

**UNIVERSITY OF GHANA**

**LEGON**



**College of Humanities**

**DETERMINANTS OF INTERNATIONAL TOURISM DEMAND FOR GHANA**

**BY**

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## DECLARATION

I, RICHMOND ADDISON, the author of this thesis, hereby declare that with the exception of references to other studies which have been duly acknowledged, this thesis is the original research undertaken by me towards the award of Master of Philosophy degree in Economics in the Department of Economics, University of Ghana, under the guidance of my supervisors. This thesis has neither in part nor in whole been submitted for any academic award elsewhere. I bear sole responsibility for any shortcomings.



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## ABSTRACT

The tourism sector has increasingly become an important contributor to the growth and development of the Ghanaian economy. Identified as one of the key drivers of the service sector, the industry offers the country the opportunity to diversify her economy which over the years has been dependent on primary commodities from the extractive industry. Despite the potential of the tourism industry in Ghana, the country still lags behind regional leaders like Kenya, South Africa and Egypt. Since the worldwide tourism industry is very competitive, it is imperative that the tourism products and services offered in the country are more demand driven in order to attract more tourists into the country. Therefore, there is the need to investigate and understand what factors drive tourism demand so that relevant policies and strategies could be adopted to increase tourism growth in the country. The study thus sought to identify and estimate the short and long run factors which drive tourism demand in Ghana. The study used data on arrivals spanning from 1995-2014 from Ghana's major generating markets outside Africa namely, the United States, United Kingdom, Germany, France, Netherlands, Canada, Italy and Switzerland. Panel Autoregressive Distributed Lag (ARDL)-Pooled Mean Group (PMG) technique was then employed to determine the dynamic relationship between tourist arrivals in Ghana and some selected variables namely GDP per capita of origin countries, tourism prices in Ghana, substitute prices in alternative destinations like Nigeria, level of trade openness of the Ghanaian economy and transport cost incurred by tourists. The study also investigated the impact of external shocks such as the global financial crises in 2007 on tourism demand in Ghana. The results of the study indicated that there exist a cointegration relationship among the variables of the model. Estimation of the Error Correction Model (ECM) of tourism demand in Ghana revealed that the incomes of origin countries, tourism prices in Ghana, substitute prices in Nigeria, the level of

trade activities between Ghana and the origin countries, and the global financial crises which occurred in 2007 are key determinants of foreign tourism demand in Ghana in the long run. The study also showed that in the short run, tourists do not consider Nigeria as a substitute destination to Ghana. Additionally, the outcome of the study revealed that the country recorded an increase in the number of tourists from the selected origin countries despite the shock of the global financial crises in 2007. Finally, the outcome of the study suggests that the reclassification of Ghana's tourism data in 2005 had a negative effect on data on tourist arrivals in the country in the short run.

Therefore, the study recommended that in order to stimulate tourism growth in the country, the government must formulate policies that promote trade between Ghana and the origin countries. Government policies must also focus on strengthening the macroeconomic fundamentals of the economy especially achieving low and stable inflation, and stabilization of the domestic currency. This is to ensure that the prices of goods and services in the country remain affordable and internationally competitive. Finally, the study suggested that attention must be paid to diversifying and capturing more markets in order to spread risk of recording low demand in some markets in periods of economic downturns.

## **DEDICATION**

This thesis is dedicated to the almighty God, my mother, Madam Ernestina Somuah Boateng, the late Mrs. Barbara Enyonam Akotey and Mrs. Gifty Koney.

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## TABLE OF CONTENTS

<b>CONTENT</b>	<b>PAGE</b>
DECLARATION .....	ii
ABSTRACT .....	iii
DEDICATION .....	v
ACKNOWLEDGEMENT .....	vi
LIST OF TABLES .....	x
LIST OF FIGURES .....	xi
LIST OF ABBREVIATIONS.....	xii
CHAPTER ONE .....	1
INTRODUCTION .....	1
1.1 Background to the Study .....	1
1.2 Statement of the Problem .....	4
1.3 Research Questions .....	6
1.4 Objectives of the Study .....	6
1.5 Justification of the Study.....	7
1.6 Organization of Study .....	7
CHAPTER TWO .....	9
OVERVIEW OF TOURISM INDUSTRY IN GHANA .....	9
2.1 Introduction .....	9
2.2 The Tourism Industry in Ghana .....	9
2.2.1 Institutional and Legal Framework of the Tourism Industry in Ghana .....	9
2.2.2 Tourism Planning, Policies and Development in Ghana .....	10
2.2.3 Tourism Resources and Infrastructure in Ghana .....	13

2.3 Performance of the Tourism Industry in Ghana.....	15
2.4 Recent Developments in the Worldwide Tourism Industry.....	20
CHAPTER THREE .....	22
LITERATURE REVIEW .....	22
3.1 Introduction.....	22
3.2 Definition and Scope of Tourism.....	22
3.2.1 Definitions of Tourism.....	22
3.2.2 Types of Tourism.....	24
3.2.3 Types of Visitors .....	25
3.3 Measurement and Challenges in the Collection of Tourism Statistics.....	28
3.3.1 Categories of Tourist Statistics.....	28
3.3.2 Methods of Measuring Tourist Arrivals and Expenditure.....	30
3.3.3 Challenges in the Collection of Tourism Statistics .....	31
3.4 Measures of Tourism Demand .....	33
3.5 Theoretical Review of the Determinants of International Tourism Demand.....	35
3.6 Review of Empirical Literature on the Determinants of Tourism Demand.....	44
3.7 Conclusion.....	55
CHAPTER FOUR.....	57
METHODOLOGY AND ANALYSIS .....	57
4.1 Introduction.....	57
4.2 Conceptual framework .....	57
4.3 Model Specification .....	58
4.4 Estimation Models.....	60
4.4.1 The Panel ARDL Model.....	60
4.4.2 The Pooled Mean Group Estimator .....	62

4.5 Definition and Measurement of Choice of Variables.....	64
4.5.1 Dependent Variable .....	65
4.5.2 Independent Variables .....	65
4.6 Source and Nature of Data .....	68
4.7 Descriptive Statistics of Variables .....	69
4.7.1 Descriptive Statistics of Arrivals by Origin .....	69
4.7.2 Descriptive Statistics of Dependent and Independent Variables.....	70
4.8 Empirical Determinants of International Tourism Demand.....	71
4.8.1 Unit Root Tests.....	72
4.8.2 Panel Co-integration Test .....	74
4.8.3 Panel-ARDL PMG Estimates of Determinants of International Tourism Demand .....	74
4.8.4 Post Estimation Tests.....	78
4.9 Conclusion.....	80
CHAPTER FIVE .....	82
SUMMARY, CONCLUSION AND RECOMMENDATION.....	82
5.1 Introduction .....	82
5.2 Summary .....	82
5.3 Conclusion.....	84
5.4 Recommendation.....	86
5.5 Limitation of Study and Further Research Areas.....	88
REFERENCES .....	89
APPENDIX.....	98

## LIST OF TABLES

<b>TABLE</b>	<b>PAGE</b>
Table 2.1 International Tourist Arrivals and Receipts in Ghana (1995-2017) .....	16
Table 4. 1 Variables Definitions, Units of Measurement and Expected Signs.....	68
Table 4. 2 Descriptive Statistics of International Tourist Arrivals in Ghana by Origin 1995-2014. .....	69
Table 4. 3 Descriptive Statistics of Dependent and Independent Variables .....	71
Table 4. 4 Unit Root Tests (Level) .....	72
Table 4. 5 Unit Root Test (First difference) .....	73
Table 4. 6 Westerland Cointegration Test .....	74
Table 4. 7 Panel ARDL Estimation (1,0,1,0,1,0,1,0) Long Run Results.....	76
Table 4. 8 Panel ARDL Estimation (Short Run Results).....	77
Table 4. 9 Post Estimation Diagnostic Tests .....	79
Table 4. 10 Cumulative Sum Test for Model Stability.....	80

## LIST OF FIGURES

<b>FIGURE</b>	<b>PAGE</b>
Figure 2.1 Ghana's Share of Total Arrivals in Sub-Saharan Africa (1995-2017) .....	17
Figure 2.2 Visitor Exports (Tourism Receipts) as a Percentage of Total Exports in Ghana (1985-2017) .....	18
Source: Author's compilation based on study data.....	18
Figure 2.3 Total Contribution of Tourism to GDP, 1995-2017) .....	19
Figure 2.4 Total Contribution of Tourism to Employment in Ghana (1995-2017) .....	20
Figure 3.1 Classification of Inbound Travelers .....	27

## **LIST OF ABBREVIATIONS**

ARDL	Autoregressive Distributed Lag
CPI	Consumer Price Index
CVI	Climate Volatility Index
DOTS	Direction of Trade Statistics
ECT	Error Correction Model
EGLS	Estimated Generalized Least Squares
ER	Exchange rate
GDP	Gross Domestic Product
GHATOF	Ghana Tourism Federation
GIPC	Ghana Investment Promotion Council
GIS	Ghana Immigration Service
GMMB	Ghana Museums and Monuments Board
GNP	Gross National Product
GSS	Ghana Statistical Service
GTA	Ghana Tourism Authority
GTDC	Ghana Tourism Development Company
HOTTCATT	Hotels, Catering, Tourism Training Centre

IFS	International Financial Statistics
MDAs	Ministries, Departments and Agencies
MoTAC	Ministry of Tourism, Arts and Culture
PMG	Pooled Mean Group
SDGs	Sustainable Development Goals
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNSC	United Nations Statistical Commission
USAID	United Nations Agency for International Development
UNWTO	United Nations World Trade Organization
WTTC	World Travel and Tourism Council

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background to the Study**

Travel and tourism is an important economic activity in most countries around the world. The sector is a major contributor to foreign exchange earnings, employment creation and economic growth. According to the United Nations World Trade Organization (UNWTO), tourism is defined as “a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for less than a year for leisure, business or other purposes” (UNWTO, 2014). Thus, touristic activities have gone beyond what was regarded as an act of enjoying leisure. Today, the scope of tourism activities is very broad and encompasses travel for the purposes of education, medical treatment, religious pilgrimage, participation in sporting activities, conventions among others. These developments have further widened the multiplier effect of tourism on the economy.

The World Travel and Tourism Council (WTTC) classifies the total impact of the tourism sector on the economy into; direct impacts (which measures the contribution of related sectors to GDP and employment); indirect impacts (which measures the supply chain impact of the sector); and induced impacts (which measures the impact of incomes spent in the host economy by those who are directly or indirectly employed in the sector). These impacts according to the WTTC, makes the tourism industry the largest industry in the world based on virtually every economic measure such as contribution to GDP, capital investment and contribution to tax revenue and employment.

There has been phenomenal growth in the worldwide tourism industry. This has seen an increase

in the number of international tourist arrivals from 534 million in 1950 to 1,323 million in 2017 (UNWTO, 2017). According to the UNWTO, this performance is the strongest in seven years since 2010. International tourism receipts have also maintained an upward trend from a total of US\$627.1 million to US\$1340 billion over the period from 2005 to 2017. The UNWTO World Tourism Barometer report in June 2018 shows international tourism receipt grew by 5% in 2017 to reach US\$ 1,332 billion globally, some US\$94 billion more than what was recorded in 2016. According to the report, the Middle East had a 13% growth in tourism receipts followed by Africa and Europe with 8% growth each. Asia and the Pacific and the Americas followed with a 3% and 1% growth in tourism receipts, respectively.

The tourism industry in Africa is endowed with several tourist sites and related facilities that meet the needs of the numerous visitors who make the continent their destination choice. The continent has been performing very well in terms of its share of world total tourist arrivals and tourism receipts until 2014 and 2015 when it recorded a weaker performance due to certain geopolitical, economic and health challenges (UNWTO, 2017). The continent had a rebound in 2016 by reaching a record 62 million international tourist arrivals. The travel and tourism industry contributed more to Africa's GDP (US\$ 166 billion representing 7.8% of total GDP) and total employment (20.7 million direct, indirect and induced jobs) than her financial, chemical and manufacturing sectors combined (WTTC, 2017). Also, the continent recorded the highest growth rate of 9% in the share of international tourist arrivals as at the end of 2017 (UNWTO, 2017).

Ghana is one of the many countries on the continent with a very vibrant tourism industry. The total contribution of the travel and tourism industry to Ghana's GDP in 2017 grew by 4.9% representing 0.9% above the world growth rate of 4% (WTTC, 2018). According to data sourced

from the Ghana Tourism Authority, the number of foreign tourists who visit the country increased from 456,275 in 2000 to 980,100 as at the end of 2017. Also, tourism receipts have increased from US\$289,500 million in 2000 to a total of US\$1854.8 million in 2017. The country's best selling point such as the beaches, the castles of the coast and a range of cultural and traditional events, coupled with her favourable political and social stability is ranked as tourists' top criteria in deciding where to visit. Despite the potential niche that Ghana has in tourism, the country still lags behind regional leaders like Kenya, South Africa, Senegal and the Gambia.

The tourist sites in different countries are unique and so creates a market niche for each country. With the right packaging and appropriate marketing strategy, it is believed that countries with attractive destinations will be able to increase demand for tourism in their respective countries. Moreover, with recent calls for tourism-led development, most governments have begun to promote tourism as a viable alternative to diversify their economies (Cobbinah & Darkwah, 2016). Nevertheless, there still remains much to be seen with regards to tourism development on the African continent.

The tourism industry in Ghana has evolved over the years into a contemporary industry with considerable involvement of both local and multinational enterprises (Akyeampong, 2011). The industry has been buzzing with a lot of activities in recent years ranging from the establishment of more modern accommodation facilities, hosting and participation in most international events, tourist sites publicity drives, expansion of tourism infrastructure such as the airports, road networks among others. Also, the government through its relevant agencies and departments like the Ghana Tourism Authority (GTA) has put in place measures aimed at increasing tourist arrivals by capitalizing on specific thematic areas namely cultural heritage, natural beauty,

hospitality, safety and security (Oxford Business Group, 2016).

## **1.2 Statement of the Problem**

The Ghanaian economy is heavily dependent on primary commodities like cocoa, timber, gold and oil for exports. This has exposed the economy to fluctuations of commodity prices on the international market. Moreover, the contribution to GDP of the primary sector, the mainstay of the Ghanaian economy, has been fluctuating over the years due to a mirage of challenges such as inadequate storage facilities causing post-harvest losses, unfavorable weather conditions, inadequate access to credit, among others (Codjoe and Owusu G., 2011; De Pinto et al., 2012; Dzadze et al., 2012). The service sector of the Ghanaian economy has however performed very well in recent years by overtaking the backbone of the economy, the agricultural sector (Enu et al., 2015). Moreover, the advancement of modern technology in recent years has positioned the service sector as a key driver of the development agenda of many economies around the world.

The tourism industry has been identified as one of the key drivers of the service sector in Ghana. The sector has become the fastest growing sector of the Ghanaian economy (Akyeampong and Aseidu, 2008). The WTTC Economic Impact Report 2017 on Ghana, estimates the country's visitor exports at US\$929.5 million in 2017 up from US\$580 million in 2013. This makes tourism the next highest earner of foreign exchange after the traditional commodity exports (Oxford Business Group, 2016). Therefore, the sector can provide an opportunity to diversify the Ghanaian economy looking at its contribution to export revenue. This could help strengthen the country's current account position.

Also, with most host communities in the country relatively underdeveloped, the formulation of

pro-poor tourism policy would bring enormous benefits to these communities. Such policies would encourage host communities to participate more in the management and development of tourism in their various localities (Cobbinah and Darkwah, 2016). There is also the opportunity to use tourism as a tool to safeguard the natural environment which has come under serious threat in the country in recent years.

Despite the numerous opportunities the tourism sector offers the Ghanaian economy, only a few studies have been conducted to investigate what factors influence tourism demand in the country. Furthermore, data on arrivals show that the country has recorded fluctuations in the number of foreign tourist arrivals over the years. The country still lags behind regional leaders like Kenya, South Africa, Egypt and the Gambia. Recent calls for developing countries like Ghana to pursue the tourism-led growth agenda has made studies on the sector needful. Again, projections by organizations like the UNWTO and WTTC supports the call for Ghana to pay more attention to tourism growth, if the country is to maximize gains from the industry. The WTTC Travel and Tourism Economic Impact Report for Ghana 2017, for instance, projects the country to attract a total of 2,052,000 international tourists by 2027. The Ghana Tourism Authority (GTA) also projects to attract a total of five million tourists by 2027.

Looking at the progress made by Ghana's tourism industry and the fact that the country stands to benefit a lot from tourism growth, it is imperative that measures are put in place in order to sustain the sector's contribution to the growth and development of the Ghanaian economy. Moreover, with the global tourism industry being very competitive, there is the need for Ghana to offer more demand-driven tourism products in order to attract more tourists into the country. Thus, policies aimed at increasing tourism growth in the country must be informed by studies or investigations into the key drivers of tourist inflows into the country.

Early studies on tourism demand concentrated on advanced economies with just a few focusing on countries in developing regions like Africa. Whilst a recent study by Bentum-Ennin (2014) modelled international tourism demand for Ghana based on five tourist originating regions namely, there is no study on the determinants of foreign tourism demand for Ghana, with the focus on specific origin countries. The regions considered in the study were Africa, the Americas, Europe, East Asia Pacific and the Middle East. Also, there is no study on what factors would drive tourism demand in Ghana in the long run. Therefore, the study adds to the scanty literature by focusing on specific major tourist originating countries, and then investigates the short and long run determining factors that drive their demand for tourism in Ghana.

### **1.3 Research Questions**

This study will identify and estimate the short and long run factors that explain international tourism demand in Ghana from her major generating markets outside Africa (the United States of America, United Kingdom, Canada, Netherlands, France, Germany, Italy and Switzerland). In undertaking this study, the following questions will be answered;

- What are the short run dynamics or determinants of international tourism demand in Ghana?
- What are the long run factors that influence demand for Ghana's export of tourism to the selected major generating markets?

### **1.4 Objectives of the Study**

The main objective of the study is to investigate the determinants of international tourism demand for Ghana by her major generating markets outside Africa (USA, UK, Canada, Netherland, France, Germany, Italy and Switzerland). The study specifically seeks to;

- Identify and estimate the elasticities of the short run factors which explain tourism demand in Ghana by the selected tourist originating countries.
- Determine the elasticities of the key drivers of foreign tourism demand in Ghana in the long run.

### **1.5 Justification of the Study**

Various research have been conducted on the drivers of tourism demand for different countries. However, only a few of these studies is focused on developing countries like Ghana. Most of these studies have often used variables such as price, income, transportation cost and distance to explain tourism demand. These studies provide varying views on the factors which determine inbound tourism demand making further studies on this discourse worthwhile.

Consequently, this study seeks to contribute to the literature wise, a Ghana specific finding in the following regard. First, to employ recent panel data estimation techniques to investigate and estimate the short and long run impacts of some selected variables namely, income of origin countries, tourism prices in Ghana, substitute prices in alternative destinations like Nigeria, trade openness of the Ghanaian economy and transport cost incurred by tourists, on the foreign demand for tourism in Ghana. Secondly, the study is the first to estimate tourism demand for Ghana using data on tourist arrivals from specific major generating markets or countries outside Africa. The outcome of the study will thus help government in the formulation of relevant policies aimed at stimulating tourism growth in Ghana.

### **1.6 Organization of Study**

The thesis will consist of five chapters. Chapter one will cover the background of the study, statement of problem, both main and specific objectives of the study, research questions,

justification of the study and the organization of the study. Chapter two will comprise of the scope and meaning of tourism, tourism statistics measurement and challenges, overview of the tourism industry in Ghana and end with the recent and expected future developments in the worldwide tourism industry. Chapter three presents the theoretical and empirical literature. Chapter four will look at the methodology adopted by the study, the model specification, measurement of variables, the sources of data and discussion of the empirical results. A summary of the whole study, conclusion, recommendation for policy, limitation of the study and suggestions for further research areas are provided for in chapter five.

## **CHAPTER TWO**

### **OVERVIEW OF TOURISM INDUSTRY IN GHANA**

#### **2.1 Introduction**

This chapter focuses on the overview of the tourism industry in Ghana and the performance of the industry spanning from 1985-2017. The chapter concludes with some recent developments in the worldwide tourism industry.

#### **2.2 The Tourism Industry in Ghana**

Ghana stands to benefit a lot from the potential niche it has in the tourism industry. The country's best selling points when combined with the appropriate marketing strategy, will help to maximize the gains already being made in the industry. This section provides an overview of the tourism industry in Ghana looking at the institutional, policy and legal framework of the industry; tourism infrastructure and resources with emphasis on the country's best selling points; performance of the industry over the years and; concludes with the recent developments in the worldwide tourism industry.

##### **2.2.1 Institutional and Legal Framework of the Tourism Industry in Ghana**

The industry has a well laid down institutional framework which see to the formulation of policies, administration and development of the sector. The Ministry of Tourism, Culture and Creative Arts is responsible for the formulation of policies and regulation for tourism, creative arts and culture. Policies and regulations designed by the ministry is implemented by the Ghana Tourism Authority (GTA), an agency under the ministry established by an Act of Parliament-The Tourism Act, 2011 (Act, 817). The Act charges the GTA with the responsibility of inspecting, licensing, registering, regulating and classifying tourism accommodation and related

establishments, catering services, travel and charter operations. The GTA is also responsible for marketing and promotion of tourist sites both in and outside Ghana, tourism research, and product development. Other agencies under the Ministry include the Ghana Museums and Monuments Board (GMMB), the Hotel, Catering, Tourism Training Centre (HOTTCATT) and the Ghana Tourism Development Company (GTDC).

The GTA also works closely with agencies like the Ghana Airports Company, Ghana Investment Promotion Council (GIPC), the Wildlife Division of the Forestry Commission, traditional rulers and chiefs, District Assemblies and other non-governmental organizations to propel tourism growth in the country. With the collection of tourism statistics, the Ghana Tourism Authority (GTA) collaborates with agencies like Ghana Immigration Service (GIS) and the Ghana Statistical Service (GSS). The private sector of the industry is also represented by various associations covering hotels, travel and tours, caterers, car rentals, tour guides etc. The apex body of these associations is the Ghana Tourism Federation (GHATOF). The body is represented on advisory boards and technical committees of Ministries, Departments and Agencies (MDAs) when it comes to decision making concerning the industry (Frimpong-Bonsu, 2015).

### **2.2.2 Tourism Planning, Policies and Development in Ghana**

The tourism industry in Ghana has received much attention from both past and present governments and so have been given consideration in the development policy of the country. Nevertheless, there remains more to be done to develop the sector. Formal tourism planning and development in Ghana started in the 1970s with the constitution of the *Obuarn* Committee in 1972 to conduct an assessment of the country's tourism resources (Teye, 2000). The outcome of the committee's work was to inform the development of a five-year development plan spanning from 1972 to 1976. During the 1970's, a number of tourism feasibility studies were carried out in

Ghana. Most of these studies were undertaken with funding from international agencies like the United Nations Development Programme (UNDP) and the United States Agency for International Development (USAID) (Teye, 2000). The product of these studies was the Ghana Tourist Control Authority Act (Act, 1973) which was to oversee tourism planning, management and development in Ghana (Cobbinah & Darkwah, 2016).

Several other tourism development plans and policies followed the five-year development plan due to the fact that, the government realized the need for a more comprehensive strategy to guide long term sustainable tourism development in the country. This decision resulted in a 15-year tourism development plan for the period 1975-1990 which received both financial and technical assistance from the Danish government. The main focus of this plan was to develop local tourism resources in order to make tourism in the country attractive to both domestic and foreign tourists. Next, was the Medium Term National Tourism Development Plan for Ghana for the period spanning 1993-1995. The plan was prepared by a tourism task force set up by the government. The plan among other objectives was to provide a foundation for tourism development in the country, make the country's tourism industry internationally competitive and maximize tourism economic benefits to Ghana.

Other tourism development plan implemented in Ghana over the years have included; the 15-year National Tourism Development Plan (1996-2010), with the aim of transforming Ghana into a major tourist hub in the West African sub-region; Strategic Tourism Action Plan (2003-2007), Ghana, with the aim of generating growth through tourism development and; the National Tourism Policy (2006) with the aim of creating the necessary environment to encourage participation of the private-sector in tourism development.

Ongoing plans and policy interventions being implemented include a National Tourism Development Plan (2013-2027), setting up of Tourism Development Fund, provision of incentives under the Ghana Investment Promotion Council Act, 2013 (Act 865) to boost private sector investment in the industry and improvement of service delivery through the strengthening of measures and procedures involved in the grading and licensing of restaurants, hotels, car rental agencies among others (Frimpong-Bonsu, 2015).

Some of the major projects and interventions that are expected to transform the tourism industry in Ghana in the near future include the following:

- Development of a tourism enclave dubbed the Marine Drive Development Investment Project, which will have modern facilities like malls, hotels, a marina, restaurant, amphitheater among others (MoTAC, 2017).
- A Public Private Partnership collaboration to put up a chain of hotels which will be called Akwaaba Hotels. They will be eco-friendly hotels which will purposely serve low budget tourists (Ghana Tourism Development Company (GTDC), 2018).
- World Bank approval of US\$40 million for the Ghana Tourism Development Project. The facility which is the first of its kind is to; strengthen the tourism enabling environment; develop tourist sites and destinations; provide support for tourism enterprises to create jobs; and support tourism reforms, coordination of tourism projects and policy implementation (The World Bank, 2018)
- The Centre of the World Project which will be funded through a Public Private Partnership. This project among other objectives, is aimed at projecting Ghana as the

centre of the world. The project will turn some strategic locations within the Tema metropolis into key landmarks and monuments (GTDC, 2018).

- The commissioning of the Accra Tourist Information Centre as a Convention and a Visitor Bureau to help attract major events into the country and provide tourists with relevant information (MoTAC, 2017).

### **2.2.3 Tourism Resources and Infrastructure in Ghana**

Ghana's tourism industry has a very diverse product offering often ranked as tourists' favourite in deciding where to visit. The 15 year National Tourism Development Plan (1996-2010) classified Ghana's tourism products into four broad categories namely; natural attractions, historical heritage, cultural heritage and other types of attractions.

#### **Natural Attractions**

This comprises of the resource reserves, the coastal wetlands reserves, lakes and rivers, waterfalls, wildlife sanctuaries, national parks, beaches and the scenic beauty. The most developed national parks in Ghana include the Mole and the Kakum National Parks and the Nzulezu Stilt Settlement. With the resource reserves in Ghana, the Shai Hills comes to mind as one with a developed visitor facility. Popular wildlife sanctuaries with built-in tourism facilities are the monkey sanctuary at Boabeng-Fiema in the Brong Ahafo region, the Wli waterfalls in the Volta region and the Paga crocodile pond in the Upper East Region.

Ghana is also blessed with long and wide sandy beaches some of which are yet to be developed for tourism activities. The coastal lines along the Greater, Western and the Central regions of the country have great potential when it comes to this type of tourism resources. Located within the attractive setting of mountains and hills and a serene environment, the Volta Lake also serves as a very important asset in Ghana's collection of tourism products.

### **Historical Heritage**

Tourism assets considered here include traditional buildings, castles and forts built along the southern coastal lines, old mosques and church buildings, etc. The location of forts and castles in the country makes its tourism product offering quite unique on the tourism supply market. Forts and castles included in the UNESCO World Heritage Site can be found in the Volta, Greater Accra, Western and the Central regions of the country. Traditional and historical buildings with peculiar architectural designs and signs which tell the historical background of a people also fall under this category. For instance, Fetish houses such as the *Besease* shrine in the Ashanti region tells about the rich Ashanti civilization in the 18<sup>th</sup> Century. Also, the architectural designs of traditional buildings in the northern part of Ghana serve as huge market for tourism especially international tourism. Notable example include the Kassena houses bordering Burkina Faso and the Tenzug-Tallensi settlement in the Upper East region. Old churches and mosques with historical heritage that serve as tourist sites especially for religious tourism include the Navrongo Catholic church in the Upper East region and the Larabanga mosque in the Northern region.

### **Cultural Heritage**

The country also serves as an appealing tourism destination as a result of the rich cultural heritage of the Ghanaian people which is often displayed in their festivals, funerals, traditional crafts, music, dance among others. A distinct and attractive feature of the Ghanaian people which encourages visitor inflows is the friendliness and the warmth with which visitors are received and treated in the country. This has created the image of a hospitable destination for the country among foreign visitors.

### **Other Attractions**

Attraction sites not captured in the above groups include museums, theatres, cultural centers, sports facilities and recreation centres, etc. Ghana's endowment of natural resources such as gold, cocoa, diamond and now oil, constitute important tourism assets for the country since they encourage business related tourism trips.

### **2.3 Performance of the Tourism Industry in Ghana**

This section focuses on the tourism economy in Ghana by making use of key tourism impact indicators to analyze the performance of the industry over the period.

#### **Tourist Arrivals and Receipts**

Over the years, the country has witnessed a steady increase in the number of tourist arrivals which has translated into increases in tourism receipts accrued by the country. Table 2.1 shows a total of over 16.33 million international tourists arrived in Ghana from the period spanning 1985-2017. The highest growth rate in arrivals was recorded in 2001 whereas the highest number of arrivals recorded was in 2014. The movement in arrivals shows an overall average annual rate of approximately 3% over the period (1985-2017). The country has recorded fluctuations in the number arrivals with some periods recording negative growth. The number of arrivals fell by almost 33% from 582,108 in 2004 to 392,454 in 2005. This could be explained by the fact that the country adopted some reforms in the collection of data on tourist arrivals and as well as reclassified her tourism data in 2005 (Bentum-Ennin, 2014). It is also worth mentioning that the arrival figures recorded also fell slightly from 672,434 in 2008 to 667,275 in 2009. Likewise, between 2014 and 2015, arrivals recorded fell by 18%. This is largely attributable to the Ebola outbreak on the continent which led to the decision by majority of airline companies to freeze

flight routes (WTTC, 2018). Also, the government in response to the outbreak, put a three month ban on all international conferences and gatherings in Ghana.

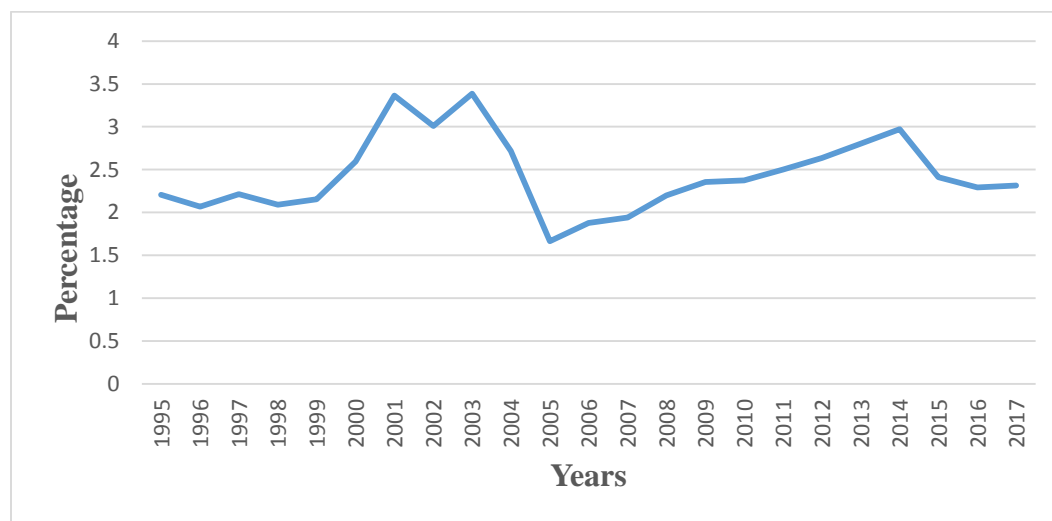
**Table 2.1 International Tourist Arrivals and Receipts in Ghana (1995-2017)**

Year	Arrivals	% Annual change	Receipts (million US\$)	% Annual change
1985	85,000		20.0	
1986	92,000	8.2	27.0	35
1987	103,000	12.0	37.0	37
1988	114,000	10.7	55.0	48.6
1989	125,000	9.6	72.0	30.9
1990	146,000	16.8	81.0	12.5
1991	173,000	18.5	118.0	45.7
1992	213,000	23.1	167.0	41.5
1993	257,000	20.7	206.0	23.4
1994	271,310	5.6	227.6	10.5
1995	286,000	5.4	233.2	2.5
1996	304,860	6.6	248.8	6.7
1997	325,438	6.7	265.6	6.7
1998	347,952	6.9	284	6.9
1999	372,653	7.1	304.1	7.1
2000	456,275	22.4	289.5	-4.8
2001	609,822	33.7	335.9	16.0
2002	584,329	-4.2	389.7	16.0
2003	688,970	17.9	452.1	16.0
2004	582,108	-15.5	487	28.8
2005	392,454	-32.6	627.1	18.0
2006	508,199	29.5	740.1	18.8
2007	580,895	14.3	879	18.7
2008	672,434	15.8	1052.3	19.7
2009	667,275	-0.8	1211.4	15.1
2010	746,527	11.9	1406.3	16.1
2011	827,501	10.8	1634.3	16.2
2012	903,300	9.2	1704.7	4.3
2013	994,000	10.0	1877	10.1
2014	1,093,000	10.0	2067.1	10.1
2015	897,000	-17.9	819	-60.4
2016	932,500	4.0	1766.4	115.7
2017	980,100	5.1	1854.8	5

**Source:** Ghana's National Tourism Development Plan, 2013 (for 1985-2011), Trends in the Tourism Market in Ghana, 2017 (for 2012-2014) and Ghana Tourism Authority Database (for 2015-2017).

These arrivals fetched the country a total of US\$21,940 million in receipts for the period from 1985-2017. Tourism receipts increased from US\$20 million in 1985 to US\$1,854.8 million in 2017 showing an average annual growth rate of approximately 18% over the period (1985-2017). The highest tourism receipts accrued over the period was in 2014. It can also be observed that even though arrivals increased from 1999 to 2000, receipts accrued to the country for that period rather fell by approximately 5%, from US\$304.1 million to US\$289.5 million.

Also, figure 2.1 shows fluctuations in Ghana’s share of arrivals in the Sub-Saharan region. The country recorded its lowest share of arrivals in the region in 2005 (approximately 1.6%) and her highest share in both 2001 and 2003 (approximately 3.4%). The country’s average annual share of arrivals in the region over the period (1995-2017) is approximately 2.8%. The country’s average tourism receipts of approximately US\$ 0.9 billion in 2017, was higher than the regional average of approximately US\$0.7 billion.

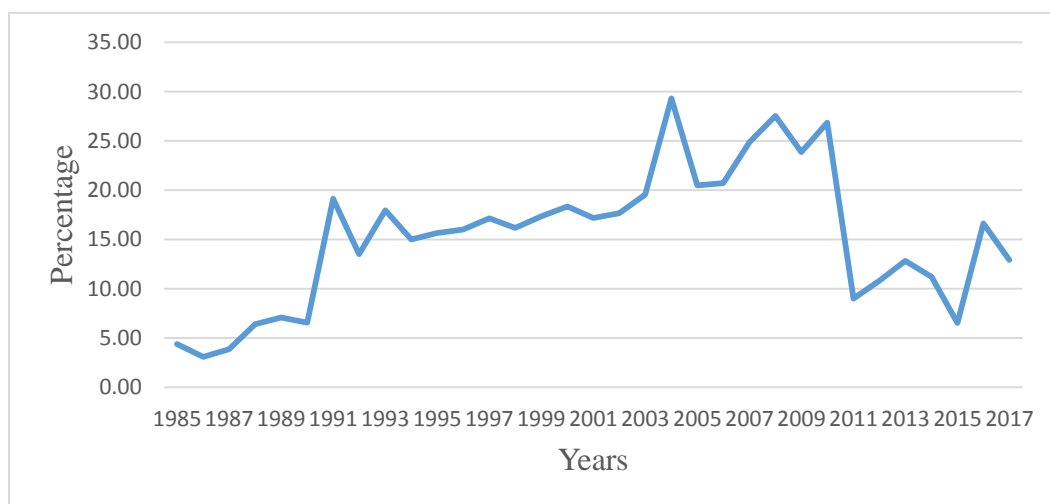


**Figure 2.1 Ghana’s Share of Total Arrivals in Sub-Saharan Africa (1995-2017)**

**Source:** Author’s compilation based on data from Ghana Tourism Authority database, Trends in the Tourism Market in Ghana and the Ghana National Tourism Development Plan (Arrivals for Ghana, 1995-2017) and World Development Indicators (Arrivals for Sub-Saharan Africa, 1995-2017)

### Tourism Receipt as a Percentage of Total Exports

The tourism industry is Ghana’s second higher earner of foreign exchange when major exportable commodities are stripped out (Oxford Business Group, 2016). Figure 2.2 shows the country has however, recorded some fluctuations in visitor earnings as a percentage of total receipts from exports. The percentage share of tourism receipts of the total export receipts (29%) was highest in 2004 over the period. This represent approximately 50% growth over the previous year. This is attributable to the fact that even though tourism earnings increase by approximately 8%, total export receipts rather fell by 28%. Average annual share of tourism receipts as a percentage of total exports is 15.32% over the period.



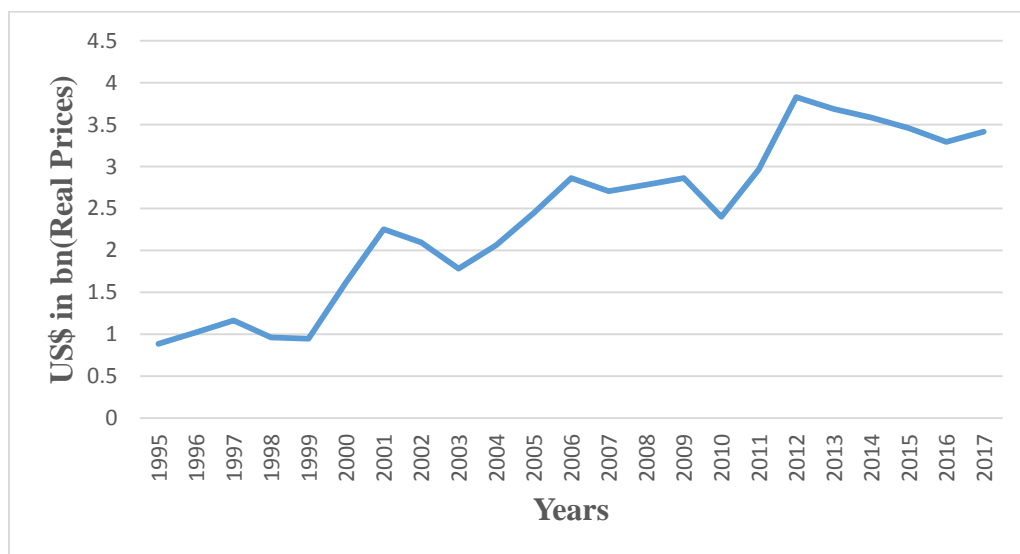
**Figure 2.2 Visitor Exports (Tourism Receipts) as a Percentage of Total Exports in Ghana (1985-2017)**

**Source:** Author’s compilation based on study data.

### Contribution to Gross Domestic Product (GDP) and Employment)

Total contribution of the tourism industry to Ghana’s GDP and employment creation efforts has been encouraging over the period as represented in figure 2.3 below. The contribution of the

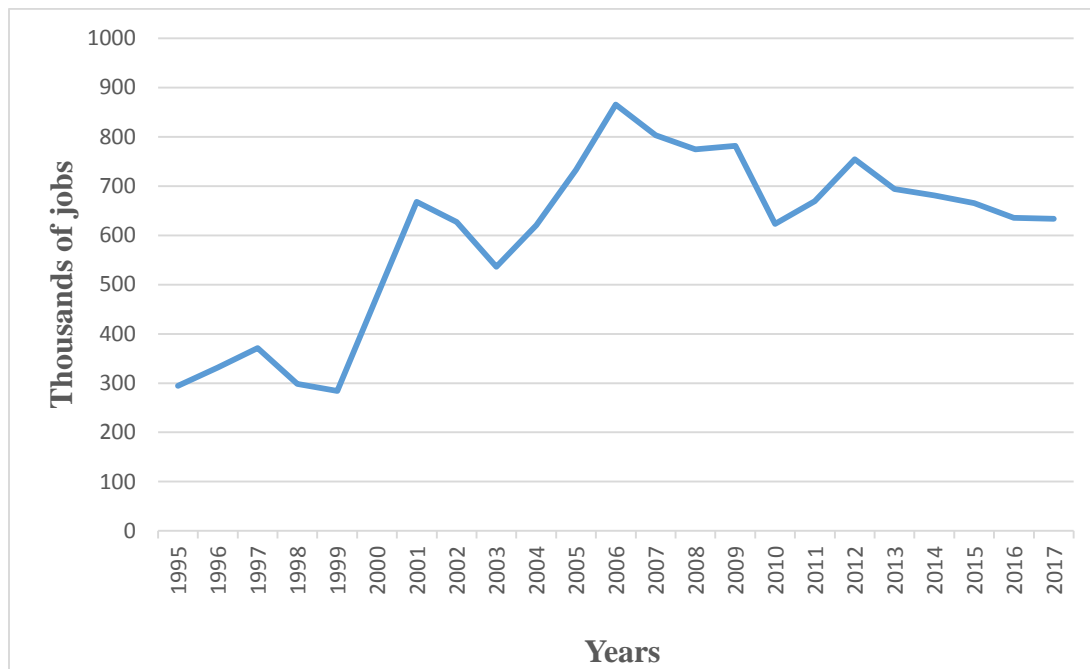
sector to the country’s GDP increased from US\$ 0.89 billion in 1995 to US\$ 3.42 billion in 2017. The country has nonetheless recorded some fluctuations in the sector’s total contribution to GDP. The highest impact on GDP was recorded in 2012 with the sector contributing US\$ 3.83 billion representing 29.13% growth over the previous year. Contribution of the sector to GDP grew at an average annual rate of approximately 10%.



**Figure 2.3 Total Contribution of Tourism to GDP, 1995-2017)**

**Source:** World Travel and Tourism Council (WTTC) Database

The sector also continues to be an important contributor to job creation. The number of jobs supported by the industry increased from 294,276 in 1995 to 633,647 jobs by the end of 2017. The country however recorded fluctuations in the number of jobs supported by the sector, with some years recording negative growth. The highest contribution to employment was recorded in 2006 with the sector generating a total of 865,457 jobs. This represent approximately 18% growth over the previous year, and accounted for 9% of total employment in the country. The sector’s contribution to employment creation grew at a yearly average rate of 6.6% over the twenty-year period.



**Figure 2.4 Total Contribution of Tourism to Employment in Ghana (1995-2017)**

**Source:** World Travel and Tourism Council (WTTC) Database

## 2.4 Recent Developments in the Worldwide Tourism Industry

Growth in the worldwide tourism industry which is often measured by the number of international tourist arrivals has in recent years outpaced global GDP. The sector accounted for 10.4% of global GDP and 9.9% of total employment in 2017 (WTTC, 2018). The industry's direct growth of 4.6% for the seventh consecutive year, has surpassed the global economy. International tourist arrivals as at the end of 2017 stood at 1323 million arrivals, a 7% growth over the 2016 recorded figure. According to the UNWTO Annual Report (2017), growth was led by Africa (+9%) followed by Europe (+8%), Asia and the Pacific (6%), the Middle East (+4%) and the Americas (+3%) in that order.

The year 2017 marked the beginning of a new chapter in the international tourism industry. The year was declared the International Year of Sustainable Tourism for Development. The objective

was to create awareness about the importance of tourism and motivate relevant stakeholders to channel policies, financing frameworks and activities in the industry towards the implementation and the achievement of the SDGs (UNWTO, 2018). Consequently, the year's celebration was based on five main thematic areas. The areas were; positioning the tourism industry as a viable sector to contribute towards sustainable economic growth; using tourism as a tool for employment creation, social inclusion and poverty reduction; protection of the environment through sustainable tourism; ensuring tourism activities brings social, economic and educational benefits to both visitors and host communities; and using tourism to champion world peace and security.

What was supposed to be a year celebration, has provided policy direction for the worldwide tourism industry towards year 2030. The UNWTO has henceforth put in place policies and initiatives aimed at maintaining the momentum and awareness created by the programs for the celebrations in 2017.

## **CHAPTER THREE**

### **LITERATURE REVIEW**

#### **3.1 Introduction**

This chapter looks at a comprehensive review of both theoretical and empirical literature on the scope of tourism and the determinants of international tourism demand. It is divided into two sections. The first section starts by discussing the concept of tourism, categories of tourists, tourism statistics and challenges, definition and measurement of international tourism demand. It concludes with the theoretical review on the determinants of tourism demand. The second part then looks at the empirical review which will be presented thematically by focusing on the factors which influence international tourism demand.

#### **3.2 Definition and Scope of Tourism**

##### **3.2.1 Definitions of Tourism**

Over the years, several definitions of tourism have been put forward by researchers, policy makers and relevant institutions in the tourism industry. However, no consensus have been reached regarding an exact definition for tourism. It is therefore imperative that a clear and precise definition is adopted especially for the purposes of study, collection of statistical data, legislation, policies and planning (Bhatia, 2007). This section thus presents a sample of the definitions that have been used in the literature and attempts to point out the central theme running through them. Finally, an internationally acceptable definition of tourism will be adopted for the purposes of the study.

Matheison and Wall (1982) defined tourism as “the temporary movement of people to destinations outside their normal places of work and residence, the activities undertaken during

their stay in those destinations and the facilities created to cater for their needs” (Thirumoorthi, Wong, & Mun, 2015, p.1). Also, Hunziker and Krapf (1941) puts the definition of tourism as “the sum of the phenomena and relationships arising from the travel and stay of non-residents, in so far as they don’t lead to permanent residence and are not connected with earning activity” (Sharma, 2005, p.14). International institutions have also proposed some definitions of tourism. According to the Tourism Society of England (1976), tourism can be seen as the “temporary short term movement of people to destinations outside the places where they normally live and work and their activities during the stay at these destinations; it includes movements for all purposes, as well as day visits or excursions” (Lueterio, 2007, p. 2). The International Association of Scientific Experts in Tourism (1981) also defined tourism as “in terms of particular activities selected by choice and undertaken outside the home” (Camilleri, 2018, p. 3).

There are also a number of definitions by various scholars across different disciplines due to the multi-faceted nature of tourism. Tourism as a subject has different aspects namely economic, social, geographical, and psychological among others. Schullard (1910) noted that tourism from economics point of view can be explained as “the sum total of operations mainly of economic nature which directly relate to the entry, stay and the movement of foreigners inside and outside a certain country, city or region” (Karma and Mohinder, 2004, p.34). Przeclawski (1973) also defines tourism from the sociologist perspective as “covering the whole of the phenomena of space movement connected with voluntary temporal change of place in space, change of the life rhythm and environment accompanied by making personal contact with the environment (natural, cultural or social) (Przeclawski, 1973, p.14). Thus, the main concern of the sociologist is to investigate the tourists and the very phenomenon of tourism. Also from the perspective of geography, Hall (2000) defined tourism as a form of leisure-oriented temporary mobility with

both spatial and temporal dimensions. The temporal dimension explains tourism activity in relation to the length of time away from home environment whilst the spatial talks about distance from the home environment.

It can be observed that, a central theme running through the sampled definitions is the fact that tourism as an activity, involves a movement of the tourist away from his or her “usual environment”. The International Recommendation on Tourism Statistics by the United Nations defines a visitor’s usual environment as “the geographical boundary (though not necessarily a contiguous one) within which an individual conducts his or her regular routine of life”(UN and UNWTO, 2010, p. 12). This also implies that tourism can be regarded as a subset of travel (Laimer, 2010). The United Nations World Tourism Organization (UNWTO) recognizing the difficulty in arriving at an exact definition for tourism, came up with a definition of tourism in a glossary of common terms for tourism it released in 2008. It explains tourism as;

“A social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for less than a year for personal, business or professional purposes. It described these people who embark on such journeys as visitors (which may be either tourists or excursionists; residents or non-residence)” (UNWTO, 2014, p.1).

The above definition thus delimits the context within which tourism is defined and tourism demand is measured in this study.

### **3.2.2 Types of Tourism**

The United Nations (1994) distinguished between three main types of tourism in its recommendation on tourism statistics. The types of tourism according to the given definitions are as follows;

- Domestic tourism: This refers to tourism activities by residents of a country who travel and visit destinations within that same country.
- Inbound tourism: This comprises of tourism activities of non-residents in a particular country.
- Outbound tourism: Tourism by residents of a particular country travelling and visiting destinations located outside their country.

The three basic types of tourism when combined give three main categories of tourism also often used in the collection of tourism statistics.

- Internal tourism: this is made up of inbound and domestic tourism.
- International tourism: This consist of inbound and outbound tourism.
- National tourism: This comprises of outbound and domestic tourism.

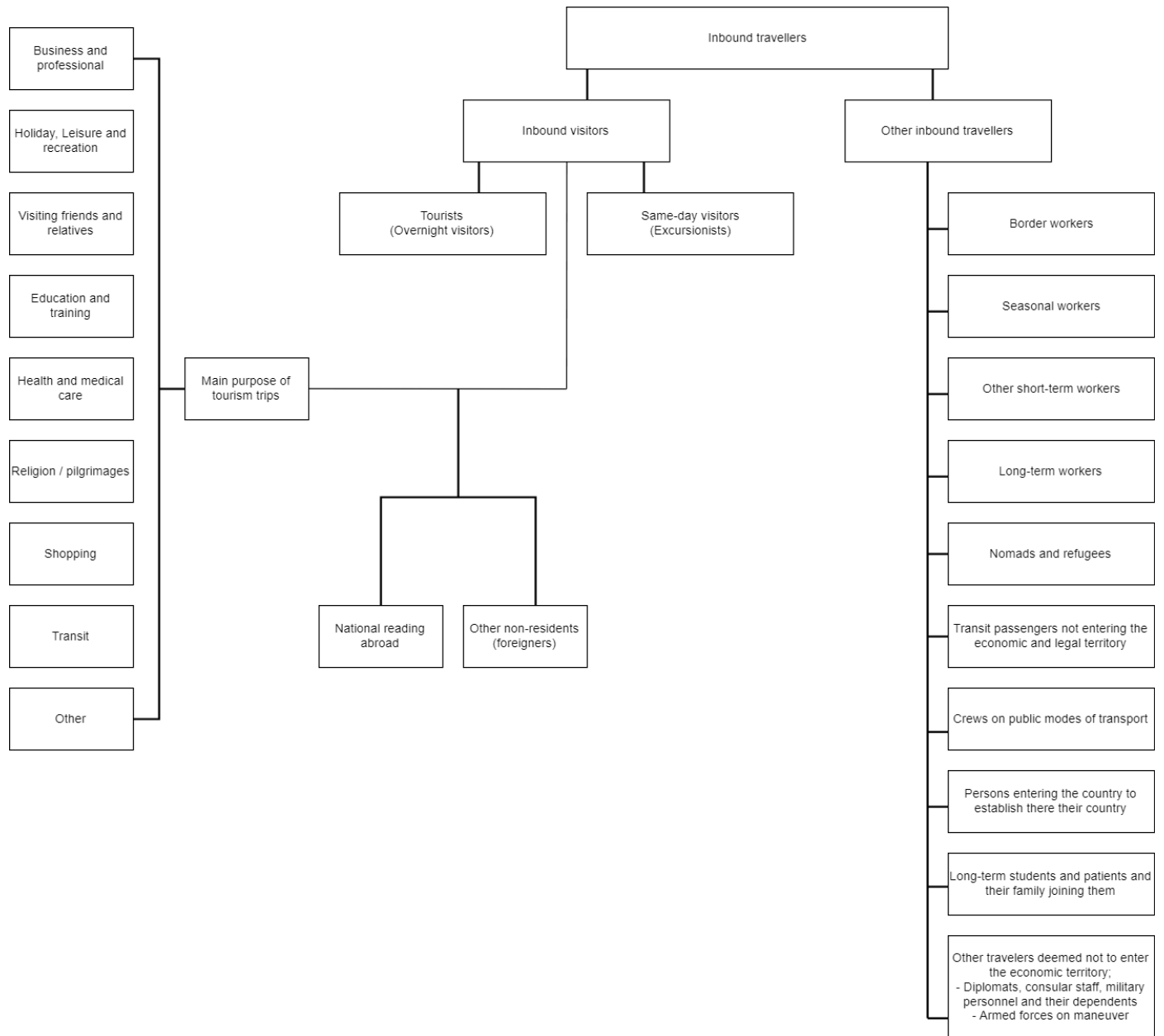
### **3.2.3 Types of Visitors**

The UNWTO classifies visitors into two main groups namely, tourists and excursionists. This classification is based on their length of stay at the destination. The distinction between the two is very important in the compilation of data on tourists and travelers in general. It also guarantees credibility and facilitate international comparability of such data.

Tourists are classified as individuals visiting a place outside their usual environment or place of residence often for more than a day (twenty-four hours) but less than a year. Beyond the period of one year, the place visited is considered as the visitor's usual environment and so activities by the visitor will no longer be considered as constituting touristic activity. These group of visitors could either be non-residents (International tourists) or residents (domestic residence).

International tourists are tourists who stay overnight but less than a year at a foreign country. Persons who arrive in a foreign country to take up jobs, engage in activities for which they are remunerated from within the foreign country or planned on establishing permanent residency in the foreign country are not considered to be foreign tourists. Domestic tourists on the other hand are residents of a country who visit various tourist destinations located in that country. The minimum time spent at the destination is one night and the maximum is a year.

Excursionists are sometimes called same day visitors since they stay at a destination for less than twenty-four hours. These visitors can also be subdivided into foreign and domestic excursionists. Figure 3.1 is semantic diagram showing the various classification of inbound visitors as distinguished from other travelers, and the different purposes of their visit according to the UNWTO specification.



**Figure 3.1 Classification of Inbound Travelers**

**Source:** UN-IRTS, 2008.

### **3.3 Measurement and Challenges in the Collection of Tourism Statistics**

The growing importance of the travel and tourism industry has attracted the attention of governments and other policy makers who hope to formulate policies to capitalize on the industry's immense benefits. The success of such policies and interventions is however, heavily dependent on the availability of credible data. Quality data on tourism activities is needed among other reasons for; planning and development of tourism facilities; marketing and promotion strategies; understanding changes in tourist fashion and; for legislative and administrative purposes (Bhatia, 2007). Tourist statistics come in different forms which can be put into three main broad groups.

#### **3.3.1 Categories of Tourist Statistics**

##### **Volumes**

The number of tourist arrivals and length of stay are basic forms of tourism volume statistics. The two are often quoted in the report of most tourism statistics. The number of tourist arrivals are collected and reported in unit period which could either be a month, half year or a year. However, due to statistical difficulties, most countries consider a year as the unit of period (Bhatia, 2007). In the collection of data, much importance is given to the visit rather than the individual visitor. Thus, a total of some 80 million tourist arrivals reported in a year could just be a reflection of 80 million visits made by somewhat small number of individuals.

Length of stay is another important tourism volume statistic. It is reported as the number of days or nights a tourist spends at a destination. It is common to find data on overnight stays usually expressed as average length of stay (Bhatia, 2007). For instance, in a hotel where three tourists

spend different number of nights, first visitor staying for three nights and the other two staying for two nights and one night, respectively, the average length of stay will be calculated as;

$$\text{Average length of stay} = \frac{\text{Overnight stay}}{\text{Number of Arrivals}}$$

With the total number of nights amounting to six nights and the number of arrivals being three, the average length of stay will thus be two nights.

### **Expenditure statistics**

This category of statistics is very important in the computation of the economic impacts of tourism as it helps to determine the monetary value of tourists' movement (Bhatia, 2007). It covers spending by tourists on the journey and at the destination. Thus, such statistics is concerned with the reporting of the amount spent on the purchase and consumption of goods and services by the tourist. It is common to see most tourist expenditure statistics grouped under broad headings like food and beverages, accommodation, transport, shopping at both formal and informal markets amongst others. Durable goods such as holiday homes, camping tents, boats, among others, purchased by the tourist for repeated use over several years are mostly not included in tourists' expenditure computation (UN and UNWTO, 2010).

In the compilation of tourists' expenditure statistics, two important factors must be taken into consideration: who does the spending and the timing of the expenditure (UN and UNWTO, 2010). The data on tourist expenditure must include not only spending by the tourist but also, all other expenses paid for or reimbursed by others on behalf of the tourist. With the consideration of timing in the calculation of tourism expenditure, the UN-IRTS (2008) advises that every good or service delivered before the trip or that is clearly related to the trip must be included. These

may include expenditure on travel agency services, medical control, passport, visas, among others.

The importance of these requirements in the calculation of tourism expenditure exposes the complex nature of tourism- as a service especially in economic sense, whose consumption is an amalgamation of several goods and services offered by different markets (Korstanje, 2012).

### **Tourist Characteristics statistics**

These statistics contain information concerning markets, tourist's mode of transport, choice of type of accommodation, socio-economic features (age, sex, income status, level of education, etc.) and purpose of visits, among others. Information on these items are essential for tourism marketing, planning and development (Bhatia, 2007).

### **3.3.2 Methods of Measuring Tourist Arrivals and Expenditure**

Irrespective of the host country or the type of tourism, the methods used for collecting tourist statistics can be grouped into three different forms, namely, enumeration at arrivals and departure, tourists' registration at hotels and other accommodation units and surveys (Bhatia, 2007).

Data on tourists' arrivals and departures especially when it comes to inbound and outbound tourism, are obtained by using administrative means of control such as Entry or Departure cards. The airports and borders are the main source of collecting such data. Also, tourists' registration at various forms of accommodation units is an important method of gathering data on overnight visitors (both domestic and foreign) since accommodation constitute a significant proportion of their expenditure. It is however difficult to use this method to collect data if tourists arrange for other forms of accommodation. Such other forms of lodging may include sleeping in the open or

in vehicle, on board a mode of transport without any arrangement to sleep or in a non-paying area (UN and UNWTO, 2010). Tourist registration at hotels thus relies heavily on the availability of accommodation establishments, and their ability to keep quality data on the visitors who patronize their services.

The third form of measuring tourist arrivals and expenditure is through surveys. Surveys have become increasingly important in the collection of tourists' statistics largely due to the difficulties in collecting data at countries' entry and exit points and as well as hotels and other accommodation establishments. The method serves as an important source of data for inbound and domestic tourist arrivals and tourism consumption expenditure. It may be carried out at the airports, borders as visitors await departure, at places of accommodation for visitors or at popular tourist sites in the destination country. For visitors who don't patronize commercial or mainstream accommodation like the hotels and motels and so make provision for private accommodation, surveys (particularly, household survey) become an important source of measuring arrivals and expenditure.

### **3.3.3 Challenges in the Collection of Tourism Statistics**

Research on tourism and related studies in both developed and developing countries, is often confronted by data limitations. This is largely attributable to the difficulty in arriving at standards concerning the concept, scope and definition of tourism (UN and UNWTO, 2010). The challenges encountered in the international comparability of tourism statistics have also called into question the credibility and quality of data collected in respective countries.

The difficulty in the collection of data is also as a result of the nature of tourism being an activity which is linked to several sectors and markets of the economy. As a demand side phenomenon, tourism can be analyzed looking at the visitors, their activities and as well as the impact that such

activities have on the purchase of goods and services at the destination. From supply perspective, tourism can be viewed as a set of productive activities that are provided or made available to meet the needs of visitors (Korstanje, 2012). A credible tourism statistics should be able to paint a very consistent picture of both perspectives of tourism in a regularly compiled set of data (UN and UNWTO, 2010).

The challenges faced in the collection of tourism statistics differ across countries. In Ghana, the challenges range from; inadequacy of resources and personnel with the requisite skills to collect data; weaknesses in the capacity of regional Ghana Tourism Authority (GTA) offices to collect data at regional tourist sites; poor coordination between institutions like the Ghana Tourism Authority, the Ghana Immigration Service (GIS) and the Ghana Statistical Service (GSS), responsible for the collection of tourism statistics, among others. For instance, there are gaps in Ghana's statistics on tourists' expenditure and arrivals and sometimes, they are based on estimates. The Ghana Tourism Authority have attributed this situation to the difficulties they sometimes face in conducting their surveys at the airports (MoTAC, 2012).

Several recommendations have been suggested to tackle the challenges confronting the tourism statistical system. To ensure consistency in the international comparability of data, countries are advised to adhere to recommendations by the UN with regards to the collection of tourism data (UN and UNWTO, 2010). The most recent of such recommendations is the International Recommendation on Tourism Statistics 2008 (UN and UNWTO, 2010). The initiative focuses on using both monetary and non-monetary indicators to measure the activities of visitors. The overall goal of the set of recommendations is to provide a common framework to guide countries in the measurement and collection of tourism statistics.

The document specifies practical and international applicable concept and definitions of tourism, classifies the variables that characterize tourism and spells out the indicators to be used in tourism statistics. The recommendations also follow acceptable definitions and concepts used in national accounts, international trade in services, balance of payments and household and migration statistics. (UN and UNWTO, 2010). They are simple but precise and take into consideration the difficulties in gathering statistics on the activities of tourists and the various products and services offered them.

The recommendations among other things clearly defines; the characteristics of visitors and tourism trips and implications for measuring flow of visitors; provides a conceptual delimitation of tourists' expenditure, the product dimension of these expenditures and their measurement; industries and establishments who offer tourism products and services and; the basic concepts and definitions surrounding employment in tourism industries. Countries are also entreated to ensure their tourism statistics satisfy the Basic Principles of Official Statistics approved by the United Nations Statistical Commission (UNSC) (UN and UNWTO, 2010).

### **3.4 Measures of Tourism Demand**

Tourism demand has several definitions. However, within the context of economics, it can be defined based on the classical definition of economic demand-“the desire to possess a commodity or make use of a service, combined with the ability to purchase it” (Song et al., 2010, p. 63). By inference, international tourism demand could be defined as the ability and willingness of a consumer to purchase and enjoy tourism products and services outside their country, region or city of residence. Different variables have been used as measures or proxies of international tourism demand. Such measures include the number of tourism arrivals and or

departures, tourist expenditures and or receipts, length of stay, tourist participation rate, among others.

Due to data limitations, the most common measure of international tourism demand is the number of tourist arrivals and departures. Lim (1997) reviewed hundred empirical studies on tourism demand and found that more than half of the number of papers reviewed used the number of arrivals and departures as measures of tourism demand. However, this proxy has been described as an imprecise measure of tourism demand (Muñoz, 2007). Proponents of such argument advocate the use of alternative measure such as the number of nights spent at a tourist destination. They argued this measure is superior to the number of arrivals and indeed other proxies because it considers how long the visitor stays at destination (Bakkal and Scaperlanda, 1991). This is due to the fact that some visitors may use a country as a transit point and as such their activities might not contribute in any significant way towards the economy of the that country. Nevertheless, they qualify to be classified as tourists by the transit country. Therefore, accounting for the length of stay of visitors takes into consideration the extent to which their activities affect the economy of the destination country.

Other studies have also measured tourism demand using the tourist participation rate of the origin countries (Song et al., 2010). This is defined as the ratio of the total number of tourist arrivals at a destination to the population of the origin country. In cases where data on arrivals according to purposes is readily available, tourism demand could also be measured using the number of tourist arrivals split by purpose for example business, leisure and holiday, visit to relatives and friends, health treatment, education exchange programs, etc (Turner & Witt, 2001).

Another important proxy of tourism demand often used in the literature is tourist expenditure and or receipts. The data on tourism expenditure can be collected mainly through visitor surveys at

points of departure, tourism accommodation establishments or through household surveys. Other less often used source of data on expenditure is by bank reporting (Witt & Witt, 1995). Tourist expenditure and receipts are normally expressed in per head of origin population, per visitor or per diem or in nominal or real terms (Lim, 1997). The expenditures by tourists are sometimes also grouped under broad headings such as food, clothing, transport, accommodation, entertainment among others (Pyo, 1991).

### **3.5 Theoretical Review of the Determinants of International Tourism Demand**

The concept underlying studies on tourism demand modeling is based on the classical economic theory that the key determinants of demand are price factors and income. Since this assertion is a product of consumer utility maximization theory, it follows that the influence of consumer theory is very important in the discussion of which factors could possibly influence inbound tourism demand. By implication, consumer theory suggests that foreign tourism demand would be influenced by income level of the tourist, prices of tourism products and services in a destination, tourism substitute prices in related destinations, and other variables which could also influence a tourist's decision to visit a foreign destination. These variables are usually collected at the macro level and so may not provide much information as to how the social characteristics of the tourist influence his or her decision to undertake touristic activities.

Therefore, other studies have shown that tourist socio-demographic characteristics such as gender family size, age, educational level among others, play a vital role in their decision to travel and enjoy tourism in a foreign destination. These studies normally use micro data at the individual or household level, collected through surveys at destination entry and exit points.

## **Income**

Income of origin countries as a measure of purchasing power is the most widely used determinant in tourism demand studies. Purchase of tourism overseas is quite expensive since the tourist would have to be able to afford a means of transport or sometimes accommodation. Moreover, it would be perceived as irrational the decision to spend more on travel for the purpose of say leisure, when provision of basic necessities have not been met. This makes overseas travel and tourism largely a luxury good (Lim, 1997). Smeral (2003) on the other hand forecasted that even though tourism consumption is essentially a luxury good, this status fades away because consumers will reach the peak of their consumption. He noted that at this saturation level, travelling in general or to a particular destination becomes less attractive to the tourist than before. Consequently, he expects that tourism consumption would increase with increases in income but at a decreasing rate when the consumer's saturation level sets in.

Therefore, it would seem more prudent to use a visitor's discretionary income as a measure of purchasing power since it is the remaining income after provision has been made for necessary expenditures. There are however exceptions to this as some consumers might view tourism consumption as very important to constitute a primary item on their budget. Obviously, such consumers will be those who belong to the high-income bracket. Nevertheless, it is very difficult to measure discretionary income for use in empirical studies because of its subjective nature (Lim, 1997).

Consequently, most tourism demand studies have used variables such as nominal income, real personal income, per capita income, Gross Domestic Product (GDP), Gross National Product (GNP) as measures of income. Other less frequently used proxies to measure income elasticity of tourism demand include foreign travel budget, real per capita consumption, destination budget

share, permanent income, production or industrial production index, household average annual disposable income subdivided into wage and non-wage income, etc.

### **Price**

Also referred to as tourism prices or relative prices, it is another most common significant determinant of tourism demand. It measures the visitor's cost of living at the tourist destination. Thus, it accounts for the cost of goods and services that a tourist would normally purchase or enjoy at the destination. Such goods and services may include food, accommodation, local transportation, entertainment among others. It is very difficult to construct meaningful prices for tourism consumption at a host country because the consumption of tourism involves the purchase of wide range goods and services that constitute the offerings of different markets in the economy. With international tourism demand, measurement of trends in the relative prices between the country of origin and destination requires that an index is constructed using a basket of goods and services purchased by the tourist (Lim, 1997). Since no meaningful tourism price index exist, the Consumer Price Index (CPI) is widely used for the computation of the tourism relative prices (Morley, 1994).

However, some researchers have questioned the use of the CPI as a proxy for tourism price index. They opined that doing so relies on a rather strong assumption that the tourist and the representative households used in constructing the CPI, consume similar basket of goods and services (Lim, 1997). Therefore, other researchers have proposed the use of a constructed index based on a basket of specific goods and services that a tourist is most likely to consume at the destination. Such specific costs of living variables may include; drinks and tobacco price index; weighted price of food, accommodation, transport and entertainment; food, shopping, entertainment, hotel price index among others.

The relative price index may be adjusted for exchange rate in order to reflect changes in the exchange rate of currencies between the country of origin and the destination. This provides some sought of convenience in empirical research since the effects of both inflation and exchange rate movement on tourism demand (both measures of relative prices) could be captured in one constructed price index variable (Mervar & Payne, 2007).

### **Transport Cost**

An important component of overseas tourism demand is the means of transport to the destination. The demand for a mode of transport in international travel and tourism is regarded as a derived demand since in order to consume tourism products and service, the tourist must do so at the destination. Transport cost here means the cost of round trip travel between the origin and the destination countries. Though very important factor influencing tourism demand, it is most often not incorporated in tourism demand models. Transportation cost in the case of demand for tourism in oversea destination is normally measured by the price of air travel (Kliman, 1981; Kulendran & Witt, 2001; Lim, 1997). However, difficulty arises when it comes to the measurement of the effective transportation cost borne by the tourist. This difficulty is attributed to the way airlines formulate and conduct their pricing policies (Lim, 1997).

Some of the proxies that have been used to capture transport cost in tourism demand studies include real economic airfare, real average airfare, real travel cost, excursion fare (for same day visitors), distance, real revenue per passenger kilometer/mile airfare of scheduled airfare, etc (Lim, 1997). Recent studies have also tend to use world crude oil prices as proxy for transportation cost (Bentum-Ennin, 2014; Muñoz, 2007; Mervar & Payne, 2007). For surface travel as a means of transport to overseas tourist destinations, such proxies as gasoline cost plus ferry costs have often been used.

### **Exchange rate**

This is a very useful determinant of international tourism demand since changes in exchange rate affect tourists' purchase of goods and services, cross border shopping, attract new tourists, length of stay at the destination, frequency of travel (Economists Intelligence Unit, 1975). The consumption of tourism products and services within the context of international travel, might require the visitor to change currencies. Exchange rates are normally incorporated into tourism demand models either separately or used in the computation of the tourism price levels. Exchange rate is sometimes used as a separate variable because it is believed that tourists have easy access to information regarding movements in exchange rates than relative price levels at the choice of destination (Artus, 1972). Exchange rates are normally published daily and so the tourist has a much more precise knowledge of prevailing values of exchange rate.

The most commonly used type of exchange rate definitions in tourism demand studies are the quantity of monetary unit of the origin country per unit of the destination country's monetary unit or the units of currency of the origin country per weighted unit of currencies of foreign destinations (Crouch, 1993). The definition used in a study is determined by whether the research is aimed at investigating the effect of exchange rate on tourist flows between pairs of countries or demand for tourism by tourists in alternative or all destinations (Vencovska, 2011).

### **Substitute Price**

This is regarded as another price type factor which affect tourism demand in a particular destination. The worldwide tourism market is very competitive and so it is expected that the demand for tourism at a particular destination will be affected by the price of tourism in available alternative destinations. The number of substitute destinations to a particular destination chosen in an empirical study, is usually at the discretion of the researcher. However, in most cases, the

number selected depends on whether they share cultural, social, economic or geographical similarities with the destination under consideration by the tourist. For instance Song et. al., (2010) used South Korea, Mainland China, Singapore, Thailand and Taiwan as substitute destination for Hong Kong and; Ibrahim (2011) and Bentum-Ennin (2014) used Tunisia and Nigeria as substitute destinations to Egypt and Ghana respectively.

The Consumer Price Index (CPI) of the substitute destination and the origin country is used to construct proxies for tourism substitute price index and may sometimes be adjusted for exchange rate fluctuations. It is expected that a higher cost of living in a particular destination would lead to a rise in the demand for the tourism offerings of alternative destinations and vice versa.

### **Trade Openness**

The degree of openness of an economy is employed in tourism demand studies to denote the economic relationship between an origin country and a destination country. Trade openness has increasingly become a key driver of overseas tourism demand due to the positive long-term bidirectional causality relation between tourists' visits and trade (Leitão et al., 2011). In economies driven by international business, it is expected that trade will have influence on business driven tourism trips. The discovery of new natural resources such as oil in large commercial quantities and new technologies also promotes business driven tourism trips and increase tourism demand.

Gli-Alana and Fischer (2007) found a unilateral causal relationship that runs from tourism to trade. They observed that increase in foreign tourism demand rather promotes trade among countries. They noted that tourism promotes cross-border exports and creates new business opportunities for entrepreneurs. They added that foreign tourism experience also creates demand for new products back home (origin country) as a result of exposure and knowledge about them

during the foreign travel. Variables normally used for the computation of trade openness in tourism demand studies are export and import of commodities and Gross Domestic Product (GDP) statistics.

### **Security factors**

The political atmosphere and the level of security in a destination is a top criteria tourists look for in deciding where to visit. Contributing factors to the security of a destination may include functioning government and rule of law, freedom of expression or belief, freedom of association, political pluralism, freedom of the press, freedom of participation in political processes, respect for associational or organizational or individual rights, etc. One or a combination of some of these factors are often employed in tourism demand modelling, with data often obtained from internationally recognized indicators or indexes such as that from the Freedom House Survey and the World Bank's Aggregate Governance Indicator. Some studies have also used dummies in their econometric analyses to proxy major events which at a point threatened peace and security at a tourist destination. For instance, Narayan (2004) used a dummy to represent coup de tat in his study of inbound tourism demand to Fuji. Munoz (2007) also used a dummy to represent the impact of the September 11th attack on tourism demand in Spain.

### **Marketing**

This creates awareness about the tourism products and services of a destination through the use of various activities and strategies. It helps to package tourism offerings of destinations in a way that meet the needs of tourists. Marketing activities are normally undertaken by government established institutions or private companies. Although this variable is a key driver of foreign tourism demand, only a few researchers have incorporated it into their study (Crouch et al., 1992; Kulendran & Dwyer, 2009; Ledesma-Rodriguez et al., 2001). This is partly due to difficulty in

accessing credible data on tourism marketing expenditure and, issues with including its impact correctly in tourism demand models.

According to Dwyer and Forsyth (2006), it is difficult to model the impact of marketing expenditure in tourism demand models correctly because different destinations react differently to various marketing and promotional campaigns and activities. They also added that the ability to effectively use marketing as a tool to increase demand for tourism differs across various destinations.

### **Repeated Visits**

This is also sometimes referred to as habit formation, word of mouth effect or interdependent preference (Muñoz, 2007). It captures the effect that previous knowledge or tourism experience as a result of a visit to a destination, has on current decision to travel. It is also seen as a form of marketing which helps destinations to sell their tourism products and services at almost no charge (Sigala et al., 2001). Repeated visits have become even more important in tourism marketing due to the growth of technology (Vencovska, 2011). Online versions of word of mouth have become more popular in recent years. On these platforms, tourist share their tourism experience from various tourist destinations which helps to provide travelers and prospective tourists with information on various tourist destinations across the world and the facilities available in those destinations.

Word of mouth has been identified as more effective in influencing tourists' decisions than marketing and advertising (Kardon, 2007). The justification given for the inclusion of this effect in tourism demand models is that it reduces the level of uncertainty about a destination (Muñoz, 2007). A tourist will be more comfortable and willing to travel to a destination he or she has

been before than to travel to a destination that is new to him or her. Also, knowledge about a destination spread when tourist who have already visited a destination share their experience with family, friends, neighbors, etc.

Repeated visits employed as a determinant of tourism demand also indirectly provides information on supply constraints in the destination country (Dwyer & Forsyth, 2006). Such information give indication of a destination country's accommodation and transport capacity. It also helps to ascertain the level of quality of service delivery by suppliers of tourism products and services at a destination.

### **Special Events**

The hosting of special events such as major sports tournaments (the world cup and the Olympics), conferences, musical shows, conventions among others influence international tourism demand. Other events like natural disasters, outbreak of diseases, energy crises may also impact inbound tourism demand.

### **Population**

An increase in population in origin countries presents a larger market for tourism products and services. The effect of population change is often captured in tourism demand models together with income of the origin countries (as income per capita) or together with the proxy for tourism demand (as tourist participation rate expressed as a the ratio of tourist arrivals from an origin to the population of that particular origin).

### **Qualitative or Socio Demographic Factors**

These factors give information on the role demographics play in travel and tourism decisions. Qualitative factors which affect the demand for tourism include tourists' attributes, household size, purpose of travel, destination attractiveness, among others. Examples of tourist attributes include marital status, age, gender, educational level, employment or profession among others (Lim, 1997). These factors influence the leisure time available to the tourist, the kind of services and facilities that must be provided at tourist destination, marketing strategies to adopt to increase tourism demand among others. The effect of household size may be captured in empirical studies as composition of household, age of child or children. Analysis of the impact of purpose of travel in empirical work mostly splits the reasons for travel into pleasure, business, visit family and friends, education, conventions, conferences, transit, health, among others. The impact of destination attractiveness have also been captured using factors such as climatic variables, culture, natural environment and historical relationship between countries (Lim, 1997).

### **3.6 Review of Empirical Literature on the Determinants of Tourism Demand**

The tourism industry is very vulnerable to shocks which could be either economic or non-economic. Empirical studies make use of these shocks to explain factors that influence international tourism demand. Such shocks may include price and exchange rate fluctuations, changes in income levels, political instability, natural disasters like floods, outbreak of diseases, etc.

Several authors have adopted different estimation techniques to estimate the equation for tourism demand. Most econometric analyses of tourism demand have used single demand equations with a few employing a complete demand system in their study (Lim, 1997). Recent studies have adopted advanced econometric methods such as co-integration, error correction models, time

varying parameters, vector autoregressive models among others. Others have also employed panel data techniques with exploration of dynamic analyses becoming more common (Habibi et al., 2009; Muñoz, 2007; Leitão, 2010).

Although the estimation of tourism demand models has witnessed much progress, reviews and meta-analyses points to the fact that no particular method consistently outperforms others (Peng et al., 2014). Therefore, the purpose and limitation of a study determines which variables to include in tourism demand models and the estimation techniques to use (Song and Li, 2008).

Early studies on tourism demand modelling focused on developed economies. However, with the growing importance of the industry to the world economy, studies on tourism demand in developing economies have been given some attention.

### ***Income***

Income elasticities in tourism demand studies have often be found to be significant although the magnitude vary depending on the given country of origin or destination (Brakke, 2005). Narayan (2004) used co-integration techniques and error correction models to study both short and long factors influencing tourist arrivals in Fuji for the period 1970-2000. He concluded that Fuji's tourism industry stand to gain from growth in incomes of her main source markets in the long run.

Applying a dynamic model to a panel data set made up of German's tourism demand in each of the 17 Spanish tourist destinations for the period 1991-2003, Munoz (2007) found out that Germans viewed tourism consumption in Spain's tourist destinations as luxury. Merver and Payne (2007) also examined foreign tourism demand for Croatia using quarterly data for the period 1994 to 2004 using Autoregressive Distributed Lag (ARDL) approach. They concluded

that tourism demand in Croatia is highly elastic with respect to income of her tourist originating countries. Bashagi and Muchapondwa (2009) investigated the factors influencing international tourism demand in Tanzania for the period between 1996 and 2006 using the ARDL approach to co-integration. The findings of the study indicated that tourists' income has a significant impact on their decision to travel.

Also, Leitao et al., (2011) estimated a demand equation for tourism in Romania using data on arrivals from twenty-three European countries for the period 1997-2008. Both the fixed effect and Tobit models estimated indicated that income of the origin countries is an important factor which affect the demand for tourism in Romania. Adeola et. al. (2017) also estimated a Poisson regression model to explain the factors influencing foreign tourists' decision to visit 44 African countries over the period 1995-2015. They concluded that per capita income of originating countries is one of the key drivers of international tourism demand in Africa.

### ***Price Type Factors***

Price type factors in tourism demand studies include relative prices at a destination, substitute prices and transport costs. Most tourism demand studies have incorporated at least one of these prices in their studies. Eilat and Einat (2004) did an investigation into what factors affect inbound tourism demand under the assumption of a world with a market of differentiated products. The study used data on tourist flows for all countries worldwide (both as origins and destinations) from 1985-1998. The discrete choice estimation technique employed by the study revealed that travel to high Gross National Product (GNP) per capita destinations responds to price fluctuations and that the price elasticity is close to one.

Also, Habib et al (2009) estimated a dynamic model for tourism demand in Malaysia from her top 15 generating markets from the period 1995-2005. Their study show that demand for tourism in Malaysia is highly price sensitive. Likewise, Hanafiah and Harun (2010) employed a modified Gravity model to study tourism demand in Malaysia using tourist arrival data from six of her major markets namely, the UK, Hong Kong, China, Taiwan, Australia, Thailand and Indonesia. They concluded that higher tourism prices and transportation cost proxy by distance discourage tourists from visiting Malaysia.

Furthermore, Bentum-Ennin (2014) investigated what factors explain Ghana's export of tourism from the period 1985-2010 based on five major tourist originating regions namely, Africa, Europe, America, East Asia Pacific and the Middle East. The results show that Nigeria is a substitute destination to Ghana. However, transport cost measured by world crude oil prices was found to be insignificant.

Sassi and Gasma (2015) investigated what factors explain demand for tourism in Tunisia by foreigners from 47 generating markets over the period 1994-2012. Empirical results from the estimation of the GMM dynamic model indicated that tourism in Tunisia is affected by the price levels and transport cost approximated by crude oil prices. The results also showed that Tunisia and Morocco are substitute destinations.

### ***Exchange Rate***

Although mostly used in the computation of the tourism relative prices, it is also quite common to find some tourism demand studies incorporate it separately in their model. Ibrahim (2011) adopted a fixed effect model estimated by seemingly unrestricted regression technique to determine the factors motivating foreign tourism demand in Egypt. The study used panel data set

of tourist arrivals from eight of Egypt's generating markets during the period 1990-2008, the empirical results showed that appreciation of the relative real effective exchange rate has a negative effect on tourists' decision to visit Egypt.

Agiomirgianakis and Sfakianakis (2014) also investigated the determining factors of international tourism demand for Greece over eight years (2004-2011) using panel EGLS method. Their findings also confirm the importance of relative real effective exchange rate in influencing foreign tourists' decision to visit Greece.

Arsad and Borhan (2016) employed the ARDL bounds testing approach to investigate and estimate the factors which explain foreign tourism demand in Malaysia in the short run and long run. Using quarterly data on tourist arrivals from six European countries, they concluded that long run exchange rate has a significant positive impact on arrivals from France and Sweden in the long run. Thus, appreciation of the Malaysian ringgit leads to fall in the number of arrivals from France and Sweden in the long run. However, exchange rate depreciation in the long run is negatively correlated with arrivals from Denmark, the UK and the Netherlands in the long run.

### ***Trade Openness***

Several empirical studies have established a bidirectional relationship between trade and tourism. This has encouraged the introduction of the impact of trade in tourism demand models (Leitao et al, 2011). Leitao (2010) estimated a static and dynamic panel demand model of tourism demand in Portugal using data on tourist arrivals for the period 1995-2006. He concluded that bilateral trade is one of the key determining factors of tourism demand in Portugal. Phakdisoth and Kim (2007) also specified a static and dynamic panel models for tourism demand in Laos. The results from both models show that bilateral trade has a significant effect on tourist arrivals in Laos.

Using a dynamic panel regression, Ngugi (2014) investigated the factors influencing international tourism demand in Kenya for the period 1991-2011. His findings indicated that trade openness is one of the economic factors which explains foreign tourist flows to Kenya. In their study of the impact of origin-specific factors on tourist arrivals in Uganda from 2000 to 2004, Andrews and Muhammad (2008) also estimated a gravity model of tourism demand using OLS and panel fixed effect technique. The results indicated that international trade between Uganda and her tourist originating countries considered, is a significant determinant of the number of tourism demand in Uganda.

### ***Political Stability and Security***

Political risk and level of security in tourism destinations (both developed and developing countries) are among some of the widely studied drivers of international tourism demand.

Garin-Munoz (2007) used a dummy to control for the September 11 attack in 2001 in the United States as a proxy for level of political stability in her study on demand for tourism in Spain by German tourists. Estimation of the dynamic demand model using the GMM approach indicated that the event led to a fall in the number of German tourists who visited Spain during those periods. Bashagi and Muchapondwa (2009) also arrived at the same conclusion using the ARDL technique in their study of the drivers of international tourism demand in Tanzania from 1996-2006.

Naude and Sayman (2004) investigated the factors influencing inbound tourism demand in 43 African countries using both cross-section data and panel data for the period 1996-2000. Their findings showed that ensuring political stability in these countries will increase tourism demand. Okon (2014) studied the relationship between foreign tourism demand and certain social factors

in Nigeria using the ARDL approach. One of the social factors included in the study was the crime rate in Nigeria proxy by the rates of kidnap cases in the country. The estimation results showed that in the short run, increasing cases of crime has a negative significant effect on inbound tourism demand in Nigeria.

### *Dynamic Effects*

The investigation of dynamic effects take the form of incorporating the lagged values of both dependent and explanatory variables into the tourism demand model. This is because it is believed that tourism demand may be affected by both current and or previous year's income level of origin countries, price or exchange rate. An evolving research interest when it comes to studies on tourism demand is the investigation of repeated visits on current decision to visit a destination, and also the analyses of short and long run dynamic impacts of both economic and non-economic factors on tourism demand.

A number of studies using different estimation approaches, have arrived at the conclusion that past tourism experience at a destination influences the current decision to visit that particular destination. Some of the empirical studies include; Garin-Munoz (2007) study of German demand for tourism in the 17 Spanish tourist destinations; Habibi et. al., (2009) in the study of tourism demand in Malaysia using data on tourist arrivals from her 15 major originating countries; Adeola et. al., (2017) in the study of factors influencing foreign tourism demand in 44 African countries; and Ngugi (2014) in the study of the analysis of international tourism demand for Kenya among others.

Other studies have also incorporated dynamic effects by investigating short and long run dynamic impacts of factors affecting tourism demand. Saayman and Saayman (2008) used data on arrivals from five regions namely Europe, Asia, North America, South America and Australia

to investigate the short and long run factors that influence tourism demand in South Africa. The findings of the study indicated that for almost all the VECM estimated, previous visit to South Africa is a significant short run factor that influences foreign tourists' decision to visit the country again. The major long run factors identified as influencing growth in tourist arrivals in South Africa are the perceptions of South Africa as a sunny and price competitive country.

Arsad and Borhan (2016) investigated the dynamic short run and long run factors that affect the number of tourist arrivals in Malaysia from six European countries. The variables used in the study were exchange rate, GDP of tourist originating countries, relative prices and substitute price. The results indicated a long run relationship between the number of arrivals and exchange rate, level of income, tourism and substitute relative prices. The dummy incorporated in the short run dynamics to represent the European sovereign crises which occurred in late 2009, had no significant impact on arrivals from the originating countries considered.

Abedtalas and Toprak (2015) estimated the short and long run determinants of inbound tourism demand in Turkey over the period 1986-2012. The tourist originating countries considered were the USA, UK, Netherlands, Germany and France. The study employed the ARDL approach to co-integration estimation. The results showed that in the short run, income of tourists from France and Germany influence their decision to visit Turkey. For tourists from the Netherlands and the USA, the short run factors which affect their decision to visit Turkey are price levels and the real effective exchange rate respectively. Long run relationship was established between arrivals from the USA and France and the variables of the model. This is validated by the significance of the error correction term for the VECM estimation.

### ***Marketing and Promotion***

Only a few empirical studies have incorporated this important determinant of tourism demand in their work. This is partly due to the difficulty in incorporating this variable correctly in tourism demand models. Lim (1997) reviewed a total of 100 empirical papers on tourism demand and found out that only seven of the papers used marketing expenditure in their study. Many authors however, indicate the importance of marketing activities in determining international tourism demand but fail to include it as an explanatory variable in their models.

Papadopoulos and Witt (1985) examined what factors affect international tourist arrivals in Greece using data on arrivals from eight major originating countries over the period 1972-1982. The study incorporated origin-specific promotional expenditure split into advertising and promotional expenditures. Three separate models were then estimated. The first model captured the total promotion expenditure and the other two models incorporated advertising and public relations expenditures respectively. Findings of the study indicated that advertising is a more effective promotional activity for increasing foreign demand in Greece.

Ledesma-Rodriguez et. al., (2001) investigated the determinants of foreign tourism demand for the island of Tenerife using data on the number of visitors from thirteen countries who were lodging in apartments and hotels on the island. The study incorporated a promotional expenditure to capture non-price competition. Panel Instrumental Variable (IV) technique was used to estimate the dynamic model of tourism demand. The results of the estimation indicated that expenditure on tourism promotional activities has a significant positive impact on tourist inflows to the island of Tenerife.

Also, Magatef (2015) studied the effect of tourism marketing mix and how it affects tourism in Jordan based on a survey data on foreign tourists collected from selected tourist sites. The results

of the multiple linear regression carried out showed that product (which denote quality and range of tourism services in Jordan as well as the brand name and features of tourist sites) and promotion (which denote sales promotion, personal selling and public relations) have a strong effect on foreign tourist satisfaction in Jordan.

### ***Qualitative and Social Demographic Factors***

These factors constitute the non-economic determinants of international tourism demand and are usually micro level variables. Empirical investigation of the impact of such variables is normally separated from macro level variables. Recent tourism demand studies have begun to take interest in how these factors affect tourism demand. This development has been largely possible due to the availability of data on tourism activities at the micro level.

A study by Ngugu (2014) used count data regression to investigate the role that some identified socio-economic factors and destination characteristics play in stimulating foreign tourism demand in Kenya for the period 1991-2011. The study concluded that socio-economic factors such as age and occupation of tourists from the eleven origin countries considered, have a positive significant impact on their demand for tourism in Kenya. The level of education, gender, marital status and the number of children by a tourist were however not significant factors influencing tourists' choice for Kenya as an ideal destination to visit. The destination characteristics composite index constructed by the study was also found to be positively correlated with demand for tourism in Kenya.

Furthermore, Menezes et., al (2008) used the Cox Proportional Hazards (PH) model to investigate the factors which affect the length of stay by tourists in Azores, Portugal, during the summer in 2003. The study selected a sample of 400 tourists based on their nationality, the routes and gateways used in 2002. The variables used in the study were tourist's socio-

demographic features, trip characteristics, destination image and tourism sustainability practices. The study concluded that tourists with higher level of education tend to have a shorter length of stay. The findings also indicated that male tourists and tourists who are married usually opt for shorter stays. The age and the professional level variables were however not found to be statistically significant. The study also concluded that tourists who visit the Azores destination for its nature, landscape and cultural heritage experienced longer stays. Tourists who visit families and friends as well those who are repeated visitors were also found to stay for longer periods.

Okon (2014) examined the relationship between inbound tourism and certain social factors in Nigeria using the ARDL approach. The social factors included in the study were urbanization rate, proxy for level of education, unemployment rate, level of poverty, crime rate and the prevalence of Malaria in Nigeria. The results from the estimation showed that in both short and long run, the level of education, urbanization rate, unemployment rate and prevalence rate of malaria in Nigeria are key social factors influencing inbound tourism demand in Nigeria.

Also, Leitao and Shahbaz (2012) employed a gravity model to estimate the impact of immigration on the demand for tourism in Portugal by foreign tourists from 16 different countries for the period 1995-2008. The findings of the study showed that the shock of immigrant inflows and population growth in origin countries over the period contributed positively to tourism demand in Portugal.

A new body of knowledge that has begun to emerge are studies to evaluate the quantitative impact of changes in the natural environment on tourism demand. These studies have become more common especially in the wake of calls to position tourism as a tool for sustainable development (Kulendran & Dwyer, 2012).

A study by Kulendran and Dwyer (2012) employed the Generalized Autoregressive Conditional Heteroscedasticity GARCH modelling approach to investigate the relationship between climate variables such as relative humidity, hours of sunshine, seasonal variation and maximum temperature on tourism demand to Australia from the UK, USA, Japan and New Zealand. According to the results of the study, these variables have a significant positive impact on the number of foreign tourists who visit Australia from the selected countries of origin.

Also, Hwang et. al., (2018) developed the Climate Volatility Index (CVI) and used a (GARCH) model to examine the relationship between CVI and demand for tourism in Korea by Japanese tourists. The study used monthly data on arrivals from January 2000 to December 2013. The findings of the study showed that rising climate volatility results in a decrease in tourism demand in Korea.

### **3.7 Conclusion**

The difficulty in arriving at an internationally accepted definition for tourism has pose a great challenge to the gathering of tourism statistics. Consequently, the UNWTO has over the years continue to provide guidelines to help in the delimiting of various tourism concept and the gathering of tourism statistics in order to ensure consistency in the international comparability of data.

Tourism demand is widely measured by the number of tourist arrivals. The demand for tourism just like the demand for any commodity, is susceptible to shocks which could either be economic or non-economic. Economic factors which affect tourists' decisions to travel and visit a destination include price levels, income levels, and exchange rate changes, among others. A number of empirical studies have also showed that international tourism demand can also be

influenced by non-economic factors such as tourists' characteristics, destination characteristics and level of security at tourist destinations amongst others. These factors are what inform the modelling of tourism demand equations.

From the literature reviewed, empirical studies have attempted to investigate and estimate the determining factors of international tourism demand using different estimation and modeling techniques to arrive at different conclusions. Also, most of these studies are concentrated on developed countries. The growing need for developing economies to diversify their economies, and use tourism as a tool to protect the natural environment and eradicate the poverty levels of host communities, have however given importance to tourism demand studies in developing countries. Therefore, knowing the factors that influence the export of tourism in developing countries like Ghana is crucial to inform appropriate policies to stimulate tourism growth.

## CHAPTER FOUR

### METHODOLOGY AND ANALYSIS

#### 4.1 Introduction

This chapter describes the conceptual framework behind the study, specifies the model to be estimated and the econometric technique used to estimate the model. It further describes the variables (both dependent and independent) with their expected signs, the nature and description of the data to be used. The chapter concludes with the descriptive statistics of the variables used, and the discussion of estimation results.

#### 4.2 Conceptual framework

The theoretical framework applied in the literature to support the specification of most tourism demand models is based mostly on consumer theory. The theory explains the economic concept of choice by modelling individual preferences formally known as utility to derive a consumer's demand for set of commodities (Nicholson and Snyder, 2008). Under the strong assumption of rationality, the consumer's utility function which specifies the overall satisfaction obtained from the consumption of set of commodities is developed. The consumer's demand function is then derived based on the optimization of the utility function subject to the consumer's budget or income. The intuition behind the maximization problem is that given the consumer's limited budget, purchasing power would be used in a way that yields the highest possible satisfaction. Consequently, the demand function derived from the maximization problem becomes a function of prices and income.

Specifically, the consumer utility maximization yields a demand function which states that the consumption levels of a commodity is influenced by the price of that particular good, the

consumer's income, price of its substitutes or complements and other variables which could cause a shift in demand of the commodity by the consumer. Thus, the decision to demand for tourism at a particular destination is determined by the relative prices of tourism at a destination, relative prices at substitute destinations and the income level of the tourist. This makes income and price type factors most commonly used variables in tourism demand models (Lim, 1997).

The "ceteris para bus" argument of a demand function has made it possible for tourism demand studies to investigate the impact of non-economic factors such as destination characteristics, special events, taste and preferences of the tourist among others.

### 4.3 Model Specification

Assumptions: Two commodities  $x$  and  $y$ , their respective prices  $P_x$  and  $P_y$  and consumers income ( $M$ )

Given a Cobb-Douglas utility function: 
$$U = x^\alpha y^\beta \tag{1}$$

Which can be expressed in a linear form as; 
$$\ln U = \alpha \ln x + \beta \ln y \tag{2}$$

And a linear budget constraint: 
$$M = xP_x + yP_y \tag{3}$$

Solving the optimization problem using the Lagrangean method will yield the function below

$$L = \alpha \ln x + \beta \ln y + \lambda (M - xP_x - yP_y) \tag{4}$$

The First Order Conditions (FOC's) after the partial differentiation is given by equation (5)-(7):

$$L_x = \frac{\alpha}{x} - \lambda P_x = 0 \tag{5}$$

$$L_y = \frac{\beta}{y} - \lambda P_y = 0 \tag{6}$$

$$L_{\lambda} = M - xP_x - yP_y = 0 \quad (7)$$

Solving the FOC's simultaneously yields the following Marshallian demand function for commodity x and y

$$x^* = \frac{\alpha M}{P_x (\alpha + \beta)} \quad y^* = \frac{\beta M}{P_y (\alpha + \beta)}$$

For a strict Marshallian demand function where  $\alpha + \beta = 1$ , the respective demand function for the two commodities become;

$$x^* = \frac{\alpha M}{P_x} \quad y^* = \frac{\beta M}{P_y}$$

Maximization of the constrained utility function yields individual demand curves. The aggregation of the individual demand curves across the market yields the aggregate demand curve;

$$Q = Q(M, P_x, P_y)$$

Thus, the aggregate demand function can be expressed in general form as function of prices and income.

$$Q = Q(M, P)$$

Applying this results to tourism demand modeling, Q denotes the tourism consumption in the host country, M represents the level of income or the purchasing power of the tourists from the originating countries. The P stands for price-type factors which affect tourism demand.

Following from the general form of the aggregate demand curve [ $Q = Q(M, P)$ ] and the findings of past empirical studies which have shown that the behaviour of tourists may be affected by

other non-economic factors, the extended function for international tourist demand in Ghana will be specified as;

$$TA = f(GDP, TP, SP, OPEN, TCOST, D2005, D2007)$$

The above function states that the international demand for tourism in Ghana which is measured in terms of number of tourist arrivals from the various origins (TA) is a function of; the Gross Domestic Product per capita of the originating countries (GDP); the relative price levels between the various origins and Ghana (TP); the price levels in a chosen substitute destination (SP); the degree of trade openness between Ghana and the various origins (OPEN); a proxy for transport cost incurred by tourists from the respective origins (TCOST); and two dummies representing the impact of the reclassification of Ghana's tourism data in year 2005 and the shock of the global financial crises in year 2007 respectively, on international tourism demand in Ghana. Also, the model implicitly includes population of the tourists' originating countries, distance between origin countries and Ghana and exchange rate as variables influencing the number of international tourist arrivals in Ghana.

#### **4.4 Estimation Models**

The study employs Panel Autoregressive Distributed Lag (ARDL) approach using the Pooled Mean Group (PMG) estimation technique suggested by Persaran et al. (1999), to estimate the short and long run determinants of international tourism demand for Ghana.

##### **4.4.1 The Panel ARDL Model**

The ARDL approach for the co-integration analysis in single equation models was suggested by Pesaran et al (1995; 1997; 1999). The model is appropriate for dynamic panels with long time dimensions. Estimation of models by this approach is independent of the order of integration of

the variables used in the model. It thus allows a mixture of both I(0) and I(1) variables to be incorporated in the model. The model allows the estimation of both short and long term dynamic relationship among variables in a model. For the long run estimation, an investigation is first conducted to find out if there is a long run relationship among the variables. If the test result comes out positive, then, the long run coefficients can be estimated according to the results obtained for the ARDL model specification.

The mathematical expression of the simple panel ARDL model with distributional delays ( $p, q_1, q_2, \dots, q_N$ ), time period ( $t = 1, 2, 3, \dots, T$ ) and groups ( $i = 1, 2, 3, \dots, N$ ) can be written as;

$$Y_{it} = \sum_{j=1}^p \lambda_{ij} y_{i,t-j} + \sum_{j=0}^q \delta'_{i,j} X_{i,t-j} + \varphi_i + \varepsilon_{it} \quad (1)$$

Where  $Y_{it}$  is the dependent variable,  $X_{it}$  is a vectors of ( $k \times 1$ ) regressors that are allowed to be purely I(0) or I(1) or co-integrated. Different values of  $X_{it}$  can be allowed to take different lag orders.  $\lambda_{ij}$  is the coefficient of the lagged dependent variable called scalars and  $\delta'_{ij}$  are  $k \times 1$  are vectors of unknown parameters. The  $\varphi_i$  represents the group specific effect and  $\varepsilon_{it}$  is the error term.

If the investigation into the long run relation among the variables proves positive, then it means that the variables may be co-integrated. Therefore, the disturbance term may be an I(O) process. Co-integrated variables have the ability to correct any deviation from their long run equilibrium through series of short run adjustments. This characteristics of co-integrated variables allows for the incorporation of an error correction dynamics into the above equation to capture the speed of adjustment of any deviation from long run equilibrium. Therefore, the above equation can be re-parameterized into an error correction equation as follows:

$$\Delta Y_{it} = \theta_i (y_{i,t-1} - \beta_i' X_{i,t}) + \sum_{j=1}^{p-1} \alpha_{i,j} \Delta y_{i,t-j} + \sum_{j=0}^{q-1} \delta_{i,j}' \Delta X_{i,t-j} + \varphi_i + \varepsilon_{it} \quad (2)$$

Where  $\theta_i = -(1 - \beta_i')$  is the group-specific speed of adjustment coefficient,  $\beta_i'$  is vector of long run relationships,  $(y_{i,t-1} - \beta_i' X_{i,t})$  is the error correction term (ECT),  $\alpha_{i,j}$  and  $\delta_{i,j}'$  are the short run dynamic coefficients.

The parameter  $\theta_i$  gives evidence with regards to the presence of a long run relationship among the variables in the model. Specifically, it tells us how much of the deviations of the variables from their long run equilibrium values, are corrected every year. The parameter is expected to be negative and statistically significant to show evidence of a long run relationship among the variables of the model.

#### 4.4.2 The Pooled Mean Group Estimator

The PMG estimator became popular owing to studies by Pesaran et. al., (1997; 1999) on the estimation of dynamic panel with long time dimensions and non-stationary variables. The PMG estimator is computed by Likelihood Maximum estimation and it operates by adding and finding the averages of coefficients (Pesaran et al., 1997; 1999). A distinctive feature of the estimator is that it allows variations in the short run coefficients (including the intercepts, the speed of adjustment, and error variances) across the groups and restricts the long run coefficients to be homogenous across groups. This estimator is more useful when it is expected that the long run relationships between the variables in the model will be similar across the cross-sections.

A key assumption underlying the consistency of the PMG estimator is that there must be no serial correlation in the residual of the error correction model in order to validate exogeneity of

the explanatory variables. This assumption is satisfied with the specification of the error correction model to include the ARDL (p, q) lags where p and q represents the optimal lag length of the dependent and independent variables respectively. The optimal lag selection ensures that the residuals of the error correction model are free from problems of autocorrelation, heteroscedascity and endogeneity problems. The efficiency and consistency of the PMG estimator is also confirmed when long relationship is established by the significance of the coefficient of the speed of adjustment.

### Unit Root Tests

Non-stationarity is a very important issue when it comes to dynamic panels with large or increasing time periods. It is therefore imperative to examine the variables of the model to ensure that they are stationary. This has been considered in the study as the variables would be submitted to suggested panel unit root test by Breitung (2000), Levin, Lin and Chu (2002), and Im, Pesaran and Shim (2003). The tests are carried out also to ensure that the order of each variable does not exceed I(1) since the ARDL approach can only be used if the variables of interest are I(0) and I(1). The unit root test is based on a simple panel data model with a first order autoregressive component as shown below

$$Y_{it} = \rho y_{i,t-1} + z'_{it} \lambda_i + \varepsilon_{it} \quad (3)$$

Where  $i = (1, 2, \dots, N)$  represent the panel groups;  $t = (1, 2, \dots, T)$  indexes time;  $Y_{it}$  is the variable being tested and;  $\varepsilon_{it}$  is a stationary error term. The  $z_{it}$  can represent panel-specific means or fixed effects ( $z_{it} = 1$ ), panel-specific means and a time trend ( $z_{it} = 1, t$ ), or nothing depending on the specification of the unit root test.

Panel unit root tests are thus conducted on the null hypothesis,  $H_0: \rho_i = 1$  (unit root) for all panel groups against the alternative hypothesis  $H_a: \rho_i < 1$  (stationary). The alternative hypothesis may hold for all panels, one panel or a fraction of panel groups, depending on the unit root test.

The Levin, Lin and Chu (LLC) and Breitung tests assume that all panels share the same autoregressive parameter (that's  $\rho_i = \rho$  for all panel groups). The Im, Peseran and Shim on the other hand, allows the autoregressive parameter to be panel specific.

### **Panel Co-integration Test**

The study employs the Westerlund (2005) test of cointegration in panel data performed by the `xtcointtest` command in stata. The test reports the variance-ratio (VR) statistics which could either be group-mean or panel VR statistics. The former holds the assumption that the AR parameter of the Dickey-Fuller regressions is panel specific whilst the latter specifies the AR parameter of the DF regressions to be the same for all panels.

Conducted under the null hypothesis of no cointegration, the group mean variance-ratio statistics is reported when the alternative hypothesis is that, some of the panels are cointegrated. Conversely, the panel-variance ratio is given when the alternate hypothesis is that, all the panels are cointegrated. The study reports the cointegration test under the two versions of alternative hypothesis.

### **4.5 Definition and Measurement of Choice of Variables**

This section explains the dependent and independent variables used in the study. The choice of variables is informed by a review of the literature on the determinants of international tourism demand.

#### **4.5.1 Dependent Variable**

The dependent variable for the study is defined as the international demand for tourism. It is measured by the yearly number of foreign tourist arrivals into Ghana from her major tourist originating countries outside Africa namely, the United States, United Kingdom, Germany, France, Netherlands, Canada, Italy and Switzerland.

#### **4.5.2 Independent Variables**

The independent variables selected for the study as well as their expected signs or impact on the dependent variable is discussed below.

**GDP:** This represents the GDP per capita of the tourist originating countries and it defines the income levels or purchasing power of the tourists. It is a continuous variable and measured in years. Implicitly captured in this variable is the population of the tourist originating countries. This income measure is expected to have a positive effect on the demand for tourism. Thus, an increase in the GDP per capita in the origin countries will lead to a rise in the number tourists from those countries visiting Ghana.

**Tourism Prices (TP):** This measures the relative prices of goods and services between the host country (Ghana) and the origin countries. It is a continuous bilateral variable whose construction relies on the CPI and exchange rate of the host country and each of the origin countries. The US dollar is used as the currency for all the origin countries since it is regarded as a globally accepted currency for transactions. It is expected that as the price levels in a tourist destination increases, the number of tourist arrivals would also fall. Thus, there exist an inverse relationship between tourism prices and foreign demand for tourism. The tourism prices is defined as follows:

$$Tourism\ Prices\ (TP_{it}) = \left[ \frac{CPI_{GH,t}}{CPI_{origin,t}} \right] * \frac{1}{ER_{it}}$$

Where t is measured in years,  $CPI_{GH,t}$  is the Consumer Price Index for Ghana at time t,  $CPI_{origin,t}$  is the Consumer Price Index for each of the of the origin countries at time t and  $ER_{i,t}$  is the average annual exchange rate of the cedi against the dollar.

**Substitute Prices (SP):** This is a continuous bilateral variable which captures the impact of price levels in alternative destinations on foreign tourism demand in Ghana. Nigeria is chosen as the substitute destination for Ghana in this study since it is the closest country to Ghana in the West Africa sub region with a large share of the total tourist inflows in Africa. The impact of this variable on international tourism demand could either be positive or negative. A positive sign means that foreign tourists consider Nigeria as a substitute destination to Ghana whilst a negative sign means they see Ghana and Nigeria as complementary tourist destinations. The variable is defined as follows:

$$Substitute\ Prices(SP_{it}) = \left[ \frac{CPI_{Nigeria,t}}{CPI_{origin,t}} \right] * \frac{1}{ER_{it}}$$

Where  $CPI_{Nigeria,t}$  represent the Consumer Price Index for Nigeria at time t,  $CPI_{origin,t}$  is the Consumer Price Index for each of the origin at time t and  $ER_{i,t}$  is the average annual exchange rate of the naira against the dollar.

**OPEN:** It is a continuous bilateral variable which defines the level of trade between Ghana and each of the origin countries. A positive sign is expected for this variable. The trade openness variable is specified as:

$$OPEN_{it} = \frac{Import_{GH,it} + Export_{GH,it}}{GDP_t}$$

Where  $Export_{GH, i,t}$  is Ghana's export of goods to each of the origin countries at time  $t$ ,  $Import_{GH, i,t}$  is import of goods by Ghana from each of the origin countries at time  $t$  and  $GDP_{GH, t}$  represent the GDP of Ghana at time  $t$ .

**TCOST:** This variable is a proxy for transport cost incurred by tourists from the various origins. It is a continuous variable constructed by multiplying the distance (in kilometers) between the origin countries and Ghana, by annual average crude oil prices. All other things being equal, we expect that as transportation cost to a foreign destination increases, demand for tourism in that destination should also fall.

**D2005:** This variable is a dummy representing the reclassification of the tourism data in Ghana in 2005. It takes the value 1 in 2005 and thereafter and 0 for the periods before 2005.

**D2007:** This variable is a dummy capturing the impact of the shock of the financial crises in 2007 on foreign tourism demand in Ghana. It takes the value of 1 in 2007 and 0 for other years. This variable is expected to have a negative sign. Table 4.1 displays the variables, their units of measurement and their expected signs.

**Table 4. 1 Variables Definitions, Units of Measurement and Expected Signs**

Variables	Units of measurement	Expected signs
Tourist Arrivals	Number of tourist arrivals	
GDP	US dollar (2010 constant prices)	+
Tourism Prices (TP)	Percentage	-
Substitute Prices (SP)	Percentage	+
Trade Openness(OPEN)		+
Transport Cost (TCOST)	US dollar	-
D2005	Dummy (1 for year 2005 and thereafter, 0 otherwise)	-
D2007	Dummy (1 for year 2007, 0 otherwise)	-

**Source:** Author's compilation based on literature

#### 4.6 Source and Nature of Data

Data on the number of international tourist arrivals into Ghana according to country of origin will be sourced from the Ghana Tourism Authority (GTA). GDP per capita and Consumer Price Index (CPI) based on 2010 constant US dollar are obtained from the World Development Indicators database. The World Bank's database on commodity prices will be the source of data on the crude oil prices. Data on the distance (measured in kilometers between the respective origins and Ghana is sourced from [www.timeanddate.com](http://www.timeanddate.com).

Average annual exchange rate data is sourced from the IMF's International Financial Statistics (IFS) database whilst data on Ghana's trade (merchandise export and import) with the selected origin countries is sourced from the IMF's Direction of Trade of Statistics (DOTS) database. Exports are valued free on board whilst the value of imports include cost of freight and insurance according to UN guidelines.

#### 4.7 Descriptive Statistics of Variables

This section begins with the description of the statistical distribution of the data on arrivals by origin which is summarized in Table 4.2. It concludes with a detailed description of the basic features of the all the variables used in the study. Accordingly, Table 4.3 provides a quick summary of the features of all the variables (both dependent and independent variables).

##### 4.7.1 Descriptive Statistics of Arrivals by Origin

In terms total arrivals, the USA is the largest generating market for Ghana outside Africa for the period spanning 1995-2014. Ghana welcomed a total number of 983,084 tourists from the United States from the period 1995-2014, followed by the United Kingdom (977,557), Germany (503,067), France (363,140), the Netherlands (302,975) and Canada (197,311) in that order. Table 4.2 show that on the average, more tourists from the USA (49,154) visited Ghana every year as compared to the other origin countries.

**Table 4. 2 Descriptive Statistics of International Tourist Arrivals in Ghana by Origin 1995-2014.**

Origin	Mean	Standard Deviation	Minimum	Maximum	Market Share (%)
United States	49,154.2	37696.87	18,864	135,900	7.2
United Kingdom	48,877.85	19375.58	24,762	91,000	8.2
Germany	25,153.35	7856.379	13,799	41,300	4.4
France	18,157	4980.209	10,334	24,200	3.3
Netherlands	15,149.75	8097.129	6,924	33,800	2.4
Canada	9,865.55	7624.188	3,843	29,400	1.4
Italy	6532.1	2269.736	3473	11700	1.1
Switzerland	4565.85	1241.286	2712	7100	0.8

**Source:** Author's compilation based on arrival data from GTA.

The UK's annual average share of total tourist arrivals in Ghana over the period is approximately 8.2%, followed by the USA, Germany and France with 7.2%, 4.4% and 3.3% respectively. Next is the Netherlands with a yearly average market share of 2.4% followed by Canada, Italy and Switzerland with a 2.4%, 1.4%, 1.1% and 0.8% respectively.

#### **4.7.2 Descriptive Statistics of Dependent and Independent Variables**

The data on total arrivals as displayed in Table 4.3, shows the average number of tourists who visited Ghana from the selected origins every year over the 20-year period is approximately 22,182 with the largest number of arrivals from the selected countries being 135,900. The data on the GDP per capita of the origin countries shows very low variability given a standard deviation of 10,860.73 and an average of 45,073 US dollars. This can be attributed to the fact that the origin countries considered are almost at the same level of development. Average tourism prices are higher in Ghana (0.6513157) than Nigeria (0.0071124) over the 20-year period.

Furthermore, the transport cost variable ranges from US\$ 55118.88 to US\$ 915263.9 with an average of US\$ 309029.7. The average level of trade openness between Ghana and the selected origin countries is approximately 0.0342. Finally, the dummy for year 2005 takes the value of 0 for the years preceding 2005 and 1 thereafter. The dummy for year 2007 takes the value of 1 in year 2007 and 0 for any other year.

**Table 4. 3 Descriptive Statistics of Dependent and Independent Variables**

<b>Variable</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Tourist Arrivals	22,181.83	22,804.38	2,712	135,900
GDP	45,073	10,860.73	30674.61	76,410.86
Tourism Prices	0.6513157	0.1197712	0.4224126	0.8702316
Substitute Prices	0.0071124	0.0033648	0.0032012	0.0160129
OPEN	0.0342556	0.0259957	0.0048123	0.120503
TCOST	309029.7	218328.8	55118.88	915263.9
D2005	0.5	0.5015699	0	1
D2007	0.05	0.2186292	0	1

**Source:** Author's compilation based on study data

#### **4.8 Empirical Determinants of International Tourism Demand**

This section begins with the test for unit roots and order of integration of the variables of the model. The study employs three panel unit root tests: the Levin, Lu and Chu (LLC), Breitung, and Im, Peseran and Shin unit root tests. Westerland (2005) co-integration test will then be employed to ascertain the existence of long run relationship among the variables. The next step is to determine the optimal lag length for each variable in the ARDL (p,q) model, where p and q represent the optimal lag length of the dependent and independent variables respectively. This will inform the specification of the ARDL error correction model to estimate the long run coefficients. The section concludes with some post estimation diagnostic tests for serial

correlation, heteroskedasticity and stability of the model for each cross-section or country of origin.

#### 4.8.1 Unit Root Tests

The panel unit root tests were carried out at both levels and first difference of the variables. The test is conducted on a null hypothesis that a particular variable is non stationary versus the alternative hypothesis that the variable is stationary. Table 4.4 and Table 4.5 reports the results of the unit root test for the variables at levels and first difference respectively.

From the results displayed in Table 4.4, the LLC unit root test results show that with the exception of total arrivals, transport cost and D2005 variables, all the other variables are stationary at either the 1, 5 or 10 percent significance level. The GDP per capita, substitute prices and D2007 variables are stationary at the 1 percent significance level. The tourism prices and the trade openness variables are stationary at the 5% and 10% significance level respectively.

**Table 4. 4 Unit Root Tests (Level)**

Variables	Levin, Lin & Chu (LLC)	Breitung	Im, Peseran & Shin (IPS)
Total Arrivals	1.2164	3.7260	3.3714
GDP per capita	-4.6678***	1.3366	-1.7083**
Tourism Prices	-1.7177**	-1.5727*	-1.2207
Substitute Prices	-2.9494***	-2.1788***	-2.0666**
Trade Openness	-1.4937*	-1.2341*	-0.5925
Transport Cost	-5.1357***	-6.7330***	-4.3880***

**Note:** \*\*\*, \*\* and \* represent 1%, 5% and 10% significance level respectively.

Results of the IPS unit root test also indicate that D2007 is stationary at the 1 percent significance level. The GDP per capita and substitute prices variables are stationary at the 5 percent significance level. All the other variables are however non-stationary at the 5 percent significance level. Results obtained from the Breitung unit root test show that, the null hypothesis of non-stationary is rejected in the case of the two dummies and the transport cost variable at the 1 percent significant level. However, the null hypothesis of non-stationary cannot be rejected in the case of the trade openness, tourism prices, substitute prices and total arrival variables.

Since at least one variable is non-stationary at levels, the unit root test was carried out again using the first difference of the variables. The results presented in table 4.5 indicate that all the variables become stationary at first difference. Variables which are stationary at levels have the order of integration I(0) and those that became stationary after the first difference have the order of integration I(1). This means the model is made up of a mixture of both I(0) and I(1) variables. This validates the use of the ARDL technique for estimation in the study since none of the variables is of order I(2).

**Table 4. 5 Unit Root Test (First difference)**

<b>Variables</b>	<b>Levin, Lin and Chu(LLC)</b>	<b>Breitung</b>	<b>Im, Peseran and Shin (IPS)</b>
Total Arrivals	-5.7637***	-7.1667***	-5.3250***
GDP per capita	-4.7860***	-3.9559***	-3.7118***
Tourism Prices	-1.6750***	-5.4680***	-2.0244***
Substitute Prices	-4.3836***	-6.4007***	-3.8731***
Trade Openness	-4.5145***	-3.7894***	-4.6679***
Transport Cost	-8.4495***	-6.0175***	-7.8574***

**Note:** \*\*\*, \*\* and \* represent 1%, 5% and 10% significance level respectively.

#### 4.8.2 Panel Co-integration Test

Table 4.6 below shows the results of both the group-mean and panel-variance ratio statistics. The result indicate that the null hypothesis of no co-integration is rejected at even the 1% significance level in the case of the test based on the group- mean statistics or panel specific AR parameter. However, with the test based on the panel-variance ratio statistics or same AR parameter for all the panels, the null hypothesis of no cointegration is rejected at just the 10% significance level. Thus, there exist a long run relationship among the variables of the model. However, the existence of cointegration relationship among the variables can also be inferred if the speed of adjustment coefficient is negative and significant in the Panel ARDL-PMG estimation. This also provides validity for the efficiency and consistency of the methodology employed in the study.

**Table 4. 6 Westerland Cointegration Test**

	Test Statistics
Variance-ratio (group)	3.1226***
Variance-ratio (panel)	1.1843*

**Note:** \*\*\* and \* represent 1% and 5% significance level.

#### 4.8.3 Panel-ARDL PMG Estimates of Determinants of International Tourism Demand

This section presents the long run and short run determinants of international tourism demand for Ghana. The long run estimates are presented in Table 4.7 and that of the short run estimates are presented in Table 4.8. The optimal lag structure is selected based on the Schwarz Information Criterion (SIC). The lag structure is specified as (1,0,1,0,1,0,1,0) corresponding to the variables in the following order; total arrivals, GDP per capita, tourism prices, substitute prices, trade openness, transport cost, D2005 and D2007.

From the long run results, all the variables have the expected sign. The long run estimates suggests that income of tourists denoted by the GDP per capita of their respective origin

countries, tourism prices in Ghana, substitute prices in alternative destinations like Nigeria, the extent of trade between Ghana and the selected origin countries and the global financial crises in 2007 are significant determining factors of international tourism demand in Ghana.

According to the long run estimates, the income of tourists has a positive effect on international tourist arrivals in Ghana and is statistically significant at the 1 percent level. In the long run, as the incomes of tourists from the selected origin countries rise, we should expect their demand for tourism in Ghana to increase. Thus, tourists from the selected origin countries consider tourism in Ghana to be a luxury. This supports the findings by Narayan (2005), Bashagi and Muchapondwa (2009) and Adiola et.al (2017). The tourism prices variable has a negative effect on tourist arrivals in the long run as expected and is statistically significant at the 5% level. This implies that in the long run, tourism demand in Ghana by tourists from the selected origins will decline as a result of increases in the price of tourism products and services in the country. This outcome is consistent with findings by Ibrahim (2011) and Bentum-Ennin (2014).

Also, the trade openness variable has a positive effect on tourism demand in Ghana and is statistically significant at the 1 percent level. Thus, as Ghana trades more with the selected origin countries, tourist arrivals from these countries to Ghana is expected to increase. This finding is consistent with the study by Ibrahim (2011) and Ngugi (2014). The coefficient for the transport cost variable has a negative sign as expected but not significant at the 5% level.

The tourism substitute price variable has the expected sign indicating that tourists from the selected origin countries consider Nigeria as a substitute destination to Ghana. The variable is also statistically significant at the 1 percent level. This result supports the findings by Bentum-Ennin (2014). This implies that as the price of tourism products and services in Ghana increases, tourists would shift their demand to the tourism offerings of competing destinations like Nigeria.

This expectation is premised on the fact that Nigeria and Ghana share a lot of common features such as location in the same sub region, had the same colonial masters, speak English as official language, share similar arts and styles of music, similar climatic conditions among others.

Furthermore, the dummy capturing the impact of the global financial crises on tourism demand is negatively correlated with the demand for tourism in Ghana and is statistically significant at the 1 percent level. This implies that in the long run, the global financial crises in 2007 reduces the number of tourist arrivals in Ghana.

**Table 4. 7 Panel ARDL Estimation (1,0,1,0,1,0,1,0) Long Run Results**

**Dependent variable: lnTA**

<b>Variables</b>	<b>Coefficient</b>
GDP per capita	5.9258***
Tourism Prices	-1.4942**
Substitute Prices	1.0167***
Trade Openness	0.9555***
Transport Cost	-0.0243
D2005	1.3023
D2007	-1.0725***

**Note:** \*\*\*, \*\* and \* represent significance at 1%, 5% and 10% respectively. All the variables are log linearized with exception of the dummy variables.

The short run estimates of the coefficients are displayed in Table 4.8. The result indicates that tourism demand in Ghana is not sensitive to income levels of tourists and tourism prices in Ghana in the short run. Also, the transport cost variable does not appear to have a significant effect on tourism demand. The substitute prices variable is negative and statistically significant at

the 5 percent level. This implies that in the short run, tourists from the selected origins do not consider Nigeria as a substitute tourist destination to Ghana. This outcome is in contrast with the results obtained in the long run and the findings by Bentum-Ennin (2014). Thus, in the short run, tourists see Ghana and Nigeria as two unique tourist destinations with distinct tourism products and services.

**Table 4. 8 Panel ARDL Estimation (Short Run Results)**

<b>Dependent variable: <math>\Delta \ln TA</math></b>	
<b>Variables</b>	<b>Coefficient</b>
ECT	-0.1056***
GDP per capita	0.5175
Tourism Prices	0.0275
Substitute Prices	-0.0594**
Trade Openness	0.0228
Transport Cost	0.0953
D2005	-0.4830***
D2007	0.0567**

**Note:** \*\*\*, \*\* and \* represent significance at 1%, 5% and 10% respectively. All the variables are log linearized (with the exception of the dummy variables) and in first difference. ECT is the error correction term.

The dummy representing the reclassification of Ghana's tourism data is negative and statistically significant at the 1 percent level. This indicates that the reclassification of the country's tourism data had a negative effect on data on arrivals. The first-three years after the reclassification shows a reduction in total tourist arrivals vis-à-vis the 2004 figure. The reduction in arrivals is attributed to reforms introduced to improve the collection of data on arrivals and receipts in the

country. Also, the dummy for the impact of the global financial crises is positively correlated with tourism demand in Ghana in the short run and statistically significant at the 5 percent level. This implies that Ghana recorded an increase in arrivals from the selected origin countries in 2007, despite the financial crises. Total tourist arrivals in Ghana increased from 508,199 in 2006 to 580,895 in 2007 whereas arrivals from the selected origin countries only, increased from 151,000 in 2006 to 173,300 in 2007. This result is in contrast with the long run outcome. This suggests that it took some time for consumers to adjust expenditure on the goods and services they consume in response to the financial crises. Moreover, it took time for the effect of the crises which started in the USA, to spread to other regions like Europe. This explains why the negative impact of the crises on tourism demand in Ghana is evident in the long run.

The coefficient of the error correction term has the expected sign and statistically significant at the 1 percent level. This indicates the existence of long run relationship between the variables of the model. This implies that for any one percent deviation in the demand for tourism from long run equilibrium, 10.56% of the deviation is corrected every year. This outcome indicates that the adjustment process towards the long run equilibrium is slow. Also, the validity of these findings is supported by the fact that the error correction term is negative and statistically significant.

#### **4.8.4 Post Estimation Tests**

This section presents the test for autocorrelation, heteroskedasticity and stability of the model specified for each country. First-order and Second-order autocorrelation is tested on each country's model using the Durban Watson and Breusch-Godfrey LM test for autocorrelation respectively. The White test is also employed to check for the problem of heteroskedasticity in each model. The Breusch Godfrey LM test is based on the null hypothesis of no serial correlation and the White test is conducted on the null hypothesis of the presence of homoskedasticity.

Generally, a Durban Watson test statistic between 1.5 and 2.5 is considered as indicating there is no serial correlation in the residuals from different period.

**Table 4. 9 Post Estimation Diagnostic Tests**

Country	Durban Watson test	Breusch Godfrey test	LM P-value	White test	P-value
United States	2.3652	1.295	0.2551	19	0.3918
United Kingdom	2.4720	1.840	0.1749	19	0.3918
Germany	2.0823	0.107	0.7433	19	0.3918
France	2.3167	1.882	0.1701	19	0.3918
Netherlands	2.5350	2.570	0.1089	19	0.3918
Canada	2.3227	1.013	0.3142	19	0.3918
Italy	2.3620	1.304	0.2553	19	0.3918
Switzerland	1.6911	1.250	0.2636	19	0.3918

**Source:** Author's compilation based on study data

The results of the Durban Watson test on each model indicate there is no first order serial correlation in the errors terms of different years, in any of the models. The Breusch Godfrey test also show that there is no second order autocorrelation present in any of the models at the 5% significance level. The results according to the White test indicates that the null hypothesis of homoscedasticity cannot be rejected for each model.

### **Model Stability**

The study employs the CUSUM test which is based on the residuals of recursive estimates, to check for the stability of the model for each country. The stability of a model is important

because it gives an idea as to how the series behave over the sample period. It is also useful in forecasting and guides the formulation of future policies.

The test is conducted on the null hypothesis of no structural break or existence of model stability. The 1%, 5% and 10% critical values are given as 1.143, 0.9479 and 0.850 respectively. Table.10 shows the test statistics for the residuals of the recursive estimates for each model. The results of the test indicates that the null hypothesis of no structural break cannot be rejected at both the 1%, 5% and 10% critical levels for all the countries.

**Table 4. 10 Cumulative Sum Test for Model Stability**

<b>Country</b>	<b>Test statistics</b>
United States	0.5996
United Kingdom	0.3280
Germany	0.2737
France	0.4879
Netherlands	0.8010
Canada	0.6745
Italy	0.8268
Switzerland	0.5227

**Source:** Author's compilation based on study data

#### **4.9 Conclusion**

The outcome of this study has shown that the specified model of tourism demand in Ghana is made up of a mixture of I(0) and I(1) variables. The findings also indicated that there exist a long run relationship between tourism demand in Ghana and the variables of the model namely, income of origin countries, tourism prices, substitute prices, trade openness and transport cost

incurred by tourists. This necessitated the specification of the error correction model of tourism demand in Ghana so as to determine the short and long run dynamic relationship among the variables of the model.

According to the estimation results, the key drivers of tourism demand in Ghana in the long run are; the incomes of tourists, the degree of openness of the Ghanaian economy to trade with origin countries, tourism prices in Ghana, substitute price levels in alternative destinations like Nigeria and the global financial crises in 2007. According to the short run estimates, the reclassification of Ghana's tourism data in 2005 and the fact that tourists consider Nigeria and Ghana as complementary tourist destinations are major factors which influence tourism demand in Ghana in the short run. Additionally, the outcome of the study show that there was an increase in arrivals in the country in the short run despite the financial crises which occurred in 2007. The coefficient of the speed of adjustment towards long run equilibrium was also found to be negative and statistically significant. The results also showed that the adjustment process occurs at a slow rate.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATION

#### 5.1 Introduction

This chapter provides the summary and conclusion of the study. It also make some policy recommendations and outlines the limitations of the study. The chapter concludes with suggestions with regards to areas for further research.

#### 5.2 Summary

The contribution of the tourism sector to the growth and development of the Ghanaian economy cannot be overemphasized. The sector offers the country the opportunity to diversify her economy which over the years has been dependent on primary commodities from the extractive industry. Growth in the tourism sector will also help the country to protect its natural environment and reduce the level of poverty especially in underdeveloped host communities.

The tourism sector in Ghana has been identified as one with huge potential looking at her tourism products and services. The country has recorded increase in the number of international tourist arrivals and receipts. According to WTTC, the country is expected to attract over 2 million tourists by 2027. Therefore, there is the need for policy makers and all other relevant stakeholders to be informed about what factors have accounted for the increase in tourist arrivals in the country over years. This will help to formulate relevant future policies to stimulate tourism growth in the country. Hence, this study was motivated by the need to empirically investigate and understand the short run and long run factors which drive tourism demand in Ghana. The study conducted investigation into the dynamic relationship between tourist arrivals in Ghana and some selected variables namely GDP per capita of origin countries, tourism prices, substitute

prices, trade openness and transport cost. The study also investigated the impact of external shocks such as the global financial crises in 2007 on tourism demand in Ghana.

The study used data on tourist arrivals from some of Ghana's major generating markets outside Africa (namely the USA, UK, Germany, France, Netherlands, Canada, Italy and Switzerland) spanning from 1995 to 2014. Panel data with large number of cross sections over a long time span has become common in recent literature due to the availability of data. With long time dimension panel data, the issue of stationarity cannot be ignored. Therefore, the study employed panel unit root techniques proposed by Levin, Lin and Chu (2002), Breitung (2000) and Im, Peseran and Shim (2003), to check for stationarity of the variables. The unit root test was carried out at both levels and first difference of the variables. The results of the unit root test indicated that the model is made up of a mixture of  $I(0)$  and  $I(1)$  variables. Cointegration test suggested by Westerland (2005) was then conducted to ascertain whether there is a long run relationship among the variables. The results confirmed that the variables are cointegrated in the long run.

A panel ARDL (Autoregressive Distributed Lags) error correction model was specified to estimate tourism demand in Ghana since it allows to determine dynamic relationship between series of a model. The PMG estimator was then employed to estimate the error correction model of tourism demand in Ghana. The PMG estimator was used because of its assumption of homogeneity of long run coefficients. Thus, looking at the features of the selected origin countries (for example, income levels), there is a reason to believe that the long run relationships between the variables of the model will be similar across the countries.

The results of the estimation of the error correction model of tourism demand in Ghana indicated that in the long run, the factors which determine tourism demand in Ghana are the incomes of tourists proxied by the GDP per capita of the origin countries, tourism price levels in Ghana,

substitute prices in alternative destinations like Nigeria, level of trade activity between Ghana and the respective origin countries and the global financial crises in 2007. Furthermore, tourist arrivals in Ghana increased in the short run regardless of the global financial crises which occurred in 2007. The outcome of the study revealed that tourists from the selected origin countries do not consider Nigeria as a substitute destination to Ghana in the short run. The results of the study also indicated that the reclassification of Ghana's tourism data in 2005 had a negative effect on data on arrivals in the country in the short run.

The coefficient of the speed of adjustment of any short run deviations in the number of arrivals from its long run equilibrium, was found to be negative and statistically significant. The adjustment process is however found to be very slow. The statistical significance of the coefficient of the adjustment process confirms the efficiency and consistency of the PMG estimator. Post estimation diagnostic tests according to the Durbin Watson, Breusch Godfrey and White tests indicate that, the model for each origin country do not exhibit problems of both first and second order serial correlation, and heteroskedasticity. Each country's model is also largely stable according to the CUSUM test for model stability.

### **5.3 Conclusion**

The main objective of the study was to identify and estimate the short and long run factors that drive international tourism demand in Ghana using data on arrivals from her major generating markets outside Africa namely the US, UK, Germany, France, Netherlands, Canada, Italy and Switzerland. Panel ARDL technique was then employed to investigate the dynamic short and long run relationship between international tourist arrivals in Ghana and some selected variables namely GDP per capita of origin countries, tourism prices, substitute prices in Nigeria, trade

openness and transport cost. The study also investigated the impact of special economic events such as the global financial crises in 2007, on tourism demand in Ghana.

Based on the outcome of the study, it can be concluded that one of the key long run factors that influences foreign tourism demand in Ghana is the income of tourist proxied by the GDP per capita of the origin country. In the long run, increase in the income of tourists from the selected origins has a positive effect on tourism demand in Ghana. The positive income elasticity of demand for tourism in Ghana in the long run suggests that, tourists would regard the tourism offerings in Ghana as luxury. This means that tourists will demand more of Ghana's tourism offerings as their income level rises. Also, the level of openness of the Ghanaian economy to trade is an important determinant of tourism demand in Ghana in the long run. Increase in trade activities between Ghana and the selected origin countries in the long run, is expected to increase tourist arrivals in the country.

Furthermore, the demand for tourism in Ghana by tourists from the selected origins is very sensitive to changes in price levels in the country. As the price of tourism products and services in the country rises, the demand for tourism in Ghana is expected to decline. In the long run, tourists consider Nigeria as a substitute tourist destination to Ghana. This implies that tourist will shift their demand for tourism in Ghana to Nigeria in response to increases in tourism prices in Ghana. Also, the global financial crises which occurred in 2007 has a negative effect on tourist arrivals in the country in the long run.

The findings of the study indicated that in the short run, tourists from the selected origins regard Nigeria and Ghana as two unique destinations and so do not consider the two countries as substitute tourism destinations. The study also found out that both arrivals from the selected countries and total arrivals in Ghana in the short run, increased despite the global financial crises

which occurred in 2007. Finally, the outcome of the study suggests that the reclassification of Ghana's tourism data which took effect from 2005 had a negative impact on data on tourist arrivals in Ghana in the short run.

#### **5.4 Recommendation**

Policies aimed at stimulating tourism growth must be informed by investigation into the factors that drive tourism demand. Therefore, based on the findings of the study, the following policies and strategies could be adopted by policy makers and other relevant stakeholders for the development of the tourism industry in Ghana with regards to increasing the demand for tourism in the country.

The positive income elasticity of tourism demand in the long run suggests that Ghana's tourism products and services would be regarded as luxury by the tourists in the long run. Hence, tourists will demand more of tourism in Ghana as their income level rises. External shocks such as the changes in the income level of origin countries and the global financial crises which occurred in 2007, is beyond the control of policy makers in Ghana. Therefore, policy makers can only monitor closely, the economic cycles in the origin countries and try to capture more markets so as to diversify the risk of recording low demand for tourism in times of economic downturns, in some of these origin countries.

Furthermore, findings from the study showed that tourism demand in Ghana in the long run is sensitive to bilateral trade arrangements between Ghana and the origin countries. Therefore, the policy implication for this outcome is that government of Ghana must encourage trade activities with the origin countries. An important policy initiative must be one that is directed towards encouraging exports of both goods and services produced in Ghana. Institutions like the Ghana

Investment Promotion Council must be adequately resourced and strengthened to look for more export opportunities for local producers. This will serve as a great incentive for local producers to expand production and increase the country's export supply. Government policies must also ensure trade protection policies do not in any way make import of vital raw materials and other inputs for production, very expensive.

Additionally, according to the results of the study, tourism demand in Ghana in the long run is sensitive to price levels in the country and competing destinations in the West African sub region like Nigeria. Tourism demand in the country is expected to fall as the price of tourism products and services in the country increases. Tourists may also respond to the higher tourism prices in the country by shifting demand to other alternative destinations in the sub-region like Nigeria. The implication of these findings for policy formulation for the growth and development of the tourism industry in the country is that, government must ensure the prices of tourism products and services are affordable. To ensure the tourism industry remains internationally competitive, government and other stakeholders must ensure that expenditure items such as the cost of accommodation and domestic transport, tourist sites charges and fees are more affordable to tourists. Again, Ghana is widely noted to be a high cost tourist destination due to the high air transport fares and cost of accommodation. Service providers blame the high charges generally on the increasing cost of doing business in the country. Specifically, they blame the increasing cost of doing business in the hospitality industry on high taxes on goods, high utility bills and continuous depreciation of the cedi against major currencies among others. Government must therefore lend support to operators in the industry through the provision of various incentives and subsidies to help reduce the cost of doing business in the industry. Generally, policies must be

directed towards the strengthening of the country's macroeconomic fundamentals in order to ensure a conducive economic environment that promote business growth.

### **5.5 Limitation of Study and Further Research Areas**

Due to data limitations, the study covered only twenty years (1995-2014). It was difficult to obtain data on arrivals that has a longer time series dimension. Also, data on arrivals are available for only a limited number of countries. For instance, data on arrivals from countries such as China which has increasingly become an important generating market for Ghana is not fully available.

In future, further studies could be conducted using a more expanded database with a wider cross sectional and longer time series dimension. This will create an opportunity to explore with various methodologies and estimation techniques when it comes to conducting tourism demand studies. Also, an area that could be investigated is the impact of government marketing and promotion expenditure on tourist arrivals in Ghana. Studies could also be conducted to examine the effect of habit formation or word of mouth on tourism demand in Ghana. This variable helps to measure the impact of supply side constraints on tourism demand and is a burgeoning research interest in tourism demand studies.

## REFERENCES

- Abdotalas, M. G., & Toprak, L. (2015). The Determinants of Tourism Demand in Turkey. *Journal of Economics and Behavioral Studies*, Vol. 7, No. 4, pp. 90-105.
- Addey, A. A., Enu, P., & Okonkwo, C. B. (2015). The Driving Forces of the Service Sector of the Ghanaian Economy. *Global Journal of Management Studies and Researches*, 2(2), 83–93.
- Adeola, O., Boso, N., & Evans, O. (2017). Drivers of tourism demand in Africa. *National Association for Business Economics (NABE)*, 53, 25-36.
- Agiomirgianakis, G. M., & Sfakianakis, G. (2014). Determinants of tourism demand in Greece: A panel data approach. *Econometrics* 1(43).
- Akyeampong, O. A. (2011). Pro-poor tourism: Residents' expectations, experiences and perceptions in the Kakum National Park area of Ghana. *Journal of Sustainable Tourism*, 19(2), 197–213.
- Aidoo, R., Dzadze, P., Nurah, G. K., & Osei, M. J. (2012). Factors Determining Access to Formal Credit in Ghana: A Case Study of Small Holder Farmers in the Abura-Asebu Kwamankese District of Central Region of Ghana. *Journal of Development and Agricultural Economics*, 4(14), 416–423.
- Akyeampong, O., & Aseidu, A. B. (2008). *Tourism in Ghana, a modern synthesis*. Accra: Assemblies of God Literature Centre Ltd.
- Arayan, P. K. N. (2004). Fiji's tourism demand and the ARDL approach to cointegration. *Tourism Economics*, 10(2), 193-206.

- Arsad, Z., & Borhan, N. (2016). Determining factors affecting tourism demand for Malaysia using ARDL modeling: A case of European countries. The 4th International Conference on Quantitative Sciences and Its Applications, 1-8.
- Artus, J. R. (1972). An Econometric Analysis of International Travel. International Monetary Fund, Staff Papers, 19, 579–614.
- Asamoah, M., De Pinto, A., Demirag, U., Haruna, A., & Koo, J. (2012). Climate Change, Agriculture and Food Crop Production in Ghana. International Food Policy Research Institute.
- Avarro-Ibanez, M., Ledesma-Rodriguez, F. J., & Perez-Rodriguez, J. V. (2001). Panel data and tourism: A case study of Tenerife. *Tourism Economics*, 7, 75–88.
- Bakkal, I and Scaperlanda, A. (1991). Characteristics of US Demand for European Tourism: A Translog Approach. *Weltwirtschaftliches Archiv*, 127, 119-137.
- Bashagi, A., & Muchapondwa, E. (2009). What actions could boost international tourism demand for Tanzania? Working Paper No.152, School of Economics, University of Cape Town.
- Bentum-Ennin. (2014). Modelling International Tourism Demand in Ghana. *Global Business and Economics Research Journal*, 3(12), 1-22.
- Bhatia, A. (2007). *International Tourism Management*. New Delhi: Sterling Publishers Pvt. Ltd.
- Brakke, M. (2005). International Tourism, Demand, and GDP Implications: A Background and Empirical Analysis. *Undergraduate Economic Review*, 1(1), 1-38.
- Breitung, J. (2000). The local power of some unit root tests for panel data. In *Advances in*

- Econometrics, 15: Nonstationary Panels, Panel Cointegration and Dynamic Panels, ed. B. H. Baltagi, 161-178. Amsterdam: JAI Press.
- Camilleri, M. A. (2018). The Tourism Industry: An Overview. In *Travel Marketing, Tourism Economics and The Airline Product*. Springer Nature, Ch.1, 3–27.
- Chin, L., Habibi, F., Rahim, K. A & Ramchandran, S. (2009). Dynamic Model for International Tourism Demand for Malaysia: Panel Data Evidence. *International Research Journal of Finance and Economics*, (33), 207–217.
- Cobbinah, P. B., & Darkwah, R. M. (2016). Reflections on tourism policies in Ghana. *International Journal of Tourism Sciences*, 16(4), 170–190.
- Codjoe, S. A., & Owusu G. (2011). Climate Change Variability and Food Systems: Evidence from the Afram Plains, Ghana. *Regional Environment Change*, 11(4), 753–765.
- Crouch, G. I. (1993). Currency Exchange Rates and the Demand for International Tourism. *Journal of Tourism Studies*, 2, 45–53.
- Crouch, G. I., Peng, B., & Song, H. (2014). A meta-analysis of international tourism demand forecasting and implications for practice. *Tourism Management*, 45, 181–193.
- Crouch, G. I., Schultz, L., & Valerio, P. (1992). Marketing international tourism to Australia. A regression analysis. *Tourism Management*, 13(2), 196–208.
- Dwyer, L., & Forsyth, P. (2006). *International handbook on the economics of tourism*. Cheltenham, United Kingdom: Edward Elgar Publishing.
- Economists Intelligence Unit. (1975). Currency Changes, Exchange Rates and Their Effects on Tourism. *International Tourism Quarterly*, Special Article, 18, 34–45.

- Eilate, Y., & Einav, L. (2004). The Determinants of International Tourism: A Three-Dimensional Panel Data Analysis. *Applied Economics*, 36, 1315-1327.
- Fei, B., Li, G., Song, H., & Witt, S. F. (2010). Tourism demand modelling and forecasting: how should demand be measured? *Tourism Economics*, 16(1), 63–81.
- Frimpong-Bonsu, M. W. (2015). Diagnostic Study of Tourism in Ghana. African Centre for Economic Transformation.
- Garín Muñoz, T. (2007). German demand for tourism in Spain. *Tourism Management*, 28(1), 12-22.
- Gasma, A., & Sassi, S. (2015). International tourism demand in Tunisia: Evidence from dynamic panel data model. *Economics Bulletin*, 35(1), 507-518.
- Ghana Tourism Development Company, GTDC (2018): Accra, Ghana. Retrieved from <http://gtdcgh.com/projects>.
- Gil-Alana, L.A., & Fischer, C. (2007). International travel and trade: Further evidence for the case of Spanish wine based on fractional VAR specifications. Contributed Paper Prepared for Presentation at the 105th EAAE Seminar “International Marketing and International Trade of Quality Food Products”, Bologna, Italy. Retrieved from [http://www.beanquorum.net/EAAE105\\_Paper072.pdf](http://www.beanquorum.net/EAAE105_Paper072.pdf).
- Hanafiah, M. H. M., & Harun, M. F. M. (2010). Tourism demand in Malaysia: A cross-sectional pool time-series analysis. *International Journal of Trade, Economics and Finance*, 1(2), 200-203.
- Hwang, Y. S., Kim, H. S. H., & Yu, C. (2018). The Test on the Impact of Climate Volatility on

- Tourism Demand: A Case of Japanese Tourists Visiting Korea. *Sustainability*, 10, 3569.
- Ibrahim, M. A. M. (2011). The Determinants of International Tourism Demand for Egypt: Panel Data Evidence. *European Journal of Economics, Finance and Administrative Sciences*, 30, 50-58.
- Im, K. S., Peseran, M. H., & Shin, Y. (2003). Testing for unit root in heterogeneous panels. *Journal of Econometrics*, 115, 53-74.
- Jones, P., Lockwood, A., & Sigala, M. (2001). Strategic Implementation and IT: Gaining Competitive Advantage from the Hotel Reservation Process. *International Journal of Contemporary Hospitality Management*, 13, 364–371.
- Kardon, B. (2007). They are saying nasty things. *Marketing News*, 41, 30.
- Karma, K. K., & Mohinder, C. (2004). *Basics of tourism: Theory, operation and practice*. New Delhi: Kaniska Publishers.
- Kliman, M. L. (1981). A quantitative analysis of Canadian overseas tourism. *Transportation Research Part A: General*, 15(6), 487–497.
- Korstanje, M. E. (2012). The economics of tourist destinations. *Anatolia*, 23(1), 131–133.
- Kulendran, N., & Dwyer, L. (2009). Measuring the return from Australian tourism marketing expenditure. *Journal of Travel Research*, 47(3), 275–284.
- Kulendran, N., & Dwyer, L. (2012). Modeling seasonal variation in tourism flows with climate variables. *Tourism Analysis*, 17, 121–137.
- Kulendran, N., & Witt, S. F. (2001). Cointegration Versus Least. *Annals of Tourism Research*, 28(2), 291–311.

- Laimer, P. (2010). Tourism Statistics: Challenges and Good Practices. Regional Workshop for the CIS countries. Retrieved from [https://unstats.un.org/Unsd/tradeserv/Workshops/Chisinau/docs/05a-UNWTO-Basis concepts.pdf](https://unstats.un.org/Unsd/tradeserv/Workshops/Chisinau/docs/05a-UNWTO-Basis%20concepts.pdf)
- Leitão, N. C. (2010). Does trade help to explain tourism demand? The case of Portugal. *Theoretical and Applied Economics*, 3(544), 63–74.
- Leitão, N. C., & Shabhaz, M. (2012). Migration and Tourism Demand. *Theoretical and Applied Economics*, 3(2), 39-48
- Leitão, N. C., Surugiu, C., & Surugiu, M. R. (2011). A Panel Data Modelling of International Tourism Demand: Evidences for Romania. *Economic Research-Ekonomska Istraživanja*, 24(1), 134–145.
- Levin, A., Lin, C. F., & Chu, C. S. J. (2002). Unit root test in panel data: Asymptotic and final sample properties. *Journal of Econometrics*, 108, 1-24
- Li, G., & Song, H. (2008). Tourism demand modelling and forecasting-A review of recent research. *Tourism Management*, 29(2), 203–220.
- Lim, C. (1997). Review of international tourism demand models. *Annals of Tourism Research*, 24(4), 835–849.
- Lueterio, F. (2007). *Introduction to Tourism* (ed.). Manila, Philippines: Rex Bookstore Inc.
- Magatef, S. G. (2015). The Impact of Tourism Marketing Mix Elements on the Satisfaction of Inbound Tourists to Jordan. *International Journal of Business and Social Science*, 6(7), 41-58
- Menezes, A. G., Moniz, A. & Vieira, J.C. (2008). The determinants of length of stay of tourists

- in the Azores. *Tourism Economics*, 14 (1), 205–222.
- Mervar, A., & Payne, J. E. (2007). Analysis of foreign tourism demand for Croatian destinations: Long-run elasticity estimates. *Tourism Economics*, 13(3), 407–420.
- Morley, C. L. (1994). The use of CPI for tourism prices in demand modelling. *Tourism Management*, 15(5), 342–346.
- Ngugi, K. W. L. (2014). An Analysis of International Tourism Demand for Kenya. Thesis Submitted to the Kenyatta University, PhD Business (Management Science) (D86/CTY/13857/2009).
- Nicholson, W., & Snyder, C. (2008). *Microeconomics, basic principles and extensions* (10th ed.). USA: South-Western College Pub.
- Okon, E. O. (2014). Inbound Tourism Demand and Social Factors in Nigeria: Evidence from an ARDL-ECM Model. *Asian Journal of Economics and Empirical Research*, 1(2), 40-47.
- Oxford Business Group. (2016). Government positive about Tourism. Retrieved from <https://oxfordbusinessgroup.com/overview/emerging-star-bold-targets-show-government's-positive-intent-sector>
- Papadopoulos, S. I., & Witt S. F. (1985). A marketing analysis of foreign tourism in Greece. *Proceedings of Second World Marketing Congress, University of Stirling*, 682-693.
- Pesaran, M. H., Shin, Y., & Smith, R. P. (1997). Structural Analysis of Vector Error Correction Models with Exogenous I(1) Variables. Department of Applied Econometrics, University of Cambridge.
- Pesaran, M. H., Shin, Y., & Smith, R. P. (1999). Pooled Mean Group Estimation of Dynamic

- Heterogeneous Panels. *Journal of the American Statistical Association*, 94(446), 621–634.
- Przeclawski, K. (1973). *Tourism and education*. Warsaw: Nasza Księgarnia.
- Pyo, S. S., McLellan, R. W., & Uysal, M. (1991). A linear expenditure model for tourism demand. *Annals of Tourism Research*, 18(3), 443–454.
- Republic of Ghana. (2013). *National Tourism Development Plan (2013-2027)*. Retrieved from <http://www.ghana.travel/wp-content/uploads/2016/11/Ghana-Tourism-Development-Plan.pdf>
- Republic of Ghana (2016). *Medium Term Expenditure Framework (Mtef) for 2014-2016, Programme Based Budget Estimates for 2014 Ministry of Tourism , Arts and Culture ( MoTAC)*. Retrieved from <http://mofep.gov.gh>
- Sharma, K. K. (2005). *Tourism and Development*. New Delhi: Sarup Book Pulishers Pvt. Ltd.
- Smeral, E. (2003). *Die Zukunft des internationalen Tourismus*. Vienna:WIFO
- Teye, V. B. (2010). *Tourism Development Experience in Ghana*. *DPMN Bulletin*, 7, 8-12.
- Thirumoorthi, T., Mun, K., & Wong, B. (2015). *Tourism*, Chapter 24 . In Idris, A., Moghavvemi, S., & Musah, G. (eds.). *Selected Theories in Social Science Research*. Kuala Lumpur: UM Press.
- Turner, L. W., & Witt, S. F. (2001). *Factors Influencing Demand for International Tourism: Tourism Demand Analysis Using Structural Equation Modelling, Revisited*. *Tourism Economics*, 7(1), 21–38.
- UN & UNWTO. (2010). *International Recommendation on Tourism Statistics 2008*. New York:

United Nations Publication.

UNWTO (2014). UNWTO Glossary of tourism terms. Retrieved from <https://statistics.unwto.org/sites/all/files/docpdf/glossaryterms.pdf>

UNWTO (2017). UNWTO Tourism Highlights. Madrid: UNWTO.

UNWTO. (2018). UNWTO Annual Report 2017. Madrid, Spain: UNWTO.

Vencovska, J. (2011). The Determinants of International Tourism Demand. Thesis Submitted to the Charles University, Prague.

Westerlund, J. (2005). New simple tests for panel cointegration. *Econometric Reviews*, 24, 297-316.

Witt, C. A., & Witt, S. F. (1995). Forecasting Tourism Demand: A Review of Empirical Research. *International Journal of Forecasting*, 11, 447–475.

World Bank (2018). Ghana Tourism Development Project. Retrieved from <http://documents.worldbank.org/curated/en/161661531711822807//Ghana-Tourism-Development-Project>

World Travel & Tourism Council, WTTC (2017). Benchmark Report-Africa Summary. Retrieved from <http://zh.wttc.org/-/media/files/report/benchmarkreport/regionalreport/africa>.

World Travel and Tourism Council, WTTC (2018). Impact of the Ebola Epidemic on Travel and Tourism. Retrieved from <https://wttc.org/publications/2018/impact-of-ebola>

WTTC (2018). Travel and Tourism Economic Impact, Ghana 2018. Retrieved from <http://wttc.org/economic-impact/country-analysis/country-data>

## APPENDIX

**Appendix I:** Optimal Lag Selection According to SIC (Maximum Lag = 1)

**Table 1a Optimal Lag Length for the ARDL (p, q) model**

<b>Variable</b>	<b>Number of Lags</b>
Total Arrivals	1
GDP per capita	0
Tourism Prices	1
Substitute Prices	0
Trade Openness	1
Transport Cost	0
D2005	1
D2007	0

**Source:** Author's computation from stata 15