INTERNATIONAL TOURISM DEMAND AND ITS DETERMINANTS IN KENYA

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DECLARATION

This research project is my original work and has not been presented for an academic award in any University

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To

My wife Betty, Children Joy and Liz

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ABBREVIATIONS

CPI	Consumer Price Index
ECM	Error Correction Model
EU	European Union
GDP	Gross Domestic Product
IMF	International Monetary Fund
KAA	Kenya Airports Authority
KCAA	Kenya Civil Aviation Authority
KNBS	Kenya National Bureau of Statistics
KPSS	Kwiatkowski-Phillips-Schmidt-Shin
KTB	Kenya Tourism Board
KTDC	Kenya Tourism Development Corporation
TTF	Tourism Trust Fund
UK	United Kingdom
USA	United States of America
WTTC	World Travel and Tourism Council
WTO	World Tourism Organization

OPERATIONAL DEFINITION OF TERMS

International Tourism	Short term movement of people to Kenya from their respective countries to indulge in pleasurable activities and may involve travel for business purposes.
Tourist	A person travelling to and staying in a place outside his / her usual environment for not longer than year for leisure, business and other purposes not related to the exercise of an activity for which they are paid
Tourism	Short term movement of people to places some distance from their normal place of residence to indulge in pleasurable activities and may involve travel for business purposes.
Tourism Demand	Amount of a set of tourist products that consumers are willing to acquire during a specific period of time, and under certain conditions which are controlled by explanatory variables used in the demand theory.
Tourism Market	Tourist's country of origin
Utility	The satisfaction or enjoyment derived from the consumption of a good or service.

ABSTRACT

Tourism is a major contributor to economic growth in many countries. In Kenya, tourism is a significant economic activity contributing greatly to the gross domestic product, foreign exchange earnings as well as employment. In 2011, the sector contributed 13.7 per cent of Gross Domestic Product, about 18.6 per cent in foreign exchange earnings while creating close to a million jobs. The country's long term economic development blue print, the *Kenya Vision 2030,* has identified tourism as the sector that will enable the country achieve a double digit economic growth rate thus propelling the country into a globally competitive and prosperous nation by the year 2030. Despite efforts in marketing the country abroad through the Kenya Tourist Board, the sector remains highly susceptible to perceived or actual risks associated with travel. For the sector to play its rightful role in contributing to growth, the factors that affect it ought to be empirically investigated so that those with negative effects can be addressed for the sector to achieve its envisaged target. The purpose of this study therefore was to empirically investigate how various factors influence international tourism demand in Kenya. The study estimated the demand for Kenya's tourism from UK, America and Indian tourists using the double-log linear model through Generalized Least Squares estimation technique. Panel data for the period 1980-2012 was used for the analysis

CHAPTER ONE: INTRODUCTION

1.1 Background

International travel and tourism is one of the fastest growing economic activities in the world. With the rapid development of new technology, tourism has become much more competitive as international marketing of tourism products is enhanced and the consumers are better informed about a wider choice of destinations and their rights and entitlements. Global economy, demographic change, technology and market liberalization have continued to influence world travel and tourism. Over the years, tourism has become one of the leading industries in the world and it is expected to play a leading role in contributing to growth in many countries (Gross, 2007). Despite the recession of global economies due to global financial crisis in 2007-2008, tourism was expected to continue from high mass consumption countries of Europe, North America and the growing classes of China and other emerging markets to developing countries (Republic of Kenya, 2009).

Figure 1.1 highlights global trends in tourist flows and positions Africa and Middle East as the least preferred destinations while Europe remains the most preferred destination in the world. Asia and America also remain preferred destination though not as attractive as Europe.

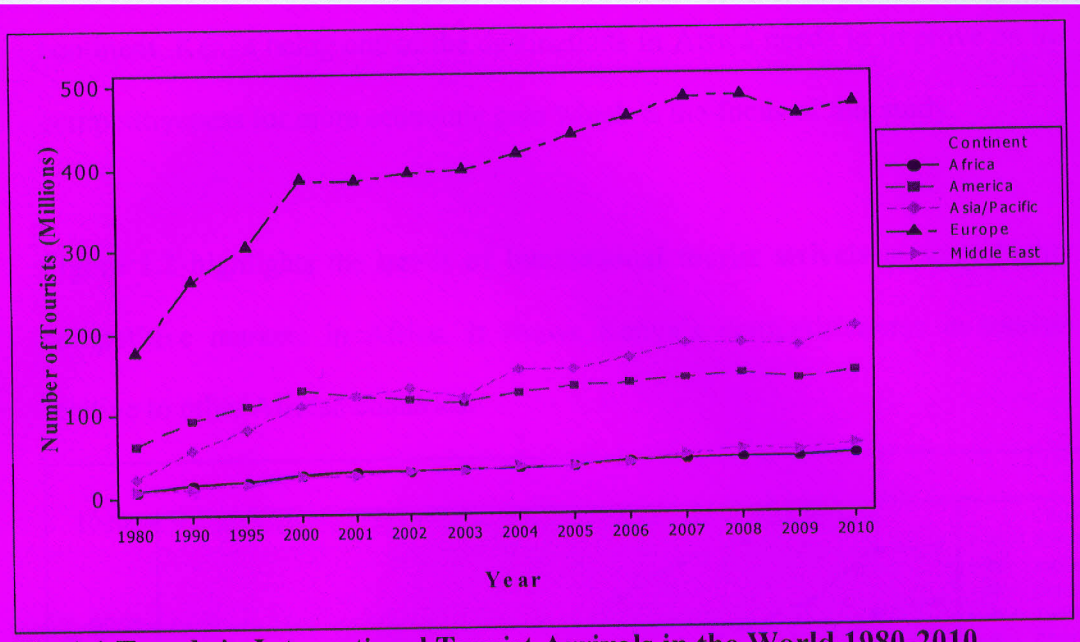

Fig 1.1 Trends in International Tourist Arrivals in the World 1980-2010
Source: World Tourism Organization (WTO) Various issues

From the figure, Europe's share of global tourists has relatively dropped from 64 per cent to 50 per cent over the period 1980 to 2010. Asia's share has grown from 22.8 million tourists accounting for 8.2 per cent to 203.8 Million tourist representing 21.7 per cent over the same period while America lost its market share from 22.5 per cent to 15.9 per cent over the same period. Middle East and Africa have over the period received a smaller share of the world tourists receiving 7.1 Million and 7.2 Million respectively in 1980 which is 2.6 per cent in both regions growing relatively low to 60.9 million and 50.3 million tourists for Middle East and Africa respectively accounting for 6.5 per cent and 5.4 percent respectively in 2010. This raises pertinent concern that while Africa has numerous tourist attraction sites and enjoys favourable weather throughout the year, there are certain aspects that work against her leading to fewer tourists visiting the

continent. Kenya being one of the destinations in Africa needs to improve on her competitiveness for more economic gain which is the focus of this study.

Figure 1.2 highlights the trends of International tourist arrivals in some highly competitive markets in Africa. It shows Kenya's competitiveness in tourism relative to other African countries.

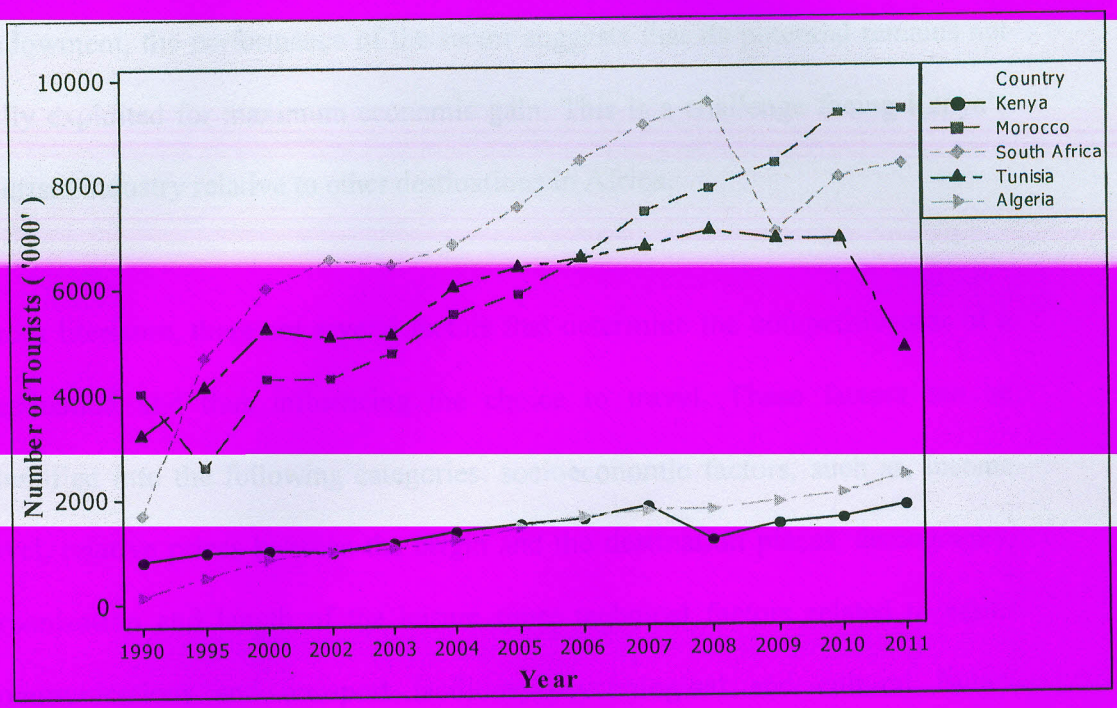

Fig 1.2: International Tourist Arrivals in Highly Competitive Destinations in Africa
Source: World Tourism Organization (WTO) Various issues

The figure shows that South Africa, Morocco and Tunisia receive the highest number of tourists visiting Africa taking approximately 50 percent of the international tourist arrivals. South Africa, Morocco and Tunisia have exhibited a steady growth over the period. Kenya and Algeria have received relatively low tourists over the period indicating that they are not as competitive as South Africa,

Morocco and Tunisia. As exhibited by Kenya in 2008 and Tunisia in 2011, political unrest impacts negatively on tourist arrivals.

On relative basis, of the 49.7 million tourists who visited Africa in 2010, Kenya received 3.2 per cent compared to 18.7 per cent, 16.2 per cent and 13.9 per cent for Morocco, South Africa and Tunisia respectively. Given Kenya's resource endowment, the performance of the sector suggests that its potential remains not fully exploited for maximum economic gain. This is a challenge facing Kenya's tourism industry relative to other destinations in Africa.

From literature, there are several factors that determine the competitiveness of a destination and thus influencing the choice to travel. These factors can be classified into the following categories: socioeconomic factors, such as, income level, relative prices between the origin and the destination places, demography, urbanization and length of the leisure time; technical factors related to easier communications and transport facilities; psychological and cultural factors reflecting personal preferences and the style of life of the potential travelers; and random factors related to unexpected events, like political instability, weather conditions, natural disasters and epidemic diseases (Hanafiah et al 2011).

Tourism demand in less developed countries does not respond to price fluctuations while destination risk, common border, common language and distance are important determinants of tourism flows (Eilat and Einav 2004). Hanafiah et al 2011 established that bilateral trade is an important factor

influencing tourism demand and since a number of tourists visiting Kenya arrive for business purposes, expanding trade with her partners, would earn the country more from tourism. This study applied the relevant factors identified from literature to assess how they influence tourism demand in Kenya. In addition, the study was also to find out whether a trade partner is an important vehicle to expand tourism or not. Trade openness was therefore included as an explanatory variable because tourist arrivals for business purposes made up about 15 per cent on average of total arrivals to Kenya and therefore volume of trade was hypothesized to affect the demand for travel to Kenya.

1.2 The Importance of Tourism Sector in Kenya

As an economically productive activity, tourism is a vital sector globally and in Kenya. Unlike manufacturing or agriculture, tourism is a service industry and the product is consumed at the point of production. Kenya's services sector, which contributes about 63 percent of GDP, is dominated by tourism. The tourism sector has exhibited steady growth in most years since independence and by the late 1980s had become the country's principal source of foreign exchange.

Tourism contributes directly about 5.7 per cent of Gross Domestic Product and 4.8 per cent of total employment in Kenya (World Economic Forum, 2008). Despite the seemingly low direct contribution, the total contribution of tourism to the economy, which captures backward and forward linkages, is estimated at 13.7 per cent of GDP, (WTTC 2012). Increasing the number of tourists visiting Kenya

will impact positively on the growth of the economy as well as employment creation.

Tourism has witnessed unprecedented growth over the past several years and is the major contributor to the country's economic growth. Between 2003 and 2006, the average annual growth rate was 9.8 per cent compared to 5.4 per cent for Africa and 3.2 per cent for global tourism (Ikiara et al 2007). In 2006, tourism revenue grew by 14.9 per cent and overtook horticulture to become the leading foreign exchange earner, with earnings of Ksh 56.2 billion (KIPPRA 2009). The sector has also demonstrated potential for quick gains based on the available resources and registered earnings of about Ksh 97.9 billion by the end of 2011, with almost 2 million international visitors. This is an indication of the sectors potential which if fully harnessed would drive the country's economic growth towards a double digit.

Figure 1.3 shows the growth of tourist arrivals and earnings in Kenya from 2001 to 2011 indicating a stable growth and a shock witnessed in 2008 negatively impacted on both the arrivals and earnings implying there is a correlation between the two variables.

Years	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Tourist Arrivals	993.6	1,001	1,146	1,360	1,478	1,600	1,817	1,203	1,490	1,609	1,822
Earnings	24.3	21.7	25.8	38.5	48.9	56.2	65.2	52.7	62.5	73.7	97.9

Figure 1.3: Kenya's Tourism Earnings and International Tourists Arrivals 2001-2011

Source: Kenya National Bureau of Statistics (Various issues)

The Figure indicates tourist arrivals almost doubled between 2001 to 2011 while tourism earnings increased by more than four times during the period mainly due to increased expenditure by tourists. However, as pointed out earlier, this increase is low compared to the country's envisaged target and its competitors in Africa.

Revenue generated from tourism sector plays a pivotal role in overall development of the economy. Beside improvement in infrastructure, tourism catalyzes growth in other economic activities such as agriculture, hotel and hospitality industries which receive direct benefits from these by providing goods and services.

related violence, high cost of jet fuel, global financial meltdown, rise in commodity prices and exchange rate fluctuations (Republic of Kenya, 2009).

The adverse effect of these challenges has resulted in job losses in the tourism sector and an adverse effect to the growth in the economy. However, several efforts have been put in place to mitigate the adverse effect of the above cited challenges with an aim of increasing the number of tourists visiting the country as well as increasing the per capita spending therefore increasing the earnings.

Among the efforts employed include the development of strategies geared towards improvement and development of the main tourism products. The main strategies focus on eco-tourism, sports and cultural tourism while other strategies includes diversification of tourist sources by marketing the country as a tourist destination in china and other emerging markets, development of human resource for provision of quality service and improving security (Republic of Kenya, 2007). The steady growth of tourist arrivals since 2003 has been largely attributed to the government's promotion efforts especially the Market Recovery Programme which started in 2003. The programme included products and market diversification whereby high-level marketing campaigns were undertaken targeting both the source and emerging markets (Republic of Kenya 2009)

These strategies are meant to make Kenya one of the top ten long-haul tourist destination in the world offering a high end, diverse, and distinctive visitor experience that a few of her competitors will be able to offer.

The Government has also recognized the varied set of products that Kenya is able to offer. These include Coast tourism which is highly competitive and sensitive to price changes, premium parks including Amboseli, Masai Mara and Amboseli and niche products such as community and eco-based tourism that are unique and can be marketed at higher prices (Republic of Kenya 2007). Efforts to diversify the range of attractions into education, health, conferences and sports tourism amongst others are continuing in order to improve not only the industry but also the quality of tourists attracted into the country.

1.3 Major Players in the Tourism Sector

The Tourism sector is managed by both Government and private institutions that work together to ensure the success of the industry. The Ministry of Tourism is responsible for policy direction, investment promotion and ensures that its growth is consistent with the overall economic growth strategy of the country. The Kenya Tourism Development Corporation (KTDC) provides advisory and financial services including loan support to investors in the industry. The Kenya Tourism Board (KTB) undertakes marketing Kenya as a tourist destination both locally and internationally. The Kenya Utalii College is responsible for staff training to enhance quality of services offered by the sector.

The private sector also plays a critical role in the promotion of Kenya's tourism industry through investment, maintenance of quality tourism products and services and community involvement and conservation efforts. Through the industry's umbrella body the Kenya Tourism Federation (KTF), the Government encourages the participation of the private sector in exploring new tourism circuits to diversify and expand tourism products and distribution in the country.

Agencies such as the Kenya Community Based Tourism Network, the Kenya Wildlife Working Group and the East African Wildlife Society play a critical role in ensuring that communities and conservation agencies work together with the Government to reduce human and wildlife conflict, conserve wildlife, cultural and natural resources and promote tourism.

1.4 Problem Statement

Kenya's economic development has over the years largely depended on the agricultural sector mainly the export of raw produce. Tourism directly contributed 11.6 per cent of GDP second to agriculture which contributed 24 per cent in 2011 (Republic of Kenya 2012). With the fluctuation of agricultural produce prices in the international market, there is need for diversification and tourism which catalyzes growth in other economic activities can provide such an alternative. This is because it has a multiplier effect on other sectors of the economy.

Tourism's importance is outlined in the Kenya vision 2030 as the lead driver among the key growth drivers in the economic pillar targeting growth of visitor arrival to Kenya from 1.6 million in 2006 to 3 million in 2012 while increasing tourist earnings from Kshs 56.2 billion to more than Kshs 200 billion over the same period. However, the realization of these targets has not been actualized with only 1.8 Million international tourists visiting the country earning Kshs 97.9 billion in 2011 which is slightly less than 50 per cent of the target. Further, though there has been an increase in the number of international visitors as well as receipts, the increase has been relatively low compared to other top tourist destinations in Africa such as South Africa, Morocco and Tunisia, who received about four to five times more tourists and more than eight times in earnings than Kenya as is the case for South Africa and Morocco in 2011.

The problem of Kenya's tourism has been relatively low levels of tourist arrivals as well as low earnings compared to its competitors yet it has a comparative advantage of favourable weather all year round unlike her competitors. For Kenya to be among the top 10 long-haul tourist destinations in the world offering a high-end, diverse, and distinctive visitor experience that few of her competitors can offer, as envisaged in the vision 2030, then the factors that influence international tourism demand ought to be understood and policies developed to manage and/ or mitigate the situation which is the purpose of this study.

Previous studies in Kenya have not considered trade openness and competitor prices as significant factors affecting tourist arrivals. This study sought to bridge this gap by including trade openness and competitor price as variables in the analysis.

1.5 Research Questions

The study was guided by the following research questions;

1. What are the factors that affect International tourist arrivals in Kenya?
2. What is the effect of trade openness on tourist arrivals in Kenya?
3. What is the effect of competitor price on tourist arrivals in Kenya?

1.6 Research Objectives

The general objective of this study was to investigate how various factors influence international tourism demand in Kenya. The specific objectives were as follows:

1. To identify the factors that affect international tourist arrivals in Kenya.
2. To investigate the effect of trade openness on international tourist arrivals in Kenya
3. To investigate the effect of competitor price on international tourist arrivals in Kenya

1.7 Significance of the study

Tourism is one of the main contributors to growth and development of the Kenya's economy contributing over 10 percent of GDP and over Kshs 70 billion per year in foreign exchange earnings. The sector also due to its backward and forward linkages contributes over 18 per cent and 11 percent of export earnings and employment respectively in the economy. With growth in importance of the sector globally, competition is likely to intensify and the marketing strategies will become increasingly important and thus the study will help in informing policy makers on the strategies to employ in marketing the country in major source markets thus making it more competitive and a preferred tourist destination in Africa as envisaged in the country's long term economic blue print the Kenya Vision 2030.

Since tourism sector is expected to play a key role in contributing towards a globally competitive and prosperous country by the year 2030 exploring the various constraints hindering the achievement of the set target will help to formulate policies which will address these challenges so that the country is able to achieve the middle income country status as envisaged in the Kenya Vision 2030.

1.8 Scope of the study

This study covers the period 1980 to 2012 and focuses on international tourist arrivals, incomes of countries of origin, prices of goods and services as well as trade openness within the destination. The study is organized in three chapters. The first chapter provides background information of the study, it highlights the objectives and has the research problem stated. Chapter two looks at the relevant theoretical and empirical literature while Chapter three explains the research design and methodology used in the study. Finally, chapter four and five gives the empirical findings, summary, and conclusion as well as policy implications of the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews both theoretical and empirical literature to establish the knowledge gap that is to be filled by the current study. This chapter is divided into three sections. The first section looks at theoretical literature, the second section reviews empirical literature and the final section gives an overview of existing literature.

2.2 Theoretical Literature

Tourism involves purchase of the service to physically visit the place of production so as to access and derive satisfaction from the service. The travel to the production place itself is part of the experience. In most cases especially in international tourism, the experience prevailing at the destination area is quite different from that of the generating area. Thus the factors that will influence demand will be found not only at their home areas but also at the destination area. Factors that generally influence all those who intend to travel regardless of the destination include; disposable incomes, distribution of incomes and value of currency amongst others. These are generally concerned with overall constraints to access the market. The second set of variables defines the economic attractiveness of the destination and is product or supply related. Given the competition between different destination areas, conditions in a number of them will functionally act together, through substitution effects to influence tourism demand. Other factors influencing travel include price levels, supply condition and quality of tourism amongst others.

Tourism takes a wide range of forms in response to diverse motivations, including religion, education, pleasure, romance, business, health, social status, escape, self discovery and more. The level of desire (push) and the destination attraction (pull) act to influence the behavior of the consumer. These include the desire to undertake a behavior or activity that is not culturally allowed in the home setting. Purpose for travel may include visiting friends and relatives, enjoying leisure activities, business or study.

In international tourism, exchange rate variations are usually the major contributor to relative price differences and these influences the demand for tourism. Relative prices between destinations and generating areas are important. A consumer is faced with a set of prices not just within one market but with relative prices in two or more markets. The effect of price changes on demand shows that tourism demand runs the whole range of possible price elasticities. The greater the degree of competition, and hence substitutability, amongst products, the higher the price elasticity of demand is likely to be, as price conscious tourists search for cheaper alternatives.

2.2.1 The Consumer Theory

The economic theory of the consumer is a combination of positive and normative theories. It is based on a rational maximizing model which describes how consumers should make their choices. The theory is normative since it describes what rational consumers should do and since it also predicts what consumers in

fact do it is predictive. Economists have worked out the theory of the consumer which is concerned in describing the consumer decision making. It tries to model how consumers make decisions about their expenditure on goods and services.

The economic model of the consumer is formulated in terms of the concept of a utility function. It's assumed that consumers act rationally and therefore they choose between different goods and services so as to maximize total satisfaction or total utility. Consumers will take into account how much satisfaction they get from buying and then consuming an extra unit of a good or service, the price that they have to pay to make this purchase, the satisfaction derived from consuming alternative products and the prices of alternatives goods and services.

The basic theory is that consumers try to maximize their utility given their budgets. This means that in this maximization of utility, the consumer is faced with a constraint which is the limited income. The consumer thus endeavors to choose the best or the most preferred set of commodities that they can afford. A consumer will maximize the utility at a point where the marginal utility equates to zero. She will buy units of each good until her budget is just exhausted and she equates marginal utility per dollar spent on the different commodities, so

$$MU_X/P_X = MU_Y/P_Y$$

Where MU_x is marginal utility of good X and P_X is the price of good X while MU_Y is marginal utility of good Y and P_Y is the price of good Y.

Economic models are concerned with measuring the responsiveness of tourism flows to changes in economic variables notably prices and incomes. According to Johnson and Thomas (1992) the economic approach takes tastes to be exogenous and fixed (or they are assumed to change slowly that they can be ignored in the short-run analysis). This is a useful assumption which enables some powerful insights to be developed through economic models, but a more complete understanding of consumers' behaviour obviously requires attention to be given to the formation of preferences and tastes.

According to Giacomelli (2006), the neoclassical consumer theory has so far represented the theoretical cornerstone of empirical research on tourism demand. The theory assumes that destinations offer a homogenous tourism good, which is characterized by a certain price composed of two components, stay and transport. The theory formed a basis of establishing empirical models in the 1960s, mainly consisting of tourism figures for a given destination. Giacomelli further observes that, starting from the 1990s, an advance class of the neoclassical models emerged. These new models saw a shift of the analytical focus from destinations to origins using a system of equations and models as opposed to single equation.

The main weakness of the consumer theory is that utility cannot be measured objectively. There are also doubts about the assumption of rational behavior among consumers particularly in a world where consumers cannot expect to have all the information on the products available in a market.

2.2.2 The Almost Ideal Demand System (AIDS) Model

The Almost Ideal Demand System (AIDS) model of Deaton and Meullerbauer is the commonly used system model in tourism (Mello et al, 1999, Durbarry, 2001; 2002). This is because of the flexibility of its cost function form. The model includes both the axioms of consumer choice and the stage budgeting process and thus it is used to explain the allocation of tourism expenditure among different destinations. In its final formulation, the AIDS model takes the form;

$$w_i = \alpha_I + \sum_j \gamma_{ij} \ln p_j + \beta_i \ln \left(\frac{X}{P}\right) \qquad i,j = 1,\text{-----},n$$

w_i = Share of tourism expenditure allocated in destination i to total tourism expenditure in n destinations,

p = Price of tourism

X = Total per capita expenditure allocated in n destinations

P = Price index

The model is suitable for estimating a country's outbound tourism demand and for it to be used in estimating inbound demand, then a series of AIDS models has to be estimated for all the source markets under consideration, and the key destination included in all the models. Average elasticity of demand is then derived from all the models which makes it not only time consuming but also highly constrained by data availability hence making it impractical for inbound tourism demand estimation (Durbarry, 2008). He therefore observes that single equation models with a proper theoretical foundation are deemed to be more appropriate than the AIDS model in estimating inbound tourism demand.

2.2.3 The Gravity Model

The gravity models are based on standard trade theories and originated from Newton's physical law where gravity is a force which increases with mass of two objects and decreases with distance between them. Tinbergen in 1962 first applied this analogy in economics and postulated that trade flows between countries follow this principle, where the volume of trade flows is determined by two opposite forces – the economic size of countries, and trade impediments between them (Helmers and Pasteels, 2005; Walsh,2006). The volume of trade can therefore be estimated as an increasing function of the national incomes of trading partners, and a decreasing function of the distance between them. Besides the proxies of national incomes and geographic distance, gravity models allow inclusion of country specific factors that influence trade flows (Durbarry, 2001; Ruiz and Vilarrubai, 2007; Khadaroo and Seetanah 2006).

According to Bergstand (1985), the "Gravity equation" has been long recognized for its consistent empirical success in explaining many different types of flows, such as migration, commuting, tourism, and commodity shipping. Consequently, the gravity model of international trade has gained the popularity to be described as the 'workhorse for empirical studies of international trade (Eichengreen and Irwin (1996). As pointed out by Bergstrand (1985), trade flows are explained commonly using the following specification:

$$PX_{ij} = \beta_0 (Y_i)^{\beta 1} (Y_j)^{\beta 2} (D_{ij})^{\beta 3} (A_{ij})^{\beta 4} u_{ij}$$

Where;

PX_{ij} is the U.S dollar value of the flow from country i to country j, Y_i (Y_j) is the U.S dollar value of nominal GDP in i (j), D_{ij} is the distance from the economic center of i to that of j, A_{ij} is any other factor(s) either aiding or resisting trade between i and j, and u is a log-normally distributed error term with $E(\ln u_{ij}) = 0$.

Kosnan and Ismail (2012) notes that formulation of the Gravity Model can be derived from different theoretical models such as Ricardian models, Hecksher-Olin (HO) models and Increasing Return to Scale (IRS) models of the New Trade Theory. The strength of using Gravity approach in comparison to others is that it can estimate both in time variant as well as time invariant variables. Additionally, the model allows more factors to be taken into account to explain the extent of trade as an aspect of international trade flows.

Gravity model is built on a solid theoretical foundation and consequently has been shown that its framework is consistent with a number of standard trade theories such as Hecksher-Ohlin and monopolistic competition (Anderson 1979; Deardorff 1998; Walsh 2006). According to Durbarry (2001), the gravity model is suitable to estimate tourism demand in a particular country as it takes into account peculiar tourism services.

Walsh (2006) used and augmented standard gravity model to show the appropriateness of the model to estimate tourism demand in the context of trade in services. Bergstrand (1985) as well as Harris and Matyas (1998) observe that the

Gravity models empirically perform well and consistently reveal high explanatory power and therefore suited for policy analysis. Based on this strength, this study will adopt the gravity model approach in examining the demand factors affecting international tourist arrivals in Kenya.

2.3 Empirical Literature

The European Intelligent Unit (1979) undertook a study on the role played by prices and tourist incomes in determining tourist arrivals in Kenya. Using price and income elasticities, the responsiveness of Kenya tourism receipts was analyzed. Specifically the model tested the real Kenya tourism receipts and potential market for Kenya tourism services relative prices over time.

Using 1964 to 1977 data, the empirical results showed that the coefficient on the potential market was significant while the relative price was not. This suggests that real Kenyan travel receipts increases with an increase in discretionary incomes of the major generating countries. A major weakness in the study is that it fails to incorporate other important determinants of travel to Kenya such as promotion/marketing, security, quality of service and seasonality.

Enders and Sander (1991) provided empirical evidence on the link between terrorism and tourism using a sample data of European countries. They used monthly data from 1970- 1988 and employed a vector autoregressive analysis (VAR). They found a negative impact of terrorism on tourism in Spain.

Enders et al (1992) undertook a study on the impact of terrorism on tourism using a large sample of European countries during the period 1974-1988. Using quarterly data over this period, they concluded that terrorist incidents have adverse effect on tourism revenues in Europe.

Lim and McAleer (2001) modeled the international tourist travel from Singapore to Australia, using a dynamic log-linear single equation model. The empirical results showed that real income per capita of Singapore and tourism prices of the two countries have significant influence on inbound tourism from Singapore to Australia. The empirical findings also showed that international tourism demand by Singapore for Australia is income and price inelastic. According to the cointegration model, the long-run real income, real airfare and exchange rate (proxy for price) effects are elastic. The main advantage of Cointegration approach is that it provides a way of avoiding a deceptive inference associated with a spurious regression. However, the number of observations available is reduced in a differenced series and therefore a large sample size is usually required to be able to use a cointegration model sensibly.

Eilat and Einav (2004) undertook a study on the determinants of international tourism. The main findings were that tourism to developed countries had a price elasticity of about one, while tourism to less developed countries does not respond to price fluctuations. Destination risk was shown to be quite important for destination choice, for both developed and less developed countries. Fashions

seemed to have an important role as well. Other variables such as common border, common language, and distance, were all important in determining tourism flows especially for less developed countries.

Song H (2006) undertook a study on the demand of international tourists flows to Macau from eight major origin countries/region comprising China, Hong Kong, Taiwan, Japan, Korea, Philippines, UK and USA using the VAR model approach. Tourist arrivals from these eight countries/regions accounted for 98 percent of the total arrivals to Macau. The focus of the paper was forecasting the most probable level of demand that is likely to occur in future in the light of known circumstances.

Using data over the period 1993 Quarter 1–2003 Quarter 2, the forecasting results showed that the growth of tourist arrivals from China was expected to be the strongest among the eight origin countries/regions. Tourist arrivals from Hong Kong were expected to decline during the forecasting period, and this was likely to be caused by the increasing competition from China. Another major market, Taiwan, showed an increasing trend accompanied by some large fluctuations, but there was a decline at the end of the period possibly due to the opening of the new Las Vegas style casinos/theme hotels.

The forecasts for the other five origin countries showed that the demand for Macau tourism by residents from these origin countries are likely to increase over

the forecasting period, but the scale of increase was much smaller than that of China.

The strength of using the VAR model is its capability of producing accurate medium- to long-term tourism forecasts. The use of VAR in forecasting tourism demand also has the following two conceptual advantages. First, the VAR modelling approach is a theory based approach and thus, it permits policy simulation via the impulse response analysis. Secondly, the VAR approach is a system approach, which relaxes the exogenous assumption of the explanatory variables. The main limitation of the VAR modelling approach is its consumption of degrees of freedom in the model estimation.

Fletcher and Morakabati (2008) while undertaking a study on tourism, terrorism and political instability in Kenya and Fiji, pointed out that 1997 and 1998 were disastrous years to the tourism industry due to these terrorist attacks coupled with violent clashes in both Coast and Rift Valley provinces. They also noted that the 1998 and 2002 bomb attacks in Nairobi and Mombasa had significant impact on tourism in Kenya. The Mombasa attacks caused the number of leisure visitors to decline by 7 percent in 2003.

In the immediate aftermath of USA embassy-bombing cancellations of room booking reached 50 percent in many hotels. Due to terrorism and civil unrests, many coastal hotels were closed down and laid off staff in 1998, and left suppliers

to hotel trade desperate. The journal pointed out that a survey done in July 1999 reported that out of 22 Indian Ocean hotels 17 suspended their operations. Consequently, the number of people directly employed in the tourist industry fell by 11.6 percent in between 1997 and 1999. The paper concludes that political events such as a coup and internal political problems have far more severe impacts on the level of tourism activity than a low-to-medium, one-off terrorist attack.

Chaiboonsri et al (2010) in their study on panel cointegration analysis on tourism demand of Thailand in six countries of Malaysia, Japan, Korea, China, Singapore, and Taiwan, used the cointegration estimation technique to find the long-run relationship of the international tourism demand model for Thailand. The long-run results indicated that growth in income (GDP) of Thailand's Asia major tourist source markets of Malaysia, Japan, Korea, China, Singapore and Taiwan had a positive impact on international tourist arrivals to Thailand. In addition, the transportation cost of these countries had a negative impact on the number of international tourist arrivals to Thailand. The study also established that Thailand's currency had a positive impact on the number of international tourist arrivals to Thailand. The advantage of using cointegration analysis in tourism demand modelling is that this methodology overcomes the problem of 'spurious regression associated with non stationary data.

Hanafiah et al 2011 in their study trade and tourism demand in Malaysia used the gravity model approach and established that bilateral trade, population, income, tourism price and geographical distance between Malaysia and the Asian countries are the main determinants of tourism. It clearly shows that tourism demands relates significantly with the trades. They measured trade openness as total trade (imports and exports) over GDP.

2.4 Overview of Literature

Most studies on factors that influence the demand for tourism have largely focused on variables related to incomes, destination attractions and generating area push factors. Most of these studies have established that income, relative price, security, transport costs among other factors significantly influence tourist movements to various destinations. Income has a positive influence, while price, terrorism and transport costs negatively impacting on the arrivals,

The reviewed studies have addressed the determinants of tourism demand through different empirical techniques. Some studies have used time series while others have used panel data econometric techniques. Various approaches including cointegration, VAR, log-linear single equation models and gravity model have been used in the analysis.

The VAR model has the strength of producing accurate medium- to long-term tourism forecasts.

VAR also is a theory based approach and thus it permits policy simulation through impulse response analysis and also is a system approach which relaxes the exogenous assumption of the explanatory variables. The main limitation of the VAR modelling approach is its consumption of degrees of freedom in the model estimation.

Cointegration approach has the advantage of avoiding deceptive inference associated with spurious regression as a result of non stationary data. However, the number of observations available is reduced in a differenced series and therefore a large sample size is usually required to be able to use a cointegration model sensibly.

Previous studies particularly in Kenya have not considered the effect of trade openness, competitor price as well as destination marketing/promotion in the analysis of tourism demand. Destination marketing/promotion is a policy issue in the country and the positive outlook particularly after the 2008 post election violence has been attributed to aggressive marketing. Consequently, this study sought to bridge this gap by including trade openness and price of a competitor as variables in the analysis. Destination marketing/promotion was not included though an important variable due to limited data availability.

While the study acknowledges that the quality of tourism services and products as well as the seasonality nature of the industry has an impact on the number of

tourist arrivals, these were not included in the analysis. This is mainly because it was difficult to quantify the quality of services and products as well as seasonality.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter consists of the methodological approach employed to investigate the various factors influencing international tourism demand in Kenya. The research design and theoretical framework for the study are first outlined followed by the specification of the empirical model after which definition and measurement of variables follow. Estimation technique, diagnostic tests, type and sources of data are also outlined.

3.2 Research Design

The purpose of this study was to investigate how various factors influence international tourism demand in Kenya. The study adopted a correlational or prospective research design which attempts to explore relationships to make prediction. It analyzed secondary data from 1980 to 2012 from UK, USA and India collected from various government and World Bank publications so as to estimate a demand function for Kenya's international tourism using the consumer theory.

3.3 Theoretical Framework

This study adopted a theoretical framework based on the consumer theory. The need to travel can be viewed as product demanded by tourists, and thus consumer choice model can be applied to model tourism demand. For this study, South Africa was considered as Kenya's competitor and therefore an international

tourist was faced with a decision to either travel to Kenya or South Africa. The choice of South Africa is because they both fall in sub Saharan Africa unlike Tunisia, Morocco and Egypt which in tourism are classified as North Africa and Middle East region. The tourist is assumed to choose travelling to Kenya (T_k) or South Africa (T_s) in such a way that it maximizes his/her utility function. These are tourist consumption expenditures from which he/she derives utility. In this case, the objective function being maximized is presented as follows:

$$\text{Max } U(T_k, T_s)$$

$$\text{Subject to the budget constraint, } P_kT_k + P_sT_s = Y \quad \} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.1)$$

Where T_k, and T_s denotes tourism goods in Kenya and South Africa respectively, P_k and P_s denotes tourism prices in Kenya and South Africa respectively, while Y denotes a tourist's total tourism budget. Assuming a well behaved utility function, we form the lagrangean expressed as:

$$L = U(T_k, T_s) + \lambda(Y - P_kT_k - P_sT_s) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.2)$$

Taking the first order conditions and solving from the necessary equilibrium condition

$$\frac{MU_K}{P_K} = \frac{MU_S}{P_S} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.3)$$

Where, MU_K and MU_S are Marginal utilities of tourism in Kenya and South Africa respectively, the demand function for tourism can be derived and expressed as follows:

$$D_K = f(Y, P_k, P_s) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.4)$$

Where, D_k and Y are tourism demand in Kenya and tourist income respectively. Therefore demand for tourism in Kenya is a function of income and price.

3.4 The Empirical Model

The study used a double log-linear model of tourism demand adopted from Katafona and Gounder 2004 which has the advantage that its parameter estimates are interpreted as elasticities. Most studies modeling the demand for tourism have either used tourist arrivals or tourism earnings as a dependent variable (Narayan, 2002). Tourist arrivals were used as the dependent variable in this study because data by KNBS captures tourist arrivals and departures by country of origin but cannot disintegrate earnings by country of origin. Tourism demand from three origin countries of UK, USA and India was modeled and the choice of these countries is due to the fact that they are the highest source of tourists to Kenya from their respective continents. To address the objectives of the study, equation 3.4 was adopted and modified as follows:

$$TA_{it} = f(Y_{it}, TA_{it-1}, P_{kt}, P_{st}, TO_{it}, D_t) \quad \text{.......................................} (3.5)$$

i = 1,2,3, is the tourist origin country with 1 = United Kingdom, 2 = USA and 3 = India.

Where TA_{it} is the number of tourist arrivals in Kenya from country i in year t. This was used as a proxy to measure tourism demand,

Y_{it} is the tourist income from country i in year t,

TA_{it-1} is the lagged number of tourist arrivals in Kenya from country i in year t,

P_{kt} is tourism price in Kenya in year t,

P_{st} is tourism price in South Africa year t,

TO_{kt} is trade openness in Kenya in year t,

D_{kt} is a dummy to capture election related civil unrest in Kenya in year t.

For estimation purposes, Equation (3.5) was specified in log form as:

$$\ln TA_{it} = \lambda_0 + \lambda_1 \ln Y_{it} + \lambda_2 \ln TA_{it-1} + \lambda_3 \ln P_{kt} + \lambda_4 \ln P_{st} + \lambda_5 \ln TO_{it} + \lambda_6 D_{kt} + \varepsilon_t \ldots (3.6)$$

Where λ_j = Parameters to be estimated

$j = 0, 1, \ldots, 6$

ε_t = Error term

3.5 Definition and Measurement of Variables

Variable	Definition	Measurement
TA_{it}	A measure of tourism demand in Kenya from a particular country in a given year	No. of tourist arrivals in Kenya from country i in year t
Y_{it}	Tourist income from country i in year t	Tourist's country real GDP per capita
TA_{it-1}	Captures the word of mouth effect and habit persistent as tourists who visit the country may influence others to visit.	Lagged annual tourist arrivals in the Kenya from country i
P_{kt} / P_{st}	Tourism price in Kenya /South Africa in year t. It measures the cost of living in the destination	Real Exchange Rate (RER) of the respective countries. This is because international tourists are

	country.	more aware of exchange rates than prices in the destination countries. The RER is defined as: $RER_i = (ER_i * P_i) / P_{k/s}$, Where: RER_i is the real exchange rate between origin i and Kenya /South Africa currencies. ER_i is the nominal exchange rate of origin i and Kenya /South Africa currencies. P_i is the consumer price index for origin i. $P_{k/s}$ is the consumer price index in Kenya /South Africa.
TO_{it}	Trade openness between Kenya and country i in year t	Total trade as a percentage of GDP TO = (Total Exports to i + Total Imports from i) / GDP
D_{kt}	Dummy that captures election related civil unrest in Kenya in year t.	Use of a Dummy variable

3.6 Data Type and Source

This study made use of secondary, panel data for analysis. The data consisted of yearly observations of tourist arrivals in Kenya, GDP per capita of tourists' country of origin, consumer price index, exchange rate, election related civil unrest. Data on GDP per capita of tourist country of origin and South Africa's CPI was obtained from World Bank publications. Kenya's CPI data and data on tourist arrivals were sourced from various Economic surveys. Data on trade openness was computed and data was collected from 1980 to 2012 for all variables.

3.7 Diagnostic Tests

Time series data may have trends and therefore to avoid spurious regression results, stationarity test was conducted on the series. Each series was tested for the presence of unit root using Im-Pesaran-Shin unit root test. Where unit root was confirmed, the series was made stationary by differencing. Hausman test was also conducted for assessing the appropriate model between Fixed Effects model and Random Effects model for analysis.

3.8 Data Analysis

Many research studies address the determinants of tourism demand through different empirical techniques. Some studies use time series and cointegration econometric techniques to investigate the determinants of tourism demand to enable them to forecast future tourist arrivals (Durbarry, 2001; Cheung and Law

2001; Divisekera 2003; Katafono and Gounder 2004; Narayan, 2005). Other studies deal with determinants of tourism using panel data econometric techniques (Walsh 2006; Luzzi and Flockiger 2003; Eilat and Einav 2004; Naudé and Saayman, 2005; Rosselló et al. 2005). This study used panel data to analyze the demand for tourism in Kenya. Equation (3.6) was estimated by Generalized Least Squares (GLS) estimation technique.

CHAPTER FOUR: EMPIRICAL FINDINGS

4.1 Introduction

To achieve the objectives of the study stated in section 1.6, this chapter presents the empirical findings of the study. The chapter reports on the descriptive statistics of dependent and independent variables used in the study. It gives the empirical results of regression analysis and finally concludes by discussing the findings.

4.2 Summary of Descriptive Statistics and Correlation Matrix

Table 4.1 presents a summary of statistics for the pooled sample variables which includes the mean, minimum and maximum values, standard deviation, skewness and kurtosis while Table 4.2 presents the correlation matrix for the pooled sample variables.

Table 4.1 Summary Statistics for Pooled Sample Variables

Variable	Mean	Std Dev	Min Value	Max Value	Skewness	Kurtosis
Tourist Arrivals (TA_{it})	82462	74015	5000	313600	1.4048	4.2344
Tourist's Income (Y_{it})	18778.3	17183.8	199.1	58527.7	0.4793	1.9444
Lagged Tourist Arrivals (TA_{it-1})	79311	72454	5000	313600	1.5048	4.6316
Tourism Price in Kenya (P_{kt})	77.998	65.73	1.248	236.17	0.4573	2.3458
Tourism price in South Africa (P_{st})	7.446	5.0569	1.2736	20.0208	0.8639	2.7687
Trade openness (TO_{it})	6.0537	3.4850	0.3091	15.3327	0.5906	3.3159

Source: **Own Computation**

The mean tourist arrivals from the three markets of UK, USA and India from 1980 to 2012 was 82,462 with the lowest number as 5,000 while the highest was 313,600 and a standard deviation of 74,015. The average lagged arrival was 79,311 tourists with the lowest and the highest similar to that of the tourist arrivals. The mean tourist income for the pooled data was 18,778.34 US Dollars while the mean tourism price in Kenya was 77.998 US Dollars which is high in comparison to tourism price of Kenya's main competitor which is South Africa with a price of 7.446 US Dollars. Trade openness index was 6.0537.

Skewness is the tilt in the distribution and should be within -2 and +2 range for normally distributed series. As indicated in Table 4.1, all the variables fall within this range indicating therefore they are normally distributed. The series also exhibited a positive skewness which means therefore a positive asymmetry for all the variables. This means that more variables are concentrated on the right hand side of the mean.

Kurtosis on the other hand which measures the relative peakedness or flatness of the distribution relative to normal distribution shows that the series has a kurtosis of less than three except for tourist arrivals and lagged tourist arrivals variables. This indicates that the distribution is flat relative to the normal meaning that the distribution is around the mean. The tourist arrivals and lagged tourist arrivals variables have a kurtosis of greater than four meaning that the distribution is relatively peaked thus the distribution is relatively dispersed from the mean.

Table 4.2 presents the correlation matrix which tests the linear relationship between the variables in the model.

Table 4.2: Correlation Matrix for Pooled Sample

	TA_{it}	Y_{it}	TA_{it-1}	P_{kt}	P_{st}	TO_{it}	D_{kt}
TA_{it}	1.0000						
Y_{it}	0.6785	1.0000					
TA_{it-1}	0.8735	0.6633	1.0000				
P_{kt}	0.4838	0.4044	0.4930	1.0000			
P_{st}	0.7474	0.5062	0.5946	0.5966	1.0000		
TO_{it}	0.0957	0.1677	0.0519	0.2657	0.1178	1.0000	
D_{kt}	0.0133	0.0864	0.0426	0.0858	-0.0228	0.1667	1.0000

Source: **Own Computation**

All the variables are positively correlated with the dependent variable. Three variables which include tourism price in Kenya (P_{kt}), trade openness index (TO_{it}) and political instability (D_{kt}) exhibit a less than 0.5 correlation index while tourist's income (Y_{it}), Lagged tourist arrivals (TA_{it-1}) and competitor price (P_{st}) exhibit a greater than 0.5 correlation index. This implies presence of correlation thus bringing about a high likelihood of the problem of multicollinearity which is addressed by Generalized Least Squares (GLS) estimation technique whose results are shown in Appendix 2.

4.3 Diagnostic Tests

This section discusses the results of the diagnostic tests that were carried out on the variables to ascertain stationarity and to test the appropriate model between the Random Effects model and Fixed Effects model.

4.3.1 Unit Root Test

The series was tested for presence of unit root using Im-Pesaran-Shin unit root test. The results indicate that all the variables were found to be stationary at levels except income which had a ρ-value of 0.8749. However this variable became stationary at first difference (See Appendix 1).

4.3.2 Hausman Test

The Hausman test was conducted in order to help in identifying the appropriate model for the data between fixed and random effects models. The test checks a more efficient model against a less efficient but consistent model to make sure that the more efficient model also gives consistent results. Statistically, with panel data, Fixed Effects always give consistent coefficients while Random Effects give more efficient coefficients. The Hausman test tests the null hypothesis that the coefficients estimated by the efficient Random Effects estimator are the same as the ones estimated by the consistent Fixed Effects estimator. If they are (insignificant ρ-value, Prob>chi2 larger than 0.05) then it is safe to use Random Effects. If the results give a significant ρ-value, then Fixed Effects should be used.

As shown in Appendix 4, the Hausman results give a significant ρ-value of 0.0247 at five percent level of significance and therefore the results of the Fixed Effects model as presented in Table 4.3 are consistent and appropriate in analyzing international tourism demand in Kenya which is proxied by

international tourist arrivals. To help understand the situational analysis, the next section presents the findings of the fixed effects model.

4.4 Empirical Results

Table 4.3 gives the regression results for the fixed effects estimation

Table 4.3 Fixed Effects Regression Estimates

Dependent Variable: Tourist Arrivals ($lnTA_{it}$)	**Coef.**	**Std. Err**	**t**	**P>t**
Differenced Ln Tourist's Income ($DlnY_{it}$)	0.4627156	0.1824	2.54	0.013
Ln Lagged Tourist Arrivals ($lnTA_{it-1}$)	0.5395142	0.0693	7.78	0.000
Ln Tourism Price in Kenya (lnP_{kt})	-0.3647557	0.0892	-4.09	0.000
Ln Tourism price in South Africa (lnP_{st})	0.4279091	0.0957	4.47	0.000
Ln Trade openness ($lnTO_{it}$)	0.0955754	0.0571	1.67	0.098
Election related unrest (D_{kt})	-0.0146849	0.0838	-0.18	0.861
Cons	5.406088	0.8926	6.06	0.000
R Squared	0.6280			
F(6,87)	24.48			
Prob > F	0.0000	,.		

Source: **Own Computation**

From the results, 62.8 per cent of the variations in international tourists arriving in Kenya from UK, USA and India can be explained by changes in tourist's level of income, tourism price in Kenya and tourism price in South Africa, word of mouth effects and trade openness. The F-test of the results shows that the regression is statistically significant at 1 per cent level of significance meaning that the independent variables in the study explain international tourism demand in Kenya.

4.5 Discussion of Empirical Results

The first specific objective of the study was to identify the factors that affect international tourist arrivals in Kenya. From the empirical results shown in Table 4.3, the coefficients of the six variables, that is real GDP per capita (Y_{it}), price (P_{kt}), competitor price (P_{st}), lagged tourist arrivals (TA_{i-1t}), trade openness (TO_{it}) and election related unrest (D_{kt}) turned out to be significant except for election related unrest. Trade openness was found to be significant at 10 per cent level of significance. The variables also exhibited the expected signs implying that all the variables except election related unrest are important in determining international tourism demand in Kenya.

The second and third objectives of the study was to investigate the effect of trade openness and competitor price on international tourist arrivals in Kenya and this is outlined in the discussion below which discusses results for each of the variables.

4.5.1 Real GDP per Capita

The estimated coefficient for the tourist's country real GDP per capita variable (Y_{it}) which was used as a proxy to measure the tourist's level of income had the expected sign and was significant at five percent level of significance and thus consistent with economic theory of demand. The absolute value of the coefficient (0.463) is less than unity implying that a one per cent increase in real GDP per capita in the tourist generating country will lead to 0.463 per cent increase in tourist arrivals in Kenya. This means that Kenya's tourism is a non luxury service

in respect to her main markets where demand rises slower than income since the proportionate increase in income leads to a less proportionate increase in tourist arrivals. The results are in conformity with findings by Khadaroo and Seetanah (2008), who in their study on the role of infrastructure in international tourism development, found an income coefficient of 0.92.

4.5.2 Tourism Price in Kenya

According to the estimation, the coefficient of price (P_{kt}), measured as a product of the real exchange rate of origin and destination currencies and the ratio of their consumer price index ($P_{kt}=(ER_i * P_i) / P_k$), exhibited the expected negative sign and at the same time turned out to be significant at five per cent level of significance. The coefficient indicates that a one percent positive change in price will lead to a 0.365 percent decrease in tourist arrivals into the country. This is consistent with the law of demand of an inverse relationship between demand and own price for a normal good. This confirms that tourism is a normal good and choice by a tourist to travel in the country is decided alongside other goods and thus price becomes instrumental in determining whether to spend a holiday in Kenya and for how long. This confirms earlier findings by Giacomelli (2006) in his study on Modelling International Tourism Demand where he found that price significantly affects tourism demand with a coefficient of -0.19.

4.5.3 Competitor Price

South Africa was considered Kenya's main competitor in tourism because it is the only country in Sub-Saharan Africa competing for tourism with Kenya. The real exchange rate in South Africa was used as a proxy for competitor price or price of

substitute (P_{st}). From the results, the coefficient exhibited the expected positive sign and was significant at five per cent level of significance implying that the demand for tourism in Kenya is positively related with tourism price in South Africa with a one percent increase in tourism price in South Africa leading to a 0.428 per cent increase in tourist arrivals in Kenya. This also confirms economic theory where the demand of a commodity is positively related to the price of the substitute commodity for a normal good. This finding is consistent with Walle's (2010) findings where he found out that as Ethiopia becomes expensive relative to Kenya, tourists who visit Africa will prefer to visit Kenya rather than Ethiopia.

4.5.4 Word of Mouth Effects and Habit Persistence

The Lagged tourist arrivals (TA_{it-1}), was used to capture the word of mouth effect as tourists who visit the country may influence others to visit through sharing the experience. It was also used to capture habit persistence since visiting tourists may develop a habit of visiting repetitively. The coefficient was found to be significant at five per cent level of significance and exhibited the expected positive sign and therefore a one percent increase in tourist arrivals in a particular year will lead to a 0.54 per cent increase in arrivals in the following year. This finding is supported by Khadaroo and Seetanah (2008) in their study on the role of Transport Infrastructure in International Tourism Development.

4.5.5 Trade Openness

The variable trade openness (TO_{it}) was statistically significant at ten per cent level of significance with positive relationship with tourism demand. This outcome shows that trade is a factor affecting tourism demand. The results give an

elasticity of 0.096 meaning a one percent increase in trade increases tourist arrivals by 0.096 percent. These findings are in line with Mohd et al (2011) in their study on trade and tourism demand in Malaysia where they found an elasticity of 0.118 and significant at 95 per cent confidence interval.

4.5.6 Election Related Unrest

The election related unrest was captured by a dummy variable (D_{kt}) to reflect the impact of political instability on tourism in Kenya. The results confirm the expected negative sign but shows that it is not significant in explaining the number of tourist flows in Kenya at both five and ten per cent level of significance. Naudé and Saayman (2004) while undertaking a study on determinants of tourist arrivals in Africa found that political stability is a significant determinant of tourism demand in Africa with a coefficient of 0.18. The results indicate that Kenya is perhaps not politically unstable and the effects of election related unrests are short lived and to a smaller extent impact on the long run tourism demand in Kenya. It may be also a possibility that tourists may time their visits not to coincide with election but still visit the country.

From the above discussion therefore, both trade openness and competitor price variables have a positive influence on tourism demand in Kenya and therefore to increase tourist arrivals into the country, there is need to open up for trade with countries who are the source of tourist market as well as ensuring that Kenya's tourism price remains competitive in comparison to her competitors.

CHAPTER FIVE: SUMMARY, CONCLUSION AND POLICY IMPLICATIONS

5.1 Introduction

This chapter presents the summary, conclusions and gives policy implications drawn from the study. It draws conclusions from the objectives of the study, highlights the limitation of the study and suggests the area for further research.

5.2 Summary

The purpose of this study was to empirically investigate how various demand factors influence international tourism demand in Kenya. The study's objective was to identify the determinants of international tourism demand in Kenya as well as to analyze the effect of trade openness and competitor price on international tourists' arrivals in Kenya. Tourist arrivals from UK, USA and India were used for the estimation since the highest number of tourists visiting Kenya from Europe, America and Asia continents come from these countries.

To contextualize international tourists arrivals in Kenya which is a proxy for international tourism demand in Kenya, the double-log linear model approach was employed in which tourist arrivals was used as the dependent variable while the explanatory variables comprised of lagged dependent variable, per capita income for the origin country, tourism prices, trade openness and a dummy for election related unrest. Panel data for the period 1980-2012 was used using the GLS estimation technique.

The Fixed Effects and Random Effects models were estimated and based on the Hausman test, the Fixed Effects model was identified as the most appropriate in estimating tourism demand in Kenya. The estimation results further revealed that tourist's income, tourism price, trade and word of mouth are important factors that explain tourism demand in Kenya.

5.3 Conclusion

In conclusion, tourism plays an important role in Kenya like in many other economies due to its contribution to economic growth, employment creation as well as foreign exchange earnings. The demand for international tourism in Kenya is influenced by several factors which ought to be properly understood in order to appropriately formulate policy strategies to develop tourism in the country.

The results suggest that tourist's income (Y_{it}), habit persistence and word of mouth effect (TA_{it-1}) tourism prices (P_{kt} and P_{st}) as well as trade (TO_{it}) are important factors determining tourist arrivals in the country. Tourist's income, habit persistence and word of mouth effect, competitor price and trade have a positive relationship with tourist arrivals while tourism price in Kenya has a negative relationship.

One of the main conclusions of the study is the significant value of the lagged tourist arrivals (0.67), which has a bigger effect on tourist arrivals. In addition, tourism in Kenya is sensitive to price changes (-0.07), changes in tourist's level of

income (0.46), changes in the price of substitute (0.48) and trade openness (0.19). The results confirm the expected signs of positive relationship between tourism demand and tourist's income, word of mouth effect, competitor price, and trade openness as well as negative relationship between the demand for tourism in Kenya and price.

5.4 Policy Implications

Based on the findings of the study, a number of policy recommendations can be drawn. The positive and significant lagged tourist arrivals (TA_{it-1}) imply the need to keep the number of repeat tourist and word of mouth referrals high. One way of achieving this is through improvement of tourism services and upgrading of tourism products. The government through the ministry of tourism can undertake regular inspections of tourism facilities to ensure quality of services, enhance training of staff to meet the demands of the industry and draw a proper curriculum to be followed by institutions offering courses related to the sector. This will ensure that the staffs providing services in this sector are well equipped with the necessary skills to provide quality services. There is also the need to develop, improve and upgrade the tourism infrastructure in the country to ensure that tourists enjoy their stay and have quality experience in the country so as to refer more into the country.

Guided by the positive relationship between tourist income and tourist arrivals, deliberate tourism market diversification efforts should be made by the Kenya Tourism Board to countries with high and rapidly growing income per capita.

This can be done through direct campaigns in the new markets to create awareness of Kenya as a destination of choice particularly in the emerging markets of Asia.

A positive relationship between tourism demand and price imply the need for maintenance of a stable real exchange rate between the country's currency and currencies of tourists' source countries. This is because changes in exchange rate impacts on the purchasing power of the tourist at the destination country therefore the government through the central bank should ensure stability of the exchange rate and that prices and inflation are kept at minimum.

From the results of the study, trade should be enhanced since it is positively related to tourism demand. A number of tourists visiting the country visit for business purposes and therefore to increase tourist arrivals the government should open trade with the main source markets of USA, UK as well as emerging markets of Asia. This can be done through bilateral trade establishments or through trade incentives to attract more trade and as result, increase the number of tourists visiting the country in any given year.

5.5 Areas for Further Research

For further research and in order to complement the demand function, there is need to investigate determinants of tourism demand in Kenya from the supply side. Factors such as tourism infrastructure and attractions in comparison to other competing destinations can be considered.

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APPENDIX

APPENDIX 1: Unit Root Test

Im-Pesaran-Shin unit-root test

Variable		Statistic	p-value
Tourist Arrivals ($lnTA_{it}$)	Level	-2.7207* -2.39225** -2.0686***	0.0193
Lagged Tourist Arrivals ($lnTA_{it-1}$)	Level	-2.6468* -2.3347** -1.9423***	0.0261
Real GDP per Capita (lnY_{it})	Level	-0.9489* -0.9202** -1.1498***	0.8749
	First difference	-8.0362* -4.5393** -6.7754***	0.0000
Tourism price in Kenya (lnP_{kt})	Level	-2.4159* -2.2178** -1.6867***	0.0458
Competitor Price (lnP_{st})	Level	-3.6022* -3.0334** -3.4695	0.0003
Trade openness ($lnTO_{it}$)	Level	-2.4377* -2.2136** -1.6775***	0.0467

* t-bar ** t-tilde-bar *** Z-t-tilde-bar

Source: Constructed from the data

APPENDIX 2: Regression Results

Variable	Fixed Effect	Random Effects
Constant	5.4061 (0.8926)* (0.000)** (6.06)***	2.7559 (0.5792)* (0.000)** (4.76)***
Lagged Tourist Arrivals ($lnTA_{it-1}$)	0.5395 (0.0693)* (0.000)** (7.78)***	0.6667 (0.0635)* (0.000)** (10.49)***
Differenced Real GDP per Capita ($lnDY_{it}$)	0.4627 (0.1824)* (0.013)** (2.54)***	0.4584 (0.1945)* (0.018)** (2.36)***
Tourism price in Kenya (lnP_{kt})	-0.3648 (0.0892)* (0.000)** (-4.09)***	-0.0675 (0.0439)* (0.124)** (-1.54)***
Competitor Price (lnP_{st})	0.4279 (0.0957)* (0.000)** (4.47)***	0.4833 (0.0986)* (0.000)** (4.90)***
Trade openness ($lnTO_{it}$)	0.0956 (0.0571)* (0.098)** (1.67)***	0.1857 (0.0555)* (0.001)** (3.35)***
Election related unrest (D_{kt})	-0.0147 (0.0838)* (0.861)** (-0.18)***	-0.0761 (0.5792)* (0.386)** (-0.87)***
R-squared: Within Between Overall F(6,87) Prob>F Wald Chi2 (6) Prob> Chi2	0.6280 0.5599 0.4036 24.48 0.0000 - -	0.5752 0.9999 0.8652 - - 571.27 0.0000

* - Standard Error ** - P values *** - Z Values (RE) and t-values (FE)

Source: Constructed from the data

APPENDIX 3: Hausman Test

Hausman Fixed Random

Variables	**Coefficients**			
	Fixed (b)	Random (B)	Difference (b-B)	S.E
Lagged Tourist Arrivals ($lnTA_{it-1}$)	0.5395142	0.6667307	-0.1272165	0.0277032
Differenced Real GDP per Capita ($lnDY_{it}$)	0.4627156	0.4583591	0.0043565	.
Tourism price in Kenya (lnP_{kt})	-0.3647557	-0.0674888	-0.297267	0.077603
Competitor Price (lnP_{st})	0.4279091	0.4833269	-0.0554178	.
Trade openness ($lnTO_{it}$)	0.0955754	0.1857352	-0.0901599	0.0136872
Election related unrest (D_{kt})	-0.0146849	-0.0760596	0.0613747	.
Chi2(6) Prob>Chi2	14.48 0.0247			

Source: Constructed from the data

RAW DATA

Country	Year	TA_{it}	Y_{it}	TA_{it-1}	P_{kt}	P_{st}	TO_{it}	D_{kt}
UK	1980	58900	9623	59800	144.7059	8.62841	9.76774	0
UK	1981	51900	9142	58900	114.0285	4.92692	6.792729	0
UK	1982	48200	10333.49	51900	140.9366	3.91284	6.628389	0
UK	1983	51100	9136.448	48200	151.2542	12.73957	7.371436	0
UK	1984	42600	7778	51100	119.9539	7.52042	6.194516	0
UK	1985	100300	8210	42600	130.5379	9.86687	8.943544	0
UK	1986	73100	8280.611	100300	236.1734	7.44867	6.357636	0
UK	1987	87700	12333	73100	213.7094	11.15827	7.315166	0
UK	1988	89700	14951	87700	152.5475	13.75443	8.912134	0
UK	1989	107400	15057	89700	112.4585	11.34756	12.02285	0
UK	1990	129700	17805	107400	150.616	9.95016	15.33273	0
UK	1991	101900	15172.72	129700	206.5844	7.48198	14.77743	1
UK	1992	98800	14650.38	101900	222.6214	9.21339	5.124355	1
UK	1993	104000	17170	98800	193.2838	15.87722	5.935802	0
UK	1994	120700	18529	104000	125.2254	14.51446	7.200636	0
UK	1995	96300	10639.18	120700	184.0256	8.74782	6.267707	0
UK	1996	116200	21145	96300	176.6045	9.75012	6.682718	1
UK	1997	119300	23460	116200	169.952	12.55870	7.610466	1
UK	1998	110700	22392.27	119300	200.0067	7.46686	5.858385	0
UK	1999	143900	25625	110700	144.7403	12.27428	6.431856	0
UK	2000	148200	28252.82	143900	131.3928	15.30955	7.359521	0
UK	2001	146100	24836	148200	187.0022	10.87552	4.568461	1
UK	2002	211800	26997	146100	136.2848	16.65782	5.854233	1
UK	2003	221800	33411.85	211800	118.2099	18.75256	6.624318	0
UK	2004	298100	36695	221800	109.281	20.02081	6.738323	0
UK	2005	248200	35082.87	298100	102.3582	10.15291	5.072611	0
UK	2006	272000	40481	248200	228.0497	15.13004	5.975243	0
UK	2007	313600	46330	272000	123.3835	16.73035	7.081746	1

UK	2008	216700	43147	313600	124.9629	8.55225	3.085848	1
UK	2009	246000	50269.83	216700	75.25354	18.06334	5.250659	0
UK	2010	247100	58527.72	246000	78.74657	18.43455	5.299395	0
UK	2011	246500	38961	247100	77.40382	11.18011	4.690086	0
UK	2012	241700	38514	246500	74.6291	7.74303	4.173408	0
USA	1980	30800	12180	34900	62.6248	2.83576	2.234949	0
USA	1981	38000	13526	30800	75.88063	4.20695	3.453622	0
USA	1982	39200	15398.35	38000	75.02538	5.59220	3.461174	0
USA	1983	36700	13102.36	39200	69.65177	3.36741	3.240734	0
USA	1984	250600	18006.29	36700	83.96337	18.61279	3.834387	0
USA	1985	54333	15444.82	250600	92.55907	7.53372	3.665459	0
USA	1986	60400	10053.97	54333	87.44996	15.39586	5.047616	0
USA	1987	67900	19394	60400	85.59896	18.09845	4.806183	0
USA	1988	69500	20703	67900	92.16931	19.06736	4.867499	0
USA	1989	85300	40157.68	69500	90.18569	9.46822	5.707844	0
USA	1990	74000	34509.95	85300	71.84961	5.21361	5.220217	0
USA	1991	52300	41079.82	74000	92.22303	5.03832	4.39666	1
USA	1992	43000	24411	52300	147.8667	4.70746	4.167358	1
USA	1993	47900	25327	43000	122.7594	6.17889	5.378139	0
USA	1994	59200	28505.12	47900	122.3794	5.18280	5.98205	0
USA	1995	47100	24936.41	59200	89.62572	4.99846	5.879952	0
USA	1996	51600	28772	47100	107.3411	6.28578	6.306229	1
USA	1997	64000	30282	51600	81.56433	11.57447	10.55449	1
USA	1998	59600	31687	64000	74.76778	4.61407	10.29184	0
USA	1999	52500	33332	59600	87.25571	3.95350	9.801435	0
USA	2000	54100	35082	52500	102.702	6.61237	12.29547	0
USA	2001	53500	26604.26	54100	95.5726	7.90573	9.037229	1
USA	2002	61700	44970.83	53500	87.48364	11.90786	14.68291	1
USA	2003	44900	38225	61700	98.10688	6.11559	5.655054	0
USA	2004	109600	40292	44900	76.78943	7.88988	7.939098	0

USA	2005	78700	39641.66	109600	82.04549	3.85713	7.277848	0
USA	2006	91900	49814.17	78700	71.22231	7.31009	7.374396	0
USA	2007	116800	51218.44	91900	55.39298	7.33766	9.535072	1
USA	2008	89400	45607.81	116800	63.67079	4.73766	4.438685	1
USA	2009	127200	48106.5	89400	46.90703	7.38493	4.821767	0
USA	2010	131500	49006.05	127200	45.90533	7.15501	4.968229	0
USA	2011	132600	48113	131500	45.83187	6.94913	5.097405	0
USA	2012	132400	49965	132600	49.6688	6.88856	4.803843	0
INDIA	1980	10500	271	9600	2.189834	2.98962	0.763345	0
INDIA	1981	9400	225.151	10500	2.343779	2.97746	0.707048	0
INDIA	1982	9400	279	9400	3.524875	2.98104	0.700208	0
INDIA	1983	5000	199.0851	9400	5.211352	3.45032	0.309076	0
INDIA	1984	50100	282	5000	3.550338	3.58313	0.705209	0
INDIA	1985	61900	303	50100	3.383869	6.24110	0.822104	0
INDIA	1986	10900	267.4728	61900	13.15868	3.12593	0.497381	0
INDIA	1987	12400	384	10900	5.355702	4.52947	0.7692	0
INDIA	1988	12600	335.7753	12400	3.611928	4.13992	0.93705	0
INDIA	1989	19100	354	12600	8.246037	7.19614	1.241568	0
INDIA	1990	12500	376	19100	9.410571	3.21359	1.208642	0
INDIA	1991	22300	402.0483	12500	10.53487	7.18807	1.908059	1
INDIA	1992	13600	324	22300	7.068737	2.07721	1.687765	1
INDIA	1993	11600	309	13600	1.823542	2.01734	1.497304	0
INDIA	1994	14400	355	11600	4.721691	3.25634	1.952514	0
INDIA	1995	12700	384	14400	1.257425	2.38950	1.789987	0
INDIA	1996	14400	411	12700	2.660576	2.43701	1.903338	1
INDIA	1997	15300	427	14400	2.208905	2.67090	12.61963	1
INDIA	1998	25600	519.0962	15300	1.921721	2.09630	13.8258	0
INDIA	1999	16300	453	25600	7.153084	1.83575	9.082888	0
INDIA	2000	16700	483.1356	16300	2.24143	2.26069	12.65811	0
INDIA	2001	16900	488.8411	16700	2.05974	2.38209	14.72811	1

INDIA	2002	9000	486	16900	4.195982	1.93430	4.318249	1
INDIA	2003	12500	565	9000	3.980742	2.21718	5.9835	0
INDIA	2004	33600	650	12500	3.054422	2.70872	7.24006	0
INDIA	2005	26200	605.8608	33600	4.11241	2.00101	6.456971	0
INDIA	2006	35700	830	26200	3.177136	2.29072	7.164285	0
INDIA	2007	37200	1069	35700	1.592144	2.47505	7.719204	1
INDIA	2008	35300	1033.697	37200	1.271984	1.36114	7.026897	1
INDIA	2009	38200	1147	35300	1.701149	1.40919	7.315419	0
INDIA	2010	41200	1419	38200	1.516996	1.92251	7.57266	0
INDIA	2011	41600	1534	41200	1.309077	1.82445	8.568355	0
INDIA	2012	41200	1489	41600	1.248133	1.27362	8.110356	0