

**MPhil Dissertation**

**Influence of Distance, Culture and Perceived Corruption  
on Inbound Tourism Flows in Pakistan**

*Dissertation submitted to department of Econometrics & Statistics, Pakistan Institute of  
Development Economics, Islamabad in partial fulfilment of the requirements for the  
degree of Master of Philosophy in Econometrics*



**Muhammad Qayyum**

17/MPhil-ETS/PIDE/2013

**Supervised By:**

**Dr. Saqlain RAZA**

**Assistant Professor, CIIT**

**Mr. Muhammad Junaid**

**Assistant Professor, QAU**

**Pakistan Institute of Development Economics (PIDE),  
ISLAMABAD**

## **Authorship Statement**

I, Muhammad Qayyum solemnly declare and affirm on oath that I myself have authored this M.Phil Thesis with my own work and mean and I have not used any further means except those I have explicitly mentioned in this thesis. All items copied from internet or other written sources have been properly mentioned in quotation marks with a reference to the source of citation.

Muhammad Qayyum s/o Ayub Ahmad

## **Acknowledgment**

Nothing could be possible without the help of ALLAH and affection of Prophet MUHAMMAD (Peace Be Upon Him). I would like to express my deep gratitude to Dr. Saqlain Raza, my research supervisor for his patient guidance, enthusiastic encouragement and useful critiques to complete this research work. He was always there whenever I need his assistance and guidance, especially, during thesis writing. I would also like to thank Mr. Muhammad Junaid, Head of Quaid-e-Azam School of Management Sciences for his advice and sincere assistance in keeping up my progress. My grateful thanks are also extended to my teacher Dr. Hafsa Hina who is always helpful and a very nice teacher. A bundle of thanks to the students and teachers of Department of Econometrics & Statistics of PIDE, especially all my dear class fellows. My deepest appreciation and sincerest thanks to Miss Neelam Younas for being helpful and becoming a source of encouragement at every stage of my study. Cordial and sincere obligations are rendered to my Mother, whose hands always raised with unlimited affection by virtue of which I could reach at this position. My humble thanks to my dear Father and my sweet family for their encouragement and unconditional support for the completion of my education.

**Muhammad Qayyum**

**THIS THESIS IS DEDICATED TO:**

*Hazrat*

***UMAR FAROOQ (R.A)***

**THE COMPANION AND THE MAN WHO DEVOTED HIS LIFE FOR  
JUSTICE.THE ONE AND ONLY JUST RULER IN THE TRUE SENSE.  
NO WORD IS WORTH OF HIS HIGHNESS. MAY ALLAH BE  
PLEASED WITH HIM.**

# TABLE OF CONTENTS

<b>Chapter</b>	<b>Title</b>	<b>Page</b>
<b>1.</b>	<b>Introduction.....</b>	<b>1</b>
1.1.	Tourism in Pakistan.....	2
1.2.	Culture,Corruption Perception, Uncertainty Avoidance.....	3
1.3.	Research Question.....	4
1.4.	Objective of the Study.....	5
1.5.	Hypothesis.....	5
1.6.	Significance of theStudy.....	6
1.7.	Organisation of the Study.....	6
<b>2.</b>	<b>Review of Literature.....</b>	<b>7</b>
<b>3.</b>	<b>Data and Methodology.....</b>	<b>11</b>
3.1.	Model Specification.....	11
3.2.	Econometric Methods.....	18
3.3.	Data Description.....	19
<b>4.</b>	<b>Results and Discussion.....</b>	<b>23</b>
4.1.	Traditional Tourism demand Model.....	23
4.2.	Gravity Model.....	25
4.3.	Mixed Panel Data Gravity Model.....	27
<b>5.</b>	<b>Conclusion .....</b>	<b>32</b>
5.1.	Policy Recommendations.....	33
	<b>References.....</b>	<b>34</b>

## **List of Tables**

<b>Table No.</b>	<b>Title</b>	<b>Page No.</b>
3.1	Data Summary	21
4.1	Estimation results of Traditional Tourism Demand Model	24
4.2	Estimation results of Gravity Model	26
4.3	Estimation results of Mixed Panel Data Gravity Model	30

## **List of Abbreviations**

<b>List</b>	<b>Abbreviations</b>
CD	Cultural Distance
PKR	Pakistani rupees
UAI	Uncertainty Avoidance Index
PS	Substitute Price
Dist	Geographical Distance
Cpi	Consumer Price Index
CPI	Corruption Perception Index
GDP	Gross Domestic Product
US	United States
UAE	United Arab Emirates
NZ	New Zealand

# Chapter 1: Introduction

---

The successfulness of many businesses is contingent largely or solely on the condition of tourism demands<sup>1</sup> (Song et al. 2009). It is one of the top most economic growing sectors in the world and a source of immense increase in the GDP of a country with a higher proportion than any other economic activity (Saleh et al. 2013). Inbound tourism for developing countries as superior good possibly will become a significant factor for economic growth, as demand increases more proportionally than with world income (Vietze 2012).

Notably, a number of inbound tourism demand modelling research accentuate its importance towards economic development of destination country (Daniel and Ramos 2002, Shareef and McAleer 2005, Kuo et al. 2014). And analysing inbound tourism demand is highly acknowledged from the literature (Yang and Wong 2012, Lim 1997, Ahn and Mc Kercher 2013). This indicates the influence of tourism on the economic development.

Destination countries serve differently for tourists in the form of business, economic, leisure, religious, social, and culture, and consequently, tourists consume destinations differently. Studies mentioned above mainly analysed economic determinants of inbound tourism but rarely talked about social and cultural differences between origin and destination countries along with their economic impacts on destination country, as these issues are very important to understand in order to know the tourist behaviour.

As inbound tourism could be an appropriate factor for growth, an important question to answer arises here is that which economic as well as cultural determinants can push the demand for tourism. In other words, we strive to analyse whether cultural and social determinants influence the tourists' behaviour along with economic determinants for inbound flow in Pakistan, using panel data. Moreover, some econometric issues pertaining to panel data would also be complemented with the demand model like time invariant and time variant variables are incorporated using Random effects and Fixed Effects techniques respectively. Hausman test for comparison between R.E and F.E has been used. Other specification tests as correlation test and Wooldridge test had been included. Panel data specification is used as it is more precise and reliable as compared to other time series or cross sectional techniques. Furthermore, panel data is quite appropriate for tourism related studies having more frequency of data.

---

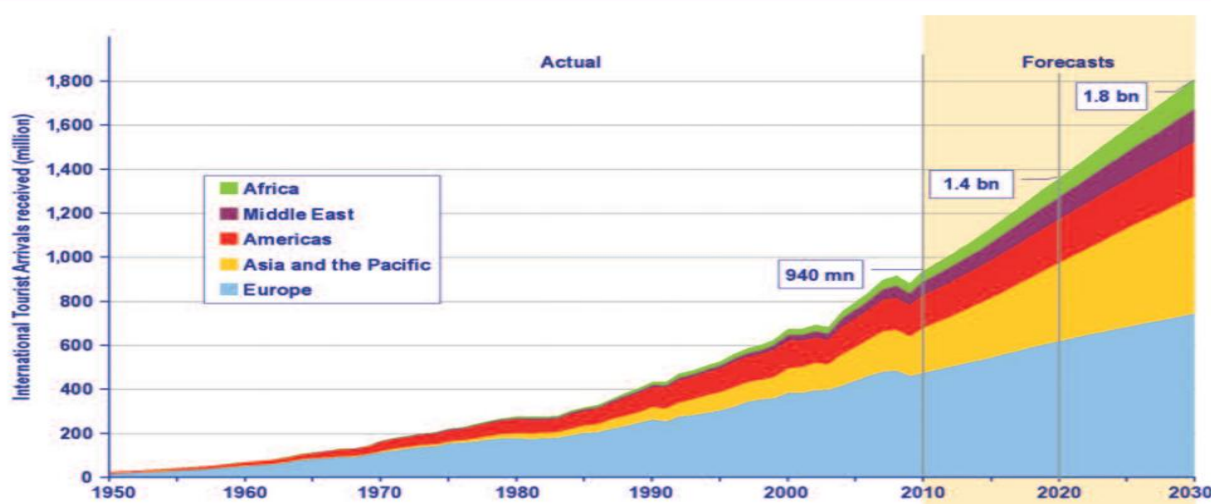
<sup>1</sup>Companies such as airlines, tour operators, hotels, cruise ship lines, and many recreation facility providers and shop owners are interested in the demand for their products by tourists. 1 in 11 persons in the world is associated in tourism job and the sector comprises of 6% of the world's exports.

## 1.1 Tourism in Pakistan

In spite of occasional shocks, international tourist arrivals have shown virtually uninterrupted growth from 25 million in 1950 to 1087 million in 2013 (UNWTO, annual report 2014), and these are expected to reach 1.8 billion up to 2030 with an annual increase of 3.3%. Asia is, and will be, the fastest growing region for tourist arrivals by receiving 248 million international tourists in 2013 (23% of the world's total) and earned US\$ 359 billion (WTO 2014).

**Figure No. 1: UNWTO's tourism trends and forecasts.**

UNWTO Tourism Towards 2030: Actual trend and forecast 1950-2030



Pakistan has a vast variety of charming places to attract tourist's attention from all over the world. Ranging from deserts to lush green forests, plain areas to top mountain ranges, very hot weather to immense cold places, rivers to seas, modern to ancient civilizations, leisure to business opportunities, existence of multiple religions, etc. all make Pakistan a beautiful country which influence tourist's decisions to visit Pakistan. International tourist arrivals in Pakistan in 1995 were only 3, 78,000 but this number reached to 11, 61,000 in 2011. Despite worst political and economic conditions of Pakistan, tourists tend to visit Pakistan with an annual growth rate of 12.17% from 1995 to 2011. Likewise Pakistan received US\$ 373 million international tourism receipts in 2011. Inbound tourism demand for Pakistan is based on to analyse social, cultural and economic determinants that influence tourist behaviour.



## **1.2 Culture, corruption perception, uncertainty avoidance and tourists' behaviour**

### **1.2.1 Culture and cultural distance**

Culture is defined as, the collection of mutual meanings, rituals, norms, and traditions amongst members of a society, is the combined programming of mind that differentiates members of one society from another (Soloman 1996). Hofstede<sup>2</sup> (2001, p. 10) argues that “culture is to human collectively what personality is to the individual.”

Cultural distance (CD) between origin and destination countries could influence tourists' mind (Crotts 2004, McKercher et al. 2006) and ultimately influence their choice of visiting country (Basala and Klenosky2001, Ng et al. 2007, McIntosh andGoeldner 1986). Ng et al. (2007) introduced the similarity-attraction hypothesis, suggesting that individuals are normally attracted towards others havingparallelprinciples and values. Kastenholz (2010) suggested that higher cultural distance may wellincrease feelings of oddity, dissimilarity and difficulty, reducing lots of people from travelling to culturally distant destinations.

These studies discussed the influence of CD on individual tourists, but rarely find any study that describes the part of CD in finding out the tourism demand except Yang and Wong (2012). Our research will analyse the affectof CD on tourism inflows within the confines of tourismdemand perusal from a macro angle.

### **1.2.2 Perceived corruption**

Another important societal factor which greatly influences tourists' behaviour is ‘perceived corruption’ of a given country.Economic literature has merely found corruption in tourism (AnatusiandNnabuko 2012, Poprawe 2015) andalldefine‘corruption’ in general terms as ‘an illegal payment to a public agent to obtain a benefit for a private individual or firm’ (Rose-

---

<sup>2</sup>Hofstede's (1980) work has a great influence in the improvement of knowledge regarding cultural distance. His initial effort differentiated among countries on four cultural facets: Power Distance; UncertaintyAvoidance; Individuality and Masculinity. After that, he has included another two dimensions: Long-Term Orientation, in 1991; and Indulgence versus Restraint in 2010 (Hofstede, 2012; Hofstede, Hofstede, and Minkov, 2010). Culture has largely been ignored as potential predictor of tourists' destination choice (Jackson, 2001; Jackson, White and Schmiere, 2000). This is surprising as it has long been recognized that culture influence people's decision making process. Indeed, cultural differences have been suggested as a possible reason why consumers and mangers in different countries make different decisions.

Akerman 1999); or ‘an act in which the power of public office is used for personal gain in a manner that contravenes the rules of the game’ (Aidt2003).

Corruption has been considered widely as detrimental like “sanding the wheels of growth” (Meon and Weill 2010) while for some researchers it support “greasing the wheels” hypothesis (Dreher and Gassebner 2013) for the macroeconomic well-being. In our research, we investigate the result that perceived corruption imposes on tourism demand.

### **1.2.3 Uncertainty avoidance**

Uncertainty Avoidance is another important dimension of culture and it is regarded as forbearance for unpredictability and fluctuation within the society. It shows the level to which representatives of a culture feel frightened by unsure or doubtful situations (Hofstede 1980, 2001). Hofstede (1989) has suggested that some cultural gaps are more disruptive than others. In particular, Hofstede offered that differences in uncertainty avoidance are potentially the most problematic cultural dimension for international cooperation due to its relationship to tolerances for risk and prescribed behaviour.

Uncertainty avoidance has been frequently discussed in the tourism literature across multi-cultural settings (Money and Crotts 2003, Litvin et al. 2004, Pizam and Fleischer2005) but rarely argued in the economic perspective. Aggravating issues related to uncertainty avoidance which are discussed in the economic literature are individual security on a tour created by whichever political aggression or terrorism (Baker 2014, Sönmez, 1998, Eilat and Einav 2004, Neumayer 2004, Raza et al. 2013).

In tourism literature, panel data settings have been argued widely in economic framework, but rarely discussed in the econometric studies. For example, how to deal with time-changing and time-invariant variables in panel data settings is a point in question. So, in our study we also aim to analyse these two types of variables according to the standard methodology.

## **1.3 Research Questions**

Taking the issue of research under consideration, this study aims to investigate to the following research questions:

- 1.1 Whether perceived corruption has a negative impact on tourist’s decision to visit Pakistan?
- 2.1 Does cultural distance (CD) influence the demand of tourist inflow in Pakistan?
- 3.1 Does uncertainty avoidance have any impact on the inbound tourism flows?

## 1.4 Objective of the Study

Following are the objectives of the study:

- 1) To analyse the influence of perceived corruption and Cultural Distance on inbound tourism flows in Pakistan within the confines of tourism demand perusal from a macro angle.
- 2) To analyse the impact of Uncertainty Avoidance in tourist's decision behaviour in visiting Pakistan and to corroborate that uncertainty avoidance could possibly have a self control effect on Cultural Distance's impact on tourism movements.

## 1.5 Hypothesis

Based on the research questions and objective of our study, we are going to construct the main hypotheses for our research:

- 1) The lower the cultural distance between origin countries and Pakistan, the higher the likelihood that he/she will visit Pakistan.
- 2) For corruption variable, our data allows to test two of hypotheses:-
  - I. In accordance with 'greasing the wheels' hypothesis, corruption might be helpful for travellers, and states having more supposed corruption will get more travellers as compared to those states having small perceived corruption, *ceteris paribus*.
  - II. In accordance with the 'sanding the wheels' hypothesis, corruption could be damaging for travellers, and states having little perceived corruption will get more travellers as compared to those states having more perceived corruption, *ceteris paribus*.
  - III. The more the uncertainty avoidance, the more will be the negative effect of cultural distance on tourism demand and vice versa.

As far as first hypothesis is concerned, if CD results in accordance with our hypothesis it would enhance the demand for tourism inflows. On the other hand, second hypothesis would be tested to know that whether corruption is economically beneficial for tourism inflows or otherwise.

## **1.6 Significance of the Study**

The influence of cultural distance and corruption on both intended destination selection and succeeding behaviour has hardly been studied in the tourism literature. Our research will analyse the impact of CD and corruption perception on tourism flows within the confines of tourism demand perusal from a macro angle. Khalil Samina et al. (2007) utilized various time series models to estimate the role of inbound tourism and its impact on economic growth. But hardly any study identified the determinants of tourism arrivals for Pakistan. According to our knowledge, this study is the first attempt to model the factors influencing inbound tourism using panel data models.

Our research will contribute to the literature in several specific ways. First, we will quantify the impact of perceived corruption on Pakistan tourism inflows using a panel dataset. Second, Cultural Distance will be contemplated in the framework of tourism demand examination, and its affect on tourism inflows would also be determined. Third, by instigating an interaction term comprising of both the Uncertainty Avoidance Index (UAI) and CD into the model, the results of this research will also impart some affirmation on the importance of the self-control effect of uncertainty avoidance on cultural distance. Finally, we attempt to estimate those variables that are time-invariant and time-variant in a panel data setting in tourism. More specifically, this study controls for the geographic characteristics, macroeconomic variables, infrastructure, and sociological aspects of tourism and overcoming the omitted variable bias.

## **1.7 Organization of the Study**

Our study is organized in a specific manner. The whole document is divided into four chapters. First chapter is based on the introduction of the whole study. It is further desegregated having subsections as research question, objective of study, hypothesis and significance of the study etc. Second chapter comprises of the literature review. Third chapter is based on data and methodology. This chapter includes the complete description and summary of data. Methodology part is further divided into two portions, first is based on model specification which comprises of complete details of models which we will utilize in the research and the second portion includes the description of econometric techniques/ estimation techniques which we are going to perform for our research. Fourth chapter includes the results and discussions part. In this chapter we have presented and interpreted the results of all the models in a selective manner. At the end, we have concluded our study and included some references.

## Chapter 2: Literature Review

---

In the last decade, there has been an increasing interest in the concept of national culture/cultural traits and distance in the field of tourism research (Lee et al. 2012, Yang et al. 2012). Many studies have been conducted focusing on a comprehensive understanding of influence of national culture on tourists' behaviour such as information search (Money and Crofts 2003), satisfaction behaviour (Crofts and Erdmann 2000), and perceptions (Kozak et al. 2007). Likewise much literature is present giving the precise information about influence of distance on tourist decision making (Ng et al. 2007).

The coverage of sectoral tourism research in econometrics is limited. Already present researches are mainly bounded to evaluate cultural distance between origin and destination countries and tourist experiences and pre-visit decisions (Basala and Klenosky 2001, San Martin and Rodriguez del Bosque 2008, Crofts 2004, Correia et al. 2011). Various researches have tried to respond the question that what establishes the demand for inbound tourism in culturally distant settings (Yang and Wong 2012, Ahn and McKercher 2013) but they did not discuss econometric features in their analyses.

The impact of crisis and crime on tourism have been studied by Wang ((2009), Ziramba and Moyo(2013) and Kozak et al. (2007) with the hypothesis that these factors affect negatively the tourist decision of visiting a country. These incidents may affect long-run relationship among macroeconomic variables but short-run relationship must be perturbed. These incidents have negative impact on tourism as well as on economic, social and psychological condition of the destination *e.g.* limiting job opportunities, losing trust towards others and feeling of insecurity. These analyses are based on Auto Regressive Distributed Lag (ARDL) model with bound testing approach which is useful in the analysis for determining long-run and short-run relationships among the factors and their demand (Pesaran et al. 1995, 1999). This approach is based on burdensome theoretical justifications that can cause deteriorated results.

Some studies analyse tourism demand based on panel data (Morley et al. 2014, Eilat and Einav 2004, Keum 2010, Ledesma-Rodriguez 2001) but these studies rarely highlighted essential econometric features of panel data except in Poprawe (2015) who considered time-variant and time-invariant variables while analysing panel data.

Cultural differences impact human economic behaviour by making decisions according to the community characteristics. Ultimatum game study from Machiguenga and Los-Anegles analysed that people make economic decision not individually but they are also influenced by the culture (Henrich 2000, Ahn et al. 2015).

Likewise, cultural distances also affect tourist decisions of visiting other countries. It is assumed and analysed in a number of studies that increased cultural distance decrease the tourist willingness to visit a country (Ferradeira et al. 2011). Hofstede's (1980, 1991) framework to measure cultural distance and adjusted version provided by Sproles and Kendall (1986) is being used in the cultural distance studies. Different cultural traits influence the tourist choice in different manner. For example, Power Distance Index (PDI) is proved to be the most influential cultural trait that impact heavily on the tourist choice of site. Secondly, tourists also plan their trips by anticipating Uncertainty Avoidance Index (UAI) of destination country (Money and Crotts, 2003) and comparing with their own. Majority of the tourists avoid risky destinations by perceiving risk (Kozak et al. 2007) or they shorten duration of the tour (Crotts, 2004).

Poprawe (2015) has examined the impact of corruption on tourists' travelling activities. Three estimation techniques have been utilized. Fixed effect technique has been utilized for only time-variant variables as this technique is unable to estimate time-invariant variables. Dynamic GMM has been applied to account for the lagged effect of dependent and independent variables. Hausman-Taylor technique has been used for estimating the coefficients of time-invariant variables. The results proved that corruption imposed harmful results on tourism influx, hence corroborating the hypothesis of 'sanding the wheels'. In general, the major results of this work corroborate earlier results and augment them by demonstrating that perceived corruption has a considerable influence on tourism. Particularly, a 1-tip addition to the Corruption Perception Index, indicating a reduction in corruption, increases travellers upto 2–7%, depending on the condition. As tourism sector is contributing a larger share to GDP in developing countries in particular, a policy proposition is presented that lowering the public sector corruption will boost an economy more than one way: i.e by rising growth, investment and GDP (as illustrated by Mauro, 1995 and other researchers) and by escalating earnings from tourism.

Leung et.al (2012) studied robustness of distance decay for international pleasure travellers through a longitudinal approach. This research inspects the association among distance and

destination choice of Hong Kong international enjoymenttravellers' movement over a decade. Panel data used in this study was composed from the yearly domestic tourism reviews on enjoymenttrips of Hong Kong locals during the phase 2001–2010. Approximately 70% of whole trips occurred in the destination places inside the 2000-mile radius of Hong Kong. The outcomes with collective data discover a constant distance decay prototype with secondary peaks among Hong Kong international pleasure travellers. The results of this research confirm that distance have an important function in travellers' choice of destination. Generally, trip duration escalated as distance from Hong Kong rise. This researchproposes a threshold of Hong Kong travellers who took international enjoyment trip, which is three-hour flight for a five-day trip and it has not been recognized in precedingresearches.

Yang et.al (2012) focused on the examination of the determinants of China inbound tourism movements and seeks out to decide the affect of cultural distance (CD) on tourism movements from a large-scaleviewpoint. Three models have beenproposedcounting a conventional tourism demand model, a gravity model, and a mixed panel data gravity model with different sets of important variables according to their utilisation. Income variable showed a positive outcomeon tourism manoeuvrehavingelasticity greater than 1, which shows that travellers from far-off countriescontemplate travelling to China asmagnificence. The Tiananmen Square Event in 1989 imparted negative consequences on tourism, while the outcome of the Asian Financial Crisis in 1997 and the SARS outbreak in 2003 were not outstanding.Increasing number of Chinese in origin countriesis favourable indicator, indicatingthe “word of mouth” impact. The negative coefficient of cultural distancSpecifies that higher cultural distancehamper international travelling. It is also concluded that the magnitude of the antiimpact of CD on tourism flows is contingent on uncertainty avoidance index (UAI); that is, more the tourists try to avoid unpredictability, larger will be the negative impact of Cultural Distance on the tourism placeselection. Regarding lacunas of theempirical evidence, this study used social axiom for measuring country level culture that can be incorrect and can be imprecise as we have no information that whether CDrecognised by concerned tourists is the same as according to that in the mean Cultural Distance level of that country.

Ng et.al (2006) found cultural similarity as one of the important reason due to which people of different countries make different decision about destination. Clark and Pugh's<sup>3</sup> coefficient was highly correlated with tourist's intention to visit destinations. Their study has also supported and verified the similarity-attraction hypothesis. Cultural similarities might be language, food, religion etc.

Vietze (2012) discussed the outcomes of cultural – and in particular religious – aspects on tourist influx into the USA as the world's biggest tourism destination. For estimating this numerically, an improved gravity equation is used. End results provide confirmation that the gravity equation is a sufficient tool to describe differences in international tourist flows. Furthermore, unambiguous and firm confirmation emerge that tourist's influx from Christian – and to be specific from Catholic and Protestant – countries, favour the USA as vacation destination much more than people from Muslim countries. As we know that a common religion includes strong familiar cultural conditions, this corroborates our statement that people desire to go on vacation to those countries having alike cultural and political background.

Morley et.al (2014) argued that gravity models in tourism demand literature were being neglected for the last decade but these models are re-emerged in modelling tourism demand when we have to evaluate the role of structural factors on tourism.

---

<sup>3</sup>Clark and Pugh's method was based on Rronen and Shnkar's (1985) cluster analysis and is used to infer the cultural distance when tourist cannot be surveyed directly.



# Chapter 3: Data and Methodology

---

## 3.1 Model Specification

Song(2003), Wong and Chon, regarded tourism, especially long-move tourism, as a comforteffect which exhibit non-linear associationamong demand for tourism and its determinants.The preconditions that associate to the magnitude of inbound tourism demanded comprise tourism prices for the destination (travel costs to and costs of living at destination country), the accessibility of and tourism costs for rival (substitute) destinations, impending tourists' incomes, advertising expenses, tastes of customers in the origin countries, and other social, geographic, cultural, and political factors. The demand function for the tourism good in destination  $i$  by inhabitants of origin  $j$  is specifiedas :

$$Q_{ij} = f(P_i, P_s, Y_j, T_j, A_{ij}, \varepsilon_{ij})$$

where  $Q_{ij}$  denotes the magnitude of the inbound tourism demanded in destination  $i$  by tourists from country  $j$ ;  $P_i$  denotes the price of tourism for destination  $i$ ;  $P_s$  is the substitute destinations price of tourism;  $Y_j$  is the income measurein origin country  $j$ ;  $T_j$  is tourist tastes in origin country  $j$ ;  $A_{ij}$  denotes advertising costs on tourism by destination  $i$  in origin country  $j$ ;  $\varepsilon_{ij}$  is the disturbance term that captures all other factors which may influence the quantity of the tourism demanded in destination  $i$  by residents of origin country  $j$ .

To lessen the impact of disturbance term and to express the 'one-off' events or shocks on tourism demand (Han et al. 2006), dummies can be introduced in the analysis. Variables used to disclose tourism demand for specific country are marketing expenditure, the lagged dependent variable, time trend variables, and migration (Lim 1997). For the purpose ofmodelling tourism demand, differentup to date econometric techniqueshave been used, such as ARDL model (Song and Witt 2003), error correctionmodel (ECM) (Dritsakis 2004), panel data (PD) model (Garín-Muñoz 2007), the time varying parameter model (Li et al. 2006), and Almost Ideal Demand System (AIDS) model (De Mello and Fortuna 2005).

### 3.1.1 Traditional Tourism Demand Model

Following form of the model is proposed to capturetourism determinants:

$$\ln T_{it} = \beta_0 + \beta_1 \ln P_{it} + \beta_2 \ln Y_{it} + \beta_3 \ln PS_{it} + \beta_4 D_{2001} + \beta_5 D_{2005} + \beta_6 D_{2009} + \mu_{it} (1)$$

Here  $i$  denote the country of origin and  $t$  denote year of study.  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  are price, income, and substitute price elasticities, respectively. To identify tourism demand growth, the coefficient of own price must be negative, while coefficients for income and substitute price must be positive.

$T_{it}$  is the annual international tourism influx from origin country  $i$  to Pakistan at time  $t$ . After the independence, Pakistan had faced so many natural as well as sociological disasters which severely affected Pakistan's tourism from time to time. So to capture the effects of some of these major events on Pakistan's tourism we have included dummy variables. D2001, D2005 and D2009, are the dummy variables for 11<sup>th</sup> September attack on World Trade Tower in USA, severe earthquake in Pakistan and anti-militants operation by Pakistan Army in Swat, Pakistan, respectively. A negative sign of all the dummy variables is expected to get identified for the tourism demand growth because it is considered that these events have hindering impact on tourists' decision to visit Pakistan.

$Y_{it}$  is the income of the country of origin and is calculated by the index of real GDP (2005=100). In place of personal disposable income, real GDP is used for capturing the influence of income and reason behind is that because tourist influx data include a large amount of business travels. So, real GDP is more appropriate to capture the influence of income.

Own price variable is equationed as:

$$P_{it} = \frac{CPI_{pak,t}/EX_{pak,t}}{CPI_{it}/EX_{it}}$$

Where  $CPI_{pak,t}$  and  $CPI_{it}$  are both the consumer price indices (2005 = 100) for Pakistan and the country of origin  $i$  at year  $t$ , correspondingly;  $EX_{pak,t}$  and  $EX_{it}$  both are exchange rate indices (2005 = 100) for Pakistan and the country of origin  $i$  at year  $t$ . This variable is included in the research to measure the effect of expenses of tourism in Pakistan comparative to that in the origin country.

The PS (substitute price) index is measured by meditating the consumer price index (CPI) of each of the five alternative destination places according to its contribution to international tourism influx, and is given as:

$$PS_{it} = \sum_{j=1}^5 \left( \frac{CPI_{jt} / EX_{jt}}{CPI_{it} / EX_{it}} \right) \cdot w_{jt}$$

Where  $j$  represents different substitute destination; and  $w_{jt}$  is the part of international tourism arrivals for the country/ region  $j$ , which is computed as:

$$w_{jt} = TTA_{jt} / \sum_{j=1}^5 TTA_{jt}$$

Where  $TTA_{jt}$  denotes the whole international tourist arrival in the country/region  $j$  at year  $t$ . This variable is included to capture the effect of cost of tourism of substitute destinations as compared to the cost of tourism in Pakistan.

Inclusion of exchange rate in constructing  $P_{it}$  and  $PS_{it}$  depicts intensity of fluctuations that cause uncertainty and possibly unexpected costs to tourists and they will thus possibly dampen inbound tourism, *ceteris paribus*. Hence, larger fluctuations in  $P_{it}$  and  $PS_{it}$  must indicate the economic instability.

### 3.1.2 Gravity Model

With respect to the distance decay definition, when distance rises, the cost of travelling increases and information regarding the destination place decreases. So tourism movements are higher for near destinations and decline with distant sites (Bull 1991). Tobler (2004) states that everything is associated to every other thing, but closer things are more associated than far-away things.

Yoo et al. (2004) explained that sometimes it is hard to decentralise physical distance from cultural distance (CD). Up to now, study on the decaying facets of other types of distance in general, and to CD in particular has not been conducted. Our research is an effort to instigate that research space by investigating that cultural distance decay effect prevails among holiday long-haul tourism markets that visited Pakistan.

The model under discussion is an augmentation of the analysis of distance decay and it is applied to examine the effect of distance decay and foresee the demand of tourism by bearing

in mind the features of the countries of origin and the destination places and their distances. This model supposes that the cumulative demand for tourism from one place to other place is in ration to the charm of destination place and the population of the origin country, and is inversely proportionate to the distance among the two places (Smith 1983). In this study, a conventional gravity model is utilized to examine the effect of distance decay in tourism movements. Its special form is illustrated as:

$$\ln T_{it} = \delta_0 + \delta_1 \ln Y_{it} + \delta_2 \ln Dist_i + \sum_{k=1}^{18} \delta_k D_k + \mu_{it} \quad (2)$$

It is necessary to highlight that here,  $i$  indicates the origin country, where  $t$  indicates the study year;  $T_{it}$  indicates the number of tourist arrivals;  $Dist_i$  indicates the geological remoteness from the country of origin  $i$  to Pakistan. To exhibit the yearly change of attractiveness of Pakistan as a tourism destination place, we have included each year's dummy variables in the model. As regarding diverse specifications to illustrate the effect of distance decay, the particular gravity models can be made more precise using other specifications, such as like (Smith 1983):

$$\ln T_{it} = \delta_0 + \delta_1 \ln Y_{it} + \delta_2 \ln Dist + \delta_3 Dist + \sum_{k=1}^{18} \delta_k D_k + \mu_{it} \quad (3)$$

$$\ln T_{it} = \delta_0 + \delta_1 \ln Y_{it} + \delta_2 \ln Dist + \delta_3 Dist^2 + \sum_{k=1}^{18} \delta_k D_k + \mu_{it} \quad (4)$$

Considering the decaying effect of geographical distance on tourist inflows, a negative coefficient of distance variable is expected. Furthermore, in order to reveal yearly charmness of change of Pakistan as tourism place, positive coefficients of all the dummy variables are expected.

### 3.1.3 Mixed Panel Data Gravity Model

It is worth to state that Tourism is not only an economic action, but also includes considerable expressive practice and other emotional practices, one of the most important drawback of economic models is that they disregard some vital and important variables (Crouch 1994a, 1994b), for examples cultural, political and social features. Without these features, the model is imperfect, and the outcomes are less consistent and convincing.

Importantly, as indicated by Henrich (2000), economic choices are deeply affected by cultural difference, and the hypothesis that people share same economic decision-making processes is dubious. Another important thing, as mentioned by Marie Poprawe (2015), is perceived corruption which greatly influences the tourists' decisions especially business tourists' decisions about visiting a particular country. Therefore, the cultural factors and perceived corruption deserves more consideration in modelling tourism demand.

The purpose of panel data gravity model is to estimate the gravity model by using panel data. On the basis of traditional tourism demand model and gravity model, the mixed panel data gravity model to be estimated is followed as:

$$\begin{aligned} \ln T_{it} = & \varphi_0 + \varphi_1 \ln Y_{it} + \varphi_2 \ln P_{it} + \varphi_3 \ln PS_{it} + \varphi_4 \ln CP_{i,t-1} + \varphi_5 \ln Dist_i + \varphi_6 \ln CD_i \\ & + \varphi_7 UAI_i \cdot \ln CD_i + \varphi_8 D_{2001} + \varphi_9 D_{2005} + \varphi_{10} D_{2009} + \alpha_i + \mu_{it} \end{aligned} \quad (5)$$

Where  $CD_i$  is the Cultural Distance from the origin country to Pakistan;  $UAI_i$  is Uncertainty Avoidance Index and  $CP_{i,t-1}$  denotes the lag of corruption perception index.  $\alpha_i$  is the origin country effect. Reason behind the inclusion of lag of corruption perception variable is that tourists reserve their vacation in advance.

Choosing the suitable variables for culture associated variables, like CD and UAI, are the most central issue. Hofstede's five dimensions for measuring culture have been widely used in literature (Crotts and Erdmann 2000, Litvin et al. 2004, Pizam and Fleischer 2005) but it has many drawbacks. For example, Hofstede's sampling of countries did not precisely shows the full view of national culture (Schwartz 1994), and it is from country-level study rather than culture-level study (Bond et al. 2004). So we have used Bond et al. (2004)'s more fresh model to measure Cultural Distance. This model is formed on the basis of Leung et al's (2002) new idea for Cultural Distance measurement – Social Axioms. According to their study, social axioms are “generalized beliefs about oneself, the social and physical environment, or the spiritual world, and are in the form of an assertion about the relationship between two entities or concepts” (Leung et al. 2002, p. 289). “They are basic premises that people endorse and use to guide their behaviour in daily living” (Bond et al. 2004). Hence, the tourists' choices for destinations are also supposed to have been made based on their social axioms. Bond et al. (2004) extracted two factors, based on ecological factor analysis, that are to say, *Dynamic Externality* and *Societal Cynicism*. Dynamic Externality was extremely associated with collectivism, hierarchy, and conservatism. Societal distrust is

associated with cognitive component of a cultural identification called malfeasance (harming/evil doing). On the bases of measurement of Social Axioms, CD is given as follows (Koghut and Singh 1988):

$$CD_j = \sum_{i=1}^n [(I_{ij} - I_{ic})^2 / V_i] / n$$

where  $I_{ij}$  is the value of one of cultural dimensions  $i$  (such as *dynamic externality* and *societal cynicism*) in the country of origin  $j$ ;  $I_{ic}$  is the value of one of the dimensions of culture  $i$  in the destination state  $c$ ;  $V_i$  is the variance of cultural dimensions  $i$ ; and  $n$  denotes the number of cultural dimensions (which are  $n = 2$  in this paper). This Cultural Distance's numerical indicator is the most accepted one in different kinds of studies (Ng et al. 2007), and has demonstrated to be applicable in a lot of circumstances.

Taking into consideration that uncertainty avoidance may have a self-control result on  $CD$ , we have included an interaction term of  $UAI$  with  $\ln CD$  in the model. We presume that, though cultural distance possibly will inflict negative effects on tourism influx, the extent of the effect differ along with different nations. As we know that uncertainty avoidance influences the readiness of people to admit uncertainty, the consequences of uncertainty created by  $CD$  may possibly be moderated by  $UAI$ ; if there is the large value of  $UAI$  of the state, the more negative effect will be imposed on tourism flows by  $CD$ .

One of the main variables of concern in this research is CORRUPTION, the corruption perception index by Transparency International. This indicator is not the evaluation of the corruption intensity in any country but it is an assessment of the level at which corruption is supposed by businessmen as influencing on business life. The corruption perception index measures the perceived levels of public sector corruption. The variable varies from 0 to 100; with 100 being supposed as least corrupt (this index was initially ranged between 0-10 upto 2011 and then the methodology changed the scale having range from 0-100 from 2012 onwards. So we have rescaled and changed all the data on 0-100 scale with 100 indicating the least corrupt country). It has been frequently argued that the Corruption Perception Index is only of use to a restricted scale because it takes into consideration only supposed corruption and not real corruption. Though, the choice of at which place to spend one's vacation depends purely on professed corruption rather than real corruption, chiefly if one is moving to a country for the first time (Poprawe 2015). The corruption is so much detrimental that even

the danger of corruption will tend to decrease tourism. According to Floyd et al (2004) and especially Neumayer (2004); “Political violence is a bad news for a country’s tourism, even if no tourist ever becomes physically harmed or killed” (p. 278). So the critique relating to the subjectivity of this corruption data’s source is in fact beneficial here. Finally, the Corruption Perception variable for each country relative to Pakistan’s corruption perception index is constructed as follows:

$$CP_{it} = \frac{cpi_{pak,t}}{cpi_{it}}$$

Here  $i$  denote the origin country and  $t$  is denoting study year.  $cpi_{pak,t}$  and  $cpi_{it}$  are the corruption perception indices for Pakistan and origin country  $i$  at year  $t$ , respectively.

As hypothesized, tourists are tending to select a destination place having less  $CD$  to reduce possible dangers and unfamiliarity, therefore we expect coefficient of  $CD$  must be negative. It is considered that uncertainty avoidance might have a self-control effect on *Cultural Distance*, so the interaction term containing  $UAI$  and  $lnCD$  is incorporated in the model. It is assumed that, though cultural distance might inflict negative results on tourism movements, the extent of this effect differs among states. Since uncertainty avoidance influences the readiness of people to admit uncertainty, the effects of uncertainty imposed by  $CD$  might be created less dangerous by  $UAI$ . We assume that if there is the larger value of  $UAI$  of the state, the more negative effect will be imposed on tourism flows by  $CD$ . So the coefficient of the interaction term is expected to be negative. As it is hypothesized that perceived corruption is harmful for tourists, implying that low perceived corrupt countries will get higher tourists than those countries having high perceived corruption. A one point addition in corruption perception index (lowering the corruption), will increase the tourist inflows. So a positive coefficient of corruption perception is expected.

## 3.2 Econometric Methods

Panel data is used for estimation purposes for this study. Panel data is the combination of Time-Series and Cross-Section data allowing the variables to be changed over time and also over the given time period. “A longitudinal, or panel data set is one that follows a given sample of individuals over time, and thus provides multiple observations on each individual in the sample” (Hsiao 2003). Panel data allows for the control of Individual Heterogeneity, trouble of aggregation, diminishing the colinearity problem and giving more degrees of freedom (Hsiao 2003). Because of these benefits, panel data technique is being broadly used in different fields of study. The usual form of panel data is specifically given as:

$$y_{it} = x_{it}'\beta + v_{it}, \quad v_{it} = \alpha_i + \mu_{it}$$

While  $v_{it}$  is the combined error term consisting two components,  $\alpha_i$  and  $\mu_{it}$ .  $\alpha_i$  denotes the individual specific characteristics, based upon which the panel data model can be differentiated into the Random Effects (RE) model and the Fixed Effects (FE) model. If we treat individual effects  $\alpha_i$  as  $N$  fixed unknown parameters, then the model is referred to as standard Fixed Effects Model; whereas, if we treat individual characteristics  $\alpha_i$  as random factors, independently and identically distributed over individuals, then the model becomes Random Effects Model (Baltgi et al. 1999). The main concern in selecting among the two models is whether  $\alpha_i$  and  $x_{it}$  are associated (Wooldridge 2002). For inspection which model is more suitable in panel data, Hausman (1978) familiarized a test based on the difference between RE and FE estimates to compare the estimates of two models. This test is used to differentiate between FE and RE models in panel data; random effect model is preferred under the null hypothesis and because of higher efficiency and fixed effect model is preferred under the alternate hypothesis because of consistency. The REM (random effect model) can be assessed by the feasible generalized least squares (FGLS) estimator, while the Fixed Effect model can be assessed by the within estimator.

Because of the vibrant nature of the economic and sociology phenomena, the issue of serial correlation is common in panel data analysis. If we ignore serial correlation, that may generate consistent but inefficient estimates of coefficients having biased standard errors. For checking of serial correlation we will perform Wooldridge test for serial correlation.



### 3.3 Data Description

20 countries are opted for the empirical examination: Belgium, Canada, China, Germany, Indonesia, Iran, France, Italy, Japan, Malaysia, India, New Zealand, Netherlands, Norway, Philippines, South Africa, Spain, Thailand, United Kingdom, and USA. Although Pakistan receive large proportion of Afghani nationals, but are not considered to be tourists. Hence they are excluded from the study.

Data of international tourist arrivals is obtained from UNWTO (World Tourism Organization 2014, Compendium of Tourism Statistics dataset). It ranges from 1995 to 2012 for all the selected countries.

In tourism demand functions, an income level of origin country is normally incorporated as a main independent variable. Lacking of suitable data on income force one to use the index of real GDP, as a proxy. We have borrowed this proxy from World Development Index (WDI) database. It shows the reaction of tourism demand to the change in the income level of the origin country/region.

Data of Consumer Price Index (CPI) and Exchange Rates are taken from the WDI database. CPI of country of destination is used as a proxy for estimating the price of tourism (own price) to Pakistan. This measure may not greatly reflect the cost of living of tourists to Pakistan due to their economic status. However, lack of more suitable data confine us to the proxy (Song et al. 2012). In addition to the data on own price, we have also obtained tourism prices for substitute destinations. It is a weighted index of selected countries. It is important to consider cultural and geographical characteristics while selecting substitute destinations (Song et al. 2003). In our research, we have included India, China, Thailand, Iran, and Malaysia as substitute destinations for Pakistan.

Geographical distance of origin country's capital to Pakistan's capital has measured using *Google Earth Software* and *Google Maps* and then averaged both for final use. Distance was measured between nearest international airport to the centre of each country's capital to the Benazir Bhutto International airport, Islamabad, Pakistan. It reflects the responsiveness of tourist's towards the actual physical distance between countries and as because it is the key consideration of the gravity model, so it is included in the study very carefully.

As corruption is the generally the main problem of developing countries, its perceived index is included in the research to capture the effect of corruption on tourist's decision to visit a particular country. Data of Corruption Perception Index of each country was obtained from yearly published report of Transparency International (TI).

We use Hofstede's (1980) Uncertainty Avoidance Index (UAI) data from his website's homepage ([http://www.geert-hofstede.com/hofstede\\_dimensions.php](http://www.geert-hofstede.com/hofstede_dimensions.php)). This index is formulated on the basis of a study statistics on work-based observations gathered between 1967 and 1973 from more than 117,000 employees of IBM who were working in 40 different nations. Hofstede (2001) assessed 66 nations, formulating index values and ordinal rankings for this index.

We have constructed the numerical values of Cultural Distance variable by using the numerical values of Bond et al's (2004) dimensions *i.e* Dynamic Externality and Societal Cynicism.

Last three variables are time-invariant in nature and are required to be estimated through using demand model in accordance with the relevant econometric methodology, to avoid misleading results of these variables toward tourism demand.

Summary statistics for the data to be used in our analysis are presented below. Observing from the values of the CDs, it is obvious that Thailand and India showed the smallest Cultural Distance to Pakistan, while Norway and Italy are most culturally distant from Pakistan.

**Table 3.1: Data Summary**

Country	Mean Value							Corr. Index
	Tourist Arrival (Billion US\$)	GDP Index	Price	Sub. Price	Geo. dist.	CD	UAI	
Belgium	3023.22	372	0.598	2.094	5749	5.561	94	68.24
Canada	26745.44	1090	0.023	0.079	10709	6.136	48	88.11
China	20058.5	2280	0.133	0.467	3904	3.317	30	33.06
France	9089.22	2110	0.098	0.342	5939	4.821	86	69.18
Germany	18116.33	2850	0.029	0.101	5128	3.527	65	79.16
India	49358.33	821	0.771	2.694	678.5	1.062	40	30.15
Indonesia	2223.11	288	161.6	560.8	5651	4.209	48	23.19
Iran	14012.67	183	109.1	413.5	2006	1.398	59	26.13
Italy	4217.28	1780	29.37	102.2	5299	8.667	75	45.75
Japan	11207.3	4450	1.83	6.534	5996	3.831	92	70.71
Malaysia	5395.38	137	0.06	0.212	4491	1.874	36	49.62
NZ	1498	106	0.029	0.1	13289	5.905	49	94.15
Netherlands	9222.4	654	0.033	0.116	5707	8.273	53	88.29
Norway	9740.89	288	0.12	0.418	5298	10.35	50	87.33
Philippines	6234.27	100	0.799	2.87	5256	3.397	44	27.47
South Africa	4530.28	247	0.121	0.436	8699	3.657	49	48.18
Spain	2186.4	1070	2.537	8.816	6664	6.745	86	63.50
Thailand	2455.67	168	0.63	2.239	3533	0.803	64	33.37
U. K	198706.2	2250	0.011	0.037	6041	6.256	35	82.95
U.S.A	90674.83	12200	0.018	0.063	11399	6.402	46	74.78

The whole comprehensive information of data and association of the variables after taking their logs are shown below. The correlation reveals that majority of the variables in the study are less related, which indicates that multiple colinearity is not a main trouble.

---

	lnT	lnY	lnP	lnPS	lnDist	lnCD	laglnCP
<i>Detailed Statistics</i>							
Mean	9.03	27.24	-1.07	0.169	8.56	1.38	-0.87
Stand. Deviation	1.35	1.35	2.77	2.78	0.62	0.68	0.54
Minimum	6.84	25	-4.74	-3.77	6.52	-0.22	-2.3
Maximum	12.7	30.3	5.74	6.92	9.50	2.34	0.34
<i>Correlation</i>							
lnT	1						
lnY	0.631	1					
lnP	-0.407	-0.240	1				
lnPS	-0.398	-0.233	0.995	1			
lnDist	-0.164	0.139	-0.39	-0.389	1		
lnCD	0.032	0.33	-0.249	-0.248	0.688	1	
laglnCP	-0.156	-0.303	0.599	0.604	-0.497	-0.54	1

---

# Chapter 4: Results and Discussions

---

To account for heterogeneity among the countries, we have, at first place, pooled all the countries in our analysis, and secondly, by separating these according to their economic conditions (developing or developed). Developed countries include Belgium, Canada, France, Germany, Italy, Japan, New Zealand, Netherlands, Norway, Spain, UK and USA, and Developing countries are China, India, Indonesia, Iran, Malaysia, Philippines, South Africa and Thailand.

## 4.1 Traditional Tourism Demand Model

At the beginning of the empirical estimations, we will only estimate those models which include only time-variant economic variables along with dummies. Fixed Effect model is used for Model 1, 3 and 5, where other models are estimated by random effects (RE) technique. All the coefficients which are estimated by FE and RE models are almost the same, showing the robustness of the specification of panel data model. Income has significantly positive impact on tourism movement and having elasticity greater than 1, suggesting the income extent of the country of origin is a significant determinant of international tourism demand in Pakistan. It implies that tourism inflow increase the demand for Pakistan tourism by the residents of the origin country. Income elasticity greater than 1 indicates that foreign travellers take travelling to Pakistan as a luxury good.

Own price measures the cost of tourism in Pakistan relative to origin countries. Pooled estimation shows non-significant results. On the contrary, opposite reaction of tourists from developing and developed countries has been estimated. Tourists from developed countries are showing less interest in visiting Pakistan in case of increasing tourism prices, while others are showing positive interest but with merely high elasticity. This suggests that increasing prices to Pakistan tourism costs in the form of losing international tourists.

Substitute price variable determines the cost of tourism in competing destinations as compared to cost of tourism in Pakistan itself in determining the demand for Pakistan tourism. Contrary to expectations, the negative coefficients implies that cost of tourism in substitute destinations have negative impact on demand for tourism inflows.

**Table 4.1: Estimation results of Traditional Tourism Demand Model**

	All Countries		Developed Countries		Developing Countries	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model6
lnY	1.793*** (0.12)	1.357*** (0.101)	3.207*** (0.219)	1.741*** (0.157)	1.71*** (0.17)	1.483*** (0.154)
lnP	0.217 (0.169)	0.048 (0.113)	0.318 (0.21)	-0.299** (0.118)	0.973*** (0.321)	0.528** (0.208)
lnPS	-0.23*** (0.085)	-0.103 (0.086)	-0.31*** (0.086)	-0.073 (0.087)	-0.553*** (0.17)	-0.438*** (0.168)
D2001	-0.159* (0.092)	-0.178* (0.096)	-0.248*** (0.081)	-0.251*** (0.094)	0.006 (0.183)	-0.059 (0.185)
D2005	0.154* (0.092)	0.165* (0.096)	0.088 (0.082)	0.106 (0.094)	0.163 (0.18)	0.187 (0.184)
D2009	0.067 (0.093)	0.123 (0.096)	-0.006 (0.082)	0.06 (0.094)	0.089 (0.183)	0.125 (0.187)
Constant	-39.55*** (3.204)	-27.879*** (2.72)	-79.6*** (5.907)	-39.844*** (4.515)	-35.78*** (4.38)	-29.88*** (3.993)
Obs.	360	360	216	216	144	144
Number of Countries	20	20	12	12	8	8
R- squared	0.4029	0.424	0.4196	0.6597	0.2236	0.37
Model Spec Test	F(6,334)= 46.58***	Wald(6)= 234.18***	F(6,198)= 51.73***	Wald(6)= 192.90***	F(6,130)= 19.52***	Wald(6)= 107.16***
Hausman Test	47.74*** (df=6)		106.09***(df=6)		10.39(df=6)	
BP Test for R Effects	1911.64*** (df= 1)		1135.35***(df=1)		513.96***(df=1)	
Wooldridge test for Auto	F (1, 19) = 42.203***		F(1, 11)=29.481***		F (1, 7) =21.648**	

\*, \*\* and \*\*\* shows significance at 0.1, 0.05 and 0.01 levels respectively. Standard errors are given in parentheses.

Developed countries showed a significantly negative impact on visiting Pakistan after 9/11 attacks in USA. It means they are more sensitive towards risks. The effect of 2005 earthquake disaster shows significant increasing demand but at  $\alpha = 10\%$ , for all the countries. Since, the earthquake had taken place in the last trimester; it may not capture all the devastating features that plausibly show the reduction in inbound tourism. Lastly, the effects of Swat operation (2009) were not significant.

It is evident that developed and developing countries have dissimilar elasticities for tourism demand. In models 3 & 4, the magnitudes of the coefficients of income and own price variables are greater than their counter parts in models 5 & 6. This suggest that inbound tourists from developed source markets incline to be more “economically sensitive”. These two different origin countries also seemed to reply not the same to the special events. 11<sup>th</sup>September, 2001 attack in USA posed a considerably stronger effect on countries with Developed origin and caused in a much larger decay in tourist arrivals to Pakistan. Lastly, for checking the FE or RE specification, some statistical tests are applied. It was observed that *Hausman test* values give mixed results, so we go to *BP test* (Breush and Pagan 1980) to confirm the suitability of RE specification. *BP test* statistic revealed that all of three RE models are significant at the 0.05 level, suggesting that RE models are chosen.

## 4.2 Gravity Model

In this study a traditional gravity model is used to examine the distance decay effect of tourism flows. This model concentrates on the effect of several geographical factors, like distance. Based on the different specifications of distance decay effects, three different forms of gravity models are presented to capture the distance decay effect. Moreover, dummy variables of 18 years are incorporated to show the annual changes from 1995 to 2012. Because the “distance” is time-invariant in the study period, only random effects (RE) method can be used for estimating panel data model. Dummy 9 (for the year 2003) was made as a reference dummy so as to control the problem of dummy variable trap. The estimated coefficients of each year dummy variable showed the positive trend of tourism growth.

The results indicate that logarithmized income and distance variable are statistically significant in nearly all the specifications. Estimated magnitude of the coefficient of income in all the three specifications is nearly the same suggesting that a 1% increase in income level of the origin countries will increase travellers to Pakistan as much as about 69%. The coefficient of distance is negative and significant which supports our hypothesis of distance decay effect. More the geographical distance of the origin country from Pakistan, less will be the number of tourists from that country.

Moreover, Models 7, 8, and 9 give details on the appropriate specification of distance in the gravity model. For checking which model shows the suitable distance decay effect on tourism

flows, the *Wald test* and *R-squared* is taken into consideration. The *Wald test* shows that Model 8 and 9 perform better than Model 7. Comparing Models 8 and 9 which have same degrees of freedom, Model 8 is favoured with larger value of R-squared. This indicates that the specification of Model 8 is more appropriate to capture the distance decay effect for Pakistan inbound tourism flows.

**Table 4.2: Estimation results of Gravity Model**

	Model 7	Model 8	Model 9
lnY	0.694*** (0.117)	0.692*** (0.117)	0.698*** (0.117)
lnDist	-0.566 (0.346)	-1.286* (0.742)	-0.983* (0.509)
Dist		0.0002 (0.0002)	
Dist*Dist			7.99e-09 (7.19e-09)
D1	0.091 (0.116)	0.09 (0.116)	0.092 (0.116)
D2	0.104 (0.115)	0.103 (0.115)	0.104 (0.115)
D3	0.04 (0.114)	0.039 (0.114)	0.041 (0.114)
D4	0.217* (0.114)	0.216* (0.114)	0.217* (0.114)
D5	0.167 (0.113)	0.166 (0.113)	0.167 (0.113)
D6	0.294*** (0.113)	0.294*** (0.113)	0.295*** (0.113)
D7	0.134 (0.112)	0.134 (0.112)	0.134 (0.112)
D8	0.029 (0.112)	0.029 (0.112)	0.029 (0.112)
D10	0.269** (0.112)	0.269** (0.112)	0.269** (0.112)
D11	0.544*** (0.113)	0.544*** (0.113)	0.544*** (0.113)
D12	0.648*** (0.113)	0.648*** (0.113)	0.648*** (0.113)
D13	0.536***	0.537***	0.536***



	(0.114)	(0.114)	(0.114)
D14	0.483***	0.484***	0.483***
	(0.114)	(0.114)	(0.114)
D15	0.573***	0.573***	0.572***
	(0.114)	(0.114)	(0.114)
D16	0.605***	0.605***	0.604***
	(0.115)	(0.115)	(0.115)
D17	0.954***	0.955***	0.953***
	(0.116)	(0.116)	(0.116)
D18	0.757***	0.757***	0.756***
	(0.116)	(0.116)	(0.116)
Constant	-5.395	-0.21	-2.285
	(4.132)	(6.264)	(4.966)
Observations	360	360	360
Number of countries	18	18	18
R-squared	0.506	0.5364	0.5362
Specification Test	Wald(19)=450.06***	Wald (20) =451.45***	Wald (20) = 451.52***

\*, \*\* and \*\*\* shows significance at 0.1, 0.05 and 0.01 levels respectively. Standard errors are given in parentheses.

### 4.3 Mixed Panel Data Gravity Model

This model combines the traditional tourism determinants along with the distance effects<sup>4</sup>. However, the influence of CD, the moderation effect of uncertainty avoidance, and the effect of corruption are also taken into consideration in this model. Due to some of the time invariant variables, random effects (RE) model is used to estimate all the models. Model 10, 12, and 14 include lnCD as a predictor, while other Models are having interaction term of UAI and lnCD as a predictor (because if we include both the variables in one model, the model will suffer from colinearity). For all the models, income shows positive and significant behaviour which indicates that it is the important factor in determining the tourists' decision to visit Pakistan. Its elasticity (greater than 1) indicates that tourism towards Pakistan is a luxury product, except for developing countries.

In Model 10 and 11, distance variable is negative and significant indicating the presence of distance decay effect. Cultural distance variable have appropriate sign (negative sign) but is

<sup>4</sup>The variables from gravity model (Model 8) have been included due to having highest value of R<sup>2</sup>.

insignificant. Corruption perception is positive, as expected, and highly significant thus supporting our hypothesis 'greasing the wheels'. It suggests that corruption has a deteriorative effect on Pakistan inbound tourism. Statistically, if we raise one point in corruption perception (implying a decline in perceived corruption level), that will increase the number of tourists upto 14%. Hence, the hypothesis of 'greasing the wheels' regarding the corruption is confirmed. Special events are also significant with reasonable signs. The 2001 attack in USA have a significantly negative impact on Pakistan's inbound tourism. The dummy for 2005 earthquake is positive but weakly significant, indicating that 2005 earthquake have positive impact on Pakistan inbound tourism. Dummy for 2009 swat war is insignificant. On the bases of Wald *statistics*, we found that Model 11 with interaction term of UAI and lnCD are better than Model 10. The interaction term in Model 11 is negative and significant, as expected, confirming the moderation impact of uncertainty avoidance on CD for the sample of all countries. This implies that the degree of the negative effect of Cultural Distance on tourism depends on UAI; that is, the more probable the tourists be inclined to keep away from uncertainty, the greater the negative effect of Cultural Distance has on tourism destination choice.

In models 12 & 13, own price variable is negative and significant, as expected. This indicates the cost of tourism in Pakistan as compared to origin country has a negative affect on Pakistan inbound tourism. If the cost of tourism in Pakistan increases, then tourists from developed nations will decrease. Negative substitute price suggests reduction in inbound tourism. Logarithmic distance is highly significant with negative sign, suggesting that developed countries are much more sensitive for geographical distance.

Contrary to expectations, Culture Distance variable is positive and important variable, shows that Culture Distance has a positive impact on Pakistan inbound tourism for developed countries. It means that if a country is more culturally distant from Pakistan, more tourists will come from that country. One possible explanation for this phenomenon is that people of developed countries are well aware from the culture of Pakistan and the people come to Pakistan with the curiosity to watch the culture closely. Secondly, Pakistani immigrants residing in developed countries are a source of "word of mouth" marketing, so these people tend to visit Pakistan no matter how much culturally distant they are.

Putting our concentration on corruption perception, it is significant with positive sign as expected from the hypothesis. It means that if we increase one point in corruption perception

Index (decrease in corruption level), that will result in about 16% increase in tourist inflows in Pakistan from that country. So, negative effect of corruption is confirmed for developed countries.

Moreover the dummy for 2001 attack in USA is negative and significant confirming the negative impact of terrorist attack in USA on Pakistan inbound tourism. Other dummies for special events are insignificant.

Models 14 and 15, own price and substitute price variables have appropriate signs as expected but are insignificant. Distance is significant and has negative impact on Pakistan inbound tourism. Again CD variable is positive and significant. The likely reason is that people from developing countries visit Pakistan as religious tourists.

Most of the developing countries included in this study are Muslim majority countries, so people will tend to come more towards Pakistan. Corruption perception index is insignificant. It implies that developing countries do not take corruption into consideration when visiting Pakistan. One possible explanation for this is that mostly developing countries are Muslim countries and their corruption perception index is more or less near to Pakistan's corruption perception index, so they do not take this factor into serious consideration. Impacts of special events are all insignificant. Based on *Wald statistics*, we found that Model 15, having the interaction term of UAI and lnCD, are better than Model 14. So, the self-control effect of uncertainty avoidance is confirmed on CD, for developed countries. Interaction term of UAI and lnCD is positive and significant indicating that uncertainty avoidance has positive effect on CD.

Now we will compare the differences between Developed and Developing source markets. For Models of developed countries (Models 12 and 13) substitute price is negative, contrary to expectation, but it is positive as expected for developing Models (Models 14 and 15). The likely explanation is that the substitute destinations we specified in the study might not be the suitable for tourists from developed countries, where our specified substitute destinations may be more appropriate for developing tourists. From Models 12 to 15, the magnitudes of the coefficients of the economic variables of developed countries are more than developing ones, which indicate that developed economies are more economically sensitive. The extent of negative effect of geographical distance on tourism from developed countries is much more than developing countries. This indicates that tourists from developed origin are much

more sensitive towards geographical distance than developing ones. Although cultural distance (CD) is positive for both the developed and developing countries

**Table 4.3: Estimation results of mixed panel data gravity model**

	All Countries		Developed Countries		Developing Countries	
	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15
lnY	1.331*** (0.10)	1.357*** (0.099)	2.19*** (0.18)	1.746 *** (0.165)	0.357*** (0.078)	0.383*** (0.071)
lnP	0.007 (0.112)	0.063 (0.112)	-0.195 (0.129)	-0.418*** (0.145)	-0.149 (0.222)	-0.172 (0.218)
lnPS	-0.13 (0.086)	-0.132 (0.085)	-0.19** (0.085)	-0.13 (0.094)	0.067 (0.22)	0.059 (0.217)
Dist	0.0001 (0.0002)	0.00002 (0.0002)	0.003** (0.001)	0.002** (0.001)	-0.00002 (0.00008)	-0.0001 (0.00008)
lnDist	-0.817 (0.809)	-0.239 (0.735)	-24.849** (10.763)	-20.26** (9.01)	-1.177*** (0.214)	-0.971*** (0.209)
lnCD	-0.566 (0.43)		3.267*** (1.003)		0.529*** (0.182)	
Lag (lnCPI)	0.146** (0.075)	0.136* (0.075)	0.163* (0.089)	0.166* (0.095)	-0.108 (0.217)	-0.118 (0.213)
D2001	-0.188** (0.096)	-0.184** (0.095)	-0.256*** (0.088)	-0.259*** (0.094)	-0.195 (0.255)	-0.195 (0.25)
D2005	0.183* (0.096)	0.182* (0.095)	0.108 (0.089)	0.11 (0.095)	0.208 (0.255)	0.209 (0.252)
D2009	0.11 (0.096)	0.112 (0.095)	0.014 (0.089)	0.03 (0.095)	0.396 (0.255)	0.388 (0.25)
UAI*lnCD		-0.016*** (0.005)		0.018 (0.013)		0.015*** (0.004)
Constant	-19.801*** (5.64)	-24.502*** (6.20)	140.2* (84.35)	119.37* (69.63)	8.509*** (2.9)	6.512** (2.578)
Observations	359	359	215	215	143	143
Number of Countries	20	20	12	12	8	8
R-squared	0.5334	0.612	0.6531	0.793	0.674	0.6835
Specification Test	Wald (10) = 248.36***	Wald (10) = 261.77***	Wald (10) = 236.22***	Wald (10) = 198.53***	Wald (10) = 272.92***	Wald (10) = 285.11***
Wooldridge test for Autocorrelation	F (1, 19) = 44.440***	F (1, 19) = 44.440***	F (1, 11) = 34.453***	F (1, 11) = 34.453***	F (1, 7) = 20.702***	F (1, 7) = 20.702***

\*, \*\* and \*\*\* shows significance at 0.1, 0.05 and 0.01 levels respectively. Standard errors are given in parentheses.

but developed countries show much more positively influenced by CD for inbound tourism in Pakistan. Corruption perception is insignificant for developing countries, although it has positive sign, but its impact on developed countries is more significant. This indicates that corruption has much more negative influence on tourist's decision to visit Pakistan from developed countries. Overall, the main outcomes of this research confirmed that supposed corruption has a considerable but negative effect on tourism of Pakistan. Specifically, one tip augmentto the corruption perception index, suggesting a decrease in corruption, which results in an increase in tourist inflows up to 13-16 %, depending on the specification. This result validated that corruption has a detrimental effect on tourism sector.

# Chapter 5: Conclusion

---

This study is an effort to investigate the determinants of Pakistan inbound tourism movements and particularly the effect of Corruption and Cultural Distance on tourism movements from a large-scale viewpoint. The panel data gravity model illustrates that income of the origin is important determinant of Pakistan inbound tourism flows. The income elasticity demonstrates that the demand for Pakistan tourism is greatly affected by the economic circumstances of the origin countries/region. Hence it is vital for policy makers in Pakistan to closely keep an eye on the economic cycles in the major source markets. The income elasticity is estimated to be approximately 1.38, which suggests that if the income of inbound tourist increases by 1%, tourist arrivals to Pakistan will increase by 1.38%. This indicates that foreigners regard travelling to Pakistan as 'luxury' item, and any change in income is anticipated to have the substantial influence on tourism demand for Pakistan. The price of tourism in Pakistan is an additional significant thing that affects the demand for Pakistan tourism. Although it is insignificant for the sample of all countries, but it is highly significant for developed countries, indicating that developed countries are more economically sensitive. Own price elasticity for developed countries is negative, which means that if we decrease the price of tourism in Pakistan, inbound tourist arrivals will be increased. The price of tourism in competing destinations (substitute price) is insignificant which states that tourists do not compare competing destinations in visiting Pakistan.

Developed countries are possibly more economically sensitive having greater magnitudes of elasticities. They are much more affected by corruption perception and distance from the host country. 11<sup>th</sup> September 2001 attacks in USA imposed much larger negative influence on tourists from developed countries.

The results from panel data estimation demonstrated that CD, which is measured by social axioms for the country level, has a negative sign as expected but is insignificant. This study confirms the moderation effect of uncertainty avoidance on CD; it says that as CD has negative impact on tourism but its effect varies from country to country depending on the degree of uncertainty avoidance. If there is larger uncertainty avoidance, the negative effect exerted by CD on tourism flows is also larger. However, the results of CD on developed and developing countries when segregated show entirely a different picture. Isolated results of both the segments revealed that CD has positive and substantial effect on Pakistan inbound

tourism, though the magnitude of the positive impact of CD is much more rigorous for developed nations. This, contradicting our hypothesis, state that if origin country is more culturally distant from Pakistan, more tourists will come to Pakistan. This may be due to the fact that Muslim tourists are more likely to visit Pakistan if they are residing in more culturally distant country from Pakistan. Another reason behind this is that more culturally distant tourists may tend to visit Pakistan because they want to see closely the diverse culture in Pakistan. One other likely reason for this may be that Pakistan has much more extraordinary natural beauty which may attract culturally distant tourists more as compared to culturally similar countries.

The above presented results confirmed that corruption is negatively effecting tourism inflows which verifies our 'sanding the wheels' hypothesis: corruption might be a barrier for international travelling. Countries having that more prevailing corruption draw fewer tourists than countries having less corruption or corruption free. This may be attributed to the fact that tourists do not wish to bear extra costs in travelling, whether these costs are of direct or indirect nature. Specifically, a one point increase in the corruption perception index (fall in corruption level) *ceteris paribus* will results in about 14% increase in tourist arrivals in Pakistan. However the influence of corruption is not significant for developing countries. The reason behind this may be that developing tourists are mostly from Muslim origins and Muslim tourists do not bother about corruption when they intend to visit Pakistan because Pakistan is also a Muslim country. The overall findings suggest that corruption not only impose negative impacts on country's growth but also cause a harmful effect on the tourism sector.

### **5.3 Policy Recommendations**

While tourism adds a great proportion to the GDP of developing countries, so the recommended policy is that if we decrease public sector corruption then we can get more than one benefits i-e we can increase growth, investment and GDP and we can also increase incomes from tourism.

Also, as we have proved that tourists from more developed origins are extra responsive to the economic variables than those from developing countries, it is need to build a specific marketing scheme specifically targeting at promoting cheaper flights, accommodation, dining and shopping alternatives. Moreover, if any of the developed countries encounter an economic prosperity, more assertive promotion strategies must be applied to draw attention of the high-spending tourists to Pakistan.

## References

- Ahn, M. J., &McKercher, B. (2015). The Effect of Cultural Distance on Tourism: A Study of International Visitors to Hong Kong. *Asia Pacific Journal of Tourism Research*, 20(1), 94-113.
- Aidt, T.S. (2003): Economic analysis of corruption: a survey, *Economic Journal*, 113: F632-652.
- Anatusi, T.C. and Nnabuko, J.O. (2012): CORRUPTION AND TOURISM: RESTRUCTURING NIGERIA'S IMAGE FOR DEVELOPMENT USING PUBLIC RELATIONS STRATEGIES, *Kuwait Chapter of Arabian Journal of Business and Management Review*, 2(4): 10-26.
- Baker, D.Mc. A. (2014): The Effects of Terrorism on the Travel and Tourism Industry, *International Journal of Religious Tourism and Pilgrimage*, 2(1): 57-67.
- Baltagi, B. H., & Wu, P. X. (1999). Unequally spaced panel data regressions with AR (1) disturbances. *Econometric Theory*, 15(6), 814-823.
- Basala, S. L., &Klenosky, D. B. (2001). Travel-style preferences for visiting a novel destination: A conjoint investigation across the novelty-familiarity continuum. *Journal of Travel Research*, 40(2), 172-182.
- Blodgett, J. G., Bakir, A., & Rose, G. M. (2008).A test of the validity of Hofstede's cultural framework. *Journal of Consumer Marketing*, 25(6), 339-349.
- Bond, M. H., Leung, K., Au, A., Tong, K. K., De Carrasquel, S. R., Murakami, F., ... & Sam, D. L. (2004). Culture-level dimensions of social axioms and their correlates across 41 cultures. *Journal of cross-cultural psychology*, 35(5), 548-570.
- Bull, A. (1991). *The economics of travel and tourism*. Longman Cheshire Pty Ltd.
- Correia, A. Kozak, M. and Ferradeira, J. (2011): Impact of Culture on Tourist Decision-making Styles, *International Journal of Tourism Research*, 13: 433-446.
- Crotts, J. C. (2004). The effect of cultural distance on overseas travel behaviors.*Journal of Travel Research*, 43(1), 83-88.
- Crotts, J. C., & Erdmann, R. (2000). Does national culture influence consumers' evaluation of travel services? A test of Hofstede's model of cross-cultural differences. *Managing Service Quality: An International Journal*, 10(6), 410-419.



- Crotts, J. C., &McKercher, B. (2006). The adaptation to cultural distance and its influence on visitor satisfaction: The case of first-time visitors to Hong Kong.*Tourism analysis*, 10(4), 385-391.
- Crouch, G. I. (1994). The study of international tourism demand: a review of findings. *Journal of Travel research*, 33(1), 12-23.
- Crouch, G. I. (1994). The study of international tourism demand: a survey of practice. *Journal of Travel Research*, 32(4), 41-55.
- Daniel, A.C.M. and Ramos, F.F.R.(2002): Modelling Inbound International Tourism Demand to Portugal, *International Journal of Tourism Research*, 4: 193-209.
- De Mello, M. M., & Fortuna, N. (2005).Testing alternative dynamic systems for modelling tourism demand. *Tourism Economics*, 11(4), 517-537.
- Dreher, A. and Gassebner, M. (2013): Greasing thewheels? The impact of regulations and corruptionon firm entry, *Public Choice*, 155: 413–432.
- Dritsakis, N. (2004). Cointegration analysis of German and British tourism demand for Greece. *Tourism management*, 25(1), 111-119.
- Eilat, Y. and Einav, L. (2004): Determinants of internationaltourism: a three dimensionalpanel data analysis,*Applied Economics*, 36: 1315–1327.
- Eldridge, J. D., & Jones, J. P. (1991). Warped space: A geography of distance decay\*. *The Professional Geographer*, 43(4), 500-511.
- Erez, M., &Earley, P. C. (1993). *Culture, self-identity, and work*.Oxford University Press.
- Frankel, J. A., Romer, D., & Cyrus, T. (1996). Trade and growth in East Asian countries: cause and effect? (No. w5732).National Bureau of Economic Research.
- Henrich, J. (2000). Does culture matter in economic behavior? Ultimatum game bargaining among the Machiguenga of the Peruvian Amazon. *American Economic Review*, 973-979.
- Hofstede, G. (1980). Culture's consequences: international differences in work-related values. *Cross-cultural research*.
- Hofstede, G. H., & Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Sage.
- Hoftede, G., Hofstede, G. J., &Minkov, M. (2010). *Cultures and organizations: software of the mind: intercultural cooperation and its importance for survival*. McGraw-Hill.
- Hsiao, C. (2003). Analysis of Panel Data. *Cambridge Books*.
- Isard, W. (1954). Location theory and trade theory: short-run analysis. *The Quarterly Journal of Economics*, 305-320.

- Jackson, M. (2001). Cultural influences on tourist destination choices of 21 Pacific Rim nations.
- Jackson, M. S., White, G. N., & Schmierer, C. L. (2000). Predicting tourism destination choices: Psychographic parameters versus psychological motivations.
- Juàrez, C.N. (2013): Essays on the economics of crime in Mexico, PhD thesis, Alfrew Weber Institute for Economics, Ruprecht-Karls University, Heidelberg.
- Kastenholz, E. (2010). 'Cultural proximity' as a determinant of destination image. *Journal of Vacation Marketing*, 16(4), 313-322.
- Keum, K. (2010). Tourism flows and trade theory: a panel data analysis with the gravity model. *The Annals of Regional Science*, 44(3), 541-557.
- Khalil, S., Kakar, M. K., & Malik, A. (2007). Role of Tourism in Economic Growth: Empirical Evidence from Pakistan Economy [with Comments]. *The Pakistan Development Review*, 985-995.
- Kluckhohn, C. (1951). *The study of culture*.
- Kozak, M., Crotts, J. C., & Law, R. (2007). The impact of the perception of risk on international travellers. *International Journal of Tourism Research*, 9(4), 233-242.
- Kuo, H-I., Liu, K.E. and Chen, C-C. (2014): Modelling Japanese Tourism Demand for Asian Destinations: A Dynamic AIDS Approach, *Asia Pacific Research of Tourism Research*, 19(1): 86-102.
- Ledesma-Rodriguez, F. J., Navarro-Ibanez, M., & Perez-Rodriguez, J. V. (2001): Panel data and tourism: A case study of Tenerife, *Tourism Economics*, 7(1): 75-88.
- Lee, H. A., Guillet, B. D., Law, R., & Leung, R. (2012). Robustness of distance decay for international pleasure travelers: A longitudinal approach. *International Journal of Tourism Research*, 14(5), 409-420.
- Leung, K., Bond, M. H., de Carrasquel, S. R., Muñoz, C., Hernández, M., Murakami, F., ...& Singelis, T. M. (2002). Social axioms the search for universal dimensions of general beliefs about how the world functions. *Journal of Cross-Cultural Psychology*, 33(3), 286-302.
- Lim, C. (1997). Review of international tourism demand models. *Annals of tourism research*, 24(4), 835-849.
- Linnemann, H. (1966). An econometric study of international trade flows (Vol. 234). Amsterdam: North-Holland Publishing Company.

- Litvin, S. W., Crofts, J. C., & Hefner, F. L. (2004). Cross-cultural tourist behaviour: a replication and extension involving Hofstede's uncertainty avoidance dimension. *International Journal of Tourism Research*, 6(1), 29-37.
- McIntosh, R. W., & Goeldner, C. R. (1986). *Tourism: principles, practices, philosophies*.
- McKercher, B., & So-Ming, B. C. (2001). Cultural distance and participation in cultural tourism. *Pacific Tourism Review*, 5(1), 23-32.
- McKercher, B., Wong, C., & Lau, G. (2006). How tourists consume a destination. *Journal of Business Research*, 59(5), 647-652.
- Méon, P. and Weill, L. (2010): Is Corruption an Efficient Grease? *World Development*, 38(3):244-259.
- Money, R. B., & Crofts, J. C. (2003). The effect of uncertainty avoidance on information search, planning, and purchases of international travel vacations. *Tourism Management*, 24(2), 191-202.
- Morley, C., Rosselló, J., & Santana-Gallego, M. (2014). Gravity models for tourism demand: theory and use. *Annals of Tourism Research*, 48, 1-10.
- Moyo, B. and Ziramba, E. (2013): The impact of crime on inbound tourism to South Africa, *African Security Review*, 22(1): 4-18.
- Munoz, T. G. (2007). German demand for tourism in Spain. *Tourism Management*, 28(1), 12-22.
- Neumayer, E. (2004): The impact of political violence on tourism dynamic cross-national estimation, *Journal of Conflict Resolution*, 48: 259–281.
- Ng, S. I., Lee, J. A., & Soutar, G. N. (2007). Tourists' intention to visit a country: The impact of cultural distance. *Tourism Management*, 28(6), 1497-1506.
- Pizam, A., & Fleischer, A. (2005). The relationship between cultural characteristics and preference for active vs. passive tourist activities. *Journal of Hospitality & Leisure Marketing*, 12(4), 5-25.
- Poprawe, M. (2015). A panel data analysis of the effect of corruption on tourism. *Applied Economics*, 47(23), 2399-2412.
- Pöyhönen, P. (1963). A tentative model for the volume of trade between countries. *Weltwirtschaftliches Archiv*, 93-100.
- Raza, S. A., & Jawaid, S. T. (2013). Terrorism and tourism: a conjunction and ramification in Pakistan. *Economic Modelling*, 33, 65-70.
- Ronen, S., & Shenkar, O. (1985). Clustering countries on attitudinal dimensions: A review and synthesis. *Academy of Management Review*, 435-454.

- Rose-Akerman, S. (1999): *Corruption and Government: Causes, Consequences, and Reforms*, Cambridge University Press, Cambridge.
- Saleh, A.S., Assaf, A.G., Ihalanayake, R. and Lung, S. (2013): A Panel Cointegration Analysis of the Impact of Tourism on Economic Growth: Evidence from the Middle East Region, *International Journal of Tourism Research*, 17:209-220.
- San Martin, H. and Rodriguez del Bosque, I.A. (2008): Exploring the cognitive-affective nature of destination image and the role of psychological factors in its formation, *Tourism Management*, 29 (2): 263–277.
- Schwartz, S. H. (1994). *Beyond individualism/collectivism: New cultural dimensions of values*. Sage Publications, Inc.
- Sen, A., & Smith, T. (2012). Gravity models of spatial interaction behavior. Springer Science & Business Media.
- Shareef, R. and McAleer, M. (2005): Modelling International Tourism Demand and Volatility in Small Island Tourism Economies, *International Journal of Tourism Research*, 7: 313-333.
- Smith, S. L. (1983). *Recreation geography*. Longman Group Limited.
- Song, H., & Fei, B. (2007). Modelling and forecasting international tourist arrivals to mainland China= 中国入境旅游需求预测研究: 以 General-Specific 方法为例. *China tourism research*, 3(1), 3-40.
- Song, H., & Witt, S. F. (2003). Tourism forecasting: the general-to-specific approach. *Journal of Travel Research*, 42(1), 65-74.
- Song, H., Wong, K. K., & Chon, K. K. (2003). Modelling and forecasting the demand for Hong Kong tourism. *International Journal of Hospitality Management*, 22(4), 435-451.
- Sönmez, S. (1998): Tourism, Terrorism and Political Instability, *Annals of Tourism Research*, 25(2):416-
- SPROTLES, G. B., & Kendall, E. L. (1986). A methodology for profiling consumers' decision-making styles. *Journal of Consumer Affairs*, 20(2), 267-279.
- Tinbergen, J. (1962). An analysis of world trade flows. *Shaping the world economy*, 1-117.
- Tobler, W. (2004). On the first law of geography: A reply. *Annals of the Association of American Geographers*, 94(2), 304-310.
- Vietze, C. (2008). *Cultural effects on inbound tourism into the USA: a gravity approach* (No. 2008, 037). Jena economic research papers.

- Vietze, C. (2012): Cultural effects on inbound tourism into the USA: a gravity approach, *Tourism Economics*, 18(1): 121-138.
- Wang, Y. S. (2009). The impact of crisis events and macroeconomic activity on Taiwan's international inbound tourism demand. *Tourism Management*, 30(1), 75-82.
- White, R., & Tadesse, B. (2008). Immigrants, cultural distance and US state-level exports of cultural products. *The North American Journal of Economics and Finance*, 19(3), 331-348.
- Witt, S. F., & Turner, L. W. (2002). Trends and forecasts for inbound tourism to China. *Journal of Travel & Tourism Marketing*, 13(1-2), 97-107.
- Wooldridge, J. M. (2002). Econometric analysis of cross section and panel data.
- Yang, Y. and Wong, K.K.F. (2012): The influence of cultural distance on China inbound tourism flows: a panel data gravity model approach, *Asian Geographer*, 29(1): 21-37.
- Yoo, J. J. E., McKercher, B., & Mena, M. (2004). A cross-cultural comparison of trip characteristics: International visitors to Hong Kong from Mainland China and USA. *Journal of Travel & Tourism Marketing*, 16(1), 65-77.