

Master's degree thesis

LOG 950 Logistics

Title:

Relationship between air transport and tourism:

A Case study of Nepal

Author(s): Uttam Kumar Regmi

Number of pages included the first page: 84

Molde, Date: 25.05.2009



Molde University College

Publication Agreement

Title:

Relationship between air transport and tourism:

A Case study of Nepal

Author(s): Uttam Kumar Regmi

ECTS credits: 30

Year: 2009

Supervisor: Nigel Halpern

(Associate Professor Molde University College)

Agreement on electronic publication of master thesis

Author(s) have copyright to the thesis, including the exclusive right to publish the document
(The Copy right act §2)

All theses fulfilling the requirements will be registered and published in Brage HiM, with the
approvals of author(s).

Theses with a confidentiality agreement will not be published.

I/We hereby give Molde University College the right to, free of charge, make the thesis
available for electronic publications: Yes

Is there an agreement of confidentiality? No

PREFACE

Nepal's economic development is constrained by a high population density, low industrial output, limited natural resources, difficult topography, geopolitical crisis, a weak human capital base with extremely poor levels of education and health, poor public management capacity, a long history of autocratic regime and public intervention. Rapid population growth further complicates the delivery of services for the improvement of human welfare. In the context of such poor economic situation of the country, tourism has played important role for the economic growth, prosperity and poverty reduction. At the same time, the difficult topography has posed serious challenges for the sustainable development of tourism because the air transport is the only easy means of accessibility to such difficult remote and mountainous regions where there are immense opportunities of tourism potential. These realities inspired me to think that there should be some relationship between air transport and tourism. Besides, tourism cannot be described in isolation, there are many businesses associated with this sector. So, this fact inspired me to investigate different factors responsible for affecting air transport for tourism. The another point of inspiration to write master thesis in the area of air transport was due to the influential teaching by Associate professor Nigel Halpern, Molde University college during my study in second semester of Master of science in Logistics.

The case study method has been considered as a strong preferred method for social science research. It helps to paint a different clear picture of actual scenario and reach to deeper roots. So, I selected Case study research method to analyze the situation in the context of Nepal taking into consideration the whole scenario of air transport and tourism as a single case. Attempt was made to collect necessary quantitative and qualitative data even facing with difficult bureaucratic system of Nepal and other reliable sources to pave my journey of writing master thesis towards final destination.

SUMMARY

The present economic growth of Nepal has been unsatisfactory. There are various factors that have contributed to the economic backwardness of the country such as its topography, lack of resource endowment, landlocked position and weak infrastructures. Tourism has played a crucial role as an important driver of economic growth and prosperity in Nepal but the increased reliance of economy on tourism is dependent on air transport because of the rugged topography, difficult weather conditions, poor accessibility in the remote hill, and insufficient connectivity by roads.

The main aim of this study is to investigate the relationship between air transport and tourism and analyze different factors affecting air transport for tourism in the context that air transport is only one means of accessibility to different remote places and mountainous parts of the country with more tourism potential.

The research methodology was implemented using broadly secondary sources of published data from 1990 to 2007 and analyzed using correlation technique and its significance test (t- test) as well as p value was observed. The primary data was collected by direct interviews with very few persons working in the field of air transport and tourism with limited number of open type questions in unstructured way. No structured questionnaires were sent to them as it was not easy to get response by mail in Norway from Nepal because of severe energy crisis in Nepal and tendency of people showing their reluctance for proper responses.

The findings of this study suggest that two way significant positive relationships exist between air transport and tourism. It was investigated that there are different factors responsible for affecting air transport for tourism such as political factors (political instability and terrorism), economic factors (global financial recessions, currency fluctuations, travel costs, and economic strength of people), environmental factors (seasonality) and non-economic factors (choice of destinations and word-of Mouth).

The findings of this study do have some limitations. Basically, the short period time series data for eighteen years and the use of normal statistical tool such as correlation analysis might not give proper results to analyze the research objectives extensively. It is, therefore recommended to use long period data and apply other suitable extensive statistical tool to find true conclusions.

ACKNOWLEDGMENTS

The successful completion of my work leaves me indebted to the Norwegian Government, my family, supervisor, friends and colleagues. I take this opportunity to acknowledge the Norwegian Government for providing me with a Quota Scholarship and additional funding for data collection without which this study would not have been accomplished. I would like to pay my respectful gratitude for my esteemed supervisor Nigel Halpern (Associate Professor of Molde University College) for the keen interest and invaluable guidance rendered to me under whose able guidance and motivation, this study has been undertaken from its conception to its completion. I am grateful to him for being a constant source of encouragement and inspiration and without whom this journey would have been a figment of imagination.

This study would not have been accomplished without the blessings and support of my parents. The deepest debt is due to my beloved wife, Nirmala Regmi and my two loving daughters, Unisha & Upama, whose constant co-operation, encouragement and help, even living far away from home provided me with strength, without which I could not have completed this work.

I would also like to extend my gratitude to my seniors Biju K. Thapalia and Bharat P. Bhatta (both Phd Students of Molde University College) for giving valuable suggestions during the course of preparing this thesis time to time.

I would also like to thank authorities working in the field of air transport and tourism in Nepal for giving their precious time for interview and providing relevant information about these sectors in detail and to the authorities of Nepal Tourism Board for providing relevant data.

Above all, I bow my gratitude to the Almighty whose grace enabled me to complete this thesis.

I. CONTENTS

i. PREFACE.....	iii
ii. SUMMARY.....	iv
iii. ACKNOWLEDGMENTS.....	v
iv. CONTENTS.....	vi
v. LIST OF TABLES.....	viii
vi. LIST OF FIGURES.....	ix
vii. LIST OF APPENDICES.....	x
viii. LIST OF ABBREVIATIONS.....	xi
Chapter 1: Introduction	
1.1 Background & rationale.....	1
1.1.1 <i>Brief sketch of the present economic situation in Nepal</i>	1
1.1.2 <i>Contribution of tourism</i>	3
1.1.3 <i>Importance of air transport</i>	4
1.1.4 <i>Statement of the problem</i>	5
1.2 Research aim & objectives.....	6
1.3 Method of study.....	6
1.4 Constraints and limitations.....	7
1.5 Thesis structure.....	7
Chapter 2: Literature review	
2.1 Demand and growth for air transport.....	8
2.1.1.1 <i>Liberalization of air transport in the world and its impact in Nepal</i>	10
2.2 Demand and growth for tourism.....	11
2.3 Linkages between air transport and tourism.....	15
2.4 Factors affecting air transport for tourism.....	20
Chapter 3: METHODOLOGY.....	29
3.1 Research purpose.....	29
3.2 Research approach.....	30
3.3 Research strategy.....	30
3.4 Data collection.....	32
3.5 Data analysis.....	33
3.6 Quality standards.....	36
3.6.1 Validity and reliability.....	36

Chapter 4: RESULTS AND DISCUSSIONS

4.1 Research Question 1.....37

 4.1.1 Present case of Nepal.....37

 4.1.2 Relationship between variables

 4.1.2.1 Case 1: Relationship between total tourists and tourists by air.....40

 4.1.2.2 Case 2: Relationship between international passengers and tourists arrivals..41

 4.1.2.3 Case 3: Relationship between international air craft movement and international tourists.....42

 4.1.3 Final results.....44

4.2 Research Question 2

 4.2.1 Political instability and terrorism.....44

 4.2.2 Terrorism.....51

4.3 Economic factors.....54

4.4 Environmental factors.....56

4.5 Non-economic factors.....58

4.6 Other possible factors in Nepalese context

 4.6.1 Factors related to air transport.....59

 4.6.2 Factors related to tourism.....60

Chapter 5: CONCLUSIONS AND LIMITATIONS & RECOMMENDATIONS

5.1 Conclusions.....61

5.2 Limitations and recommendations.....62

List of References.....63

II. LIST OF TABLES

Table 2.1:	International tourist arrivals by region.....	14
Table 2.2:	Air transport's share of international tourism.....	17
Table 2.3:	Impact of 9/11 in the World.....	21
Table 2.4:	Impact of 9/11 in South Asia.....	22
Table 2.5:	Summary table of factors affecting air transport for tourism.....	27
Table 3.1:	Research strategy.....	31
Table 3.2:	Sources of data collection.....	33
Table 4.2:	% change in total tourists Vs % change in tourists by air.....	45
Table 4.3:	Cost comparison.....	55

III. LIST OF FIGURES:

Fig. 2.1	Passengers carried on scheduled air service (1997-2006).....	9
Fig. 2.2	Scheduled revenue passenger kilometers by region.....	10
Fig. 2.3	Inbound tourism in the World (1990-2007).....	13
Fig. 2.4	Total number of tourists in Nepal (1990-2007).....	14
Fig. 2.5	Foreign exchange earnings from tourism (%).....	15
Fig. 2.6	Tourists arrivals & international air travels.....	18
Fig. 2.7	Change in international tourist arrivals by region (2001/2000).....	22
Fig. 2.8	Political situation of the country.....	23
Fig. 2.9	Top 15 European airports.....	23
Fig. 2.10	Top 40 European airlines.....	24
Fig. 2.11	Air travel Vs GDP.....	26
Fig. 4.1	Tourist arrivals (1990-2007).....	41
Fig. 4.2	Trends of international passengers and tourist arrivals.....	42
Fig. 4.3	International aircraft movements.....	43
Fig. 4.4	International tourists by air.....	43
Fig. 4.5	Tourist arrivals (1990-1995).....	44
Fig. 4.6	Total tourists (1999-2002).....	46
Fig. 4.7	Total tourists by month (2000-2002).....	46
Fig. 4.8	Indian tourists (2000-2002).....	47
Fig. 4.9	Total tourists arrivals by air by month (2002-2003).....	48
Fig. 4.10	Total tourists arrivals by air by month (2004-2005).....	49
Fig. 4.11	Total tourists Vs tourists by air (2005-2007).....	49
Fig. 4.12	Total tourists (2007-2008).....	50
Fig. 4.13	Total tourists Vs tourist arrivals by air (1999-2001).....	51
Fig. 4.14	Indian tourists (1999-2001).....	51
Fig. 4.15	Tourist arrivals by air by month (2001-2002).....	52
Fig. 4.16	Indian tourists (2001-2002).....	52
Fig. 4.17	Total tourists Vs tourists by air (2001-2002).....	53
Fig. 4.18	Total tourists by air by month (2001-2002).....	54
Fig. 4.19	GDP of Nepal (1990-2006).....	55
Fig. 4.20	Number of Nepalese going abroad (1990-2006).....	55
Fig. 4.21	Tourist arrivals by air by season (2002-2004).....	56

Fig. 4.22 Tourist arrivals by air by season (2005-2007).....56
Fig 4.23 Total tourists Vs tourism earnings.....57

IV. LIST OF APPENDICES:

Appendix 1: Questionnaire.....69
Appendix 2: Interview/ interactions.....69
Appendix 3: Cost comparison.....70

V. LIST OF ABBREVIATIONS

Abbreviations	Descriptions
ADB	Asian Development Bank
ATAG	Air Transport Action Group
ASA	Air Service Agreement
CAAN	Civil Aviation Authority of Nepal
GATS	General Agreement on Trade in Services
GDP	Gross Domestic Product
ICAO	International Civil Aviation Organization
MOF	Ministry of Finance
MOTCA	Ministry of Tourism & Civil Aviation
MOU	Memorandum of Understanding
NRB	Nepal Rastra Bank
NTB	Nepal Tourism Board
SAARC	South Asian Association for Regional Cooperation
SARS	Severe Acute Respiratory Syndrome
TIA	Tribhuvan International Airport
UNWTO	United Nations World Tourism Organization
WTO	World Tourism Organization

CHAPTER 1

INTRODUCTION

The main objective of this chapter is to introduce the study and the structure of this thesis. The chapter consists of six main sections. The first section will provide the background and rationale to the study. The second section will mention the statement of the problem. The third section will state the research aim and objectives. The fourth section will highlight the proposed method of study. The fifth section will highlight a number of constraints and limitations of the study and sixth section will illustrate the structure of this thesis.

1.1 Background and rationale

In order to develop a case study related to air transport and tourism sector of Nepal, it is useful to provide some background on the economic situations in Nepal and developments in air transport and tourism in Nepal.

1.1.1 Brief sketch of the present economic situation of Nepal:

Nepal is a sovereign, independent, relatively small and landlocked republic country in South Asia with china to the North and India to the East, West and South. Nepal has a total geographical area of 147 181 square kilometer. It is a mountainous country with the total estimated population of 29 million in 2008 (CIA- 2008).

Nepal's development is constrained by a high population density, low industrial output, limited natural resources, difficult topography, geopolitical crisis, a weak human capital base with extremely poor levels of education and health, poor public management capacity, a long history of autocratic regime, and public intervention. Rapid population growth further complicates the delivery of services for the improvement of human welfare. Because of an unequal distribution of income, opportunities and power equations, almost half of Nepal's citizens live in absolute poverty. Since opportunities to bring additional land into cultivation are limited, a high population density has resulted in over-exploitation

of the natural resource base and erosion of soil fertility. Poverty has been the bane of the Nepalese economy.

There are various factors that have contributed to the economic backwardness of Nepal such as its topography, lack of resource endowment, landlocked position, weak infrastructure and lack of suitable policies conducive to development. Large areas of the country lack even the most basic infrastructure developments and essential services and still remain deprived from access to any sort of connectivity infrastructure; although in some areas the pace of development has been quite appreciable.

Due to its landlocked situation, it relies heavily on its neighbors India and China for its trade, especially on India. Nepal's economy has been subject to fluctuations resulting from changes in its relationship with India as a result of its geographical position and the scarcity of natural resources.

Agriculture is the mainstay of the economy, providing a livelihood for three-fourths of the population and accounting for 38% of GDP (CIA- 2008). The development of this sector is very difficult due to landlocked geographic situation, lack of infrastructure, lack of adequate investment and adverse environmental situations.

Industrial activity mainly involves the processing of agricultural products including jute, sugarcane, tobacco and grain. Its workforce suffers from a severe shortage of skilled labor. Prospects for foreign trade or investment in other sectors remain poor. Nepal's exports of mainly carpets, clothing, leather goods and grain contributed total of \$830 million in 2006 that does not include unrecorded boarder trade with India due to open boarder (visa not required to travel each other). Import commodities of mainly gold, machinery and equipment, petroleum products and fertilizer contributed a total of \$2.398 billion. India (70%), the US (8.9%), and Germany (4.1%) were its main export partners in 2007. Nepal's import partners include India (56.2%), China (13%), Indonesia (2.9%) and others such as Saudi Arabia and Singapore (CIA- 2008).

Nepal has considerable scope for exploiting its potential in hydropower but this sector is also experiencing severe problems like a lack of huge investments, geographical difficulties, lack of infrastructure, and political conflicts. The total electricity is around 600

megawatts. Electricity is available to just 40% of the country's population, mostly urban and semi-urban but only 5% of the population in rural areas has access to electricity.

The economic development efforts of more than four decades, starting from the first economic development plan (prepared at the interval of every five year) started in 1956, have yielded an average economic growth of around four percent per annum.

In totality, Nepal's economic growth during the past four years has been unsatisfactory when compared to the five year Tenth plan target (2002-2007). The growth has been erratic, from a negative of 0.3% in fiscal year 2001/02 to 2.4% in 2005/06 and almost same in the current year, with a lot of fluctuations in between. The unemployment rate was estimated at 42% in 2004 and still seems as in increasing trend. Per capita income is less than \$ 300 (CIA- 2008).

So, in order to foster the economic growth of the country, tourism is one of the most important factors as a main source of earning foreign currencies and increasing more employment opportunities in the country.

1.1.2 Contribution of tourism

Tourism generates an increasingly significant share of government (national and local) tax revenues throughout the world. In addition, the development of tourism as a whole is usually accompanied by considerable investment in infrastructure, such as airports, roads, water and sewerage facilities, telecommunications and other public utilities. Such infrastructural improvement not only generates benefit to tourists but can also contribute to improve the living conditions of local populations. This increase in social overhead capital can also help attract other industries to a disadvantaged area and thus be stimulus to regional economic development.

The service sector in Nepal grew by 4.1% in 2007 contributing 1.8% to GDP growth compared to 4.7% in 2006 weakly during the year and Nepal's GDP growth remained sluggish despite the end of the decade-long armed conflict in 2007 as renewed political unrest undermined economic activity. However, the real GDP growth was 2.5% in 2007, compared to 2.8% in 2006 (MOF, 2008). According to NTB (2008), Nepal's tourism

industry recorded strong growth in 2008, making it the most successful year for the industry in eight years despite fears of a slow down due to the global financial crisis.

According to World Travel & Tourism Council (2008), the contribution of Travel and tourism to GDP of Nepal is expected to rise from 6% in 2009 (US\$ 653 million) to 6.3% (US\$ 1129 million) by 2019. Its contribution to employment is expected to rise from 497 000 jobs in 2009, 4.7% of total employment, or 1 in every 21.2 jobs to 677 000 jobs, 5% of total employment or 1 in every 20 jobs by 2019. Real GDP growth for the Travel and Tourism economy is expected to be 4.3% in 2008, -4.1% in 2009 and to average 3.9% per annum over the coming 10 years. Export earnings from international visitors and tourism goods are expected to generate 14% of total exports (US\$ 234.5 million) in 2009 growing to 13.3% of total (US\$ 410.5 million) in 2019. In this way, a growing travel and tourism sector contributes to employment, raises national income, and can improve the balance of payments. Thus, the sector is an important driver of growth and prosperity, and particularly within developing country like Nepal, it can also play a role in poverty reduction.

In reality, the overall development of the nation is not possible without sound economic growth of the nation. The systematic development of the tourism sector, in fact, is one of the best solutions that can contribute significantly to the economic growth resulting in the economic development of Nepal as the major source of foreign currencies.

1.1.3 Importance of air transport

One of the main obstacles on the way of the continuity of the growth of economic trend is poor infrastructure especially traffic infrastructure where the air connections represent a special bottleneck in Nepal. Internal connectivity by air is limited to operations from one international airport at Kathmandu (TIA). However, the domestic air transport network is extensive and plays an important role for many parts of the country.

Advances in transport and easy access by air are prerequisites for any country seeking to be a leading international destination for tourism. In Nepal, only the southern part called Terai, is plain and flat fertile land with 9886 Kilometer of paved roads and one mere 59 kilometer railway line. Internally, the poor state of development of the road system (22 of

75 administrative districts lack road links) makes volume distribution unrealistic (CIA-2008).

Predominantly mountainous topographical features, steep rivers and long scratches of thinly populated hills and mountains of Nepal have posed formidable problems in the development of transportation. The rugged topography, difficult weather conditions, poor accessibility in the remote hill, insufficient connectivity by roads, high transport costs, poor maintenance systems and more road accidents have made air transport an indispensable vehicle to change the mode of living of people of Nepal. Certain areas of Nepal remain largely inaccessible except through porter and mule-tracks. Roads are affected by landslides and floods during rainy seasons. Security problems are rising day by day in the surface transportation. To many of the remote towns and villages in the mountainous areas of the country, air transport is the only practical means of access. So, the air transport sector is of critical importance to the development of Nepal not only from the standpoint of international travel but also from the domestic angle as more than 80% of international tourists and more than 60% of domestic people travel by air.

1.2 Statement of the problem

Many tourists travel by air. Aviation liberalization such as charters, domestic deregulation, open skies agreement and low cost carrier development has reduced fares considerably that has contributed substantially to the tourism boom.

In the context of Nepal, more than 80% tourists travel by air. These increasing trends of international tourist arrivals in Nepal indicate that tourism is flourishing as one of the fastest growing industries in Nepal. Nepal features diverse physiographic and ecological characteristics and becoming a central attraction for tourists from all over the world due to its natural beauties, incomparable rich heritages, diverse traditions, awe-striking customs and innumerable special tourist destinations but most of such places with tourism potential are scattered and situated mostly at the mountain region of the country and remote areas where surface transport will not reach in the foreseeable future. In such case, air transportation is only one means of accessibility to such different tourism destinations.

So, it seems that the development of air transport sector is crucial for the sustainable development of tourism in Nepal but the main problem is that it is very difficult to enhance tourism effectively especially due to the landlocked situation of the country and lack of proper connectivity of different places by means of road transport. So, it flourishes the fact

that there might be some relationship between air transport and tourism and there could be some factors that affect air transport for tourism. These realities are the most important relevant factors found to investigate the actual relationship between air transport and tourism and factors affecting these with reference to Nepal. But, in Nepalese context, there is a lack of extensive study and analysis showing the relationship between these two sectors combined. Such types of practices have not been developed yet so far as any relevant articles and sources were not found available in the library databases such as pro-quest, science direct and other internet sites. So, this study tries to sort out these unsolved facts.

1.3 Research aim & objectives

Based on the discussion above, the aim of this study is to investigate the “Relationship between Air Transport & Tourism” in relation to Nepal. In order to achieve this aim, two research objectives have been set as below.

1. What type of relationship between air transport and tourism exist?
2. What are the factors that affect air transport for tourism?

1.4 Method of study

The investigation of the relationship between air transport and tourism in this study is broadly based on secondary sources of data published by different published sources such as the United Nations World Tourism Organization (UNWTO), ICAO (International Civil Aviation Organization), Civil Aviation Authority of Nepal (CAAN), Ministry of Tourism and Civil Aviation (MOTCA) of Government of Nepal, Ministry of Finance (MOF), Tourism Board of Nepal (NTB), Nepal Rastra Bank (NRB) and other reliable internet sources. For this research recently published reports by reliable sources are used. Secondary sources of quantitative data will be analyzed using a range of statistical techniques and some graphical presentation into Microsoft excel. Similarly, primary data that is derived from direct interviews with the experts of related field will be collected. In this way, this study plans to use both primary and secondary sources of data and finally the research is to be considered both qualitative and quantitative.

1.5 Constraints & limitations

During the preparation of this thesis, the following limitations have been encountered.

- Study is broadly based on secondary source of information as it is difficult to approach to the concerned authorities to have discussions directly.
- The study is limited to data from 1990 to 2007.
- The data is based on data available from different published sources such as CAAN, NTB, MOTCA, NRB, ICAO, and UNWTO. So methodologies may vary between sources.
- It has been very difficult to obtain the required data from Nepal because there is no legal compulsion to publish the result regularly for public information.

1.6 Thesis structure

This thesis will provide a written account of the study and has been structured in order to take account of academic best practice for constructing a thesis.

Chapter 1 has provided an introduction to the study. Chapter 2 will provide brief background that explains the world scenario of air transport and tourism in comparison with Nepalese context and theoretical perspective to the study, reviewing relevant literatures. Chapter 3 will describe and justify the methodologies used to address the research questions. Chapter 4 will provide an analysis of main findings in relation to the research questions. Chapter 5 will discuss conclusions of the study and limitations as well as recommendations for future research.

CHAPTER 2

LITERATURE REVIEW

The main objective of this chapter is to explain the demand and growth of air transport and tourism in the world and in Nepal as well as to review relevant literatures to find where this study fits into debates around the subject.

This chapter contains five sections. The first section will describe the study of demand and growth trends of air transport in the world and in Nepal. The second Section will elaborate the demand and growth of tourism in the world and in Nepal. The third section will discuss about the literatures showing the linkages between air transport and tourism. The final section will deal about literatures showing different factors affecting air transport for tourism.

2.1 Demand & growth for air transport

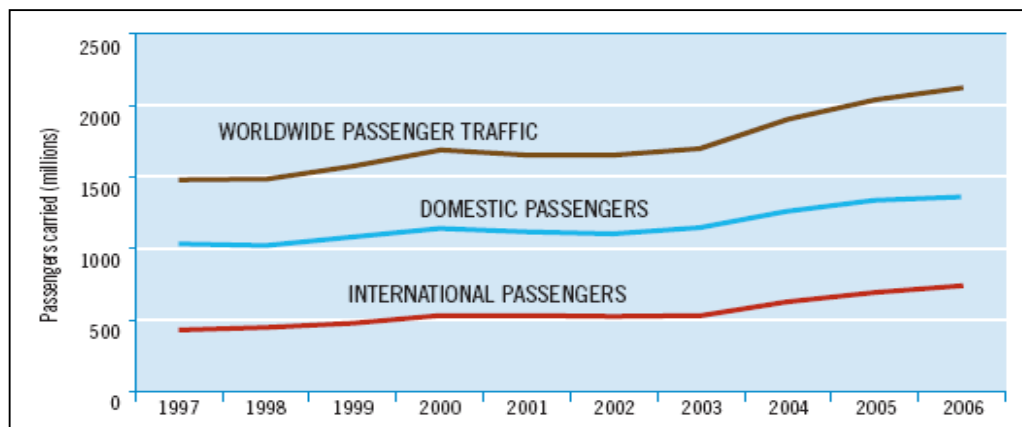
Air transport is essential for world businesses, creating jobs and opening up new market opportunities by attracting businesses to locations in the developed and developing world. It moves products and services quickly over long distances, enabling economic and social interaction among communities. It is becoming increasingly accessible to a greater number of people who can now afford to travel by air for leisure and business purposes. More than 1.6 billion passengers worldwide use the world's airline for business and leisure travel. It is expanding twice as fast as the general output of the world economy, with further growth potential expected over the next two decades. In the developing countries, air transport accounts for nearly 80% of international tourist arrivals (Aero-Tech Magazine, 2007).

Air transportation has had great impact on economic activity but it differs from other transportation modes because of its distinctive characteristics: speed, cost, flexibility, reliability and safety. It is the only feasible long-distance transportation mode for high-value perishable commodities and time-sensitive people and is often the only means of access for geographically isolated areas.

Over the past 20 years, air travel grew by an average of 4.8% each year. This was despite two major world recessions, terrorist acts, the Asian financial crisis of 1997, the SARS¹ outbreak in 2003, and two Gulf wars. On average over the next 20 years, passengers travel will grow at 5% per annum. The fastest growing economies will lead the transformation into a more geographically balanced market (Summary Outlook, 2008-2027).

The figure 2.1 below illustrates the growth of the air transport that worldwide passengers performed increased more rapidly since 1997 to 2006. A similar load factor of around 76% was recorded on domestic services, compared to fewer than 75% in 2005. In 2006, total scheduled freight traffic showed growth of around 3% over 2005. Domestic traffic grew more rapidly, at around 5%, while international traffic increased by about 3%. It also illustrates the growth in the number of passengers carried over a 10 year period continuously increasing to a total of some 2.1 billion passengers in 2006. Also depicted are the international and domestic components (ICAO, 2007).

Fig 2.1: Passengers carried on scheduled air Services (1997-2006)



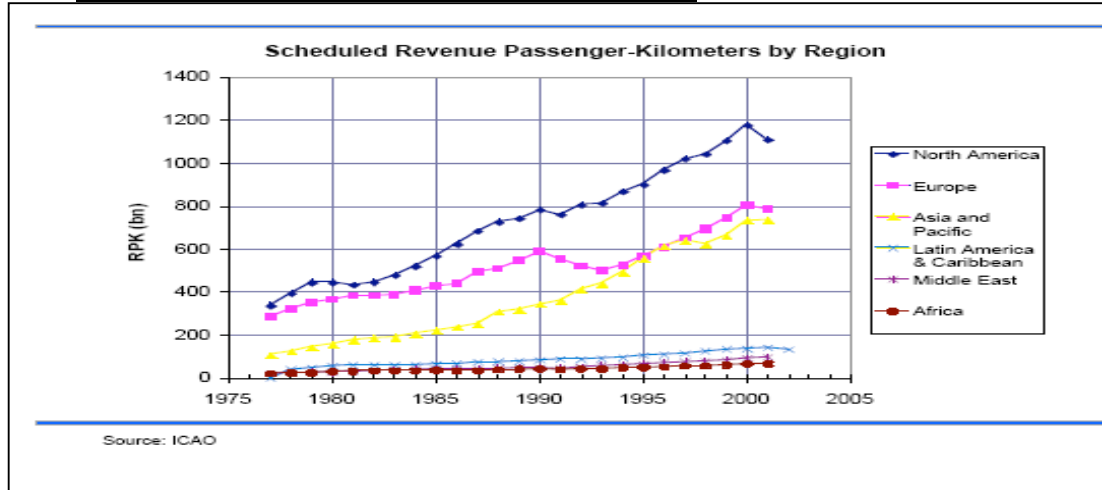
(Source: ICAO, 2007)

Similarly looking at the development of air transport by region, North America, Europe and Asia Pacific regions have been found to be tremendously increasing every year followed by Latin American, Middle East and Africa as shown in the figure 2.2 below.

Similarly, Air Transport Action Group (ATAG, 2008) mentions that air transport have become a major contributor to global economic prosperity in 2008 because of many reasons, for instance:

¹ SARS refers to severe acute respiratory syndrome

Fig 2.2 Scheduled revenue passenger-kilometers by region



The air transport industry generates 32 million jobs globally through direct (5.5 million), indirect (6.3 million), induced (2.9 million) and catalytic impacts (17.1 million). Aviation transports more than 2.2 billion passengers annually.

The value of all goods transported by air represents 35% of all international trade. Aviation's global economic impact is valued at more than \$3560 billion, or 7.5% of the world's total gross domestic product (GDP).

Air transport is indispensable for tourism, which is a major engine of economic growth, particularly in developing economies. Over 40% of international tourists now travel by air.

2.1.1 Liberalization of air transport in the World & its impact in Nepal

Today, liberalization of air transport largely means market access for private carriers. The liberalization of air transport, traditionally pursued at the bilateral level, is now being carried to the level of multilateral trade agreements. In fact, an intricate web of bilateral air services agreements (ASAs) establishes the conditions under which air companies operate in each country. These rules define, for instance, whether airlines can freely set prices, how many airlines can operate a service and their capacities. Clearly, the degree of liberalization of air transport services between two countries is determined by the specific design of each ASAs. Airlines alliances have become widespread and are still evolving, with partnership relationships becoming more intertwined and complex. The main motivation behind such alliances is the need to minimize costs while maintaining the quality of global services and extending connections throughout the world.

Nepal implemented an open sky policy in 1992 that brought milestone changes in Nepal's aviation history with the support of several donor agencies. Following the adoption of liberal sky policy in 1992, there has been surge in low cost carriers in Nepal. Apart from National flag carrier Nepal Airlines, different private airlines company such as Buddha Air, Yeti air, Sita Air, Cosmic Air etc. also came into operations and they have been operating both scheduled and charter flights to various destinations of Nepal.

According to CAAN (2007), Nepal's government has air agreements with 36 countries so far and 12 of such countries are directly connected to Nepal. Out of 41 airline companies licensed by CAAN, 16 companies licensed so far are in operation. Nepal government has already signed air seats agreements with more than 36 countries.

In the year 2007, air traffic growth on international front was relatively higher influenced by the sights of low cost carriers in the sub-region as well as in the entire Asia pacific region for the past few years. It was also boosted by good air connectivity with many destinations. Entry of new foreign airlines and fifty years of unstinted service of Nepal airlines also helped to raise the number of air passenger in Nepal. Nepal has good air links with number of countries in the world such as India, Bangladesh, Pakistan, Bhutan, Thailand, China, Malaysia, United Arab Emirates, Japan, Qatar, Oman, Bahrain, South Korea and has signed Memorandum of Understandings (MOUs) /ASAs with 35 countries.

2.2 Demand and growth for tourism

The World Travel and Tourism Council (2008) defines that tourism comprises the activities of a person travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited. It includes all activities that result when people travel to, or stays, at a place that is neither their main and permanent domicile nor their place of work. So, in order for tourism to happen, there must be a displacement: an individual has to travel, using any means of transportation, but all travel is not tourism.

Like many other products, tourism itself is not a total product. One cannot have its utility in isolation. This product is a component of a system-based product, which includes airlines, airport services, immigration, trading, besides core tourism components such as hotel, sightseeing, natural and cultural interface, expeditions and golfing. These all components

are interdependent; looked upon them as a total product helps the development of the entire economic system.

At the start of the new millennium, tourism is firmly established as the number one industry in many countries and the fastest-growing economic sector in terms of foreign exchange earnings and job creation, world's largest export earner as one of the major international trade categories and an important factor in the balance of payment of most nations. It provides government with substantial tax revenues. Most new tourism jobs and business are created in developing countries, helping to equalize economic opportunities and keep rural residents from moving to overcrowded cities.

Tourism has been continuously increasing tremendously every year in the world and within the countries of the world. Globalization, which is accelerated by less costly, more frequent and faster transport, improved access to information technologies and freer movement of capital, goods and people, will continue to create enormous opportunities for the expansion of tourism.

Today, the export income generated by international tourism rank fourth after fuels, chemicals and automotive products. For many developing countries, it is one of the main income sources and the number one export category, creating much needed employment and opportunities for development (UNWTO, 2008).

The key figures from UNWTO (2008) reveal the following facts highlighting the importance of tourism.

- From 1950 to 2007, international tourist arrivals grew from 25 million to 903 million.
- The overall export income generated by these arrivals (International tourism receipts and passengers transport) grew at a similar pace, outgrowing the world economy, exceeding US\$ 1 trillion in 2007 or almost US\$ 3 billion a day.

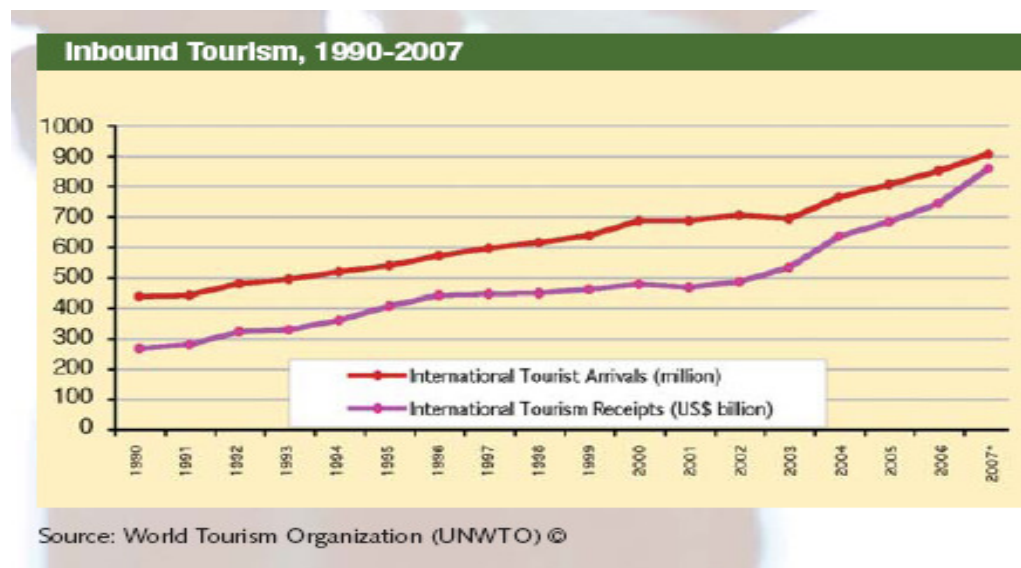
Similarly, Current developments and forecasts (UNWTO, 2008) highlight the true picture of the development of tourism in the world.

- Worldwide, international tourists arrivals reached 903 million in 2007, up 6.6% in 2008, international tourists arrivals reached 924 million, up 16 million, representing a growth of 2% but the second half of 2008 saw growth come to a standstill with the number of international arrivals declining slightly- a trend which is expected to continue in 2009.

- Between 1995 and 2007 growth averaged over 4% a year, in spite of the stagnation between 2001 and 2003 due to terrorism, SARS and the economic downturn.
- International tourism receipts rose to US\$ 856 billion (625 billion Euros) in 2007, corresponding to an increase in real terms of 5.6% on 2006.
- Outbound tourism in recent years has been increasingly driven by emerging source markets.

The figure 2.3 below clearly shows that international tourist arrivals have been found to be continuously increasing since last eighteen years resulting in the increase of international tourism receipts. The international tourism receipts grew to US\$ 856 billion (625 billion Euros) in 2007 corresponding to an increase in real terms of 5.6% over 2006. Receipts from international passenger transport are estimated at US\$ 165 billion, bringing the total international tourism receipts including international passenger transport (i.e. visitors' exports) to over US\$ 1 trillion, corresponding to almost US\$ 3 billion a day.

Fig.2.3: Inbound Tourism (1990-2007)



The UNWTO (2008) forecasts that by 2010 international arrivals are expected to reach 1 billion, and 1.6 billion by 2020. It discloses that international tourist arrivals grew by 6.6% to reach a new record figure of over 900 million as an extraordinary achievement in 2008. All regions registered increases above their long term average, with the Middle East leading the growth ranking, with an estimated 16% rise to nearly 48 million international tourist arrivals. In second place came Asia and the Pacific (184 million) with +10% over

2006. South Asia recorded 8% growth in arrivals in 2007, with India and Maldives (+12% each) sustaining above average growth.

According to UNWTO’s *Tourism 2020 vision* forecasts, the total tourists arrivals by region shows that by 2020, the top three receiving regions will be Europe(717 million tourists), East Asia and the pacific (397 million) and Americas (282 million), followed by Africa, the Middle East and South Asia. (See table 2.1)

Table 2.1: International tourist arrivals by region

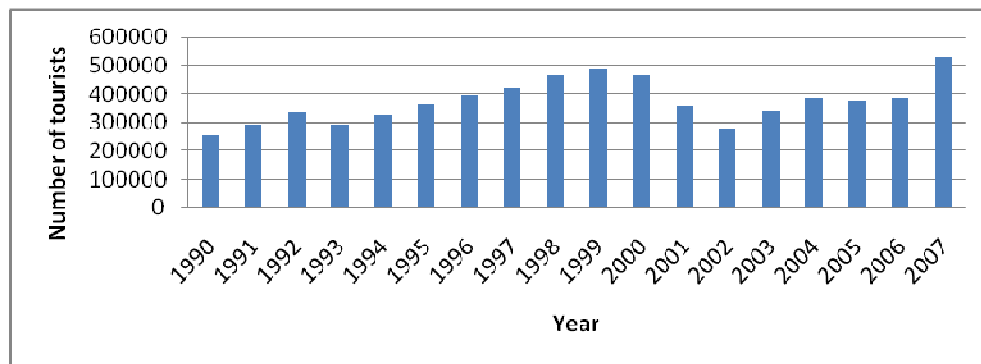
International Tourist Arrivals by Region (million)						
	Base Year	Forecasts		Average annual growth rate (%)	Share (%)	
	1995	2010	2020	1995-2020	1995	2020
Total	565	1,006	1,561	4.1	100	100
Africa	20	47	77	5.5	3.6	5.0
Americas	109	190	282	3.9	19.3	18.1
East Asia/Pacific	81	195	397	6.5	14.4	25.4
Europe	338	527	717	3.0	59.8	45.9
Middle East	12	36	69	7.1	2.2	4.4
South Asia	4	11	19	6.2	0.7	1.2
Intraregional (a)	464	791	1,183	3.8	82.1	75.8
Long-haul (b)	101	216	378	5.4	17.9	24.2

Source: World Tourism Organization (UNWTO) ©

Notes: (a) Intraregional includes arrivals where country of origin is not specified
 (b) Long-haul is defined as everything except intraregional travel.

The increasing trends of international tourist arrivals in South Asian region (table 2.1 above) indicate the positive sign for the increase of tourist arrivals in Nepal as well.

The figure 2.4 below shows that the flow of international tourists in Nepal is increasing tremendously in current years despite some ups and downs in previous years due to many reasons (explained in Chapter 4).



Source: Nepal Tourism Board (2008)

Fig. 2.4: Total number of tourists in Nepal

Tourism has played a crucial role in the economic development of Nepal. In addition to the growth of tourist numbers and tourism revenues, the relative contribution of the tourism industry to Nepalese economy has also shown a remarkable increase. The ratio of tourism revenues to total Nepalese exports also increased as shown in the figure 2.5 below. The trends of tourism earnings is its example that show that except some unfavorable years due to many reasons explained in chapter 4, tourism earnings is found to be continuously increasing.

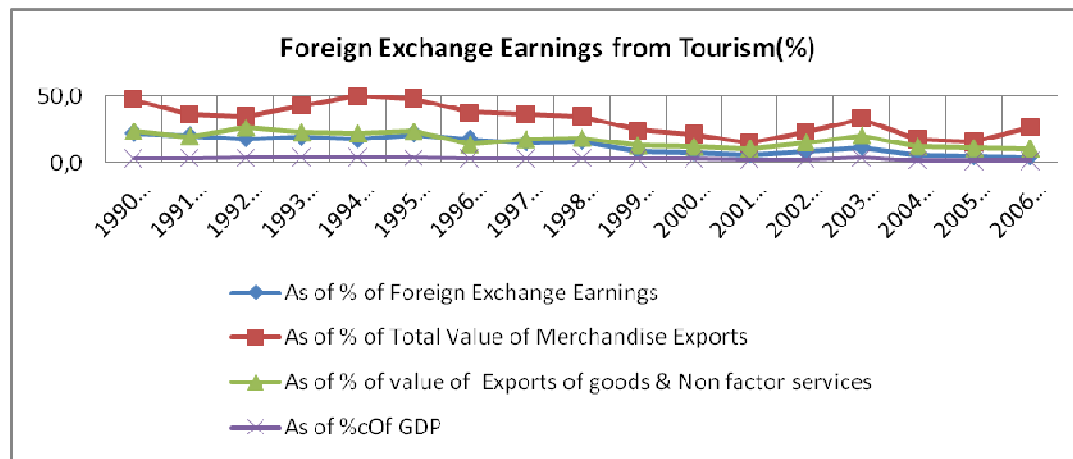


Fig.2.5: Foreign exchange earnings from tourism (%)

As shown in the figure 2.5 above, it is clear that the increase in tourism earnings has direct impact on GDP. Increasing or decreasing in the amount of tourism earnings has direct relationship with GDP. It has not only direct impact on GDP but on total value of Merchandise exports and export of goods and non factor services as well. The increase in foreign exchange earnings from tourism result in the increase in the components mentioned above.

2.3 Linkages between air transport and tourism

Very few literatures have been found to show the linkages between the air transport and tourism. Tourism does not have a unique base as an industry because its related commodities are viewed as heterogeneous in terms of consumption and production practices. Nevertheless, transport and hospitality services are functionally linked. They exhibit demand and cost complementarities and support the holistic production of tourism experience (Eadigton and Redman, 1991). In this context, civil aviation is regarded as the prominent of the tourism industries (Papatheodorou, 2002).

There are very close links between the transport and tourism industry where a two-way relationship exists. Good accessibility, which is determined by the transport services provided, is essential for the development of any tourist destination. Conversely for the transport industry, there can be substantial benefits from tourism because of the additional demand which this type of travel can produce. Aviation is an increasingly important mode of transport for tourism markets. In this respect, Graham et. al. (2008) mention that air transport is a fundamental component of tourism, providing the vital link between the tourist generating areas and destinations. They further mention that travel by air for leisure purposes is an important part of the growing global demand for tourism. According to the United Nations world tourism organization (UNWTO, 2008), 846 million international tourist arrivals were recorded in 2006 which represents an average annual growth rate of around 4 % since 1995. Around half of these arrivals were for leisure, recreation and holiday purpose and a further quarter of these for visiting friend and relative (VFR), religion and other purposes. It indicates that the air share arrivals is increasing, accounting for 46% of all the arrivals in 2006 as compared to 38% in 1995 (UNWTO, 2008). Air transport is the main form of transport to many tourist destinations, in some cases it constitutes up to 100% of the international tourist arrivals as shown in the table 2.2 below.

The relationship between air transport and tourism is one of the substantial overlap: air travel constitutes a significant impact on tourism, while tourism generates considerable demand for air transport. Tourism represents a particular form of consumption, and air transport facilitates such consumption as part of an increasingly globalised economy. Several authors have also acknowledged that reciprocal relationships exist between these two sectors: air transport is important in supporting the growth of the tourism industry; in turn, leisure travel is stimulated by tourism development (Harrison, 1995; Williams and Balaz, 2000; Williams and Shaw, 1998). Furthermore some authors have highlighted that the relationships between aviation and tourism is one of high dependency and vulnerability.

Overtime a clear trend can be observed of a slow but steady increase in air transport at the expense of road transport. The share of air transport in total passenger transport is still rising as a result of the tendency on one hand to travel to farther destinations and, on the other, to take holidays more often but of shorter duration. The table 2.2 below shows that air transport's share on international tourism is immense that air transport's share of arrivals ranges from 73% to 100% where the Nepal's dependence on air travel is around

83%. It means the activities of some of the countries are heavily dependent on air transport contributing substantially to flourish tourism in the country.

Table 2.2: Air transport’s share of international tourism

Country	Air transport’s share of arrivals (%)	Country	Air transport’s share of arrivals (%)
Japan	100	Cyprus	84
Taiwan	100	India	83
Australia	99	Thailand	80
New Zealand	99	Greece	79
Philippines	98	Egypt	76
Korea	95	Singapore	74
Dominican Republic	94	Puerto Rico	73

(Source: Keller, 2002 (based on World Trade Organization, Madrid, 2002)

Shaw and Thomas (2006) reported the view of UK government that failure to accommodate air transport growth would have serious ramifications for tourism, the finance sector, and other businesses that rely on world markets. Jenelle and Beuthe (1997) drew attention to the dualistic role of transport-including air transport-as a pro-active agent of globalization and as a beneficiary of its development. Such views above imply that air transport and tourism are currently bound in a cycle. As was mentioned in the chapter 1, it appears that tourism is a vital sector for the economic development of Nepal and air transport is a driving force for the sustainable development of tourism. Such kind of bounded cycle between these two sectors has not been analyzed so far in Nepalese context. This study tries to elaborate this fact.

Due to the linked nature of aviation and tourism, and the fact that air transport may drive considerable demand for tourism products and generate intensive environmental impacts, some authors have attempted to reconcile air transport and tourism with sustainable development principles. The relationship between aviation and tourism is not simply one of overlap: affordable air transport drives tourism demand and two industries are mutually-reinforcing (Hall, 1999). In this connection, Turton and Mutamirwa (1996) mention that

international air transportation is an essential ingredient for the success of tourism in many countries and regions. It is essential to the process of tourism expansion, both in respect of long haul flights from overseas and the provision of adequate domestic services.

Air transport has made a significant contribution to the growth of tourism in many parts of the World including destinations in Asia, Spain, Africa and the Pacific Islands (Wheatcroft, 1994). He recognized the role of transport system as an essential component of successful tourism development and stated that “transport especially air transport plays an important role in the successful creation and development of new attractions as well as the healthy growth of existing ones. Provision of air transport has transformed dead centers of tourist interest into active and prosperous places attracting multitudes of people.

Bieger and Wittmer (2006) opine that the development of air transport and tourism relies heavily on each other; and this can lead to both positive and negative outcomes. In some cases airlines get involved in the planning and development of tourist destinations, e.g. in advertising initiatives and the planning of airport access facilities. The tourist destinations often have an incentive to invest in local airports that can allow larger aircraft to land and in all weather conditions.

After the liberalization of air transport industry in the world, the availability of cheap air transport can also be considered as one of the main driving forces in international tourism growth as the figure 2.6 below shows that air transport is clearly the means of transport mostly used by international tourists.

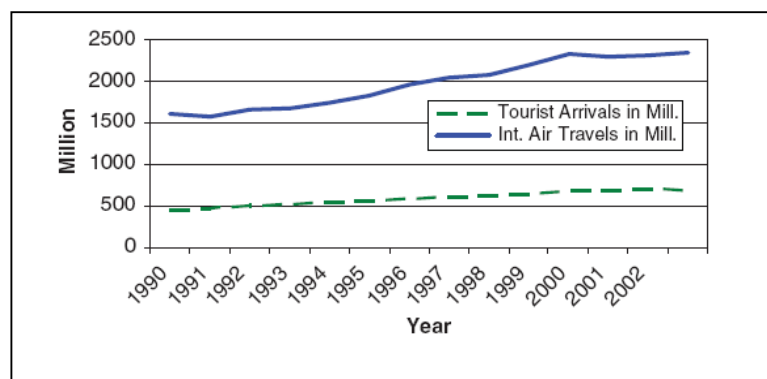


Fig 2.6: Tourist arrivals and international air travel

(Source: International tourists arrivals and air travels; WTO, 2002)

It is an inevitable fact that tourism is inextricably linked with air transport and the development of one affects the other. The most salient fact in the context of air transport

and tourism is that air transport has positively contributed to the opening of new tourism markets which are often not accessible by road or sea (Abeyratne, 1999). Giving the example of SIDS (Small Island Developing States) such as high income countries like Aruba, The Bahamas, Cyprus and the United states Virgin Island as well as low-income and least developed countries such as Cape Verde, the Comoros, Haiti, Kiribati, Maldives, Samoa, Sao Tome and Principe, Solomon Islands, Tuvalu and Vanuatu, he mentions that particularly in the instance of SIDS, the development of tourism would be influenced by air transport conducted in their territories and both, would, in turn, affect the sustainable development of SIDS since the number of tourists brought by air carriers could affect the tourism industry of these countries and the expansion of the tourism industry would, together with the movement of aircraft, have a significant impact on the development of SIDS. This example can be linked in the context of Nepal because although there are no islands as such in Nepal but the accessibility to the remote areas of Nepal where there are profound opportunities of enhancing tourism is not possible without air transport.

For this reason, the growth of air traffic in general exceeds the growth seen in international tourist arrivals. The report of ATAG (2008) also clearly indicates that there is a positive relationship between aviation and tourism as aviation generates travel and tourism. A strong link between both industries is evident. On One hand, tourism demand is the air transport sector's main area of growth. But the suppliers of tourism products and services are also dependent on air transport to an extent reflecting the geographical situation and source markets. Because the growth of air transport is general faster than that of international travel, the conclusion that air transport constitutes an additional factor of induced demand in favor of tourism can be pointed out on the other hand.

This ATAG (2008) report discloses that South Asia, the Middle East and Africa are relatively more dependent on arrivals from other regions compared to Europe, where the share of intraregional arrivals is as high as 88 %.

Ishutkina and Hansman (2005) state that air transportation flows give rise to the enabled flows of tourism, investment, remittances, knowledge, labor and goods. Citing some examples such as Cargo flights carry goods between economies; business passengers provide a source of labor, knowledge and investment; personal business passengers are a source of remittances, labor, knowledge and investment and leisure passengers result in tourism flows, they tried to prove linkages between air transport and tourism. They mention that air transportation provides a faster mode of transportation increasing the

number of possible holiday's destinations given a tourist's utility function and limited vacation time.

Air transport is indispensable for tourism, which is a major engine of economic growth, particularly in developing economies because over 40% of international tourists now travel by air. ATAG (2008) discloses that the air transport industry is a vital part of the increasingly globalised world economy, providing access to global markets, facilitating the growth of trade, tourism and international investment, and connecting people across continents.

Despite some of the literatures mentioned above, research assessing the role of air transport in tourism development is scarce. In many tourism studies, the relationship between transport and tourism is defined only in terms of accessibility, that is, transport is seen as a link between tourist generating regions and tourist destinations regions. Some authors have examined the history of tourism from the perspective of the development of various transport modes (Dickman, 1994) while others (Mill & Morrison, 1985) have taken an interdisciplinary perspectives, viewing transport as only one of many components which together constitute the tourism system. In summary, these earlier studies, though recognizing the link between tourism and transport, fail to identify any specific causal relationship. So, this study tries to explore such relationship.

Different literatures, in this way, have strongly confirmed the dependence between air transport and tourism. In order to investigate such relationship, Salleh et al (2007); Wickeremasinghe and Ithalanayake (2006); and Babatunde, M.A and Adefabi, R.A (2005) mention that the Augmented Dickey Fuller (ADF), Phillip- Perron (PP) unit root test, Engle-Granger Co-integration analysis are considered as good methodologies to investigate the relationship between variables in an area such tourism, energy, and stock exchange. But the main limitations of the use of these methods are that it requires long period of time series data to get the valid results. But in the absence of such long period data some literatures such as Latzko, D.A (2003) and Abed et al (2001) suggest the use of correlation analysis.

2.4 Factors affecting air transport for tourism

A growth trend in both air transport and international tourism has been evident in the last twenty years. But different literatures show various factors responsible to affect air

transport for tourism. There are clearly a multitude of factors that is effecting the growth in aviation and tourism. Economic causes, particularly increasing real income and declining real price, have played a key role. Numerous other political, social, technological and environmental factors have also had major influences. But, the relationship between these two sectors is found to be inevitable (Papatheodorou, 2002).

Over the past five decades, world tourism has been severely affected by a wide range of problems, including natural disaster, serious social and political conflicts, wars, economic crisis and terrorism. Now, the world political situation is unstable and that wars and ‘terrorism’ constitute a continuing threat. Shaw and Thomas (2006) state that the industry has to accept that when a war breaks out in a tourism-receiving area, demand will fall away almost instantly and may take some time to recover. When terrorism is related to the aviation industry, as the September 11, 2001 attacks tragically were, the downturn in traffic can be massive.

	Arrivals (in millions)		Percent change 2000/2001	2001 market share
	2000	2001		
World	696.8	692.6	-0.6%	100.0%
Africa	27.2	28.4	4.3	4.1
Americas	128.5	120.8	-6.0	17.4
East Asia and the Pacific	109.2	115.2	5.5	16.6
Europe	402.5	399.7	-0.7%	57.7%
Middle East	23.2	22.7	-2.5	3.3
South Asia	6.1	5.8	-4.5	0.8

Table2.3: Impact of 9/11 in the world Source: (UNWTO, 2002)

Worldwide tourism experienced a 0.6% decrease in 2001. The Americas suffered the most (6.0% decrease), followed by South Asia (4.5%), and the Middle East (down 2.5%). Europe also experienced a slight decrease of 0.7%, but it still remained the world's top tourism region as shown in the table 2.3 above.

The figure 2.7 below shows that international tourists arrivals was showing positive growth rate before September 11 incidents but started showing decreasing trend worldwide up to about 25% after this great terrorist attack in the United States. The attacks had a

particularly severe impact on air transport, business travel and long-haul travel. Other recent hits were the outbreak of the Iraq war and the SARS epidemic.

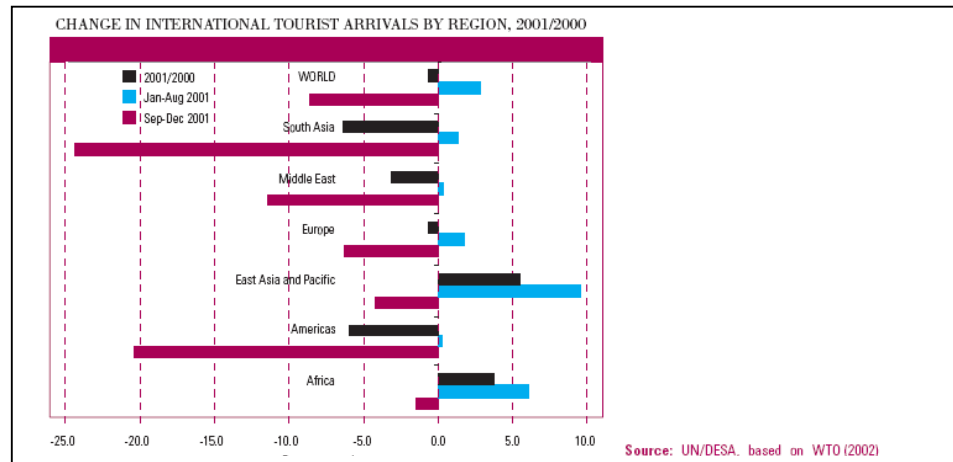


Fig. 2.7: Change in international tourist arrivals by region (2001/2000)

Along with the worldwide impact of 9/11, South Asia also felt the impact of the increased tension between India and Pakistan and the war in Afghanistan. Arrivals were down by 4.5% in South Asia suffering the biggest declines with decline by 21.8% in Nepal in 2001 as shown in the table 2.4 below.

Table 2.4: Impact of 9/11 in South Asia. (Source: (UNWTO, 2002))

Region and country	Arrivals (in thousands)		Percent change 2000/2001	2001 market share
	2000	2001		
South Asia	6,091	5,818	-4.5%	100.0%
India	2,649	2,537	-4.2	43.6
Iran	1,342	1,402	4.5	24.1
Pakistan	557	500	-10.2	8.6
Maldives	467	461	-1.3%	7.9%
Nepal	464	363	-21.8	6.2
Sri Lanka	400	337	-15.9	5.8

Due to the international nature of air transportation, political instability and bad political situation, internal security issues as well as economic sanctions play an important role in the number of passengers visiting a particular nation. For example, low or negative air

transportation growth trends reflect the unstable political climate in some of the African countries such as Libya and Algeria as shown in the figure 2.8 below (Ishutkina and Hansman, 2005).

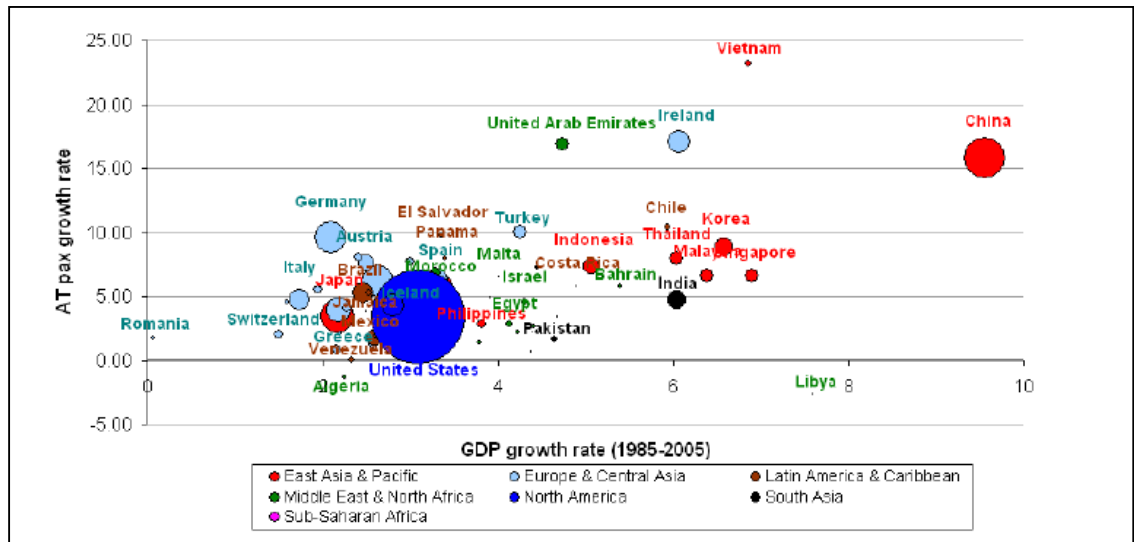


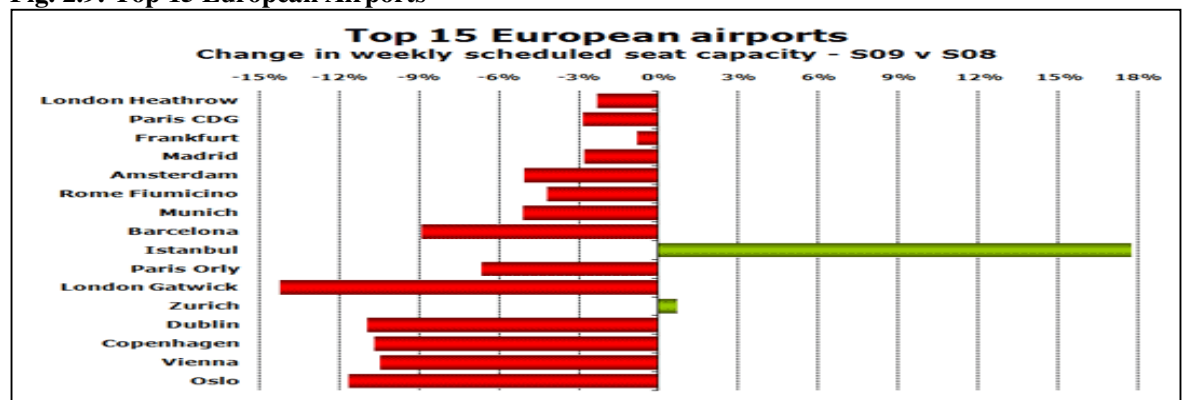
Fig. 2.8: Political situation Vs tourist arrivals.

Source: World Bank National Accounts)

Adapted from: Ishutkina and Hansman, (2005)

The global recession is responsible for the decline in tourist arrivals worldwide as travelling is determined by disposable incomes, travel budgets and consumer confidence. According to the recent data (Anna, 2009), early summer (starting 29th March, 2009) capacity is down by 4.8% in Europe. None of the five major country markets in Europe are reporting growth this summer 2009. UK and Spanish airport capacities are down 9.6% and 8.2% respectively. Greece and Turkey are reporting growth driven by their major airports. Scandinavian countries are all suffering heavily as shown in the figure 2.9 below. Similarly, looking at the top European Airlines as shown in the figure 2.10 below, it clearly indicates the effect of global financial recessions showing the negative growth trend of many top 15 European Airports and Top 40 European Airlines except few of them.

Fig. 2.9: Top 15 European Airports



Source: OAG Max Online for w/c 30 March 2009 and w/c 31 March 2008)

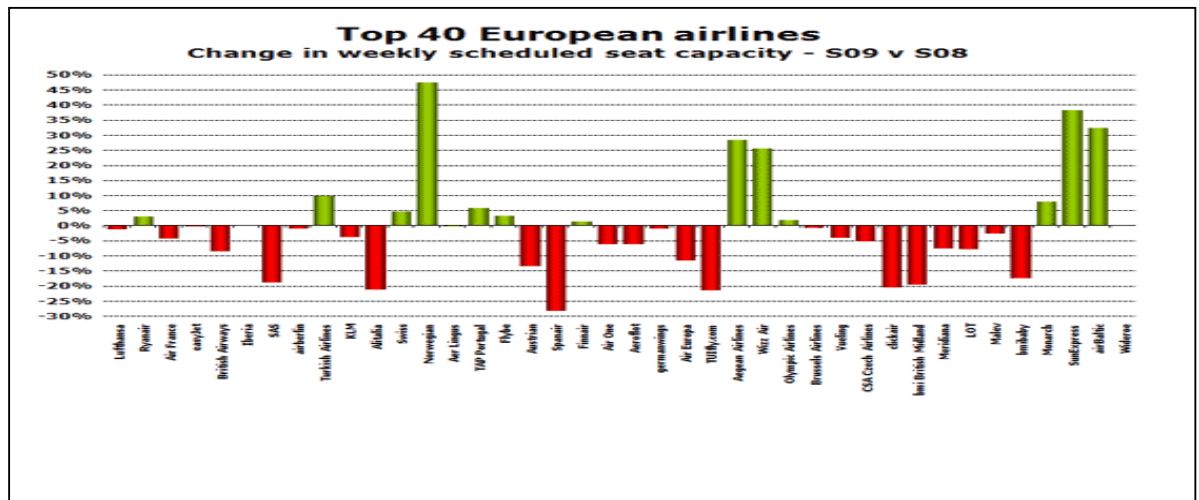


Fig.2.10: Top 40 European Airlines

(Source: OAG Max Online for w/c 30 March, 2009 and w/c 31 March 2008)

Travel costs refer to the costs of round-trip travel between the origin and destination countries or regions. Transportation, as one of the most necessary elements of a travel product, accounts for a considerable proportion of the total travel expenses, especially for long-haul travel (Li, 2006). Travel cost will determine the amount of income that needs to be spent on travel and can be divided into two separate elements: namely the cost of travel to and from the destinations and the cost of living at the destination. Travel cost is likely to have far greater impact in encouraging additional trips (Graham, 2006). Tourists value the availability of efficient, reliable and safe travelling to relatively unknown destinations and on the other hand, tourism is found to be both income and price elastic and this is more pronounced for the case of European and American destinations and African and Asian originating countries. If the ability of tourists to travel to preferred destinations is inhibited by inefficiencies in the transport system such as uncompetitive prices or lengthy and uncomfortable journey, the likelihood that they will seek alternative destinations may increase (Khadaroo and Seetanah, 2008).

Exchange rates of currencies are also one of the factors affecting air transport for tourism. Real exchange rates refer to the market rate of exchange between the origin country's currency and the destination's currency, adjusted by an index of relative inflation rates between the two countries. The price becomes more complicated as far as the demand for international travel is concerned, because tourists need to consider the relative exchange rate between tourism generating and receiving countries if different currencies are used. Therefore an unfavorable variation of the exchange rate tends to reduce the tourist's demand for travel (Li, 2006).

Seasonality is the systematic, although not necessarily regular, intra year movement caused by changes in the weather, the calendar, and the timing of decisions, directly or indirectly through the production and consumption decisions made by the agents of the economy. It is one of the most salient and significant characteristics of tourism. A good understanding of seasonality is essential for the efficient operation of tourism facilities and infrastructure. Seasonality in tourism activity is not a particular characteristic of a single destination or country, as it is experienced in almost all countries and destinations in the world. In exploring seasonality in a particular destination the figures numbers and total tourism receipts are used as seasonality indicators. It is generally of two types. One is natural that is related to the regular and recurring temporal changes in natural phenomena at a particular destination, which are usually associated with climate, season of the year, precipitation, wind and daylight. Second is the institutional characterized by the result of religious, cultural, ethnic, and social factors such as industrial holidays ((Koc and Altinay, 2007). Air transport for tourism is also often characterized by seasonality due to climatic, holiday, festive and other factors (Papatheodorou, 2002).

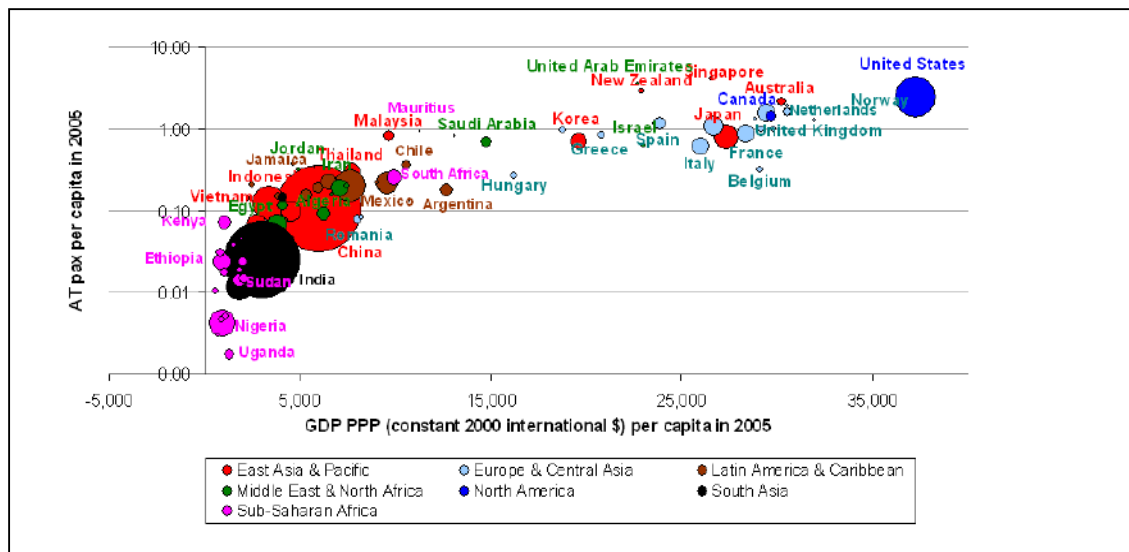
With other factors remaining constant, given the same price level, increased income will lead to a growth of demand for leisure travel (Li, 2006). Ishutkina and Hansman (2005) state that if the country level trend analysis of the world signifies in the figure 2.11 below that the growth in GDP and consumer spending is likely to increase propensity to travel. They also view that air travel increases with increase in per capita income as income increases; people tend to shift to faster and more expensive transportation modes such as air transportation.

Word-of Mouth is one of the important factors for the potential growth of tourist arrivals. Knowledge will be spread out as people talk about their holidays, thereby reducing

uncertainty for potential visitors and increasing their confidence. It, thus encourages tourists to come to that destination (Salleh et. al, 2007)

Natural factors, social factors, historical factors, recreational and shopping facilities, food and shelter are some of other factors for selecting destination thereby affecting tourism. Besides, the infrastructure such as highways and roads, water, electricity and gas, safety services, health services and communications of the destination are further more important determinants (Gearing 1974). Governments may use their regulatory powers to exert interventions with respect to tourism, which will further affect the demand for tourism and travel products. The development of the information and communication technologies and the spread of mobile technologies and navigation system (GPS), all have strong impacts on people’s travel decision-making and their choice of destinations and travel distribution channels. Further, social and cultural events, along with natural and man-made disasters, can all affect people’s travel decisions, at least in the short term (Li, 2008).

Fig.2.11: Air travel Vs GDP



(Fig. passenger traffic and GDP PPP per capita for countries with population greater than 1 million)

(Original Source: World Bank National Accounts) Adapted from: Ishutkina and Hansman (2005)

Once people have been on holiday to a particular country and have liked it, they may generally return to that destination. There is much less uncertainty associated with holidaying again to that country compared with travelling to a new destination (Naudee and Saayman, 2005).

Another factor is supply constraints as these are likely to grow in significance as leisure travel increases. These constraints may be associated with the air transport such as a lack of runway slots, insufficient terminal capacity or air space congestion, or elsewhere, for instance, a lack of hotel beds. The attitudes to travel may also be changed by supply constraints. These may not actually physically make the consumer unable to travel but they may reduce their desire to travel. For example, travelers may shy away from airports which are too congested or from resorts which are too crowded (Graham, 2006).

On the basis of different literatures mentioned above, different factors are found responsible for affecting air transport for tourism which can be categorized and summarized as follows.

Summary table 2.5: Factors affecting air transport for tourism

Categories	Factors	Rationale
1. Political instability and terrorism	Political situation of the country	Political instability results in decrease of tourist flow
	Terrorism	Worst impact on tourist flow
2. Economic factors	Global financial recession	Decrease in tourist flow
	Currency fluctuations	Weaker currency results expensive travel cost & vice versa.
	Travel cost	Higher travel costs, lower the propensity to travel.
3. Environmental factor	Seasonality and pollution	Increase or decrease in tourist flow in specific period and bad impact of pollution.
	Economic strength of people	Stronger economic position, higher propensity to travel
4. Non- economic	Choice of destinations	The tourist growth depends on facilities of

factor

and supply constraints

the destination country.

Word-of Mouth and
consumer confidence

Good and bad message
create impact on tourist
flow.

CHAPTER 3

METHODOLOGY

Having considered the different theories to this study in the literature review and the research questions in the previous chapter, this chapter will describe the methodology to analyze the data in connection with investigating the relationship between air transport & tourism. This chapter contains six sections. The first section will discuss about research purpose; the second section will elaborate research approach; the third section will talk about research strategy; the fourth section will explain the procedure of data collection; the fifth section will mention about the methods of data analysis and the last sixth section will mention about quality standards.

3.1 Research purpose

According to Tull & Hawkins (1984), a method is a tool, a way to solve a problem and reach new knowledge and mention that a number of researchers have found it useful to consider three general categories based on the type of information required. These three categories are exploratory, descriptive and explanatory.

Exploratory studies are discovering investigations that are suitable when researchers seek new insights to problems and want to assess phenomena in a new light. This kind of research is flexible and adaptable and tends to start with a wide research area, and narrow down as the research develops (Saunders et al., 2000). Thus, exploratory studies are important for obtaining a good grasp of the phenomena of interest and for advancing knowledge through good theory building (Sekaran, 1992).

When a structured research problem has been stated, and the purpose is not to find causes, descriptive research becomes appropriate (Saunders et al., 2000). According to Bernard in Miles and Huberman (1994), descriptive research could be in direct connection to exploratory research undertaken to ascertain and to be able to describe the characteristics of variables in a situation. This may be an extension of a piece of exploratory research.

Explanatory research seeks to find cause/effect relationships between given variables. Bernard in Miles and Huberman (1994) implies that explanation means making

complicated things understandable by showing how their components parts fit together according to some rules.

The first research question of this study is to investigate the relationship between air transport and tourism. In such case, this study can be said to be explanatory. The second research question is to investigate factors affecting air transport for tourism, this study becomes exploratory.

3.2 Research approach

Qualitative and quantitative methods, as two paradigms, are not simply different ways of doing the same thing. Instead, they have different strengths and logics and are often best used to address different questions and purposes. The qualitative studies tend to be more flexible, while the quantitative ones are more structured. For qualitative studies the research problem needs to be explored because little information exists on the topic (Creswell, 1994). Qualitative methods, also called ‘judgmental methods’ or ‘subjective forecasting’, rely on the experience and judgment of experts in the field. They are useful for short term forecasting, as the relationships between variables are likely to remain constant over this short time period. The disadvantages are that errors can arise due to the lack of expertise or the bias of chosen judges, the human tendency to confuse desires for the future with forecasts of it (Li, 2008). The Quantitative research strives to use a consistent and logical approach toward what is being investigated and uses statistical inferences and mathematical techniques for processing the data (Foster, 1998).

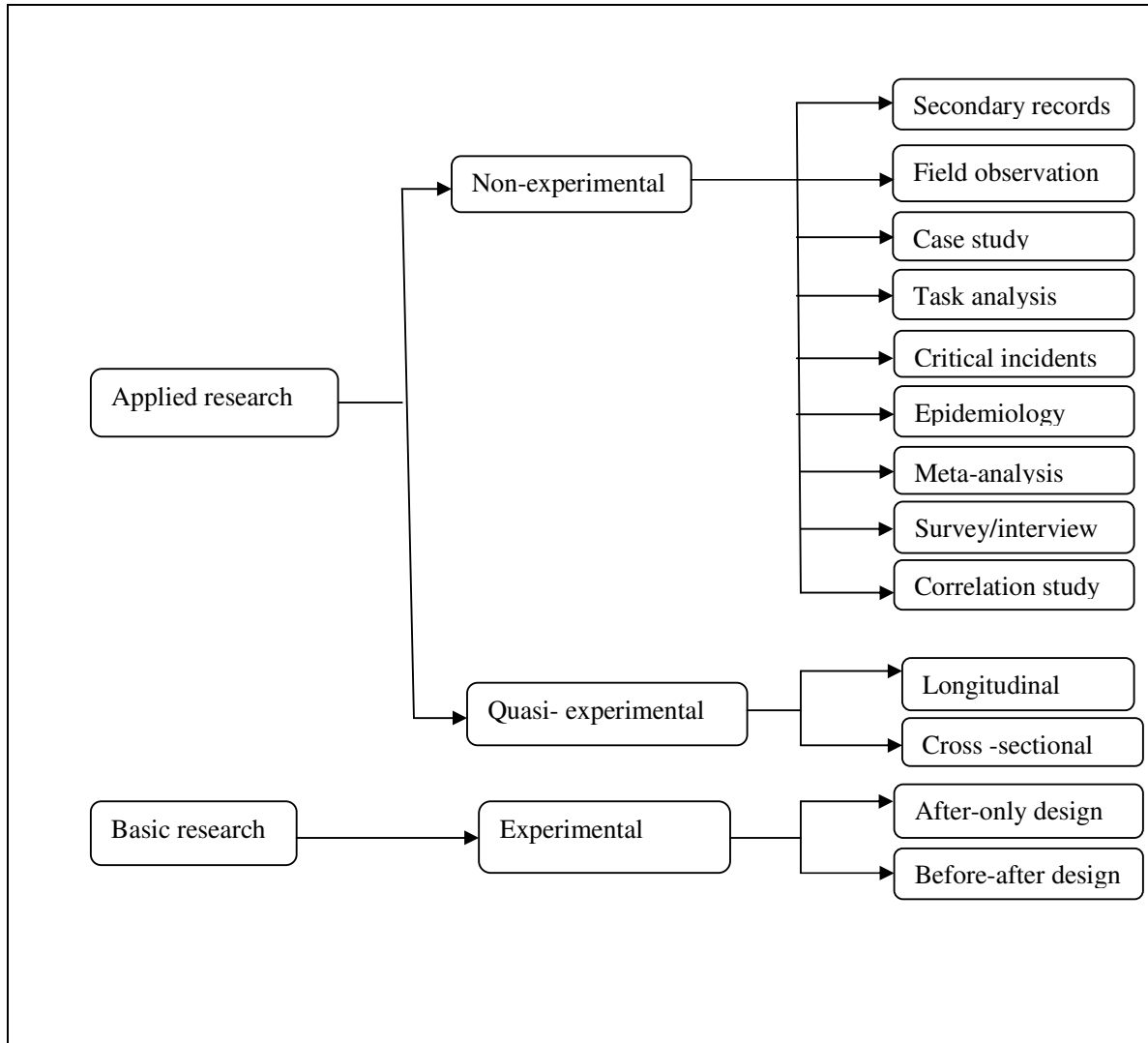
The research questions stated in this research seek both qualitative and quantitative solutions. It has been a goal of the research to use both methods found to best suit the research questions.

3.3 Research strategy

This study belongs to the social science research .Yin (1994) states there are a number of approaches for a researcher to conduct social science research, namely experiments, surveys, archival analysis, history and **case studies**. This study is well suited to the non-experimental class of research (see table 3.1 below) because variables, in this instance cannot be manipulated or controlled and most common in the social sciences such as the use of case studies, surveys/interviews. In this study, the data has been gathered from the

original sources (for instance number of tourist arrivals), opinions collected through interviews and others cannot be manipulated or controlled.

Experimental and Quasi-experimental research is applied in an environment where variables can be manipulated or controlled but in this study, variables cannot be manipulated, so does not fall under this category.



Source: Adapted from Wiggins and Stevens (1999)

Table 3.1: Research strategy

Yin (1994) states that a case study approaches are best used as a method for gathering data about a contemporary set of events. He states that a case study is an empirical inquiry that investigates a contemporary phenomenon within its real- life context. The case study is one of several ways of doing social science research. He mentions that case studies continue to be used extensively in social science research – including the traditional disciplines (psychology, sociology, political science, anthropology, history and economics) as well as

practice-oriented fields such as urban planning, public administration, public policy, management science, social work and education. Yin mentions that as a research strategy, the case study is used in many situations to contribute to our knowledge of individual group, organizational, social, political, and related phenomena and this method is a frequent mode of thesis and dissertation research in all of these disciplines and fields.

In addition, he mentions that the case study strategy should not be confused with “qualitative research”, instead, it can be based on any mix of quantitative and qualitative evidence and provide the possibility to use multiple sources of evidence.

In order to answer two research questions of this study, it needs broader analysis of both quantitative and qualitative information from a contemporary set of events; the above mentioned reasons make case study most appropriate strategy in order to answer the research questions of this study with respect to Nepal.

3.4 Data collection

After having determined the most suitable research strategy, it is necessary to decide on how the data will be collected. There are two kinds of data, namely secondary and primary data (Yin, 1994). This research would be based on both primary and secondary sources of data

As primary sources of data, different views of different government authorities working in the field of air transport and tourism as well as with different professionals doing their own private business in this area have been collected with open unstructured questionnaires. First, it was very difficult to approach such persons directly and secondly as there was less possibility to get response in time if structured questionnaires are sent to them. So, the attempt was made to collect their views directly through open questions and succeeded to some extent in collecting views of very limited person (see appendix 1 and 2). Each interview on different dates generally lasted for 10 to 15 minutes.

As secondary sources of data, basically the existing quantitative data recently published by Ministry of Tourism and Civil Aviation (MOTCA) of Government of Nepal, Tourism Board of Nepal (NTB), Civil Aviation Authority of Nepal (CAAN) and Nepal Rastra Bank (NRB) was taken for case analysis. Other reliable data was adapted from ICAO (International Civil Aviation Organization), and other reliable internet sources to make comparative study of the world and Nepal. The data of GDP of Nepal was derived from the

United Nations World Tourism Organization (UNWTO, 2008) calculated on the basis of tourism satellite accounting.

Summary table 3.2: Sources of data collection

Sources	Description
Primary source:	
<ul style="list-style-type: none"> Interviews 	With different government authorities and other professionals working in the field of air transport and tourism.
Secondary sources:	
<ul style="list-style-type: none"> Ministry of Tourism and Civil Aviation (MOTCA) of Government of Nepal. 	Tourism data, 2008
<ul style="list-style-type: none"> Tourism Board of Nepal (NTB), 	Nepal Tourism Statistics, 2007
<ul style="list-style-type: none"> Civil Aviation Authority of Nepal (CAAN) 	Civil Aviation Report, 2008
<ul style="list-style-type: none"> Nepal Rastra Bank (NRB) 	Economic survey, 2008
<ul style="list-style-type: none"> The United Nations World Tourism Organization (UNWTO), 	World tourism statistics, 2008
<ul style="list-style-type: none"> ICAO (International Civil Aviation Organization), 	World air transport scenario

3.5 Data analysis

Three types of data may be available for empirical analysis: time series, cross-section, and pooled (i.e., combination of time series and cross section) data. A time series is a set of observations on the values that a variable takes at different times. Such data may be collected at regular time intervals, such as daily, weekly, monthly, quarterly, annually, decennially (Gujarati, 2003). Time series data for 18 years from 1990-2007 was used in this study.

In order to investigate the first research question, firstly the present actual scenario of air transport and tourism of Nepal was presented and the quantitative data was analyzed on the basis of Pearson correlation analysis as mentioned in the literature. In fact, correlation is a bivariate analysis to show the strengths of dependence between two variables. The correlation coefficient ranges from -1 to +1 can be illustrated as follows.

Correlation coefficient	Results
+1	There is a perfect positive correlation between two variables.
-1	There is a perfect negative correlation between two variables.
Being +/-0.1	A weak correlation
Being +/-0.5	A moderate correlation
Being +/-0.7	A strong correlation

Now, Pearson correlation study was made in each of three different cases mentioned below by means of Microsoft excel.

Case 1: Relationship between total number of tourists and tourist arrivals by air.

Case 2: Relationship between international passengers and tourist arrivals by air

Case 3: Relationship between international aircraft movements and international tourists by air.

The basic idea behind investigating the first case is to test their dependence each other taking total number of tourists as the variable for tourism and tourist arrivals by air as the variable for air transport. The basic aim to investigate the second case is to find out dependence of overall international passengers on tourists arrivals by air. The third aim is to look at the third case to find out the effect of increase or decrease in the number of international air craft movements have impact on the flow of international tourist by air. The overall objective was to investigate the relationship between air transport and tourism in different angles.

After calculating correlation in each of three cases mentioned above, its significance test was made. An alternative but complementary approach to the confidence-interval method of testing statistical hypotheses is the test-of-significance approach developed along independent lines by R.A.Fisher and jointly by Neyman and Pearson. Broadly speaking, a test of significance is a procedure by which sample results are used to verify the truth or falsity of a null hypothesis. The key idea behind tests of significance is that of a test statistic and the sampling distribution of such a statistic under the null hypothesis (Gujarati, 2003) using the following relationship.

T-test on the t statistic = $r \sqrt{(N-2)/\sqrt{(1-r^2)}}$ where N is the number of observations and r is correlation coefficient.

In the language of significance tests, a statistic is said to be statistically significant if the value of the test statistic lies in the critical region. In this case the null hypothesis is rejected. By the same token, a test is said to be statistically insignificant if the value of the test statistic lies in the acceptance region.

So, after calculating t value, it was compared with the critical value at 99% confidence level at degree of freedom $n-2$. The term degree of freedom means the total number of observations in the sample ($= n$) less the number of independent (linear constraints or restrictions put on them). The p value (probability value) also knows as the observed or exact level of significance was calculated (two tailed). More technically, it is defined as the lowest significance level at which a null hypothesis can be rejected. While it is generally safest to use a two tailed tests, there are situations where a one tailed test seems more appropriate. The bottom line is that it is the choice of the researcher whether to use one tailed or two tailed tests (Gujarati, 2003). The two tailed test is used here to see if two means are different from each other (i.e. from different populations) or from the same populations.

However, the basic limitation of correlation analysis is that it does not show the causal relationship between two variables. The correct use of the coefficient of correlation depends heavily on the assumptions made with respect to the nature of data to be correlated. It can be employed for measurement of relationship in countless applied settings. However, in situations where its assumptions are violated, correlation becomes inadequate to explain a given relationship. These assumptions mandate that the distribution

of both variables related by the coefficient of correlation should be normal and that the scatter-plots should be linear (Gujarati, 2003).

In order to answer the second research questions, whole data of eighteen years have been categorized as different influential factors that affect air transport for tourism as investigated by different literatures such as political situation of the country and terrorism; economic factors such as global financial recession, currency fluctuations, travel cost and economic strength of people; environmental factor such as seasonality and non –economic factor such as choice of destination and supply constraints, word of mouth and consumer confidence.

In order to analyze the political situation of the country, the data have been divided into different time periods according to the increasing or decreasing trend of tourist arrivals and the occurrence of different political events in the country such as:

- The period between 1990-1995;
- The period between 1999-2002;
- The period between 2000-2002;
- The period between 2002-2003;
- The period between 2004-2005;
- The period between 2005-2007 and
- The period between 2007-2008;

Then the results have been presented with reasons on the basis of bar diagram for each of the period mentioned above.

Since it is difficult to get real data on cost of transportation, the multi-supplier web pages that emerged to support airlines disintermediation travel agencies such as Opodo (<http://www.opodo.com>) was used to calculate the total cost to reach Nepal for instance from Oslo (Capital of Norway) to Kathmandu (Capital of Nepal) two way directly and indirectly via India on hypothetical date like 29th June 2009 (Outbound) to 29th August 2009 (Inbound) from Oslo to Kathmandu (two ways) and comparative cost study was made searched in Opodo website on 23.03.2009.

3.6 Quality Standards

To simply collect and analyze data for research is not enough to ensure the quality of the research. Reducing the possibility of getting wrong answers means that attention has to be paid to two particular emphases on research design: validity and reliability (Saunders et al., 2000).

3.6.1 Validity and reliability

Judgments of validity measure how valid the collected data is, and whether or not the methods used to gather data measure or explain the things what the researcher states to measure or explain (Yin, 1994). Yin defines construct validity as the establishment of correct operational measures for the concepts being studied.

To increase construct validity of this research, direct face to face interview was conducted in the best possible way for collecting qualitative data. The quantitative facts and figures were taken from the data sources of concerned ministries and their departments of government of Nepal.

The information gathered from the interviews was handled and evaluated in as objective way as possible and statistical data has been double checked to ensure the reliability.

CHAPTER 4

RESULTS AND DISCUSSIONS

This chapter aims to analyze the results of the study with its interpretation. The chapter contains two sections. The first section will discuss about the results of first research question and the second section will elaborate the results of second research question.

Section One: Research Question 1

4.1 What type of relationship between air transport and tourism exist?

In order to answer this first research question, as explained in methodology the first part gives the present picture of air transport and tourism in Nepal and second part gives the quantitative analysis.

4.1.1 Present case of Nepal

Tourism in Nepal has experienced several ups and downs in the past. However, the time series analysis for the last 18 years since 1990 to 2007 shows an average growth of 5.4% per annum in the visitors' arrivals. While analyzing the trend of tourist arrivals since 1990 to 1999, it is found to be continuously increasing by an average growth 7.6% except for the year 1993, where tourist arrival decreased by 12%.

The tourism industry in Nepal has shown promising growth in 2007 compared to other years. The 10 years (1996-2006) of political instability left a big void in the industry. The scenario has changed for better now with the restoration of peace in the country. This was the main reason for enabling the country to witness the highest number of tourist arrivals in a year so far. The year 2007 proved a very favorable year for Nepal with the data of 526705 tourist arrivals. Analyzing the growth trend of 2007, it has been recorded 27.1% growth over 2006 with the arrival figure of air reaching 360350 all time high since 2000 against 283516 in 2006. In 2000, the number of visitors arriving Nepal by air was 376914 (Nepal Tourism Board, 2007). Since then, it has continued to plummet due to various-socio political reasons. The changed political scenario and improved accessibility with many destinations ushered in by the operation of new international airlines to Nepal in 2007 such

as GMG; Air Arabia, China Southern Airlines and Korean Air has now increased the base of consumer awareness and interests towards Nepal.

According to NTB (2008), the first half of 2007 has shown the overall growth of 37.5% in total tourist arrival with substantial 80% increase from developing markets like south Korea(+27%), Spain(+23.2%). The volume markets like India and Bangladesh as well as the value markets have also shown an encouraging growth.

The statistics about the number of touristic agencies between 2001 and 2007 is also confirming the increase of volume within the adventure tourism since the number of trekking agencies was increased up to 33% to existing 790 agencies while the number of travel agencies increases also for about 30% up to 1030 agencies. The number of registered guides was doubled from 2001 to 2007. Surprisingly the rafting agencies and the number of river guides increased only for about 5% in the specified period of 2001 to 2007.

According to NTB (2008), Nepal's tourism industry recorded strong growth in 2008, making it the most successful year for the industry in eight years despite fears of a slowdown due to the global financial crisis. A total of 813561 tourists visited Nepal during 2008-an increase of 64.74% in comparison to 2007 with 526705 tourists. The highest tourist generating markets are India, UK and US. The highest number of tourist arrivals in Nepal is from India, with the total number of tourists 91117 which is 11.2% of the total tourists' arrival in 2008.

Against the continuing global financial crisis since August, the overall 4% growth in international tourists' arrivals in 2008 can be considered as a healthy increment (NTB, 2008). Tourists' arrivals were pushed up by strong growth of visitors from Europe, South Asia and Americas.

European sector in 2008 remains unchanged with almost the same figure as compared to the 2007. France grew up by 21%, Austria by 20%, Netherland and Israel with 28%, Switzerland with 66%, Spain with 25% but UK, Sweden and Germany decreased by 20%, 31% and 20% respectively (NTB, 2008).

There are some significant growths recorded; Australia and New Zealand arrivals show a growth of 51%. Closely following the trend are Canada and USA with the growth of 25%. The arrival figure shows a decrease of 18% for the Asian Countries. South Asian

Association for Regional Cooperation (²SAARC) countries arrival is decreased by 14% where India has the share of 19% decrement. Bangladesh on the other hand shows an extraordinary growth of 60% which may be positive impact of the recent Bangladesh Sales Mission program held vigorously. "The total number of tourists arriving by air in 2008 was 4 per cent higher than in 2007 (NTB, 2008). 374,661 visitors arrived in Nepal through Kathmandu airport, the highest since 2000."

However, the growing trend might hit due to the global economic crisis as it will affect the number of tourist coming from the US and European countries.

All explanations mentioned above are the current status of air transport and tourism situation in Nepal. It indicates that there might be some relationship between these two components. So, in order to show the linkages between air transport and tourism, correlation analysis of three different cases as mentioned in Chapter 3 will be made here separately.

4.1.2 Relationship between variables

4.1.2.1 Case 1: Relationship between total tourists and tourists by air

While analyzing the relationship from time series data of 18 years between the two variables, total tourists and tourists by air, following results were observed.

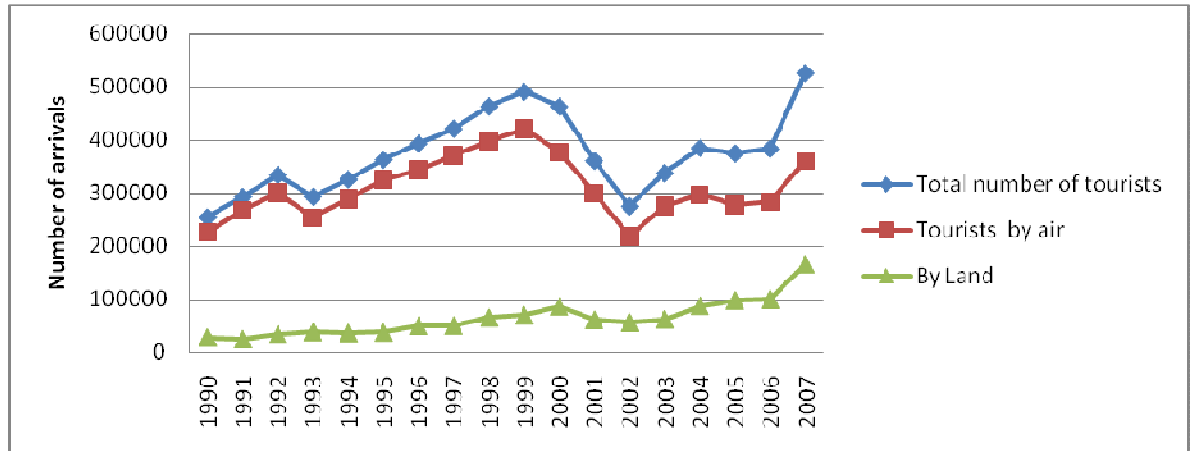
Number of observations	Pearson correlation coefficient	t-value(observed)	Significance (non directional Probability)
18	0.9044	8.478	Less than 0.0000001

Now, comparing the observed value 8.478 with critical value at 99% confidence level at degree of freedom 16 (two tailed) i.e. 2.921, it is found to be higher than the critical value. Hence it proves that there is significant positive relationship between total number of tourists and tourists by air.

It is also reflected in the figure 4.1 below.

² SAARC Countries include Nepal, India, Pakistan, Bangladesh, Bhutan, Sri Lanka, Maldives and Afghanistan.

4.1: Tourist arrivals (1990-2007)



4.1.2.2 Case 2: Relationship between international passengers and tourist arrivals.

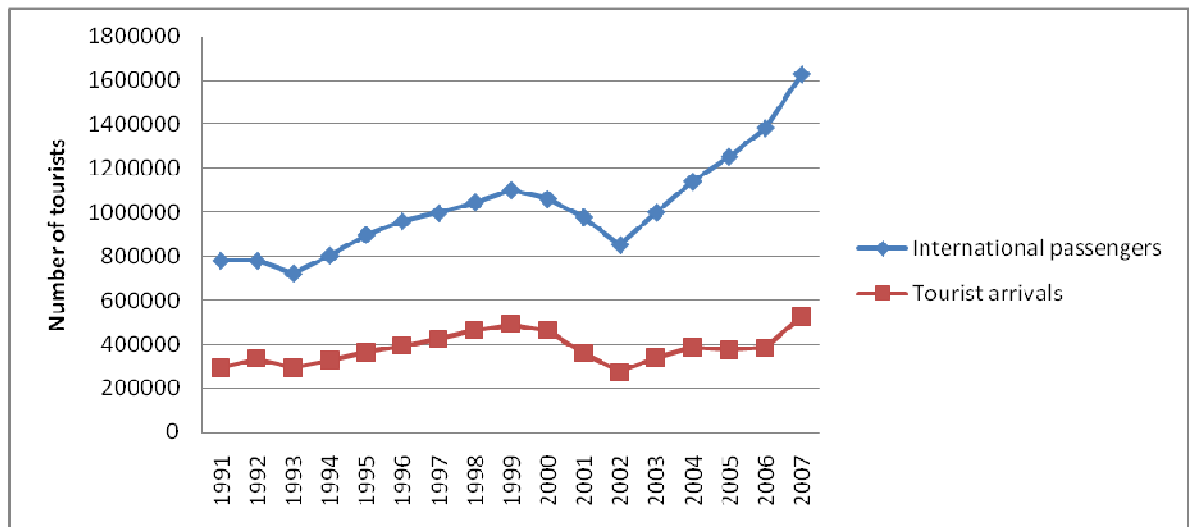
Comparing the relationship between international passengers and tourist arrivals, following result was observed.

Number of observations	Pearson correlation coefficient	t-value(observed)	Significance (non directional Probability)
17	.7140	3.95	0.001285

Now, comparing the observed value 3.95 with critical value at 99% confidence level at degree of freedom 15 (two tailed) i.e. 2.947, it is found to be higher than the critical value. Hence it proves that there is significant positive relationship between international passengers and tourist arrivals by air.

It is reflected in the figure 4.2 by graphical presentation.

Fig. 4.2: Number of international passengers and tourist arrivals



4.1.2.3 Case 3: Relationship between international air craft movement and international tourists:

Comparing the relationship between international passengers and tourist arrivals, following result was observed

Number of observations	Pearson correlation coefficient	t-value(observed)	Significance (non directional Probability)
17	0.92	9.092	Less than 0.00010.001285

Now, comparing the observed value 9.092 with critical value at 99% confidence level at degree of freedom 15 (two tailed) i.e. 2.947, it is found to be higher than the critical value. Hence it proves that there is significant positive relationship between air craft movement and international tourists by air.

It is reflected in the figure 4.3 and 4.4 below.

Fig 4.3: International aircraft movement

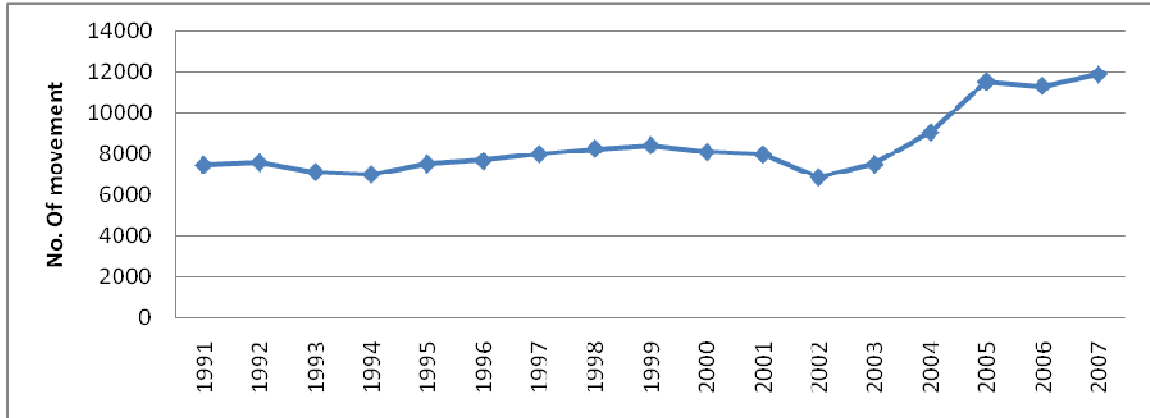
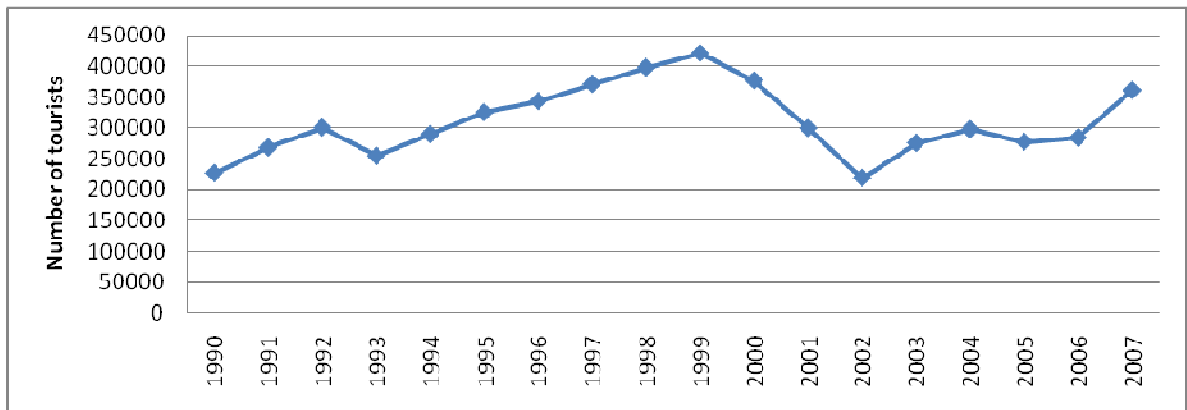


Fig 4.4: International tourist by air



4.1.3 Final results

All calculations in three different cases mentioned above prove that there is significant positive relationship between air transport and tourism. The first case shows that total number of tourists is highly dependent on air transport. It is supported by the third case that signifies positive relationship between aircraft movement and international tourists by air, which means that higher the number of aircraft movement leads to high number of tourists and vice versa. Similarly second case explains that increase in the number of international passengers will increase the flow of tourists.

As mentioned earlier in the background, Nepal is a landlocked country with difficult topographical features making air connection as one of the most important link with rest of the world. Unlike European countries, Nepal is not connected by reliable road and train transport with other countries of the world. It is only connected by road link to eastern and northern India which is mostly used by only local people. Many people do not prefer to

visit Nepal via India using long and difficult land routes (see figure 4.1 above). So the reliable way to reach Nepal is through air and this shows the reliance of tourism in Nepal only on air transport.

Also different literatures show the increase of tourist pulls the demand for more flights. It is also seen obvious in the case of Nepal (see figure 4.3 above). This pressurizes airlines companies to add more flights to Nepal in peak tourist period (see figure 4.21 and 4.22). The figure 4.3 above shows that during current period, international tourists by air have been increased due to the increase in the number of aircraft movement.

This shows that there is a two way causal relationship between air transport and tourism.

Section Two: Research Question 2

4.2 What are the factors that affect air transport for tourism?

As mentioned in the literatures in Chapter 2, different factors are found responsible for affecting air transport for tourism which can be analyzed as follows

4.2.1 Political instability and terrorism

As mentioned in the literature, political situation of any country has had great impact on the flow of tourists which can be proved as follows dividing the whole periods of eighteen years into different time intervals according to the increasing or decreasing trends of tourists.

4.2.1.1 From the period 1990 to 1995

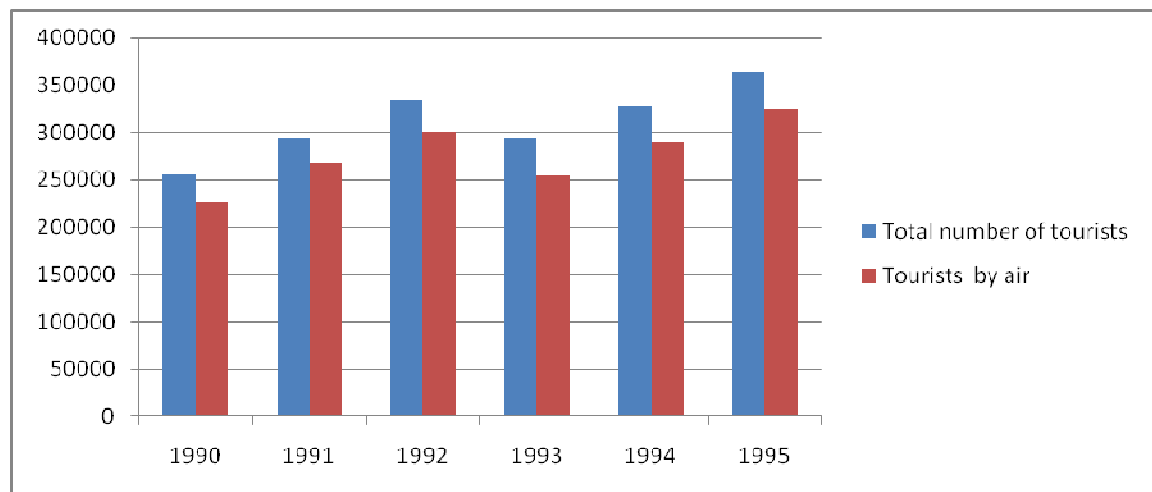


Fig 4.5: Tourist arrivals (1990-95)

The figure 4.5 above indicates that total tourist arrivals have been found to be in increasing trend from 1990-1995 except the year 1993 that shows the decrease in total tourist arrivals by 12.19% consequently resulting in decrease of tourist arrivals by air by 15.42%. (See details in the table 4.2 below).

The result might be political reasons because in 1993, one of the strong political parties of Nepal (The United Nepal Communist Party) led several strikes and street demonstration in protest to the government keeping various demands. On ³May 16, 1993, a road accident in which two prominent communist leaders lost their lives led to further conflict between the government and the communists through allegations that the government had killed them. In a protest and demonstration on June, July and September in 1993, 12 people were killed with police firing. This incident sent a very bad message worldwide citing Nepal as unsafe place to travel that resulted in decreasing tourist arrival by 12.19% but the number of tourist arrivals started increasing again after 1993 that shows this type of disturbance might affect for specific time period only.

Table 4.2: Percentage change in total tourist Vs percentage change in tourist by air

Year	% change in total tourists	% change in tourist by air
1990-1991	14.95%	18.33%
1991-1992	14.11%	12.15%
1992-1993	⁴ (12.19)%	(15.42)%
1993-1994	11.22%	13.87%
1994-1995	11.28%	12.32%

4.2.1.2 From the period 1999-2002

The continuous decreasing number of tourist arrivals in the fig 4.6 below from 1999 to 2002 might also be due to the political reason because the political circumstances in the country particularly after 1999, was never favorable for tourism development. Activities

³ The exact date of political events has been adapted from Economic policy paper by Rabindra Adhikari, 2005.

⁴ Bracket indicates negative value.

such as usual changes in the elected government, frequent street demonstration from opposition, holding election pre-maturely, anti- Indian demonstration, hijacking of an airplane, royal palace incident and emergency declaration continued providing poor messages about Nepal in the globe affecting destination marketing. Apart from the real political crisis, the situation is further aggravated by the media reports. The sporadic incidents of little importance on the safety and security of tourists are normally blown up to larger scale.

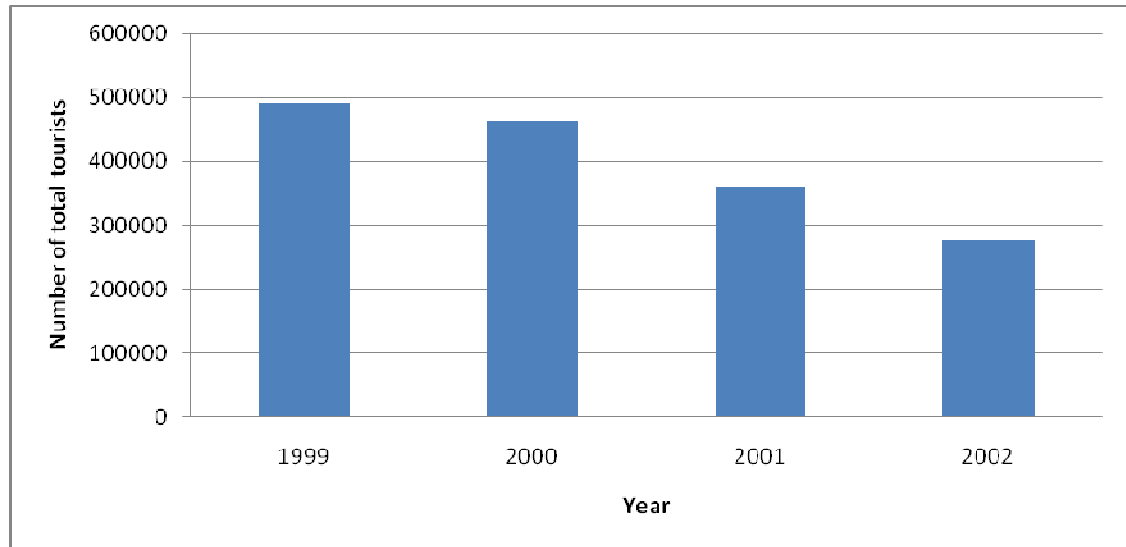


Fig. 4.6: Total tourists (1999-2002)

4.2.1.3 From the period 2000-2002:

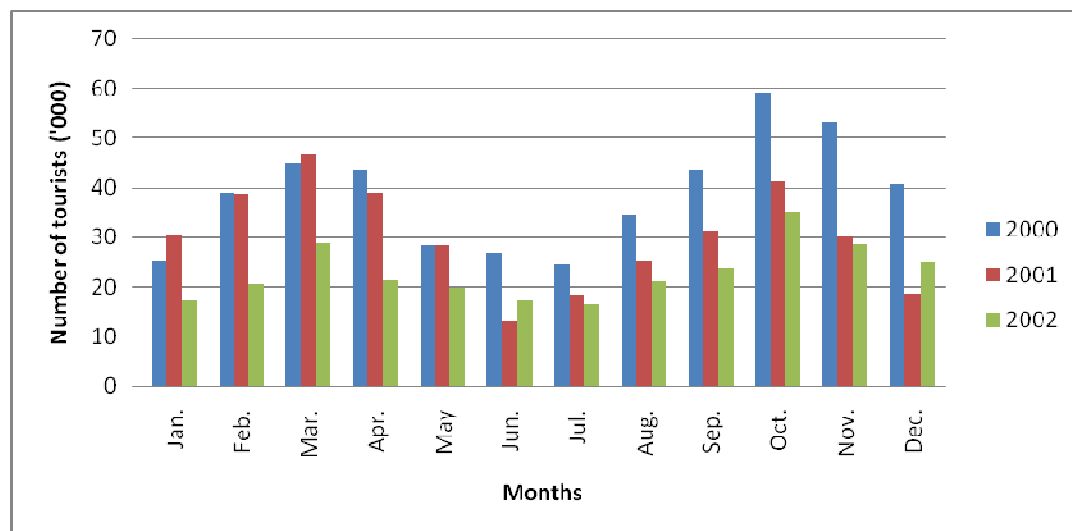


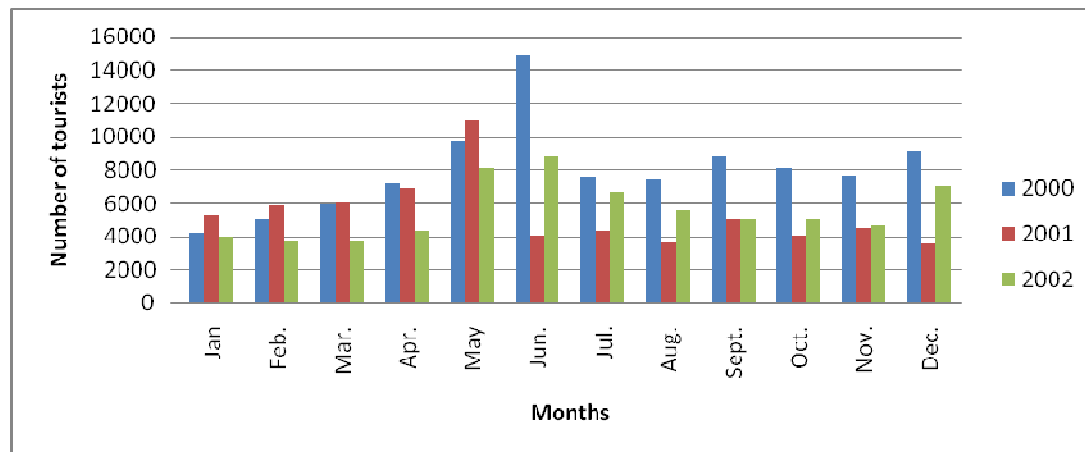
Fig. 4.7: Total tourists (2000-2002) by month

The figure 4.7 above shows that tourists in the month of June immediately after the incident went down sharply as against in the June of 2000. It also shows that the number of tourist arrivals started increasing again from the month of July of same year 2001 again might be due to the next political situation of the country that the royal palace incident (royal family massacre) of 1st June 2001 became the top story of the news centers worldwide.

Similarly, in the context of indian tourists, the figure 4.8 below shows that the number of indian tourist arrivals did not stabilize from June 2001 to September 2001, might be due to the royal palace incident that created very bad impression of Nepal.

Although the arrivals of tourists were stabilizing in the latter part of the year, October, November and December 2001 saw another outbreak of violence and the visitors halved again in comparison to the same period of previous year as shown in the figure 4.8 below.

Fig. 4.8: Indian tourists (2000-2002)



4.2.1.4 From the period 2002 – 2003

The figure 4.9 below shows the total number of tourist arrivals in 2003 was increased by 20% as compared to 2002 might be due to the positive political situation of the country because the successful hosting of SAARC summit in January 2002, which got good media attention, helped to create better destination image. An international campaign in the name

of “Destination Nepal” was launched the same year. However, the year 2003 was not completely crisis free, however, attempts to establish normalcy in the country is reflected in the number of tourist arrivals by air by over 20% over 2002. But, the program failed to achieve the objective to revive tourism in high scale for the escalating armed violence in the country.

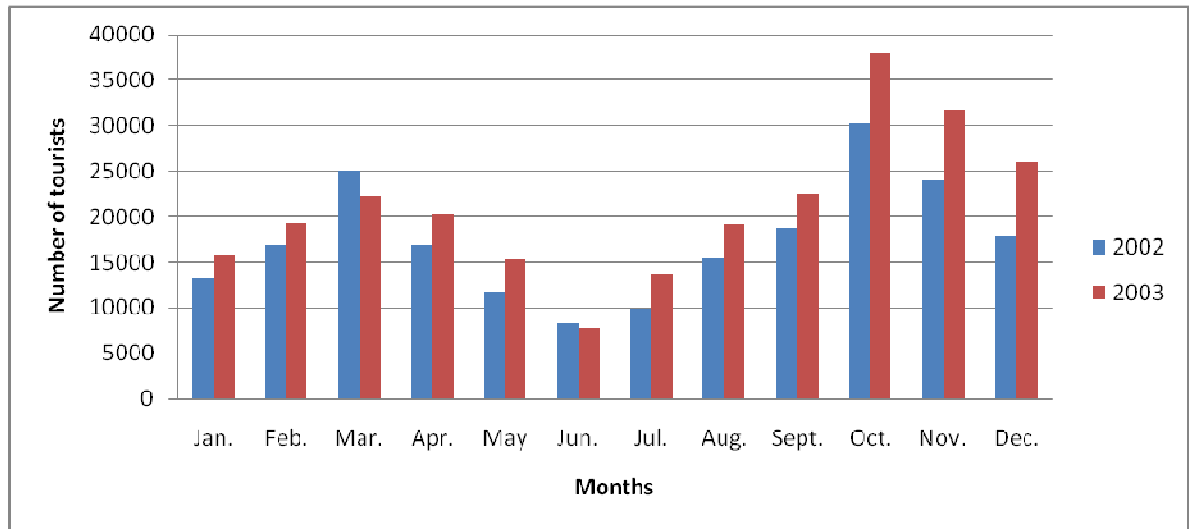


Fig.4.9: Total tourists by air by month (2002-2003)

4.2.1.5 From the period 2004 – 2005

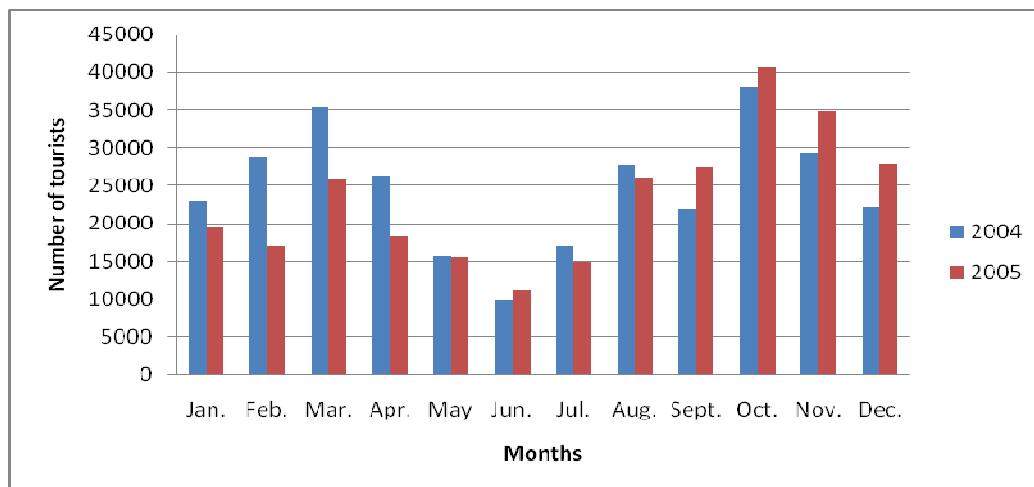


Fig.4.10: Total tourists by air by month (2004-2005)

The figure 4.10 above shows the dramatic decrease in the flow of tourists by air for the month of February 2005 in comparison to the same period last year by 43% due to bad political situation of the country because through a proclamation in February 2005, the then

King Gyanendra usurps absolute power and takes up the post of chairman of council of Ministers. The royal regime restricts political freedom, muzzles the media, cut off phone lines nationwide and blocks communication channels with the outside world, detains political figures and declared a state of emergency.

4.2.1.6 From the period 2005- 2007

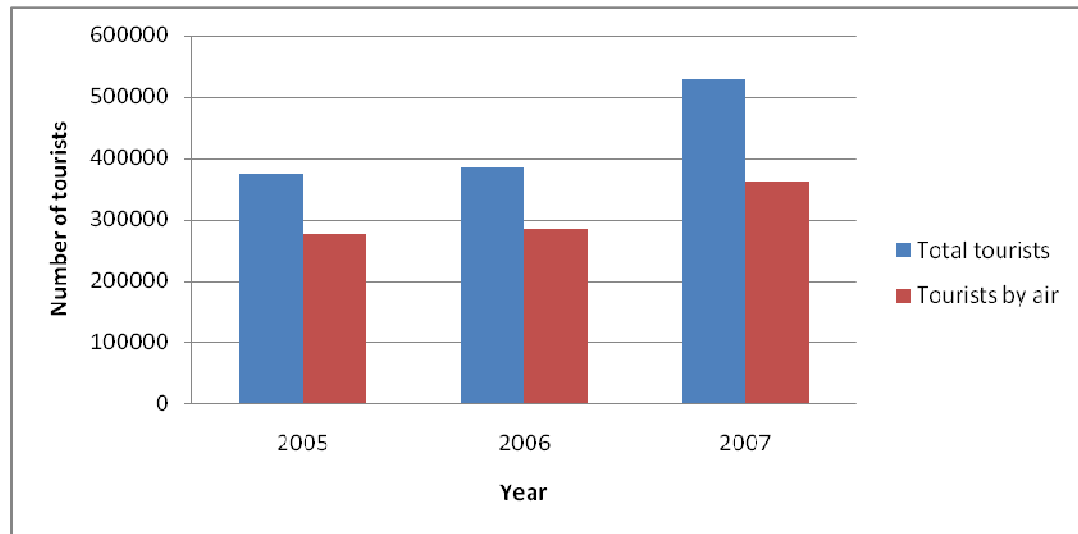


Fig.4.11: Total tourists Vs tourists by air (2005-2007)

The figure 4.11 above shows that the total number of tourist arrivals and tourist arrivals by air was increased by 2.27% and 2.33% respectively in 2006 as compared to 2005 but the figures dramatically changed in 2007 in comparison to 2006 increased by 37.18% for total tourist arrivals and 27.09% for tourist arrivals by air might be due to another political reasons. Following the April 2006 people's movement for democracy uprising, the Seven Party Alliance (SPA), interim government of Nepal and the Maoist Party (the rebel party) entered into a bilateral cease-fire and 25 point code of conduct on 26 May 2006. Further negotiations concluded with a Comprehensive Peace Agreement (CPA) between the interim government and Maoist on 21 November 2006, and a tri-partite agreement with the United Nations on the monitoring of the management of Arms and Armies process on 8 December, ending a decade of civil war and during this process, no any big incidents happened in a country for the year 2006.

4.2.1.7 From the period 2007 - 2008

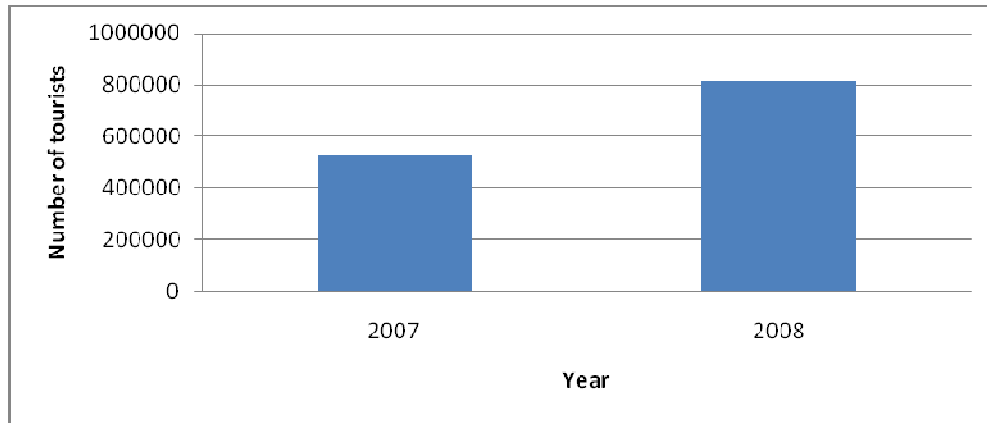


Fig.4.12: Total tourists (2007-2008)

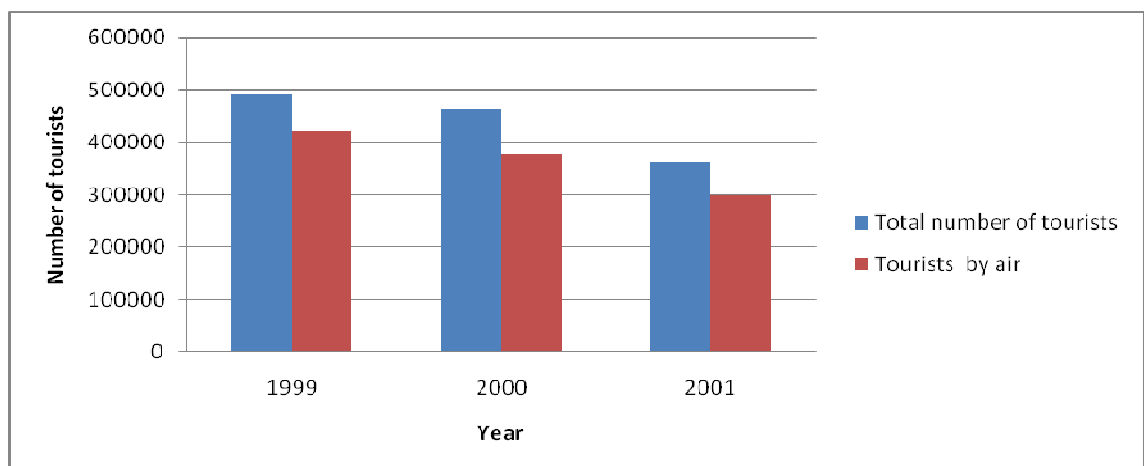
The figure 4.12 above shows that the year 2008 ended with whopping tourist arrivals with a total of 813561 tourists visited i.e. an increase of 67.74% in comparison to 2007, specially from the highest tourist generating markets, India, UK and US with the highest number of tourist arrivals from India, an increment of 11.2% in comparison to 2007, according to the Immigration Office, TIA. The highest number of tourist arrivals was 90923 from different countries found to be arrived in October. This again happened due to the political situation of the country because the joining of former rebel (Maoist) to the interim government and holding up of the election of Constituent Assembly to frame new constitution in the country on April 10, 2008, maintained political stability for certain periods and created peaceful situation on the country.

4.2.2 Terrorism

As explained in the literature, terrorism has had severe impact on air transport for tourism ultimately resulting in sharp decrease in international tourist arrivals.

4.2.2.1 From the period 1999-2001

Fig. 4.13: Total tourists Vs tourists by air (2001-2002)



The figure 4.13 above indicates that the total tourist arrivals and tourist arrivals by air were decreased in 2001 as compared to 2000 by 22% and 20.53% respectively. The reason was due to the effect of terrorism because although the year 1999 was a record year for Nepal from tourism point of view with nearly half a million tourist arrival, in fact, the crisis in tourism was observed from the year 2000, when tourist arrival began to decline. The hijacking episode of Indian Airlines from flight to Kathmandu (Nepal) to Delhi (India) in 2000 resulted suspension of all Indian Airlines flight to Kathmandu on the ground of insufficient security in the airport for six months.

The incident also damaged the peaceful image of Nepal due to negative propaganda In Indian Press in regard to the safety and security condition in the country. Immediately after the incident the numbers of Indian tourists were decreased by 30% in 2000 in comparison to the previous year as shown by the figure 4.14 below.

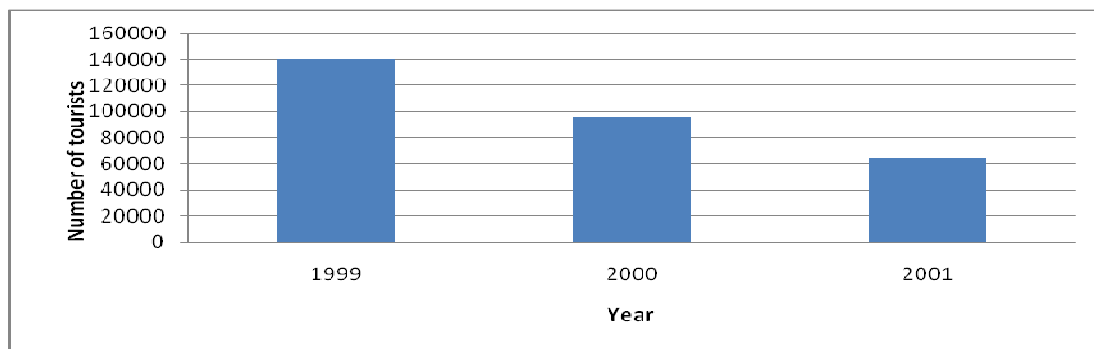


Fig 4.14: Indian tourists (1999-2001)

4.2.2.2 Impact of 9/11 and other terrorist activities in Nepal

The great 9/11 incident in the United States had crated very bad impact in Nepal. As shown in the figure 4.15 below, this caused sudden reduction in numbers of tourist arrivals after November 2001 and the effect in Nepal continued for the whole of 2002 decreasing overall number of tourists by 24%.

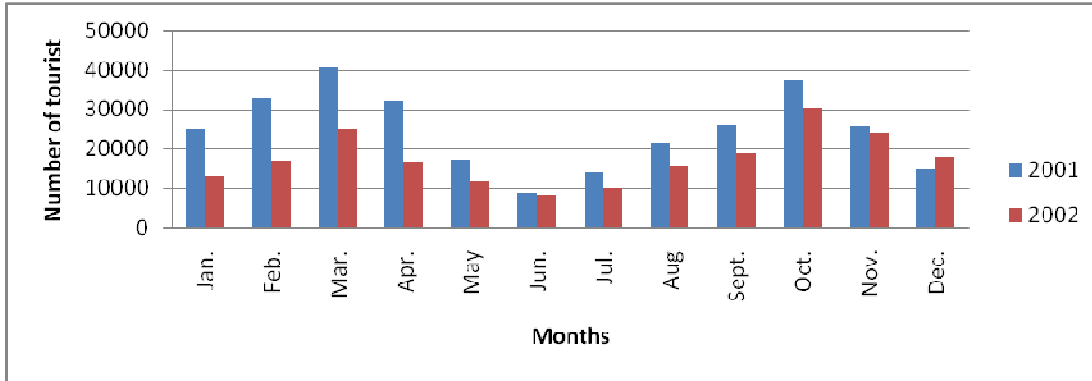
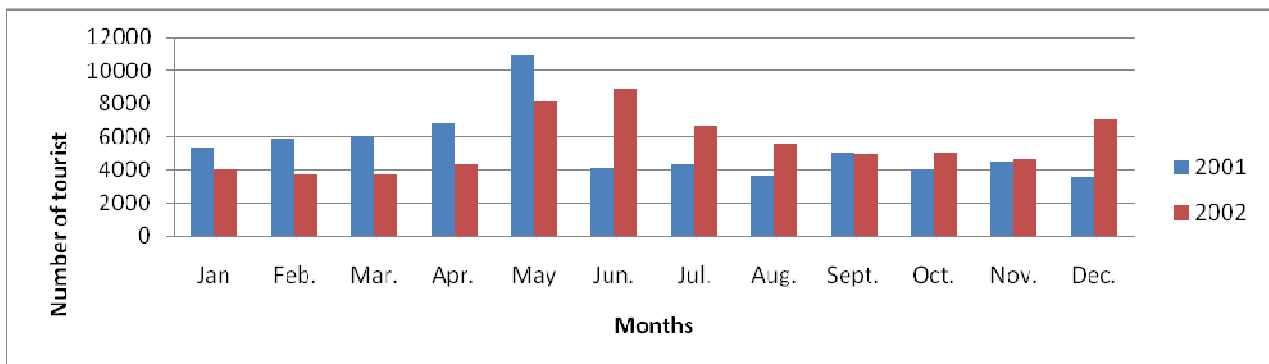


Fig. 4.15: Tourist arrivals by air by month (2001-2002)

Another reason was the attack on Indian Parliament on 13 December 2001 that resulted the suspension of PIA (Pakistan International Airlines) flight to Kathmandu (Nepal) because of air space sanction between India and Pakistan. This tension between two arch rivals made the region most vulnerable to travel for the whole of 2002. The decrease in number of international tourist arrivals is obvious in the figure 4.16 below from the period of December 2001 to February 2002 and sharp decrease in Indian tourists, in particular from the period of December 2001 to April 2002 which was again started recovering after October 2002.

Fig. 4.16: Indian tourists (2001-2002)



4.2.2.3 For the period 2002

The figure 4.17 below shows that the total number of tourist arrivals and tourist arrivals by air were decreased in 2002 as compared to 2001.



Fig.4.17: Total tourists Vs tourists by air (2001-2002)

The figure 4.18 below also shows that tourist arrivals for the month of October and November were decreased in comparison to the number of tourist arrivals same period last year. This situation was created might be due to the impact of terrorism because the Bali bombing case (Indonesia) of October 2002, outbreak of SARS in South East Asian Countries with highest numbers of victims recorded in Hong Kong and China, deterred tourists to visit the region. The war against Iraq, the Tsunami incident was further deteriorating the situation of tourism in Nepal.

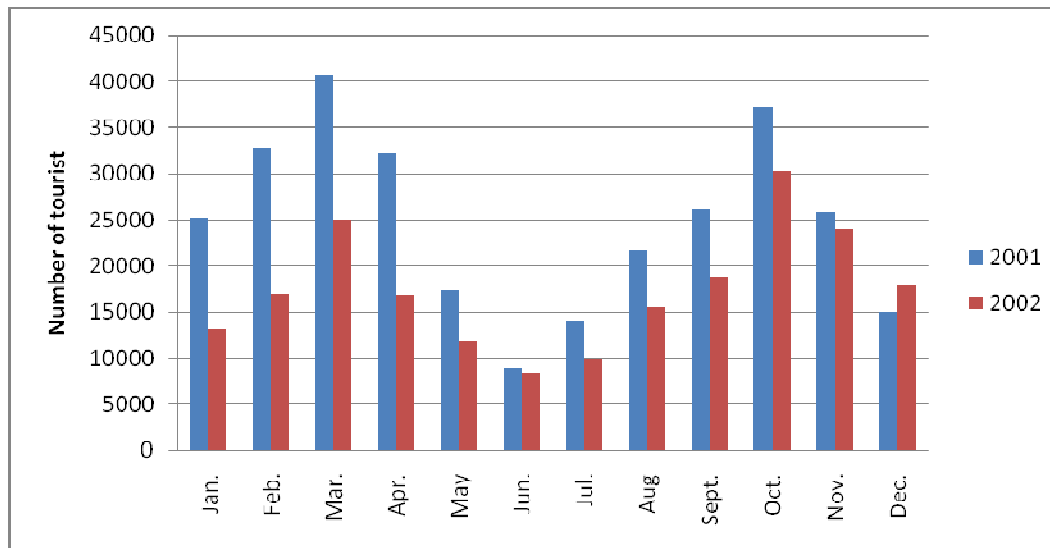


Fig 4.18: Total tourists by air by month (2001-2002)

4.3 Economic factors

4.3.1 Impact of global financial recession in Nepal

As mentioned in the literature, the global financial recession dramatically affects to the flights towards South Asian region from different parts of the world thereby affecting tourism industry in Nepal.

The figure released by Immigration office, TIA reveal that tourist arrival figures in Nepal by air in the month of March 2009, compared to the same month last year, have decreased by 17.6% to 33005. In South Asia, Sri Lanka, and Bangladesh have registered a growth of 12.3% and 29.6% respectively where as India and Pakistan witnessed negative growth of 24.7% and 6.3% respectively. The entire European and Oceania regions registered negative growth of 19.8% and 11.6% to Nepal in comparison to the same month last year.

4.3.2 Currency fluctuations

Tourism demand slowed significantly through the year 2008 under the influence of an extremely volatile world economy (financial crisis, commodity and oil price rises, and sharp exchange rate fluctuations), undermining both consumer and business confidence and resulting in the current global economic recessions. Nepalese currency is heavily influenced by the fluctuation in Indian Currency as the exchange rate between two countries is always fixed (i.e. 1 Indian currency (rupee) = 1.60 Nepali Currency (rupees). The current data of Central Bank (25.04.2009) shows that due to global financial crisis, Nepalese currency has been becoming weaker day by day reaching up to approximately NPR 82 for 1 US\$ from NPR 70 for 1 US\$ since last six months of 2008. In this way, the continuous weakening of the Nepalese currency against the US\$ has provided incentives for American tourists to visit Nepal cheaply where as it is extremely expensive for Nepalese tourists to visit the US, thus affecting the decision for travel.

4.3.3 Travel cost

In Nepalese context, there is no direct flight from USA, United Kingdom and other European Countries except some gulf countries. So, many tourists visit Nepal via India. As a result, the direct destination to Nepal costs more expensive rather than coming through India. For instance, see the comparative cost below calculated from “OPODO” assuming two way flights from 29th June 2009(Outbound) to 29th August 2009(Inbound) from Oslo to Kathmandu(two way).(See table 4.3 below)

Table 4.3: Cost Comparison (Appendix1)

	First Option	Second Option	Third Option
Oslo to Kathmandu (via Other routes)	£ 1089.40(NOK 10018)	£ 1131.10 (NOK 10401)	£ 1938.90 (NOK 17829)
Oslo to Kathmandu via Delhi(India)	£ 744.90 (NOK 6850)	£ 838.20(NOK 7708)	£ 863.90 (NOK 7944)
Difference	£ 344.50 (NOK 3168)	£ 292.90 (NOK 2693)	£ 1075 (NOK 9885)

Note: £ 1= NOK 9.19563 (23.03.2009)

4.3.4 Economic strength of people

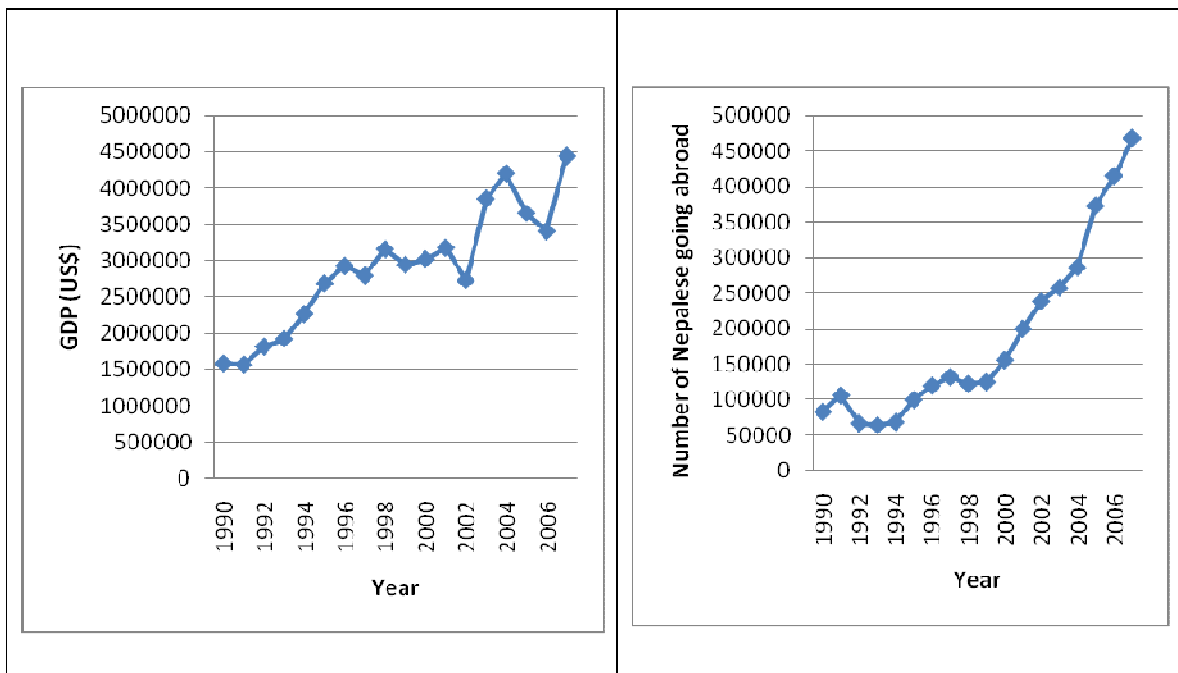


Fig. 4.19: GDP of Nepal

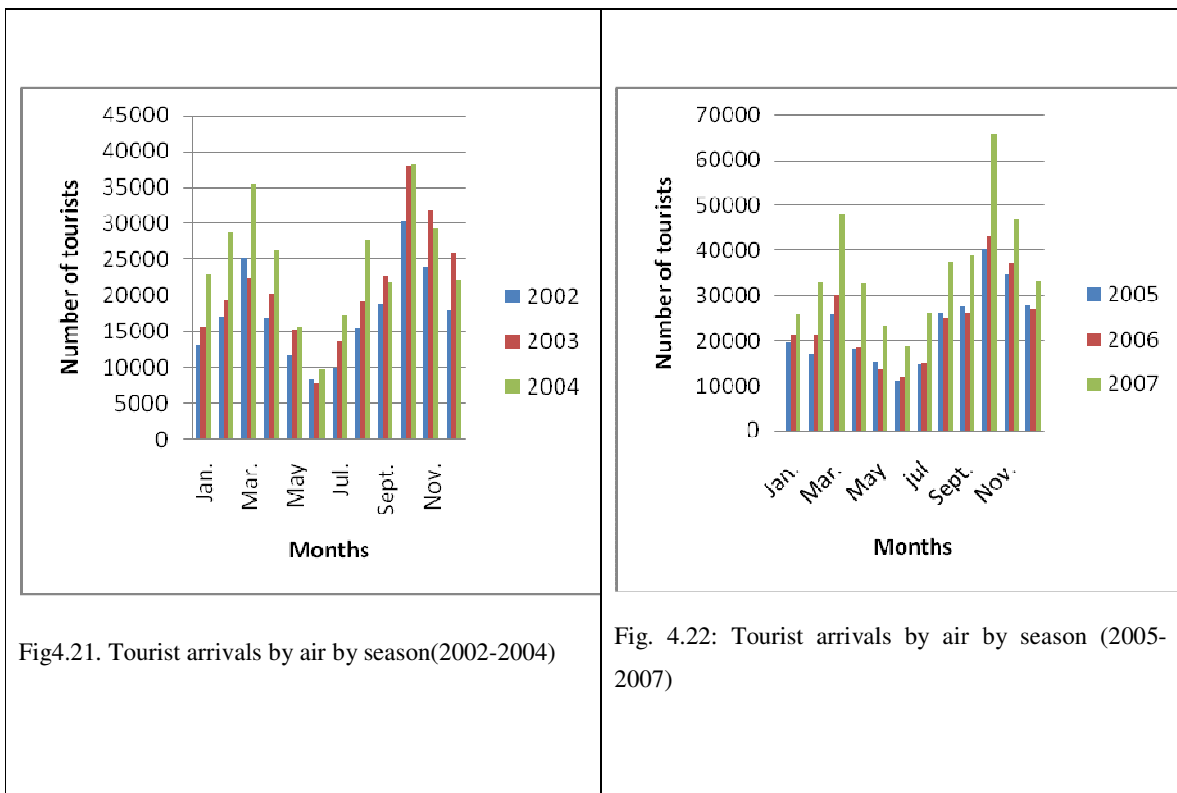
Fig. 4.20: Number of Nepalese going abroad

As mentioned in the literature, increased income will lead to a growth of demand for leisure travel and higher the GDP, higher will be the propensity to travel. It is obviously seen in the context of Nepal while comparing the trend of figure 4.19 and 4.20 above that shows that as the GDP increases, there is high propensity of Nepalese going abroad to travel. But sometimes, it is difficult to forecast exactly that the number of Nepalese going abroad is highly dependent on GDP only or any other factor as well.

4.4 Environmental factor

4.4.1 Seasonality

The six year figures 4.21 and 4.22 below shows that tourists mostly prefer to visit Nepal for the month of October and November because in this period, the weather is balmy, the air is clean, visibility is perfect and the countryside is lush and green following the monsoon. October is the time for festivals in Nepal as well. The figure also shows that from February until April, the tail end of the dry season is the second-best period. The figure indicates the sharply decrease in the flow of tourist arrivals for the month of June and July. The trends in the figure show that the number of tourist arrivals starts increasing gradually after July. December and January is not recommended for travelling in Nepal.



As mentioned in the literature, while comparing tourists numbers and total tourism receipts as shown in the figure 4.23 below, it shows that tourism earnings have not been increased according to the increase in the number of tourists. One of the reason might be due to seasonality as there is less flow of tourists in certain months as mentioned above. So, it proves that seasonality is one of the factor affecting air transport for tourism.

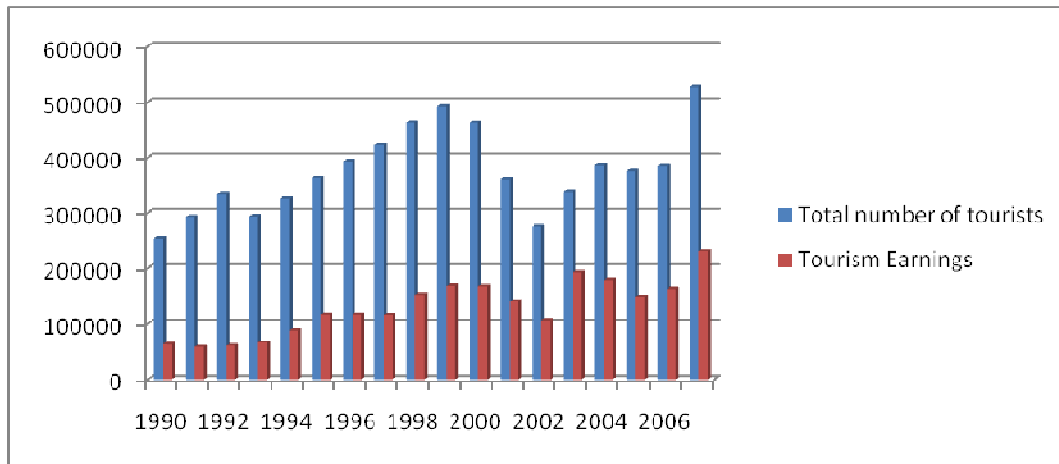


Fig. 4.23: Total number of tourists Vs tourism earnings.

Another environmental factor might be that pollution in different tourism area and security questions on trekking routes has posed a threat in marketing of Nepal which was observed on the basis of direct conversation with the experts.

4.5 Non-economic factor

4.5.1 Choice of destinations

As mentioned in literatures, the travel decision of people depends on the availability of technological advancement and other necessary facilities. Based on direct interviews, this study found that capacity constraints at airports limit the effectiveness of the system and offer opportunities for specialization and growth at other airports. In this context, insufficient terminal capacity and crowded as well as congested airport are one of the factors affecting air transport for tourism. Furthermore, in Nepal, the condition of many highways and roads, continuous load shedding for 16 hours per day now, slow internet facility and inadequate health services due o the lack of modern equipments are further impeding the growth of tourism.

4.5.2 Word-of Mouth

On the basis of direct conversation with the experts, despite the improved situation of tourism due to the stable political situation the country is still the victim of the past image which is visible as travel reluctance for Nepal and through negative and strong travel advisories. This kind of situation will be spread out immediately as word-of mouth among friends, thus decreasing travel confidence on tourist and affect tourism activities as a whole.

4.6 Other Possible factors in Nepalese Context:

From open discussions on the basis of unstructured Questionnaire (see Appendix 1), with experts of related field during our research, some more other possible factors are found to be responsible for affecting air transport for tourism.

4.6.1 Factors related to air transport

The inefficiency of Nepal Airlines to run in full capacity on both long haul and domestic routes, insufficient airport capacity, delay in flight, long processing of documents are found to be some of the critical factors affecting tourism.

Similarly, the contribution that Nepal Airlines has made to the promotion of tourism has been seriously restricted by the rigidity of state control over finance, aircraft acquisition, pricing and operational policies. Damaged by frequent political interventions, the state run airline is in critical condition. The managerial problems of this airline have caused to pull out its flight from Europe sector. Cancellation of such European flight has made a direct unfavorable impact on tourism. Unfortunately there is no any direct flight from Europe to Kathmandu till now.

Many of the problems faced by the private hotel industry in expanding tourism within the country can be directly attributed to this inability of Nepal Airlines to negotiate freely with hotels and tour operators in constructing attractive packages for the overseas markets. The poor country infrastructure and accessibility by air and by land represents a bottleneck for a considerably higher touristic inflow currently. The lack of sufficient seats on Indo Nepal sector, the poor long-haul connectivity and limited air seats are further biggest challenging factors in the race for tourism growth.

Many tourists visit Nepal for a few days only; therefore they want to best use every travel hour. In TIA, both on arrival or departure, these tourists experience sheer lack of efficient services in every step. Many of them have to spend an hour waiting for baggage and immigration processing. So, airport services and immigration in the TIA have almost always underperformed. This underperformance is a serious marketing bottleneck for Nepal's tourism. Institutional and managerial improvement, as well as development of

professionalism in the national flag carrier Nepal Airlines Corporation, has remained a big challenge.

4.6.2 Factors related to tourism

In tourism sector, national deficit of hotel rooms, inadequate access to investment capital, limited promotion and marketing compared to Asian neighbors, inadequate national training and education in the hospitality and catering services and more generally in the tourism industry are some of the major bottlenecks for the development of tourism.

Pollution in the area and security questions on trekking routes has posed a threat in marketing of Nepal. Non- involvement of local community in service provision has made tourism to concentrate on limited areas. There are number of newly identified tourist destinations, but none of them were practically developed as tourists sites. Unbalanced attention for the development of tourists sites have provided limited options to the visitors and hence confining their movements to focused areas.

The frequent Bandha (Close down) around whole nation such as educational institution, vehicular movements, industries) in the country has become a common part of political problems now a days in Nepal due to various kinds of demands from different national and regional political groups frequently is found to be the major cause for cancellation and even avoiding Nepal from the marketing brochure of the tour operators. It has deprived tourists from visiting the places of their interests and makes them stress with unnecessary worry of missing their international flights.

Despite the improved situation of tourism due to the stable political situation the country is still the victim of the past image which is visible as travel reluctance for Nepal and through negative and strong travel advisories.

CHAPTER 5

CONCLUSIONS, LIMITATIONS & RECOMMENDATIONS

The main objectives of this chapter are to summarize the main findings of the research and some limitations and recommendations for future research. To this context, this chapter contains two sections. The first section will provide the conclusion of the research. The second section will provide limitations and recommendations for further research.

5.1 Conclusions

The development of air transport is crucial for the sustainable development of tourism in Nepal but the main problem is that it is very difficult to enhance tourism effectively due to the landlocked situation of the country and lack of proper connectivity of different places by means of road transport. So, in the context of increased number of tourists every year and on the other hand, air transport is only one means of accessibility to different remote places and mountainous parts of the country with more tourism potential, there might be some relationship between air transport and tourism.

This study, therefore, aims to investigate the relationship between air transport and tourism and analyze different factors responsible for affecting air transport for tourism. Aviation liberalization in the world and in Nepal as well, many airlines has been emerged such as charter and low cost carriers that reduced fares considerably contributing substantially to the tourism boom in Nepal.

This study investigated that of two way significant positive relationship exist between air transport and tourism. In the context of Nepal, more than 80% of tourists are found to be travelling by air means that it has contributed substantially on tourism as well. It was investigated by correlation analysis for eighteen years time series data from 1990-2007 in three different cases (explained in chapter 4), its significance test (t –test) was conducted and *p* value was observed to investigate relationship.

This study also investigated many factors and observed that there are basically four major factors such as political (political instability and terrorism), economic (global financial recession, currency fluctuations, travel costs, economic strength of people), environmental (seasonality) and non-economic (choice of destinations and word-of Mouth) factors responsible for affecting air transport for tourism. It was investigated by the analysis of increasing or decreasing trend of tourists every year and showing by graph from 1990-2007 dividing into seven different time periods such as the period between 1990-1995; between 1999-2002; between 2000-2002; between 2002-2003; between 2004-2005; between 2005-2007 and between 2007-2008. It was proved that any disturbance of any economic or political situation in the originating country has had very bad impact on the flow of tourists. This study proved that the political unrest has direct impact on tourism in Nepal. Sharp decline in tourists was observed whenever crisis arises. The slow growth is observed after the crisis is subsided. However, it does not reach to pre-crisis number. Similarly, terrorism had created worst impact worldwide on tourist flow as the sharp decline in the flow of tourists after September 11 events, Iraq and Afghanistan war are its great examples. Recession in originating markets was found to be more critical factors that affect tourism market in the destination countries. Weaker currency of the originating countries, higher travel cost, and low economic conditions of the people show low propensity to travel. It was also investigated that the flow of tourists depends on the specific period of the destination countries called seasonality effect. Besides, the tourists flow depends on the facilities of the destination countries and most sensible part is the word-of Mouth publicity.

This study investigated other factors which are the underperformance of Tribhuvan international airport of Nepal, victim of past bad image towards Nepal till now and lack of development of many tourists sites.

5.2 Limitations and recommendations

This study has produced a number of interesting results while investigating the relationship between air transport and tourism but a number of limitations still exist that are necessary to be recognized and made recommendations for future research.

Limitations and recommendations are listed as follows.

1. The main findings of this study is limited to the data of air transport and tourism for eighteen years only due to the difficulty of obtaining more data as there is no proper mechanism of maintaining all data of previous years in detail in Nepal and there is no legal compulsion to publish the result regularly for public information. So, the absence of adequate data may not produce accurate findings. Further studies should cover more years' data for proper investigation.
2. Interviews were conducted with very few persons with limited number of open type questions in unstructured way because they did not provide sufficient time to answer more questions. Further study should cover more extensive questions in detail and cover the opinions of more experts working in the area of air transport and tourism.
3. This study is broadly based on secondary data. Very little primary information was collected during the short stay of this researcher to home country for one month in last summer holiday. So, it was difficult to make this study of Nepal living in Norway on the basis of primary information. It was not easier to get proper responses of structured questionnaire sent by email to different concerned authorities on time during the short period of five months because of severe energy crisis in Nepal (Load shedding for 16 hours a day) and tendency of people showing their reluctance for timely reply by email. Further study should be aware of these problems and try to collect more reliable information from both sources.
4. Different authors have suggested to apply Augmented Dickey Fuller (ADF), Phillip- Perron (PP) unit root test, and Engle-Granger Co-integration analysis for this kind of research but due to the unavailability of long period time series data, the analysis of this study is limited to the use of simple statistical tool such as correlation analysis and significance test was made to investigate the relationship between air transport and tourism as some literatures suggest this method. Further research should cover, besides these tools, extensive statistical tools mentioned above using large number of data.

List of References:

Abed, S.Y; Ba-Fail, A.O. and Jasimuddin, S.M (2001), “An econometric analysis of international air travel demand in Saudi Arabia,” *Journal of Air Transport Management*, 7, 143-148.

Abeyratne, R.I.R (1999), “Management of the environmental impact of tourism and air transport on small island developing states”, *Journal of Air Transport Management* 5, 31-37.

Adhikari, R. (2005), “Building confidence in Tourism through crisis management, Economic Policy Network, Policy paper 9”, (www document) available at http://www.mof.gov.np/economic_policy/pdf/Building_Confidence.pdf (accessed date 25.04.2009)

AeroTech Magazine (2007), “Global Air Transportation Takes Flight, Vol. 1, Issue 2, 2007”, (WWW document) available at www.honeywell.com.(Accessed date 20.03.2009)

ATAG (2008) (Air Transport action groups), “The economic and social benefits of air transport 2008”, (www document) available at <http://www.iata.org.pdf> (accessed date 19.03.2009)

ANNA (Airline network news and analysis), (www document) available at <http://www.anna.aero/2009/03/27/> (accessed date 28.03.2009)

Babatunde, M.A and Adefabi, R.A(2005), “ Long Run Relationship between Education and Economic Growth in Nigeria: Evidence from The Johansen’s Cointegration Approach”, Paper presented at the regional conference on Education in West Africa: Constraints and opportunities Dakar, Senegal, November 1st-2nd, 2005.Cornell University/CREA/Ministerede l’ Education du Senegal

Beiger, T.and Wittmer, A (2006), “Air Transport and tourism – Perspectives and challenges for destinations, airlines and governments”, *Journal of Air Transport Management* 12, 40-46.

CAAN (Civil Aviation Authority of Nepal), Civil Aviation Report 2007

CIA- (2008), (www document) available at [www.cia.gov/library/publications/the world-fact book](http://www.cia.gov/library/publications/the_world_fact_book) (accessed date 01.12.2008)

Creswell W.J. (1994), “*Research Design qualitative and Quantitative Approaches*”, sage Publications, Inc.

Dickman, S (1994), “Tourism: An Introductory text(2nd ed.). Sydney: Edward Arnold”. In Khadaroo, J and Seetanah, B (2008), the role of transport infrastructure in international tourism development: A gravity model approach, *Tourism Management* 29(2008) 831-840.

Eadigton, W.R. and Redman, M. (1991), “Economics and tourism”, *Annals of Tourism Research*, 18, 41-56.

Foster T. (1998), “*Industrial marketing Communication-an Empirical Investigation on the use Marketing Communication Tools*”, Lulea University of Technology.

Gearing, C.E. (1974), “Establishing a measure of touristic attractiveness”, *Journal of Travel Research*, 12, 1-8

Graham, A. (2006), “Have the major forces driving leisure airline traffic changed?” *Journal of Air Transport Management*, 12, 14-20.

Graham,A., Papatheodorou, A. and Forsyth, P (2008), “Trends and Characteristics of Leisure Travel demand” *Aviation and Tourism, Implications for Leisure Travel, 2008*” TJ international Ltd, Padstow, Cornwall, Great Britain.

Gujarati, D.N. (2003), “Basic Econometrics”, McGraw-Hill publication (Fourth Edition).

Hall, D.R (1999), “Conceptualizing Tourism Transport: Inequality and Externality Issues2”, *Journal of Transport Geography* 7, 181-8 in Graham,A., Papatheodorou, A. and

Forsyth, P eds. “*Aviation and Tourism, Implications for Leisure Travel, 2008*” TJ international Ltd, Padstow, Cornwall, Great Britain.

Harrison, D (1995), “International Tourism and the Less Developed Countries; the Background”, in D.Harrison (ed.) *Tourism and the Less Developed Countries*(Chichester: John Wiley and Sons)1-18. In Graham,A., Papatheodorou, A. and Forsyth, P eds. “*Aviation and Tourism, Implications for Leisure Travel, 2008*” TJ international Ltd, Padstow, Cornwall, Great Britain.

Hsu, T; Tsai, Y. and Wu, H. (2009), “The preference analysis for tourist choice of destination: A case study of Taiwan”, *Tourism Management* 30 (2009) 288-297.

ICAO (2007), Civil Aviation Statistics of the world: ICAO statistical Yearbook 1966-2007.

Inskeep, E. (1991), “Tourism Planning-An Integrated and Sustainable Development Approach”, Wiley, New York. In Beiger, T.and Wittmer, A(2006), Air Transport and tourism – Perspectives and challenges for destinations, airlines and governments, *Journal of Air Transport Management* 12 (2006) 40-46.

Ishutkina, M. A. and Hansman, R. J. (2005), “Analysis of Interaction between Air Transportation and Economic Activity”, (www document available at **Error! Hyperlink reference not valid.** date 19.03.2009)

Jenelle, D.G and Beuthe, M (1997), “Globalization and research issues in Transportation”, *Journal of Transport Geography* 5:3, 199-206. In Graham,A., Papatheodorou, A. and Forsyth, P eds. “*Aviation and Tourism, Implications for Leisure Travel, 2008*” TJ international Ltd, Padstow, Cornwall, Great Britain.

Koc, E. and Altinay, G. (2007), “An analysis of seasonality in monthly per person tourist spending in Turkish inbound tourism from a market segmentation perspective”, *Tourism Management* 28, 227-237.

Khadaroo, J and Seetanah, B (2008), “The role of transport infrastructure in international tourism development: A gravity model approach”, *Tourism Management* 29(2008) 831-840.

Latzko, David A (2003), "Tourism and Fluctuations in the Hawaiian Economy", Business and Economic Devison Pennsylvania state University (www document) available at <http://www.personal.psu.edu.pdf> (accessed date 01.o5.2009)

Li, Gang (2008), " The Nature of Leisure Travel Demand," in Graham,A., Papatheodorou, A. and Forsyth, P eds. "*Aviation and Tourism, Implications for Leisure Travel, 2008*" TJ international Ltd, Padstow, Cornwall, Great Britain.

Miles and Huberman (1994), "*Qualitative data analysis: an expanded sourcebook*", sage, Cop.

Mill, R.C. & Morrison, A.M.(1985), "The Tourism system: An introductory text", Englewood Cliffs, NJ: Prentice-Hall. In Khadaroo, J and Seetanah, B(2008), The role of transport infrastructure in international tourism development: A gravity model approach, *Tourism Management* 29(2008) 831-840.

MOF (2008): Ministry of Finance, Government of Nepal, "Economic survey 2008", (www document) available at www.mof.gov.np (12.02.2009)

MOTC: Ministry of Tourism and Civil Aviation, Government of Nepal, Summary of Tourism statistics 2007, (www document) available at www.tourism.gov.np (accessed date 12.02.2009)

Naudee, W.A., and Saayman, A.(2005), "Determinants of tourists arrivals in Africa: A panel data regression analysis", *Tourism Economics*, 11(3), 365-391. In Khadaroo, J and Seetanah, B (2008), The role of transport infrastructure in international tourism development: A gravity model approach, *Tourism Management* 29(2008) 831-840.

NRB (Nepal Rastra Bank, Central Bank of Nepal (2007), (www document) available at www.nrb.org.np (accessed date 23.03.2009)

NTB (Nepal Tourism Board, 2008), (www document) available www.welcomenepal.com/nepal/index.asp (accessed date 24.03.2009)

Papatheodorou, A. (2002). Civil aviation regimes and leisure tourism in Europe, *Journal of Air Transport Management* 8, 381-388.

Salleh, N.H.M, Othman, R and Ramachandran S. (2007), "Malaysia's Tourism Demand from Selected Countries: The ARDL Approach to Cointegration", *International Journal of Economics and Management* 1 (3): 345-363.

Saunders M.N.K., Lewis p. and Tornhill A. (2000), "*Research Methods for Business Students*", England, Pearson Education Limited.

Sekaran U. (1992), "*Research Methods for Business: A Skill- Building Approach*", Canada, John Wiley & Song Inc.

Shaw, S and Thomas, C (2006), "Social and Cultural Dimensions of Air Travel Demand: Hypermobility in the UK?", *Journal of Sustainable Tourism* 14, 209-15. In Graham,A., Papatheodorou, A. and Forsyth, P eds. "*Aviation and Tourism, Implications for Leisure Travel, 2008*" TJ international Ltd, Padstow, Cornwall, Great Britain.

Summary Outlook (2008-2027), (WWW document) available at http://www.boeing.com/commercial/cmo/pdf/boeing_cmo_summary_2008.pdf (accessed date 18.02.2009)

Turton, B. J. and Mutamirwa, C. C. (1996), "Air Transportation services and the expansion of international tourism in Zimbabwe", *Tourism Management*, Vol. 17, No.6, PP 453-462, 1996

Tull D.S. and Hawkins D.J (1984), "*Marketing Research Management and Method*", New York, Macmillan Publishing Company

UNWTO (2008): United Nations World Tourism organization, (www document) available at www.exxun.com/nepal/c_pp.html (Accessed date 26.03.2009)

Wheatcroft, S. (1994), "Aviation and tourism policies balancing the benefits", London: Routledge. In Prideaux, B(2000), The role of the transport system in destination development, *Tourism Management* 21(2000) 53-63.

Wickremasinghe, G.B. and Ithalanayake, R. (2006), "The Causal Relationship Between Tourism and Economic Growth in Sri Lanka: Some Empirical Evidence", Working Paper Series School of Applied Economics, Victoria University, WP 2006.10, December 2006.

Wiggings, M.W. and Stevens, C. (1999), "*Aviation social science: research methods in practice.*" Ashgate, Aldershot. In Halpern, Nigel (2006). *Market orientation and the performance of airports in Europe's peripheral areas.* PhD thesis, Cranfield University, London

Williams, A.M and Balaz (2000), "Tourism in Transition: Economic Change in Central Europe," (London: IB.Tauris) In Graham, A., Papatheodorou, A. and Forsyth, P eds., "*Aviation and Tourism, Implications for Leisure Travel, 2008*" TJ international Ltd, Padstow, Cornwall, Great Britain.

Williams, A.M and Shaw, G. (1998), "Introduction: Tourism and Uneven Economic Development", 1-16 . In Graham, A., Papatheodorou, A. and Forsyth, P eds. "*Aviation and Tourism, Implications for Leisure Travel, 2008*" TJ international Ltd, Padstow, Cornwall, Great Britain.

World Travel and Tourism Council (2008), (www document).available at wttc.org/eng/Nepal/ (accessed date 26.03.2009)

Yin R.K. (1994), "Case study Research: Design and Methods (2nd ed.)", the United States of America, sage publications Inc.

Appendices:

Appendix 1: Questionnaire

Q. 1

How do you analyze the current situation of air transport in Nepal?

Q. 2

Does the present weak condition of Nepal airlines (National flag carrier) affect tourism development of Nepal?

Q. 3

What do you think the current barriers for the sustainable development of air transport and tourism?

Appendix 2:

Meeting/Interactions with Individual:

- | | | |
|---------------------|-------------------------------|------------------|
| 1. Mr. Vinay Shakya | Senior Manger (Yeti Airlines) | Date: 10.07.2008 |
| 2. Mr D.P. Dhakal | Tourism Expert | Date: 17.07.2008 |
| 3. Mr. K. Bhandari | Officer Nepal Tourism Board | Date: 18.07.2008 |

Appendix 3: Price (Cost) Comparison⁵:

1. Option 1:

Total price: £ 1,089.40 GBP			
Price per adult including taxes and booking fees: £ 1,089.40 GBP			
✈ Outbound: Mon 29 June 09 Please select flight time			
Departing	16:35	Oslo Airport, Norway	Duration: 20:40 , 2 stop(s) Availability good
Arriving	17:00 + 1 day(s)	Kathmandu, Nepal	Qatar Airways 
Departing	19:05	Oslo Airport, Norway	Duration: 18:10 , 2 stop(s) Availability good
Arriving	17:00 + 1 day(s)	Kathmandu, Nepal	Qatar Airways 
✈ Inbound: Sat 29 August 09			
Departing	20:25	Kathmandu, Nepal	Duration: 20:50 , <u>2 stop(s)</u> Availability good
Arriving	13:30 + 1 day(s)	Oslo Airport, Norway	Qatar 

Option 2:

Total price: £ 1,131.10 GBP			
Price per adult including taxes and booking fees: £ 1,131.10 GBP			
✈ Outbound: Mon 29 June 09 Please select flight time			
Departing	16:55	Oslo Airport, Norway	Duration: 21:15 , 2 stop(s) Availability good
Arriving	17:55 + 1 day(s)	Kathmandu, Nepal	Gulf Air 
Departing	16:55	Oslo Airport, Norway	Duration: 21:15 , 2 stop(s) Availability good
Arriving	17:55 + 1 day(s)	Kathmandu, Nepal	Gulf Air 
✈ Inbound: Sat 29 August 09			
Departing	19:10	Kathmandu, Nepal	Duration: 24:55 , <u>2 stop(s)</u> Availability 7 Seats


⁵ Source-www.opodo.com

Arriving 16:20	Oslo Airport, Norway	Gulf Air 
+ 1 day(s)		
Departing 19:10	Kathmandu, Nepal	Duration: 22:05 , <u>2 stop(s)</u> Availability 7 Seats
Arriving 13:30	Oslo Airport, Norway	Gulf Air 
+ 1 day(s)		






Option 3:

Total price: £ 1,938.90 GBP		
Price per adult including taxes and booking fees: £ 1,938.90 GBP		
	Outbound: Mon 29 June 09	Please select flight time
Departing 16:55	Oslo Airport, Norway	Duration: 18:05 , 2 stop(s) Availability good
Arriving 14:45	Kathmandu, Nepal	Virgin Atlantic 
+ 1 day(s)		
	Inbound: Sat 29 August 09	
Departing 15:45	Kathmandu, Nepal	Duration: 28:15 , <u>2 stop(s)</u>

Total price: £ 540.70 GBP		
Price per adult including taxes and booking fees: £ 540.70 GBP		
	Outbound: Mon 29 June 09	Please select flight time
Departing 09:00	Oslo Airport, Norway	Duration: 12:00 , 1 stop(s) Availability 4 Seats
Arriving 00:30	Delhi Indira Gandhi International Airport, + 1 day(s) India	Aeroflot 
	Inbound: Sat 29 August 09	
Departing 02:50	Delhi Indira Gandhi International Airport, India	Duration: 22:05 , <u>1 stop(s)</u>

Total price: £ 634.00 GBP		
Price per adult including taxes and booking fees: £ 634.00 GBP		
	Outbound: Mon 29 June 09	Please select flight time

Departing	20:50	Oslo Airport, Norway	Duration: 22:40 , 1 stop(s)
Arriving	23:00	Delhi Indira Gandhi International Airport, + 1 day(s) India	Availability good British Airways 
✈ Inbound: Sat 29 August 09			
Departing	08:15	Delhi Indira Gandhi International Airport, India	Duration: 17:40 , <u>1 stop(s)</u> Availability good
Arriving	22:25	Oslo Airport, Norway	British Airways 
Departing	08:15	Delhi Indira Gandhi International Airport, India	Duration

Total price: £ 659.60 GBP			
Price per adult including taxes and booking fees: £ 659.60 GBP			
✈ Outbound: Mon 29 June 09 Please select flight time			
Departing	12:15	Oslo Airport, Norway	Duration: 15:15 , 2 stop(s) Availability 4 Seats
Arriving	07:00	Delhi Indira Gandhi International Airport, India + 1 day(s)	Lufthansa 
Departing	12:15	Oslo Airport, Norway	Duration: 15:15 , 2 stop(s) Availability 4 Seats
Arriving	07:00	Delhi Indira Gandhi International Airport, India + 1 day(s)	Lufthansa 
Departing	13:15	Oslo Airport, Norway	Duration: 14:15 , 2 stop(s) Availability 4 Seats
Arriving	07:00	Delhi Indira Gandhi International Airport, India + 1 day(s)	Lufthansa 
Departing	16:05	Oslo Airport, Norway	Duration: 11:25 , 2 stop(s) Availability 4 Seats
Arriving	07:00	Delhi Indira Gandhi International Airport, India + 1 day(s)	Lufthansa 
✈ Inbound: Sat 29 August 09			
Departing	01:20	Delhi Indira Gandhi International Airport, India	Duration: 21:15 , <u>1 stop(s)</u> Availability good
Arriving	19:05	Oslo Airport, Norway	SWISS 
Departing	01:20	Delhi Indira Gandhi International Airport, India	Duration: 11:30 , <u>1 stop(s)</u> Availability good
Arriving	09:20	Oslo Airport, Norway	SWISS

Total price: £ 204.20 GBP
 Price per adult including taxes and booking fees: £ 204.20 GBP

✈ Outbound: Tue 30 June 09 Please select flight time

Departing 08:25 Delhi Indira Gandhi International Airport, India Duration: **01:30** , Non-stop
 Availability **4 Seats**

Arriving **10:10** Kathmandu, Nepal Indian Airlines 

Departing 13:40 Delhi Indira Gandhi International Airport, India Duration: **01:30** , Non-stop
 Availability **4 Seats**

Arriving **15:25** Kathmandu, Nepal Indian Airlines 

✈ Inbound: Sat 29 August 09

Departing 11:00 Kathmandu, Nepal Duration: **01:30** , Non-stop
 Availability **4 Seats**

Arriving **12:15** Delhi Indira Gandhi International Airport, India Indian Airlines

Total price: £ 217.20 GBP
 Price per adult including taxes and booking fees: £ 217.20 GBP

✈ Outbound: Tue 30 June 09 Please select flight time

Departing 12:55 Delhi Indira Gandhi International Airport, India Duration: **01:35** , Non-stop
 Availability **7 Seats**

Arriving **14:45** Kathmandu, Nepal Jet Airways 

✈ Inbound: Sat 29 August 09

Departing 09:30 Kathmandu, Nepal Duration: **01:55** , Non-stop
 Availability **7 Seats**

Arriving **11:10** Delhi Indira Gandhi International Airport, India Jet Airways