculcates traveling to fragile, protected and untouched areas with least human footprint in a very responsible manner. These travelling endeavors to have a non-significant effect on the environment. Humans mostly attracted towards ecotourism are environment and love to visit naturally beautiful sites for their internal satisfaction. These kind of tourists are usually environment friendly and do not degrade environment The objective of this traveling is to educate travelers and tourists about conservation of environment along with development of local communities by providing economic opportunities. Pakistan is a very blessed country and provides best destination in the world such that high mountains of Himalayas, Karakoram, and the Hindu Kush ranges, different types glaciers such that Pasu and Batura, rugged cliffs, alpine meadows, coniferous forests, sub-mountain scrub forest, diverse flora and fauna, deserts in south , beaches with Arabian sea, coastline of Sindh and Afghanistan , and wetlands all around the country, Rawal Lake is one of the wetlands which is the study area of this research (Muhammad et al., 2009). . Pakistan has immense adventure capacity and natural beauty that provide many activities to attract the tourists towards them. These activities include trekking, mountain biking, white water rafting mountaineering, trout fishing, mountain and desert jeep safaris, camel and yak safaris wild boar hunting, bird watching, and the Indus River blind dolphin watching. Culture festivals of Pakistan include the Shandur Polo Festival, Khanpur water sports festival, Kalash festivals and Silk Route festivals. The Shandur Polo festival is a traditional polo tournament annually organized on the Shandur Pass at altitude of about 3700 m from sea level which is the highest polo ground in this world.

Adventure tourism

Adventure lovers are attracted by Few areas in the world that are of remarkable importance. some of these areas also exists in the northern areas of Pakistan. Adventure sports involves thrill and it usually attracts youth thrill lovers that love to inquire and enjoy new experiences. The adventure tourist spots places are located in different regions in Pakistan mainly Kalam Valley, Hunza in north, Kaghan vallye, Naran Valley, Malam Jaba nearby Swat, Murree located near Islamabad, Chitral with immense culture, Shangla, Gilgit Baltistan, Balakot near Abbottabad, Ayubia near Muree, and not to forget, Neelam valley. These mountains and valleys contain immense beauty and significant adventures spots in their deep lush green valleys. Pakistan possesses amazing destination spots in the loveliest valleys and lakes, it also has adventure opportunities in rivers and glaciers, and peaks of Pakistan hold significant importance all around the world as K-2 is present in Pakistan (Muhammad et al., 2009). The Deosai Highland is north region which is entitled as the highest plateau in the world which is located on the border of the Karakoram and the western Himalayas. Deosai possesses pleasant weather and greenery during summer which is a main attraction for tourists. Different species are present in these areas that are unique but native to Pakistan, i.e. brown bears that is now a critically endangered species (Ursus arctos isabellinus). It is also important to mention that Pakistan possesses 5 of the highest peaks among the total 14 of the highest peaks of this world. K-2 is one of those peeks at 8611 m above sea level.

Tourism studies in Pakistan

There had been several studies in Pakistan on tourism sector using WTP. One of these studies tried to measure the value of recreational benefits of Margallah Hills National Park Islamabad. This study examines how much park visitors are willing to pay to visit the park by doing so they find consumer surplus and other economic values.(Khan, 2006) Another study focuses on ecotourism due to its importance to protect natural environment and also its contribution to GDP of economy. To maintain parks and tourist sites there is need of new funds and aids. However, recreational sites maintain these expenditures by using revenues from tickets and parking fees etc. Present study using to determining consumer WTP in terms of time, travel cost and money for the recreational services. (Ashfaq, 2017)

Growth of industries and factories enhance the economic prosperity now a day especially the tourism industry contribute a lot in GDP of economies. Present study is aiming to focus on socio economic factors effecting tourism influx at sheikh Badin National Park (SBNP) this study used data collection through questionnaire survey regarding visitor's choice.

Contribution of tourism to GDP of Pakistan

Tourism contribution in GDP of Pakistan was 7.6 billion USD which was 2.7% of total GDP in year 2016 and it was predicted that this will increase by 5.1 % equivalent to PKR 833.8 billion in year 2017 and it was also predicted to enhance by 5.6 % equivalent to PKR 1, 432.1 billion (World Travel & Tourism Council, 2018) but it unluckily industry did not achieve the predicted targets.

Contribution of tourism in the job market of Pakistan was 1.337 million jobs equivalent to 2.3% of total employment in 2016. It was predicted to increase by 2.3 % by year 2017 equivalent to 1.368 million jobs and it was predicted that by year 2027 the increase would be enhanced by 2.5% equivalent to 1.757 million jobs (World Travel & Tourism Council, 2018)

Visitor export is a significant element in the tourism and travel sector. Only in 2016, visitor exports contributed around USD 893.8 million equivalent to 3.6% of total exports. It was expected to increase in 2017 by 3.1 % which would have attracted more international tourists.

The World Development Indicators of the World Bank reported that in 1995–2000, the tourist influx arrivals increased around 8 % but the horrific attack of 9/11 terrorist attacks in the USA led to operations /military interventions and instability because of which ultimately the country had to face negative impact on global tourism. Pakistan also faced impact of this attack as it is a neighboring country of Afghanistan that was headquarter for Al-Qaida. This had impacted world's tourism from 2001 till 2003. Tourism was affected again in Pakistan by terrorist attacks of TTP and Osama operation in Abbottabad. This city itself was a significantly important attraction for tourists. This Decrease was around –11% in 2001-2003 which had impacted the world's economy. This loss was nullified in 2007 and 2008. The increased annual growth rate of global tourist arrivals was 11% in 2003–2011, with a highest tourist of 1.161 million tourists arriving at the end of that era (World Economic Forum, 2017).

Contingent valuation method

The contingent valuation method has been in use for over 30 years and is now the most frequently used approach to monetize non-marketable goods and to estimate future values. It is a highly developed survey approach to non-market and future valuation. The survey tries to elicit how people would respond to certain hypothetical changes in environmental resources or developing Public facilities like recreational sites and others. It is a powerful tool for measuring willingness to pay or accept for establishing future good. A panel established by the international Oceanic

Atmospheric Administration (OAA) in the United States co-chaired by Professors Kenneth Arrow and Robert Solow issued a report which concluded that "CV studies can produce estimates reliable enough to be the starting point for a judicial or administrative determination of natural resource damages (Carson et al., 2000). This method of CVM can also be used for estimating values for future goods and service decisions. Some of the more popular studies are by (Randall et al., 1974).

The different kinds of work done using CVM can be found (Randall et al., 1990). A recent bibliography (Carson & Hanemann, 2005) lists over 1400 contingent valuation studies and papers from over 40 countries covering a highly varied empirical application of contingent valuation. There are several forms of the contingent valuation method. CVM has been used to measure benefits of a wide range of environmental goods including recreation, amenity value, scenery, forests, wetlands, wildlife, air and water quality. More recently, there has been a trend to conduct CVM studies not only to value environmental goods, but also to investigate the various methodological issues involved in the valuation exercise, including the study of the impact of consumer's attitudes, motivations on CVM estimates

CVM is the broadly applied and applicable economic evaluation method. Its application potential has a broader range of environmental goods than any other major economic valuation methods.

For estimating direct and indirect values in terms of total values including future value, CVM is a renowned technique. The CVM discloses respondent's maximum Willingness to Pay (WTP) to acquire some degree of improvement in environment or measuring the future value of any project (Turner et al., 2004).

Factors affecting the willingness to pay of visitors for installing chairlift at lake view park

This part of research's literature reviews mainly focused on the values and variables used for analysis. It shows that disposable income of a person is main determinant in tourism related decisions. It is because tourism expenditure is totally volunteer in nature and depends entirely on person's own decisions (Alegre & Cladera, 2012).

Expenditure on tourism is income elastic in the United Kingdom (UK) means as income increases the expenditure on tourism also increases. Similarly, (Jang, 2006) explained that Japanese high income travelers spent more money in USA Tourism than other low income categories. (Crawford et al., 1991) explained that the income determines the decisions related to traveling and tourism.

A person's income helps him in deciding his interests and expenditure directions. A person with stressed wallet will never think and plan to invest in tourism neither for himself nor his family. It also affects the mode of expenditure. that income not only affects the decision to travel but also determines the expenditure mode of tourism. However, (Alegre & Cladera, 2012) extend this debate and show that other financial variables like Visitors and its family member's employment status are also responsible for visitors' expenditure on and their participation in recreation and tourism.

Another documented study shows the negative impact of children's numbers on the tourism related decision of any family. Family dependents also are very important in decisions about tourisms. A poor person with more children never prioritizes tourism no matter how much is it required for his children's personal development (Mergoupis & Steuer, 2003). In addition to this, attitude and behavior of the visitors has also been explained with residence city i.e., previous study of (Mergoupis & Steuer, 2003) described that people who live in areas that are far from recreational or tourist sites are less attractive to tourists and are more disposed to go on holidays than people who lives in

The number of adults and children or family size and considered in the analysis, which controls for the same effect that a marriage dummy could. This variable is important because it directly affects tourists' expenditures (Downward & Lumsdon, 2003) number of visits at recreational sites may negatively affect daily tourists' expenditure (Mehmetoglu, 2007). Several studies showed that repeat visitors spend less than first time visitors, while other studies including (Wang et al., 2006) and (Wanga & Davidsonb, 2010) claimed that there is no significant difference in expenditure between first time and repeat visitors.

(Nicolau & Más, 2005) showed rapport that describes how travel party size and objectives of travelers can affect and influence the tourism factors. This report also affiliated to travel distance and the expenditure between travel distance and relevant expenditures. Other aspects that were also studied include (Downward & Lumsdon, 2003) and (Jang et al., 2005), mode of travel, (Laesser et al., 2006) and race or ethnicity. There were many other variables that were also studied and analyzed to have direct or indirect impact on tourism factors.

Research gap

There have been no studies at Rawal lake view park including economic point of view regarding increasing tourism at the site. Our research tried to establish the basis for economic feasibility of chairlift at Rawal lake view park. Moreover, the success of chairlift depends on the visitor's response, we also tried to identify the factors which can affect the WTP of visitors for installing chairlift.

Chapter 3: Data and Methodology

Introduction

In this chapter methodology for research will be discussed. How different objectives of research are achieved by using different econometric techniques. A brief description of study area, list of variables, sampling techniques, questionnaire and econometric model will also be discussed.

Study Area

Study area of this research was Rawal Lake which is located in Potohar plateau (Ghumman, 2011; Hendrickx et al., 2007). It is located 10 km away from Rawalpindi. Total area of the lake is 8.8 km^2 at an altitude of 1800m. Rawal Lake is replenished by 4-5 major and 43 small streams. Storage potential of Rawal Lake is 31000 acre-feet which is used for provision of water to Rawalpindi and Islamabad. Storage capacity is decreasing over time because of excessive urbanization in Bani Gala to Murree hills (Iqbal & Shah, 2011). Rawal Lake is surrounded by the sites that were planted with flowering trees, gardens, picnic spots and scheduled paths. Garden and lake are used for recreational activities. Highest point around Rawal Lake provides a beautiful view of the lake in panoramic form. These points include Margallah and Murree hills, Rawalpindi and Islamabad. Rawal Lake also provides services which include fishing, boating, sailing and water skating. It has an Islamabad club in the west which provides sports facilities.

Total reservoir area is three square miles, depth of reservoir is 102 feet, live storage is 37,500-acre feet, dead storage is 4,500-acre feet and gross capacity is 42,000-acre feet. Rawal Dam provides 22 gallons of water per day to Islamabad and Rawalpindi. The elevation in the watershed 523 meters to 2145 meters above mean sea level. Sub humid to subtropical is the climate with inconsistent rainfall patterns. Mean rainfall per annum is 1220 mm. Two main types of forests are present around the mountains of Rawal Lake, which include shrub forest and coniferous forests. *Dodonaea viscosa, Olea ferruginea* and *Carissa spinarum* are some of the main species.

Government of Pakistan launched many tree plantation activities in a 10 billion tree tsunami project. Different species of plants, especially *Pinus roxburghii, are planted* around Rawal Lake under this project. Excessive wood cutting practices in the watershed of Rawal Lake have triggered steep slopes, accelerated rate of erosion and increased the surface run off. The storage capacity of Rawal Lake is reduced up to 34 %. Loss of storage capacity is caused by human activities and natural factors that have led to increase in sedimentation in the catchment and decrease in depth of Rawal Lake (Ashraf et al., 2014).
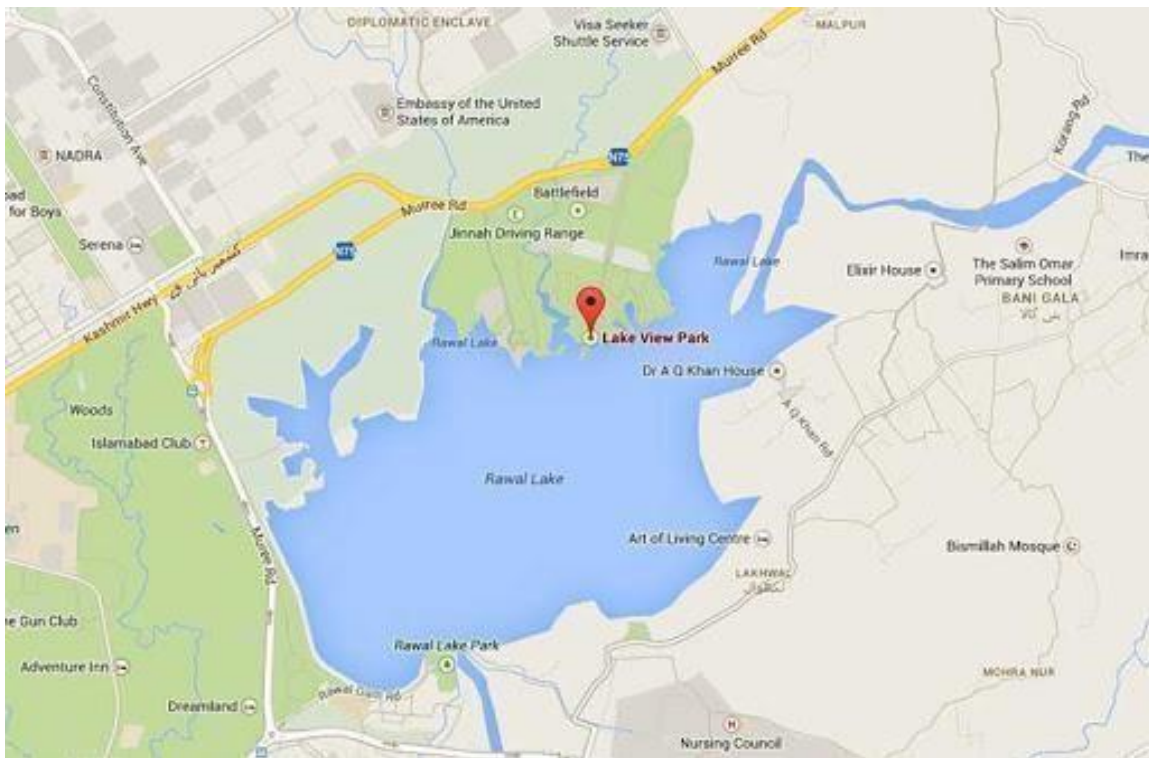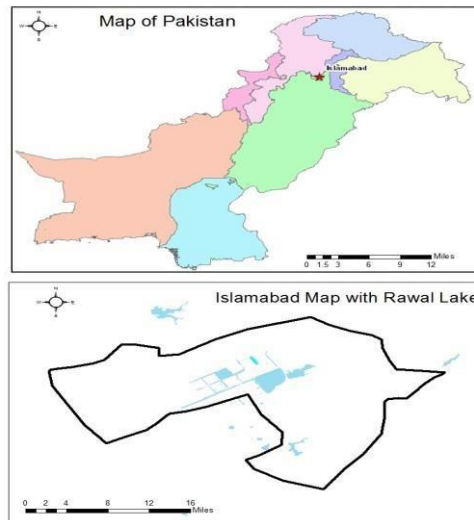
Figure 1. 1   Map **of Pakistan** *and Islamabad showing Rawal Lake*

Methodology

City parks have always been a valuable source for the municipal sector which play a significant role in sustainable development of any city. Parks of cities provide recreational facilities to the citizens residing in vicinity of those parks (Jim, C. Y. (2004). Living in greenery areas of cities leave positive impact on person's development and behaviors that ultimately lead to sustainable

and stable society (Roe et al., 2013), beautification of urban areas can also be enhanced by construction of parks and lakes are and additive to the beautification that cannot be ignored.

The CVM is the method of economic valuation which is developed by economists for non-market goods and services. Wantrup (1947) first time used Contingent valuation method was for prevention of soil erosion. Later this term was used for economic valuation using the technique of willingness to pay to estimate contingent valuation methods. The contingent valuation method (CVM) is a technique based on which a researcher can construct a hypothetical market to measure willingness to pay for the future recreational facility. The method involves direct surveys and 1o1 interviews for clarification about survey questions there and then on the spot. Contingent valuation guides the respondents about different aspects of trade-offs they are facing; hence, CVM is significantly efficient in measuring WTP of tourists for installations of new recreational facilities. Chairlift in Rawal Lake is the facility that is to be analyzed in this research. Moreover, "The bidding game (BG) method of contingent valuation is one way to increase the precision of willingness to pay (WTP) estimates relative to the single dichotomous choice approach".

In modelling visitor's behavior towards installing chairlift at lake view park, it is often important to consider visitor's response towards this project. This study therefore asks visitors what will be their willingness to pay for installing chairlift at RLVP and whether they are willing to have chairlift at RLVP or not. The title of research shows that the objective of the research is to measure the willingness to pay of visitor's for installing chairlift at RLVP. This is an essential part of research because the response of visitor's toward installing chairlift is key for the success of this recreational project. The first objective of the research stated that what are the socio-economic factors of visitors affecting visitor's willingness to pay for having a chairlift at RLVP or not. Previous studies show that social and economic and demographic variables are the main indicators that are to be collected for analyzing recreational facilities. The most prime part of any research of outdoor recreation is the use or social, economic and demographic indicators which are used for participation. Mostly the recreation studies used methodology described by (Chen, 2010). Most of the researchers used social, demographic factors to analyze the affiliation between characteristics of individuals and their selection ability as per specific leisure demand. As per the population researches, society and demography play the most significant role in determining a person's behaviors and attitudes towards commodities and recreational facilities. Income, no of depends, area of residence surroundings, education is some of the factors that determine who will be

responding optimistically and who will optimistically nullity to the installation of new recreational facility,

To fulfil this objective, we use the logit model because much of the modelling of recreation behavior can be expressed in terms of distinct choices means individuals have to choose between two options like enjoy recreational activity or not. The choice of recreational facility and choice of recreational sites are also the two main examples that are of significant importance. Individuals select from a distinct or defined set of mutually exclusive alternatives in all the instances like in our case want to have chairlift at lake view park or not.

Second objective of this research is to investigate the features affecting the amount they want to pay for having chairlift at RLVP or final bid. To decide the actual amount, the visitor wants to pay for chairlift as a final bid. We use a bidding game as compared to the traditional method in which we only ask open ended questions. This technique is commonly employed in contingent valuation studies. It is just a simple bidding game where a respondent decides the bid up or down by the respondents in a repeated style to converge upon the respondent's maximum willingness to pay. There is a benefit affiliated to the bidding game that it requires only responses of yes and no. Accordingly, the visitors were assigned to a one starting bid (300 Rupees). The starting price of bid (Rs 300) was selected on the suggestion of Murree chairlift manager. The reason for this price is that it may be according to the distance of chairlift which is of 1.7 km, which is less than Murree chair lift with total length of 7 km. For starting bid the interviewers followed predetermined bidding algorithms; presented in figure 1.

After eliciting the final bid of the visitor by solving the above given algorithm. We can use this variable as a dependent variable to fulfil our second objective about factors affecting the final bid for installing chairlift. As our dependent variable is final bid which is continuous variable so Ordinary least square is appropriate.

Third objective of the research was to conduct cost and benefit analysis to measure financial acceptability of projects. The formula for cost benefit ratio is:

$$CBR = \frac{present\ value\ of\ expected\ benfits}{present\ value\ of\ expected\ costs} \tag{1}$$

To fulfil this objective, we gathered data from managers of lake view park regarding total number of visitors and feasibility of chairlift at Rawal lake view park. Secondly, data was collected from the manager of chairlift at Murree regarding costs of installation and operating cost etc. Then we have conducted a Cost-benefit ratio, Net Present Value and Internal Rate of Return to evaluate the financial acceptability of the project.

Figure 2:

```
                    ┌─────────────────────────────────────┐
                    │ Would you like to pay rupees 300 for │
                    │    chairlift at Rawal lake view park? │
                    └─────────────────────────────────────┘
                  YES                              NO
                   │                                │
                   ▼                                ▼
    ┌──────────────────────────┐      ┌──────────────────────────┐
    │ Would you also be willing │      │ Would you like to pay Rupees │
    │ to pay Rupees 500 for     │      │ 200 for chairlift at Rawal   │
    │ chairlift at Rawal lake   │      │ lake view park?              │
    │ view Park?                │      │                              │
    └──────────────────────────┘      └──────────────────────────┘
      yes              No               Yes              No
       │                │                │                │
       ▼                ▼                ▼                ▼
```

| How much maximum would you like to pay for chairlift at RLVP? Rupees_____ | Would you like to pay Rupees 400 for chairlift at Rawal lake view park? 1. YES 2. NO | Would you like to pay Rupees 250 for chairlift at Rawal lake view park? 1. YES 2. NO | Would you like to pay 100 for chairlift at Rawal lake view park? 1.YES 2. NO |

Data for Analysis

According to our objectives we have targeted to investigate the factors which affect the amount of final bid by visitors for installing chairlift at RLVP. We also need to examine the factors influencing the decision of visitors whether they were Willing to pay (WTP) for chairlift or not.

For such purpose the data has been collected by using the technique which is following.

Data of the Study for CVM

In this section, we will discuss the procedures of collection of data, sample size and technique which was used in the survey. We employed CVM method to estimate willingness to pay for chairlift at Rawal lake view point. Contingent valuation method gives estimates in terms of willingness to pay for selected goods, services and projects. These estimates are based on the opinion of the concerned people who were surveyed during interview. CVM can be used both for the projects which are planned to build in future and unmarketable goods and services, like recreational site, water supply, biodiversity, and sanitation (Amondo et al., 2013).

This study was basically based on primary data which was collected through well-structured questionnaires from the visitors and the people working at RLVP. The data includes the information about demographic characteristics of visitors, previous experience and cost for visiting chairlift. Type of transport reaching used to visit the site, distance from home to site and whether they are willing to pay for chairlift to not.

Variables for research

There are a number of variables used as explanatory variables to estimate the determinants of willingness to pay. The brief explanation of these variables is given below

Age

Age of visitors is recorded as the number of years. Age may have positive or negative effects on the recreational activity in use. This largely depends on the nature of recreational activity. We are not sure the effect of age on willingness to pay for chairlift. However, this is an important variable to include in research.

Family size

Overall family size negatively affects the ability to visit the recreation site because of increase in family expenditure especially in developing countries.

Education

Education is also an important variable in determining a visitor's willingness to pay for a chairlift. It has been noted that if visitors are more educated their level of awareness will also be high so he will be more inclined towards newly created recreations.

Visitors' City of Residence

We ask visitors if you are coming from Islamabad or not. If he said, he is from Islamabad. We coded his response as" I" and "0" otherwise. It is expected that they are from Islamabad. They are more willing to pay for chairlift as compared to visitors from outside the city.

Distance

Distance from home to the RLVP may be inversely proportional to the willingness to pay for chairlift. If distance from home to recreation increases, it will increase the travel cost which may negatively relate to the amount of WTP. Distance from home to recreational sites is recorded in kilometers.

Number of dependents

We ask visitors what is the number of dependents in their family. By this we mean those who can't earn, including children and adults also. As the number of dependents increases it will decrease the WTP.

Income

Income plays a very important role in deciding about willingness to pay for chairlift. Higher income levels positively impact the decision of willingness to pay and vice-versa. We have divided the different income levels in six categories rather than directly asking the level of income because people normally avoid to give the exact information about level of income. These income categories ranges from 0-20000, 20000-50000, 50001-100000, 100001-150000, 150001-200000, and 200001-250000.

Working members

We ask the respondents how many family members are working and earning something. If the number of earning family member's increases, willingness to pay for chairlift at Rawal Lake View Park is expected to increase.

Public Transport

We ask the visitors if the public transport facility is improved to reach RLVP. Does it increase the number of visits to the park? The response of the visitor is coded as "1" in case of yes and "0" otherwise.

Preference to other sites

Visitors only come to RLPV for recreation or he visits other recreational sites. Preference to other sites for recreation may negatively impact his willingness to pay because he has the alternatives source of recreation other than RLVP.

Number of visits in last 6 months

This mainly includes the respondents' visits to the RLVP in the last 6 months. If a visitor has a greater number of visits, he will be more willing to pay for chairlift as compared to those who have a smaller number of visits. Because he frequently visits this sight and like it and probably more willing to pay for a new recreational facility (chairlift) in the park.

Previous experience

Previous experience of having chairlift will positively impact the willingness to pay for chairlift. If the respondent has previous experience of chairlift somewhere else. He will be more willing to pay for installation of chairlift as compared to those who have no experienced it earlier.

Cost of public transport

If the cost of public transport is high, it will create problems for visitors to enjoy the recreational activities in the park because it may restrict their access to the park.

Using public transport or own transport

We ask visitors whether they use their own transport or public transport to reach the RLVP. If used own transport=1 otherwise=0

WTP for chairlift

WTP (willingness to pay) for chairlift shows the decision of visitors. whether visitors are willing to pay for having chairlift at RLPV or not. If they are willing to pay =1 otherwise =0

Final bid (maximum amount a visitor is willing to pay)

By using bidding game, we came to know the amount of final bid which an individual visitor wanted to give for having chairlift at RLVP. Final bid is the maximum amount in rupees which a visitor is willingness to pay for chairlift. We repeated this process for all visitors to get final bid of all visitors in sample.

Sampling Technique and sample size

For Sample size the researcher overviewed the population size of RLVP after that the researcher determined the sample size. This study used an online calculator for estimating the sample size. The respondents were selected through a simple random sampling procedure. The study collected

the data from respondent in such a way that each and every person will be having the equal chance to get selected as a respondent of this study.

After collecting information about the number of visitors. We had founded that total number of visitors who visited in a week is approximately 2500. Number of visitors increases during the holiday and weekends. We calculated sample size by employing Equation 1 given below.

Formula:

$$\text{CBR} = \frac{present\ value\ of\ expected\ benfits}{present\ value\ of\ expected\ costs} \qquad \textbf{(1)}$$

N= (number of visitors in week)

n= sample size

e= margin of error

After using formula given in "equation 1" at 5 percent of margin of error and 95 % of confidence level the calculated sample size was 180 approximately.

Respondent Selection Process

The respondents were selected randomly, it is very important to conduct the survey in a way that every person gets an equal chance, the enumerators have randomized the data, through the following multi stage sampling method.

The data was collected by a team that first identified few individuals or groups at RLVP garden or place of park and assigned them numbers, the number of groups had been written on different pieces of paper which were then put into a box. After a good shake in the box one piece was selected, which indicated the randomization of data at its first stage by providing the opportunity to select the group randomly. On the second stage within the group we selected the leader of the group. This process was repeated every time.

Econometric model

In the first model we just estimate the probability of willingness to pay through logit model where dependent variable is dummy variable. If respondent is willingness to pay then 1, otherwise zero. Among the independent variable includes socio-economic and demographic variable as explained below in Equation 2.

Model 1

Do you willing to pay for Having chairlift at lake view or not $= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \mu_i$ **(3)**

Y_1 = Do you willing to pay for having chairlift at RLVP or not = Dummy for WTP for chair lift (if yes =1 otherwise =0)

X_1 = Age of Visitor in number of years

X_2 = Number of Family members of Visitors

X_3 = Education of Visitor in Years

X_4 = Distance from home to RLVP in Kilometers

X_5 = Income of respondent = (If income < 20000 =1)

(If $20001 \leq$ income $\geq 50000 = 2$)

(If $50001 \leq$ income ≥ 100000 =3)

(If $100001 \leq$ income ≥ 150000 =4)

(If $150001 \leq$ income ≥ 200000 =5)

(If income > 200001 =6)

X_6 = If respondent has not excess to public transportation from home to RLVP then=1 otherwise=0

X_7 = If ever enjoyed chairlift before then=1 otherwise=0

X_8 = Do you come here by your own transport then =1   public transport = 0

Model 2

In model 2 we try to explore factors which can affect the maximum amount of willing to pay (final bid). we use "OLS" model because our dependent variable is continuous i.e. final bid. We construct dependent variable named as "final bid" by solving a biding game from each visitor. This bidding game contains different set of questions to find his accurate bid for installing chairlift at Rawal

lake View. we also used demographic and socioeconomic variables in our model as independent variables.

Final Bid $= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \mu_i$ **(4)**

$Y_2 =$ Final Bid, i.e. Maximum amount willingness to pay for chairlift at RLVP achieved through bidding game

$X_1 =$ Age of Visitor in number of years

$X_2 =$ Number of Family members of Visitors

$X_3 =$ Education of Visitor in Years $X_4 =$ Number of dependents in the family

$X_5 =$ How many family members are working and earning in visitor's family

$X_6 =$ If you have not excess to public transportation from your home to reach RLVP then$=1$ otherwise$=0$

$X_7 =$ If willing to pay for chairlift at RLVP $=1$ otherwise $= 0$)

$X_8 =$ If belongs to Islamabad then $=1$ otherwise$=0$

$X_9 =$ Distance from home to RLVP (km)

$X_{10} =$ Do you feel other sits in ISD are equally as good as RLVP then $=1$ otherwise$=0$

Chapter 4: Results and Discussion

Introduction:

In this chapter we will discuss descriptive statistics, regression results and Cost-benefit Analysis for Installing chairlift at RLVP. Moreover, interpretation of results will also take into account.

Descriptive Statistics:

In the analysis given below researcher use descriptive statistics that summarize a given data set, which is a representation of the entire sample of a population. Descriptive statistics are broken down into measures of central tendency and measures of variability (spread). Measures of central

tendency include the mean, median, and mode, while measures of variability include the standard deviation, the minimum and maximum of variables variable, and graphical and tabulated representations.

Table 4. 1 Descriptive Statistics

Variable	Observations	Mean Std.	Dev.	Min	Max
Education	178	14	2.69	10	18
Are you from Islamabad	178	0.43	0.50	0	1
Income categories	178	3.22	1.40	1	6
How many family members are working	178	2.71	1.69	1	6
not excess to public transport	178	0.92	0.26	0	1
How many times visit RLVP in 6 months	178	3.08	2.157284	0	7
Do you come here by own or local transport	178	0.426	0.4960326	0	1
Have you ever taken ride on chairlift	178	0.747191	.4358484	0	1
Do you prefer to visit other sites	178	.3876404	.4885862	0	1
Is it expensive to use public transport	178	.6235955	.4858501	0	1
Willing to pay for chairlift	178	.741573	.4390048	0	1
Final bid	178	295.5056	285.7877	0	1000

Above table shows descriptive analysis of variables of interest in research. Most of the visitors have graduation level education. 101 people said they are not from Islamabad while 77 visitors said they are from Islamabad out of total 178 visitors selected for sample. Average respondents lie in third category of income which is ranged from 100001-150000 Rupees. So average income is ranged in this category. Maximum number of "working family members" in family for our sample is 6. However, on average every family has two working members. Visitors responded that they have 3 visits in last six months to RLVP on average.

One sample t-test

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
Visitors willing to pay	123	427.6423	22.36517	248.0418	383.36 471.91

Ho: mean = 300   t = 5.7072 degrees of freedom = 122   Ha: mean > 300   Pr(T > t) = 0.0000

As data on variable whether visitors are willing to pay or not is in binary form. we make two groups one who are willing to pay and second are those who are not willing to pay. we make new variable consist of visitors who are willing to pay for chairlift at Rawal lake view park. Then we compare the mean of this new developed variable with hypothetical mean of Rs 300 to see whether it is statistical significant or not. Above table show Pr (T > t) = 0.0000 so this is statistically significant mean value. Shows that mean value is greater than 300.

Table 4. 2 Summary Statistics not excess to Public transport

Excess public to transport			
Responses	Freq.	Percent	Cum.
0	13	7.30	7.30
1	165	92.70	100.00

I65 respondents said they have access to public transport very few said they have not access to RLVP. Average amount of visitor is willing to pay as final bid is approximately 300.
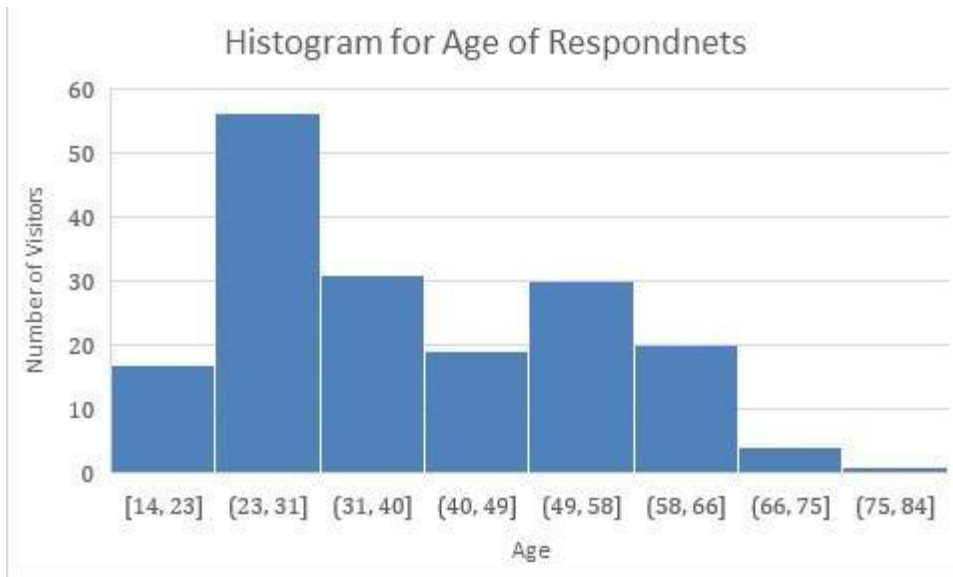
Figure 4. *1 Histogram for age of respondents*

Data for age of visitors is negatively skewed as shown in diagram. Maximum number of visitors lies in age of 23 to 31. Means young people are more interested in reactional activities.
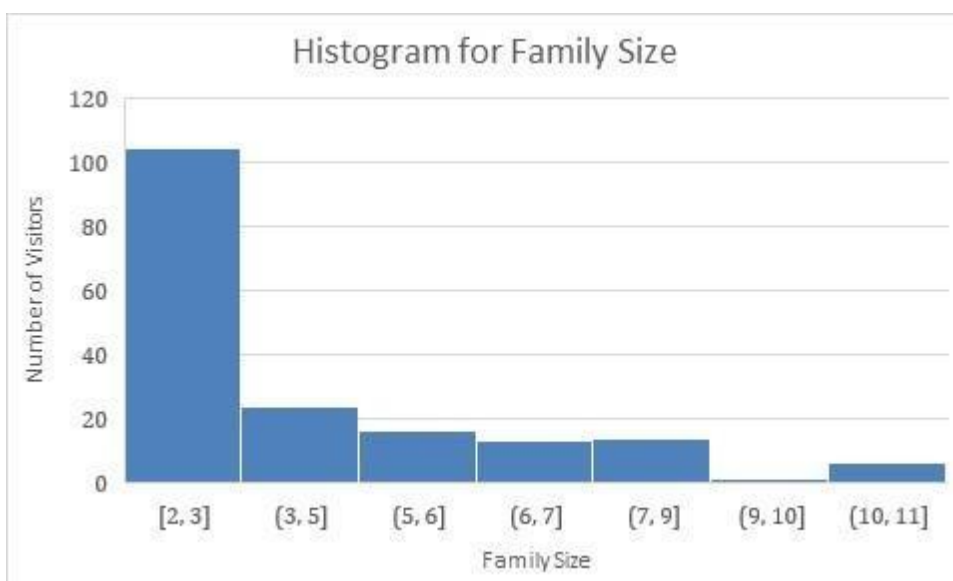
Figure 4. *2 Histogram for family size*

On the other hand, family size comprises of 3 family members this shows newly married couples are more frequency to visit RLVP.
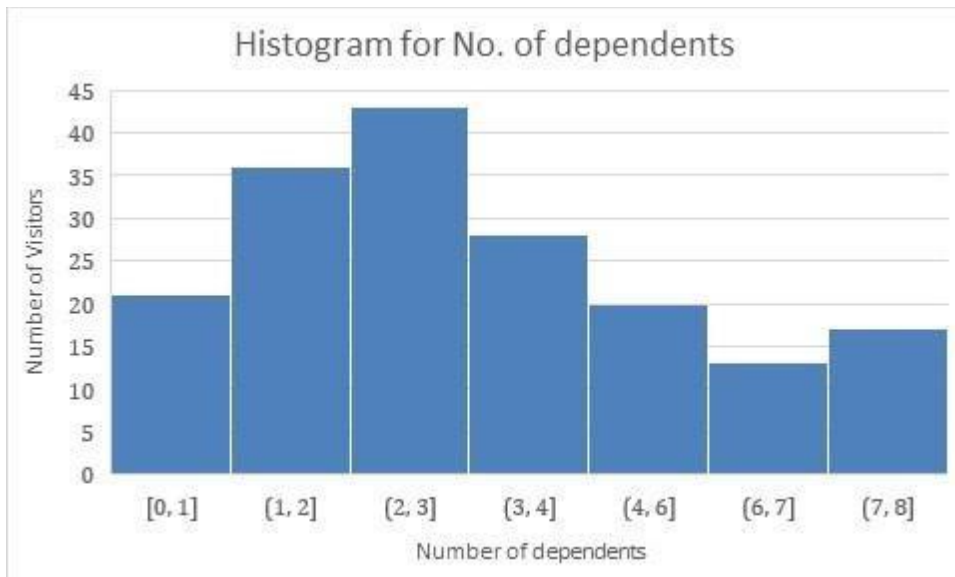
Figure 4. 3 Histogram of number of dependents

Figure 5: Histogram of number of dependents

Highest frequency of number of dependents lies between range of 1 to 3. However, some of families have number of dependents between 7 to 8 members also. Increase in number of dependents increases the burden on family's income. Hence, reduces their capability to visit recreational sites.
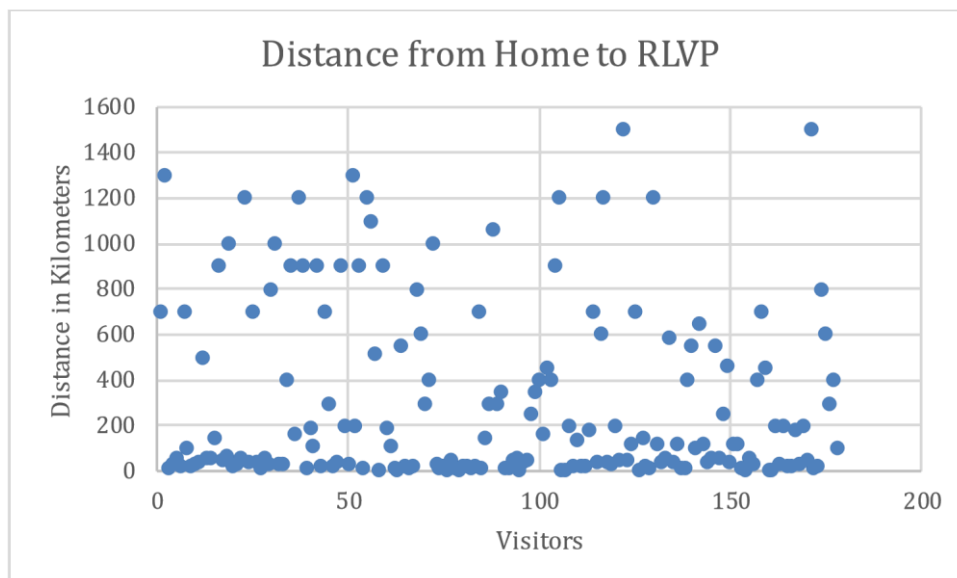
Figure 4. 4 *Scatter plot for Distance from Home to RLVP*

Distance is very important variable which affects the ability of visitor to explore a new recreational site because of travel and times costs. minimum distance from home to RLVP was recorded for sample as 5 km and maximum was 1200 kilometers.

Regression results:
Model 1:

First objective is to investigate the socio-economic factors affecting the WTP for chairlift at Rawal lake view park. The possible response of this question in "Yes" or "No" form. As theory suggest that if dependent variable has binary response, we can use Logit or Probit model for estimating regression results. There is no significant difference in using anyone of these models. However, we used logit model because of its ease in mathematical expressions and interpretation of results.

We choose all those explanatory variables that can possibly affect the decision of willingness to pay. Total number of observations are 178 in logit model. Likely hood ratio of Chi-square test is 174.10 which is significant at 5 percent level of significance. This shows overall goodness of fit of model. It means model gives better results if include more predictors in model as compare to no predictors.

There are six variables which shows significant effect on decision of willingness to pay for chairlift at RLVP namely, Age, Family size, Education, Distance from home to RLVP, use of public or private transport to reach RLVP. The regression coefficients β can be interpreted along the same lines as in linear models, bearing in mind that the left-hand-side is a logit rather than a mean. Thus, βj represents the change in the logit of the probability associated with a unit change in the j-th predictor holding all other predictors constant. (Rodriguez, 2007)

As we can observe in table given below, parameter value of age is -0.92. This shows that if visitors age increases by one year then probability or log-odd value of visitors for willingness to pay for having chairlift decreases by -0.92. Age decreases the physical strength of individuals to enjoy the recreational activities specially those activities which required physical involvement (Unger, 2015). Similarly, as family size increases the probability of WTP for chair-lift decreases by -1.10. The possible reason for this decrease is that if family size increase family expenditures also increases, especially, in third world countries where income levels are low (Schänzel & Yeoman, 2015) Coefficient of Education is 1.11, which shows as education increases by one unit, the log-odd for WTP for chairlift also increases. The main reason for this is that education has of positive effect on the awareness of visitors regarding the quality and other aspects of newly developed

recreation. As a result, an educated visitor is more willing to pay for having chairlift at RLVP. Secondly, high education levels are related to high income levels which make it easy for visitor to enjoy new recreation.(Lynch et al., 2011)

Distance from home to Rawal Lake View Park is another important factor for installing chair-lift at RLVP. It varies with every visitor hence it causes different travel expenditures to every visitor.(Hillsdon et al., 2006) Model shows that if distance increases by one unit that is one Kilometer from home to RLVP then log-odd for WTP for having chairlift decreases by -0.004.

Experience of having ride on chairlift also positively affect the decision of WTP for chair-lift at RLVP. If visitor has previous experience of chairlift, then probability for paying is positive 1.48. If visitor use his own transport as compare to local transport, then probability to pay for chair-lift decreases. Coefficients of willingness to pay model estimated through Logit model.

Table 4. 3 Willingness to pay for having chairlift at RLVP

Willingness to pay for having chairlift	Coef.	Std. Err. z	t	P>z	[95% Conf.	Interval]
Age	-0.092	.046	-1.98	0.048	-0.184	-0.0007
Family size	-1.107	0.31	-3.55	0.001	.463	1.765
Education	1.114	0.33	3.35	0.001	.463	1.765
Distance from your home to RLVP	-0.004	.001	-3.08	0.002	-.007	-.001
Income categories	0.876	.605	1.45	0.148	-.311	2.06
not excess to public transport	3.369	3.18	1.06	0.289	-2.86	9.60

Have you ever taken ride on chairlift?	1.481	0.41	2.04	0.042	0.032	1.64
Do you come here by your own?	-2.604	1.32	-1.96	0.50	-5.20	-.003
_cons	-10.757	5.72	-1.88	0.60	-21.98	.471

Logistic regression	No. of Observations	= 178
	LR chi2(9)	=174.10
	Prob > chi2	=0.0000
Log likelihood = -14.660625	Pseudo R2	=0.8559

Model 2:

To explore the determinants of maximum willingness to pay (final bid) we use "OLS" model because our dependent variable is continuous i.e. final bid. We construct dependent variable named as "final bid" by solving a biding game from each visitor. This bidding game contains different set of questions to find his accurate bid for installing chairlift at Rawal lake View. With the help literature dealing with willingness pay for different products that create attraction we select the most commonly used demographic and socioeconomic variables in our model.

Total numbers of observations are 178 in this model. There are five variables which statistically significant and impact the amount of final bid for installing chairlift. Adjusted R-square is more appropriate measure as compare to simple R-square. R-square explains the variation in dependent variables caused by independent variables. however, in case of adjusted R-Square its value only increases if newly added independent variable sufficiently improves the model, not only by chance as in the case of simple R-square. The value of adjusted -R square is above 70 percent in our model.

As we can observe in the table given below that if visitor is from Islamabad, we coded him as "I" and "0" otherwise. If one-unit increase in number of visitors from Islamabad, then the amount of final bid on average increases by 83 Rupees. Distance increases the cost of traveling and increases

the expenditures on tourism (Manosuthi et al., 2020) While if number of dependents in a family increases by one unit then the willingness to pay for amount of final bid decreases by 18 rupees. It is obviously true because increasing the number of independents shrinks the opportunity for visitors to enjoy the recreation because of increase in expenditures. Same is true, if public transport becomes expenses amount for final bid also decreases.(Schänzel & Yeoman, 2015)

If visitor also prefers to visit other sites as compare to RLVP then he may lack interest in installation of chairlift at RLVP, as a result his amount of final bid decrease by 11 rupees. Improvement in access to publics transport increase the final bid amount of visitor by 100 rupees. Moreover, if a person is willing to pay for chairlift then his amount of final bid increases by 261 rupees on average.

Table 4. 4 Factors effecting Willingness to pay for Final bid

Final bid	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Age	-1.06	0.84	-1.26	0.21	-2.72	.60
Education	2.50	5.36	0.47	0.64	-8.08	13.09
Are you from Islamabad or from another city?	83.22	28.26	2.94	0.004	27.42	139.03
Number of dependents	-18.18	6.85	-2.65	0.009	-31.70	-4.65
Do you prefer to visit other sites?	-11.52	26.74	-0.43	0.667	-64.33	41.27
Is it expensive to use public?	-286.16	29.30	-9.76	0.000	-344.02	-228.30
not excess to public transport	100.58	46.76	2.15	0.033	8.25	192.91

How many family members are working?	21.86	7.43	2.94	0.004	7.18	36.55
Willing to pay for chairlift	150.32	46.47	3.23	0.001	58.56	242.07
_cons	261.42	105.62	2.47	0.014	52.88	469.97

Observations	178
Adjusted R- Square	0.7202
R-squared	0.7214
Prob` > F	0.0000
F `(8 , 166)	53.72
Root MSE	155.66

Cost and Benefit Analysis for Installing Chairlift:

Table 4. 5 Costs and Benefits from Chairlift

Total cost of chairlift at Murree (PKR) in 1991	50 crores
Total cost of chairlift at Murree (PKR) if install today	90 crores
Total length of chairlift at Murree (KM)	7.7 km
Per Kilometer cost of chairlift	11 crores approx.
Total length for chairlift at RLVP Islamabad	1.7 KM
Total cost of chairlift (RLVP)	19 Crores approx.
Total number of labors for chairlift at RLVP	20
Monthly wage per labor	25000 PKR

Maintenances cost of chairlift	20000 PKR
Electricity cost per month (PKR)	200000 PKR
Total number of visitors at RLVP per month	20000
30 percent of total visitors at lake view park per month (numbers)	6000
50 percent of total visitors at lake view park per month (numbers)	10000
ticket per person (PKR)	500
1 year is equal to 12 months	12
present market interest rate	9.12 %

Cost-benefit analysis helps the investors whether to invest in the project or not because it creates signals of profitability. It is one of the good techniques commonly used on project evaluation. We analyze all the costs and benefits related to project. In the light of our analysis manger will be in the position to decide in the light economic feasibility of the project. According to our research objective we want to evaluate the decision of installing chairlift at RLVP. We want to investigate that it will economically viable or not. We also choose other measures for checking financial acceptability for this project namely Net present value (NPV) and IRR (Internal rate of Return).

Present value of benefits means all future cash inflows throughout the life of project discounted at a present interest rate to get present value of benefits and its comparison with the present value of costs incur throughout the project. For discounting future values into present values, we use average interest of state bank of Pakistan from 1991 to 2019 which is 9.12 percent (State Bank of Pakistan). If the cost-benefit ratio of project is greater than 1 then we will accept the project.

Interviews were conducted with managers of Murree chairlift Mr. Asif and manager of RLVP to analyze the costs and benefits situation for installing chairlifts at RLVP. Few questions that were inquired regarding installation of Murree chairlift included installation year, installation cost, operational cost, total staff working in chairlift, length of chairlift, height of chairlift, and estimated

cost for installation of 1.7 km long chairlift were asked. According to Mr. Asif Chairlift installed at Pindi point in Murree is around 3.3 km long with total length of 6.6 km on both sides. Height of chairlift ranges between 25 feet to 30 feet. This chairlift was installed in 1990-1992. Moreover, the lift is still working so we can conclude that life of chairlift project is equal to 27 years at the installation cost of 50 crore Rupees in 1992.

Before doing cost and benefit analysis we need to consider the life of project. As we know that chairlift project of Murree is 27 years and still properly working. As a result, we will conduct cost and benefit analysis of RLVP chairlift for 27 years. An important factor is tourist influx at RLVP because if number of tourists increase then there are more chances of the success of project. The inflow of large number of people coming to a particular place and depends mainly on the recreational facilities on the site. As far as RLVP is concerned, Tourist influx is 5000 tourists per week. Operating cost or the Operational cost is the amount which is affiliated to the operation of a business, or to the operation of a device, component, piece of equipment or facility. The operational cost also depends on of the number of laborers per day. There are around 10 persons required at this chairlift facility working in different fields which include security guards, chairlift operators, ticket providers etc. The operational cost may approximately equal to 2 lac per month. Charges of ticket is Rs. 500/-. As per the manager, estimated installation cost of chairlift at Rawal Lake View Park (RLVP) of 1.7 km in length will be approximately around Rs.19 crores.

As we can conclude from above given information that life of project is 27 years. Expected initial installation cost for 1.7 km long chairlift is 19 crore rupees approximately and operation cost are 24 lacs annually. Expected annual profit per year is equal to number of visitors in a year multiplied with price of tickets to get annual revenue. According manager of RLVP average number of visitors is 5000 in week at RLVP. we multiply it with 4 to get monthly number of visitors equal to 20000 then multiply this amount with 12 to get annual influx of visitors at RLVP. which is equal to 2,40,000 visitors. However, it may be possible that all of the visitors will not visit the chairlift at RLVP, some of the visitors may enjoy other facilities. On the other hand, it is also possible that total influx of visitors may also increase at RLVP due to newly installed chairlift facility at park. This reason leads us to conduct cost and benefit analysis if 30 %, 50% and 100 % visitors visit chairlift. Moreover, Price per ticket is 500 in Murree chair lift so we also assume this Price as approximation for ticket price at RLVP. If we multiply 500 with 2,40,000, we get annual revenue from project which is 1,20,000,000 rupees annually.

Cost -Benefit Ratio

As table given below shows that benefit cost ratio is greater than one in all three scenarios i.e. if visitors influx is 30 %, 50 % and 100 %. Cost and benefit analysis result shows that project is acceptable for gaining financial benefits. Furthermore, project will give more than 100 percent profit if 100 percent visitors visit the chairlift and 24 percent profit, if 50 percent visitors visit chairlift and 6 percent profit if, 30 percent visitors visit the chairlift. However, in case, if 30 percent visitors visit the chairlift profit will be 6 percent, which is quite low as compare to 9 percent of current interest. It is also proved from the analysis that value of net returns value is positive.

Table 4. 6 Cost and benefit analysis

Years	1	2	3	4	5	6
Initial installation cost of Chairlift	198.70 m					
Operational cost (labor+ maintenance) per year (PKR)	6.24m	6.24m	6.24m	6.24m	6.24m	6.24m
electricity cost (subsidized PKR)	2.40m	2.40m	2.40m	2.40m	2.40m	2.40m
Total cost	207.34m	8.64m	8.64m	8.64m	8.64m	8.64m
Present value of total cost	207.34m	7.92m	7.26m	6.65m	6.09m	5.58m
Present value of total cost with each adding year (PKR)	207.34m	215.26m	222.25m	229.16m	235.26m	240.84m
Benefits if 100 percent visitors go to chairlift)						
Lake revenue generated from lake view chairlift PKR	120m	120m	120m	120m	120m	120m

present value of total benefits	120m	109.97m	100.00m	92.36m	84.64m	77.56m
Present value of total benefits with each adding year (PKR)	120m	229.97m	330.75m	423.11m	507.74m	585.31
Net return	-87.34m	102.05m	93.52m	85.71m	78.54m	71.98m
Benefit cost ratio of 100 % visitors go to chairlift	4.5					
IRR if 100 % visitors go to chairlift(percentage)	108 %					
Benefit cost ratio of 50 % visitors go to chairlift	2.2					
IRR if 50 % visitors go to chairlift (percentage)	24 %					
Benefit cost ratio of 30 % visitors go to chairlift	1.34					
IRR if 30 % visitors go to chairlift (percentage)	6 %					

Chapter 5: Summary and Conclusion

 Recreational activities improve the physical and mental health of citizens. Moreover, these activities flourish the tourism and support the economy. Pakistan has huge potential for tourism which is not fully utilize to its maximum level. This fact motivates the policy makers and other administrative authorities to utilize tourism potential.(Kaczynski & Henderson, 2007)

Among the other recreational sites RLVP (Rawal Lake View Park) has the potential to enhance the tourism quality in Islamabad. Rawal dam is an artificial lake which provides drinking water to citizens of Rawalpindi. It is located at footstep of Margallah Hills National Park. Due to its geographical location policy makers are interested to install a chairlift at RLVP.

Installation of chairlift at Rawal Lake View Park requires the economic analysis to understand feasibility of project. To accomplish this goal Cost and Benefit analysis has been conducted for installing chairlift at Rawal Lake View Park. Results shows that if project life is 27 years and 100 percent visitors who will visit lake view park also visit chairlift then benefit cost ratio is 4.5 and IRR is 108 percent. In this scenario project will be successful because IRR is 108 percent which is quite high as compare to 9.12 percent of market interest rate. Moreover, in scenario two if 50 percent of visitors who will visit lake view park also visit chairlift then Benefit and Cost ratio is 2.2 and IRR ratio is 24 percent. This also shows project is very beneficial because 24 percent profit is very high as compare to 9.12 percent of market interest rate. However, in third scenario if 30 percent of visitors who will visit RLVP also visit chairlift the Benefit and Cost ratio is 1.34 and IRR is 6 percent which is less then market interest rate of 9.12 percent. In this case investor may not be interested in investing in chairlift project. However, the assumption of assuming 30 percent visitors visit chairlift may or may not be true because installing chairlift at Rawal Lake View Park may attract more visitors to park and overall influx of visitors to park may increase. It is quite rational to assume that tourist influx will increase at Rawal Lake View Park because we observe that chairlift in Murree is overburden and by installing chairlift at Rawal Lake View Park burden of visitors will be shifted toward chairlift at RLVP. Government can earn huge revenue by establishing chairlift at Rawal lake view park. However, there is need to keep in mind the important variables found statistically significant in this research while establishing chairlift site. There must be a need of infrastructure which can facilitate the visitors to utilize this facility like for instance giving them the facility of cheaper public transport. Ultimately government need to make policies which promote tourism in the country, which can benefit the nation by reducing health and other medical cost.

Other than economic feasibility of chairlift it was also important to investigate visitor's response towards chairlift. What are the socio-economic factors affecting the WTP for chairlift at Rawal lake view park?

Results show that among other variables, six variables show statistically significant effect on decision of willingness to pay for chairlift at RLVP namely, Age, Family size, Education, Distance from home to RLVP, use of public or private transport to reach RLVP.

Results show that age positively affect the decision of willingness to pay for installing chairlift at RLVP. This shows that if visitor's age increases by one year then probability of visitors for willingness to pay for having chairlift decreases. Similarly, as family size increases the probability of WTP for chair-lift decreases. The possible reason for this decrease is that if family size increase family expenditures also increases, especially, in third world countries where income levels are low. Coefficient of Education is positive, which shows as education increases by one-unit probability for WTP for chairlift also increases. The is mainly due to reason that education has of positive effect on the awareness of visitors regarding the quality and other aspects of newly developed recreation. As a result, an educated visitor is more willing to pay for having chairlift at RLVP. Secondly, high education levels are related to high income levels which make it easy for visitor to enjoy new recreation. Government can also promote healthy tourism by supporting the education system which ultimately increase the awareness of visitors regarding identification of tourism activities.

Distance from home to Rawal Lake View Park is another important factor for installing chair-lift at RLVP. It varies with every visitor hence it causes different travel expenditures to every visitor. Results show that if distance increases by one Kilometer from home to RLVP then probability for WTP for having chairlift decreases. It is obvious because as distance increase it will increase the expenditure of visitors. Experience of having ride on chairlift also positively affect the decision of WTP for chair-lift at RLVP. If visitor has previous experience of chairlift, then probability for paying is positive.

It is also important to know what is the amount an individual visitor is willing to pay for chairlift. we have found the maximum amount which an individual is willing to pay for chairlift by using bidding game for each and every individual. This bidding game contains different set of questions to find his accurate bid for installing chairlift at Rawal lake View. We used demographic and socioeconomic variables in our model as independent variables which can affect the amount of bid.

There are six variables which statistically significant and impact the amount of final bid for installing chairlift. Results show that If one-unit increase in number of visitors from Islamabad then the amount of final bid on average increases by 83 Rupees. While if number of dependents in

a family increases by one unit then the willingness to pay for amount of final bid decreases by 18 rupees. It is obviously true because increasing the number of independents shrinks the opportunity for visitors to enjoy the recreation because of increase in expenditures. It is also true in case of public transport, if public transport becomes expenses amount for final bid also decreases.

If visitor also prefers to visit other sites as compare to RLVP then he may lack interest in installation of chairlift at RLVP, as a result his amount of final bid decrease by 11 rupees. Improvement in access to publics transport increase the final bid amount of visitor by 100 rupees. A unit increase in number of family members who are working the amount for final bid increase by 21 rupees on average. This is mainly due to increase in overall family income.

If government authorities want to established new recreational facility at RLVP then need to consider important factors like influx of visitors, social and economic factors which can significantly affect their decision of willingness to pay for chairlift. Furthermore, if funding can be available then the data can be collected from citizens and also from the official authorities to make the analysis more accurate.

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Annexure
Questionnaire

1. Age

2. Family size

3. Education

4. Are you resident of Islamabad or not?

    a. Local

    b. Outside Islamabad

5. Distance from home to RLVP

6. Number of dependents

7. Income of House hold in Rupees

    a. Less than 20,000

    b. 20,001- 50,000

    c. c.50,001-100,000

    d. 100,001-150,000

    e. 150,001-200,000

    f. 200,0001 and above

8. Whether your family is nucleus or not?

    a. Yes

    b. No

9. In case of yes you both are working?

    a. Yes

    b. No

10. In case of no in Q-7 how many members are working in the family?

11. Do you visit sites other than Rawal Lake in Islamabad?

    a. Yes

    b. No

12. If yes, then why?

    a. Other sites are cheaper

    b. Other sites are more attractive for children

    c. RLVP is overcrowded

    d. For diversification

    e. Others How many times did you visit RLVP in last six months?

13. Do you come here by your own transport or by public transport?

    a. Own transport

    b. Public transport

14. If public transport, did you get it easily?

    a. Yes

    b. No

15. Is it expensive?

    a. Yes

b. No

16. Do you think if public transport facility will be improved from your home to RLVP, it will increase your visits?

    a. Yes

    b. No

17. Have you ever taken ride on chairlift anywhere?

    a. Yes

    b. No

18. If yes where?

    a. Murree

    b. Northern Areas of Pakistan

    c. KPK

    d. other

19. If yes in question 17 how much did you pay?

20. Do you want to have chairlift in Rawal Lake?

    a. Yes

    b. No

21. If no, then why?

    a. Costly

    b. No attraction for it

    c. Fear

    d. Alternates are better source of amusement

    e. e. others

22. If yes, then

Would you like to pay rupees 300 for chairlift at Rawal lake view park?			
Yes		No	
Would you also be willing to pay Rupees **500** for chairlift at Rawal lake view Park		Would you like to pay Rupees **200** for chairlift at Rawal lake view park?	
Yes	No	Yes	No

How much maximum would you like to pay for chairlift at RLVP?	Would you like to pay Rupees **400** for chairlift at Rawal lake view park?		Would you like to pay Rupees **250** for chairlift at Rawal lake view park?		Would you like to pay **100** for chairlift at Rawal lake view park	
	Yes	No	Yes	No	Yes	No
	Rs.					

Cost and Benefit Analysis:

2	**Cost and Benefit Analysis of Chiarlift**	
3	Total cost of chairlift (muree) pkr	900000000
4	total length of chirlift (muree) KM	7.7
5	per kilometer cost of chairlift pkr	116883116.9
6	total lengh of Islamabd lake view park chairlift KM	1.7
7	total cost of chairlift (lake view park) pkr	198701298.7
8	total labor required for lake view park chirlift (numbers)	20
9	per labor monthly wage pkr	25000
10	mainitance cost pkr	20000
11	electricity cost (subsadized) pkr	200000
12	total number of visitors at lake view park per month (numbers)	20000
13	30 percent of total visitors at lake view park per month (numbers)	6000
14	50 percent of total visitors at lake view park per month (numbers)	10000
15	ticket per person (pkr)	500
16	1 year is equal to 12 month	12
17	present market interest rate	9.12

Years		0	1	2	3	4	5	6	7	8	9	10	11
Cost of the plant													
average Cost to owner (per plant)		198701299											
Operational cost (labor+ mantinance) per year (pkr)		6240000	6240000	6240000	6240000	6240000	6240000	6240000	6240000	6240000	6240000	6240000	6240000
electricity cost (subsadized) pkr		2400000	2400000	2400000	2400000	2400000	2400000	2400000	2400000	2400000	2400000	2400000	2400000
Total cost		207341299	8640000	8640000	8640000	8640000	8640000	8640000	8640000	8640000	8640000	8640000	8640000
Present value of total cost		207341299	7917389	7256130	6649579	6093914	5584599	5117851	4690112	4298123	3939896	3609592	3308002
Present value of total cost with each adding year (pkr)		207341299	215259187	222515317	229164996	235258910	240843508	245961359	250651471	254949594	258889490	262499183	265806185
benefits (if 100 percent per month visitor)													
lake revenew generated from lake view chairlift pkr		120000000	120000000	120000000	120000000	120000000	120000000	120000000	120000000	120000000	120000000	120000000	120000000
present value of total benefits		120000000	109970674	100779577	92356651	84637693	77563868	71081257	65140449	59696159	54706890	50134614	45944477
Present value of total benefits with each adding year (pkr)		120000000	229970674	330750252	423106902	507744595	585308463	656389721	721530169	781226328	835933219	886067832	932012310
Net return		-87341299	102052786	93523448	85706972	78543779	71979270	65963407	60450336	55398035	50767994	46524922	42636475
BCR		4.5											
IRR		108%											
benefits (if 50 percent per month visitor)													
lake revenew generated from lake view chairlift pkr		60000000	60000000	60000000	60000000	60000000	60000000	60000000	60000000	60000000	60000000	60000000	60000000
present value of total benefits		60000000	54985337	50389789	46178325	42318846	38781934	35540629	32570224	29848079	27353445	25067307	22972239
Present value of total benefits with each adding year (pkr)		60000000	114985337	165375126	211553451	253872298	292654232	328194860	360765085	390613164	417966609	443033916	466006155
Net return		-147341299	47067449	43133659	39528646	36224933	33197336	30422778	27880112	25549956	23414549	21457615	19664236
BCR		2.2											
IRR		24%											

12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
6240000	6240000	6240000	6240000	6240000	6240000	6240000	6240000	6240000	6240000	6240000	6240000	6240000	6240000	6240000	6240000
2400000	2400000	2400000	2400000	2400000	2400000	2400000	2400000	2400000	2400000	2400000	2400000	2400000	2400000	2400000	2400000
8640000	8640000	8640000	8640000	8640000	8640000	8640000	8640000	8640000	8640000	8640000	8640000	8640000	8640000	8640000	8640000
3031527	2778159	2545967	2333181	2138179	1959475	1795706	1645625	1508088	1382045	1266537	1160683	1063676	974776	893306	818646
268837712	271615871	274161838	278633197	280771376	282730851	284526557	286172183	287680270	289062316	290328853	291489535	292553211	293527987	294421293	295239939
120000000	120000000	120000000	120000000	120000000	120000000	120000000	120000000	120000000	120000000	120000000	120000000	120000000	120000000	120000000	120000000
42104543	38585542	35360650	32405288	29696928	27214927	24940366	22855907	20945662	19195072	17590792	16120594	14773271	13538555	12407034	11370082
974116853	1012702394	1048063045	1110165261	1139862189	1167077116	1192017482	1214873388	1235819051	1255014123	1272604914	1288725508	1303498779	1317037334	1329444368	1340814450
39073016	35807383	32814684	30072107	27558749	25255452	23144659	21210282	19437575	17813027	16324255	14959911	13709596	12563779	11513727	10551436
60000000	60000000	60000000	60000000	60000000	60000000	60000000	60000000	60000000	60000000	60000000	60000000	60000000	60000000	60000000	60000000
21052272	19292771	17680325	16202644	14848464	13607463	12470183	11427953	10472831	9597536	8795396	8060297	7386636	6769277	6203517	5685041
487058426	506351197	524031522	555082630	569931095	583538558	596008741	607436694	617909525	627507061	636302457	644362754	651749390	658518667	664722184	670407225
18020744	16514612	15134358	13869463	12710285	11647989	10674476	9782328	8964744	8215491	7528859	6899614	6322960	5794502	5310210	4866395

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BCR	2.2
IRR	24%
benefits (if 30 percent per month visitor)	
lake revenew generated from lake view chairlift pkr	36000000
present value of total benefits	36000000
Present value of total benefits with each adding year (pkr)	36000000
Net return with each adding year	-171341299
Present Value of Net Return	-171341299
BCR	1.3400
IRR	6%

The End