

INTERNATIONAL POLITICAL TURBULENCES IMPACT  
ON TRAVEL AND TOURISM

by

ABEER OMAR ALMUGHRABI

Presented to the Faculty of the Graduate School of  
The University of Texas at Arlington in Partial Fulfillment  
of the Requirements  
for the Degree of

DOCTOR OF PHILOSOPHY

THE UNIVERSITY OF TEXAS AT ARLINGTON

August 2018

Copyright © by Abeer Almughrabi 2018

All Rights Reserved



## Acknowledgements

Praise is to Allah the almighty, the most generous and merciful for giving me strength, patience, determination, and wisdom to finish this extremely challenging milestone in my life.

I would like to start with thanking my dissertation committee. I am thankful for my outstanding chair, Professor Barbara Becker, for her extraordinary supervision and dedication directing my path throughout this long journey and brighten my way with her words of wisdom. My sincere appreciation to my co-chair, Professor Ardeshir Anjomani, for his kindness, encouragement, and for helping me with his priceless experience to shape the dissertation work. I am most thankful for my committee member, Professor Rod Hissong, for dedicating countless hours and providing me with valuable guidance to ensure the ultimate modeling. My deepest respect to all my committee members!

I would like to express my genuine gratitude to my wonderful family. Thanks to my parents, Omar Almughrabi and Asma Almomani, and siblings, for their unconditional love, help, and inspiration throughout my life. Also, I am extremely thankful for my children, Fares and Jude Alfayez, and nephew, Azad Alkurdi, for their patience, understanding, love, and most importantly for their astonishing cooperation. I am most indebted to my amazing husband and life partner for all his extraordinary assistance and exceptional support and care. Zaid Alfayez is a one of a kind! Thank you all for believing in me and helping in making my dream come true.

I would like to recognize the kind spirit, attention, consideration, and support I received from my relatives, friends, and colleagues. I am specifically thankful for everyone that has helped me through providing data, interviews, and education. Last but not least, I am also grateful to the University of Texas at Arlington for providing me with this opportunity to expand my knowledge and sharpen my academic and analytic skills.

September 4, 2018

## Dedication

This dissertation is dedicated to my parents for always being there for me.

And

Dedicated to my great country, Jordan!

September 4, 2018

## Abstract

# INTERNATIONAL POLITICAL TURBULENCES IMPACT ON TRAVEL AND TOURISM

ABEER ALMUGHRABI, PhD

The University of Texas at Arlington, 2018

Supervising Professor: Barbara Becker and Ardeshir Anjomani

Tourism is a major economic development force, but it appears that international political turbulence has an impact on tourism. Whether the impact of political instability on tourism is a negative or a positive one is the scope of this study. In addition, Substitution and Spillover Effects that occur as a result of political instability impact on tourism are analyzed to provide additional information about the impact on safe countries adjacent to political instability/ or located within the same region of the turmoil. This research attempts to prove that there is a correlation between international political turbulence and tourism. In addition, it tries to provide evidence about the Substitution and Spillover Effects and the factors that contribute to the existence of one but the other.

Jordan, a country in the Middle East region that depends heavily on tourism for its economic development, is studied as a tool to measure this impact. Panel Data Analysis using the Fixed Effect Model and the Random Effect Model to prove or disprove the research hypotheses was used. The results provide that the tourism is associated with political turmoil only when the turmoil is taking place in the Middle East and North Africa region. Moreover, the Substitution

Effect is correlated with international tourism that arrives from outside the Middle East and North Africa region. On the contrary, the Spillover Effect was proved to have a regional impact, within the region of turmoil.

## Table of Contents

Acknowledgements .....	ii
Dedication .....	iii
List of Figures .....	ix
List of Tables .....	x
Chapter 1 Introduction .....	1
1.1    Background .....	1
1.2    Problem Statement and Research significance.....	5
1.3    Research Purpose and Questions.....	8
Chapter 2 Literature Review .....	11
2.1    Mainstream Theories.....	11
2.1.1    Tourism Theory .....	11
2.1.2    Socioeconomic Theory .....	18
2.1.2.1    Tourist decision making .....	19
2.1.3    Terrorism Theory .....	27
2.2    Tourism, terrorism, and Political Instability .....	31
2.3    Empirical Studies about Tourism and Methodologies .....	38
2.4    Case Study: Jordan .....	46
2.5    Research Status and Gaps .....	58
Chapter 3 Methodology .....	62
3.1    Research Objectives and Plan .....	62
3.2    Population Sample.....	64
3.3    Data Sources.....	64
3.3.1    Jordanian Ministry of Tourism and Antiquities.....	65
3.3.2    Global Terrorism Database .....	65
3.3.3    Uppsala Conflict Data Program .....	65
3.3.4    World Bank Indicators.....	65
3.3.5    Center for Systemic.....	66
3.3.6    Jordanian Department of Statistics .....	66
3.3.7    World Heritage Center UNESCO.....	66
3.3.8    Royal Jordanian Airlines and the Jordanian Ministry of Transport.....	66
3.3.9    Other Data Sources .....	67

3.4	Analysis Techniques and Steps .....	67
3.5	Regression Models, Variables, and Hypotheses .....	71
3.5.1	Regression Model One.....	72
3.5.2	Regression Model Two .....	87
	Chapter 4 Results and Discussion.....	93
4.1	Statistical Tests: Independent Variables Selection (Model One).....	93
4.1.1	Summary of Statistics .....	93
4.1.2	Multi-collinearity Test (VIF) .....	95
4.1.3	Pearson Correlation.....	95
4.1.4	Normality Test .....	96
4.1.4.1	Shapiro-Wilk W test for Normal Data.....	96
4.1.4.2	P-P and Q-Q plot tests for Normal Data.....	97
4.1.4.3	Kernel Density estimate.....	100
4.1.5	Homoscedasticity Test.....	102
4.2	Statistical Tests: Independent Variables Selection (Model Two) .....	104
4.2.1	Summary of Statistics .....	104
4.2.2	Multi-collinearity Test (VIF) .....	105
4.2.3	Pearson Correlation.....	106
4.2.4	Normality Test .....	108
4.2.4.1	Shapiro-Wilk W test for Normal Data.....	108
4.2.4.2	P-P Plot and Q-Q Plot Tests for Normal Data.....	108
4.2.5	Kernel Density Estimate .....	111
4.2.6	Homoscedasticity Test.....	112
4.3	Model Selection Process: Tests and Results (Model One) .....	114
4.3.1	Model Selection Tests.....	114
4.3.2	Regression Model Results.....	117
4.3.3	Discussion and Analysis .....	120
4.3.3.1	Hypothesis One.....	120
4.3.3.2	Hypothesis Two .....	122
4.3.3.3	Hypothesis 3 .....	123
4.4	Model Selection Process: Tests and Results (Model Two).....	125
4.4.1	Model Selection Tests.....	125
4.4.2	Regression Model Results.....	128
4.4.3	Discussion and Analysis .....	130

4.4.3.1	Hypothesis .....	130
4.5	Summary .....	131
Chapter 5 Conclusion and Policy Recommendations .....	133	
5.1	Findings Summary .....	133
5.2	Policy Recommendations .....	135
5.3	Limitations .....	139
5.4	Future Studies.....	140
Appendix A Countries of the Study.....	143	
References .....	145	
Biographical Information.....	151	

## List of Figures

Figure 1-1:Global Economy Direct and Total Contributions of Travel and Tourism .....	2
Figure 1-2:International Tourism Market Share by Region .....	4
Figure 2-1: Hierarchy of Needs for Human Motivation .....	25
Figure 2-2:Hierarchy of Travel Needs .....	26
Figure 2-3:Middle East Inbound Tourism .....	38
Figure 2-4:Jordan's Tourism Sites.....	48
Figure 2-5:Terrorism Attacks, 1970- 2018: Concentration and Intensity.....	49
Figure 2-6:Jordan's Total Tourism .....	51
Figure 2-7:Domestic Tourism.....	52
Figure 2-8:Jordan's International Tourism by Region.....	53
Figure 2-9:Jordan's Tourism % Change of Receipt .....	54
Figure 2-10:Petra, Jordan.....	55
Figure 2-11:Tourism & Syrian Refugee growth Support in Key Services Sectors .....	57
Figure 4-1:P-P Normality Test for Residual.....	98
Figure 4-2:P-P Normality Test for Dependent Variable.....	98
Figure 4-3:Q-Normality Test for Residual .....	99
Figure 4-4:Q-Q Normality Test for Dependent Variable .....	99
Figure 4-5:Kernel Normality Test for Residual.....	100
Figure 4-6:Kernel Normality Test for Dependent Variable.....	101
Figure 4-7:Homoscedasticity Test for Dependent Variable .....	102
Figure 4-8:Homoscedasticity Test for Log Transformed DV.....	103
Figure 4-9:Homoscedasticity Test for Robust Transformed DV.....	103
Figure 4-10:P-P Normality Test for Dependent Variable.....	109
Figure 4-11:P-P Normality Test for Residual .....	109
Figure 4-12:Q-Q Normality Test for Dependent Variable .....	110
Figure 4-13:Q-Q Normality Test for Residual.....	110
Figure 4-14:Kernel Normality Test for Residual.....	111
Figure 4-15:Kernel Normality Test for Dependent Variable.....	112
Figure 4-16:Homoscedasticity Test for Dependent Variable .....	113
Figure 4-17:Homoscedasticity Test for Transformed Dependent Variable.....	113
Figure 4-18:Homoscedasticity Test for Robust Transformed DV .....	114

## List of Tables

Table 1-1: International Tourism Number of Arrivals .....	6
Table 3-1: Crime Rate Categories.....	79
Table 3-2: Dummy Variable for Visa .....	80
Table 3-3: Dummy Variable for Religion.....	80
Table 3-4:Dummy Variable for Democracy .....	81
Table 3-5:Dummy Variable for Direct Flights .....	81
Table 3-6: Dummy Variable for RJ Direct Flights .....	82
Table 3-7: Dummy Variable for Conflict .....	82
Table 3-8:Categorical Variable for Regions .....	83
Table 3-9: Definition of Variables Used in Model One .....	85
Table 3-10: Dummy Variable for Site Type .....	89
Table 3-11: Definition of Variables Used in Model Two.....	91
Table 4-1: Summary of statistics .....	94
Table 4-2: VIF Test.....	95
Table 4-3: Pearson Correlation Matrix .....	96
Table 4-4: Shapiro-Wilk W test for Normal Data .....	97
Table 4-5: Summary of statistics .....	104
Table 4-6: VIF Test Model 2 .....	105
Table 4-7: VIF Model 2 Adjusted.....	106
Table 4-8: Pearson Correlation Matrix Model 2 .....	107
Table 4-9: Pearson Correlation Matrix Model 2 Adjusted .....	107
Table 4-10: Shapiro-Wilk W test for Normal Data .....	108
Table 4-11: ML Test for Random Effect .....	115
Table 4-12: Hausman Test.....	116
Table 4-13: Model One Results .....	119
Table 4-14: ML Test for Random Effect .....	126
Table 4-15: Hausman Test.....	127
Table 4-16: Regression Results .....	129

# Chapter 1

## Introduction

*“Tourism is a universal phenomenon”* (Mansfeld, Y., and Pizam, A. (Eds.), 2006).

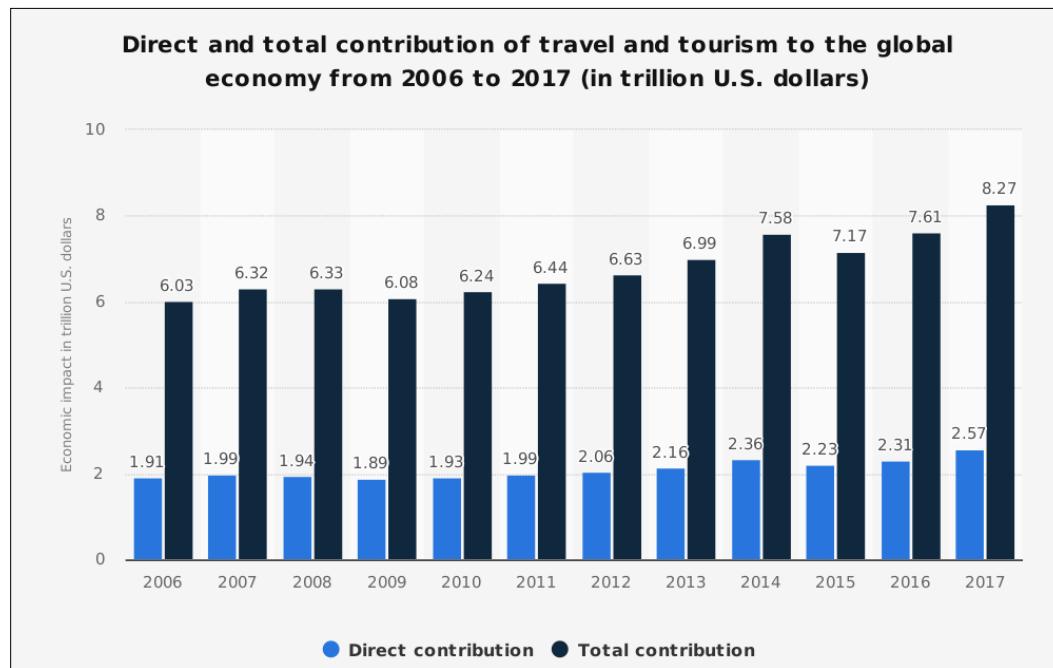
### 1.1 Background

The study of tourism is relatively recent. Tourism really began to grow after World War II. Several reasons contributed to this growth. Technological innovations created during the war assisted in this growth as well as the knowledge about the freedom to travel as a human right (Smith, 1998). Global tourism was enabled by expanded transportation and the emergence of international investment. No longer was travel restricted to the wealthy or those traveling to buy and sell goods. The growing emergence of the middle class in developing nations, helped to radically raise the growth rates of international tourism.

Tourism has a substantial impact on the economy. It comprises about 5 percent of the total export industries (Weaver, 2006). In addition, the industry constitutes about 30 percent of the world's exports of services and ranks fourth worldwide in terms of exports (World Tourism Organization, 2015). This contribution is considered enormous and provides a base block for the economy. Furthermore, between 1950 and 2004, the international tourist destinations increased tourism revenue from \$2 billion to \$474 billion (Weaver, 2006). The increase in this sector made tourism one of the most important industries for many countries, especially ones most reliant on revenue from tourism. Moreover, there has been a steady increase of the total revenue of the travel and tourism industry in the international economy between 2006 and 2017 as Figure 1.1 shows. In fact, the sector's total direct contribution increased to reach \$2.57 trillion and the total contribution to reach \$8.27 trillion in 2017. Tourism growth is considered stable and

reliable source to support global, regional, and national economies from which both developed and developing nations can benefit.

*Figure 1-1:Global Economy Direct and Total Contributions of Travel and Tourism*



*Source: World Travel and Tourism Council, 2018*

Economic development in some countries depends mainly on the tourism industry as it is a source of income and foreign currency (Altindag, 2014). In these countries, tourism plays a major factor in economic development. Along with raising income, tourism generates jobs so the stronger the tourism industry, the stronger the economy (Po and Huang, 2008). Indeed, tourism jobs decrease the unemployment rate for many developing nations. According to World Travel and Tourism Council (WTTC), international tourism created 67,000,000 direct jobs in 2003 which added 3.7 percent to the global cumulative Gross Domestic Product (GDP) (WTO, 2003a; Weaver, 2006). Tourism had a positive impact and has helped revive a number of economies.

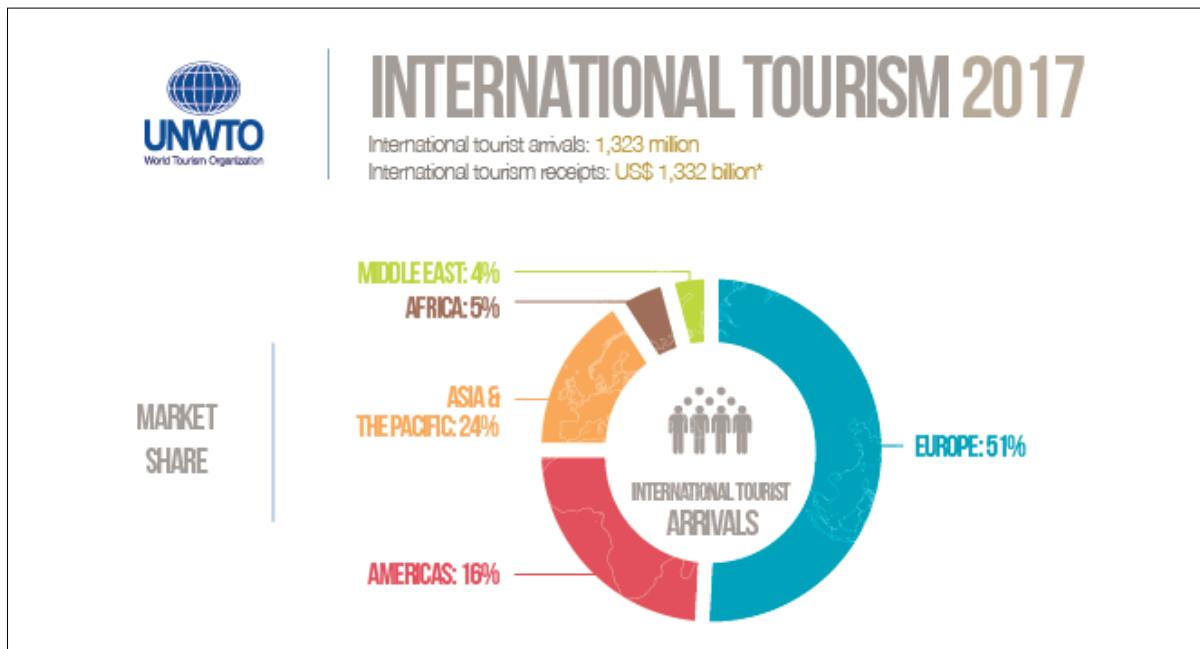
More recent studies show that international tourism created 105, 408,000 direct jobs in 2014 (WTTC, 2015). This increase is a result of the growth of global tourists' number that grew from 439 million in 1990 to 922 million in 2008 (Saleh, Assaf, Ihalanayake, and Lung, 2008). Based on these facts, tourism – economy nexus is established and investigated.

Despite international tourism growth, world regions experience different levels of growth around the globe. For instance, while the average yearly tourism growth was 1.7 percent in the Americas, 2.8 percent in Europe, 6.6 percent in Asia and the Pacific, and 6.7 percent in Africa, the tourism development was the highest in the Middle East (ME) region with an average annual growth of 10.5 percent between 2000- 2008 (Saleh, Assaf, Ihalanayake, and Lung, 2008). Hence, the Middle East region had the highest tourism growth during that period. This difference can be partly explained on developing nations depending more on tourism than developed ones (Neumayer, 2004). Tourism dependent countries focus more on the development of this sector that results in essential economic development. In addition, many third world countries use tourism as a base of foreign direct investment and thus, benefit more from tourism (Drakos and Kutau, 2003). Tourism growth is increasing in general but is obviously the highest in developing countries for these years.

Unfortunately, international tourism that was the fastest growing industry among developing nations, specifically the Middle East, became the fourth in the previously mentioned tourism growth list (UNWTO, 2018). In 2017, the average yearly tourism growth was 9 percent and 8 percent in Africa and Europe, respectively. Then, Asia and the Pacific tourism growth reached 6 percent followed by the Middle East region which reached an average annual growth of 5 percent. Surprisingly, the U.S. had only an increase of 3 percent for the same year even though Europe and North America remain the major tourism destinations as Figure 1.2

illustrates. In fact, developing countries that have a higher rate of unemployment and a low per capita Gross Domestic Product needed the most improvement of the economic growth of tourism to create jobs and decreases unemployment as well as generate revenue. However, limited tourism growth due to several factors has affected the economic development of a country.

*Figure 1-2: International Tourism Market Share by Region*



*Source: UNWTO, 2018*

Although tourism is considered a major force that help local communities overcome different obstacles, internal and external forces such as violence could lead the industry to a no-growth or limited growth status. These elements may contribute to reducing tourism growth and could even drop tourists' number and/or receipts. Sadly, the developing nations that are highly dependent on tourism revenue for their GDP (Neumayer, 2004), are also the countries most exposed to violence (Altindag, 2014). For example, Middle Eastern countries are going through massive challenges due to the global and regional terrorism and political instability. Indeed,

tourism in the ME region is not only unable to flourish but is also dropping. Since tourists are attracted to safe destinations, international turmoil has probably contributed to lowering tourism growth percent in general. Such turmoil can affect tourism destination image of a given country/region even if that country does not directly have active violence.

## 1.2 Problem Statement and Research significance

During the past twenty years, several countries went through numerous socioeconomic, environmental, and political problems which created an increase in terrorism events. As international terrorism started to grow during the late 1960s and early 1970s, the rise of terrorism and political turmoil introduced several obstacles for tourism (Soñmez, 1998). In fact, both political and economic instability affect growth development in many sectors. For instance, the oil crisis in 1973, the Gulf War in 1991, the attacks of September 11, 2001 in the U.S., and the invasion of Iraq in 2003 by the U.S., hurt the tourism industry worldwide (Weaver, 2006). The influence was on different levels including national, regional, and/ or international.

Table 1.1 shows the impact of September 11 attacks on the number of tourism arrivals on the regional level. The US is the only region that was affected by the attack and the effect was lagged tourism for several more years. Not until 2004 did tourism start to regain previous levels of success and start to increase. On the other hand, the Middle East region witnessed a tourism drop in the same year of the attacks. This might be due to the overgeneralization effect where tourists from other regions believed that they are targeted by the Islamic extremists if they travel to the ME. Although the impact of such events might vary based on different factors, it is still crucial and essential to investigate the effects of real and perceived issues.

*Table 1-1: International Tourism Number of Arrivals*

	1999	2000	2001	2002	2003	2004
North America	68,275,000	71,197,000	66,884,000	63,922,000	59,009,000	65,503,000
Change 		4%	-6%	-4%	-8%	11%
Europe & Central Asia	355,060,748	383,005,300	384,056,401	395,426,089	398,184,919	416,511,867
Change 		8%	0%	3%	1%	5%
Middle East & North Africa	33,648,874	37,374,434	37,111,513	41,048,669	42,904,448	50,985,789
Change 		11%	-1%	11%	5%	19%

*Source: World Development Indicators, World Bank, 2018*

Unfortunately, tourism sites can encounter several challenges due to competition, politics, and environmental instability which play a major role in tourism industry development (Weaver, 2006, P.7). Terrorism and political instability could be the major forces for these challenges and this would make it almost impossible for tourism to grow in such conditions. For example, Iraq was impacted by the Second Gulf War, as it was nearly impossible for tourism to grow in Iraq when it was occupied by foreign troops (Fyall, Prideaux, and Timothy, 2006). In addition, the longer the event lasts, the harder it would be for tourism industry to recover. The foreign troops in Iraq stayed for a long period of time which led to more complications in the country. Subsequently, the tourism sector was significantly decreased.

In general, the decrease in tourism activities due to political turbulences increases the unemployment rate leading to more poverty that bring more violence and victimizations. This not only jeopardizes the safety condition of the country, but it also affects the socioeconomic stability of the community. Consequently, the social structure of the community and the national security are seriously impacted. This in return prevent the country from securing a sustainable political regime. Due to its importance and effect, a multidisciplinary analysis of the tourism industry is required to further investigate the issue.

Although tourism plays an important role in the economy of several countries, a very limited number of studies have analyzed tourism in the Middle East region and they are mostly outdated. Not only is the Middle East a neglected area of study, but the more recent studies have focused on the impact of political turbulences on tourism within the country in conflict. When researchers started to pay attention to the Middle Eastern nations not directly involved in political instability but impacted by the adjacent nations in turmoil, the tourism sector was not analyzed. For instance, not until 2015 had there been a study of the political instability impact on the Middle Eastern nations not directly involved in political instability but impacted by the adjacent nations in turmoil by Abu-Ghunmi and Larkin. However, this study focuses on the economy and does not analyze the tourism sector. Therefore, there is a need to analyze and prove the existence of the relationship between political turbulences within the Middle East Region and tourism in safe adjacent countries.

In addition, a very limited evidence is provided about the spillover and the Substitution Effects which can affect the policy decisions of the nation. The Spillover Effect occurs when the impact spreads from the turmoil country to another/adjacent countries that will be seen as unsafe and the Substitution Effect happens when tourists replace the target country with another more politically stable one. Therefore, it is important to establish the relationship between political turbulences and tourism to expand our understanding of the issue and help policy makers prepare a tourism policy that supports lowering the impact on tourism and speed recovery during such events.

Moreover, Panel Data analysis that provides more comprehensive analysis approach and increase the degree of freedom is important to use for policy analysis. This type of analysis is crucial for tourism industry. Although Panel Data Analysis creates dependable estimates,

tourism study has limited use of this method (Saha and Yap, 2013; Ahlfeldt, Franke, and Maennig, 2015). Thus, a more up to date and comprehensive empirical research that depends on more sophisticated quantitative methods that allows for cross- sectional analysis using Panel Data is required.

### 1.3 Research Purpose and Questions

The purpose of this empirical study is to contribute to the tourism knowledge by investigating if the international political turbulences have a correlation with tourism development using the Middle East and North Africa as an example, specifically, Jordan. I will examine the relationship of the tourism related social and economic data in Jordan with the regional turmoil measures for the period of 2000 to 2016. In general, the major goal of this study is to provide solid results that constitutes a base to help policy makers design a tourism crisis recovery plan that helps minimize the effect on and assist planning for recovering and rebuilding the tourism industry.

Towards this aim applying Panel Data Fixed Effect and Random Effect Analysis, this research will examine the effects of political turbulences and other contributing variables on tourism development in the country of Jordan. The research question will be as follows:

1. Is there is a relationship between tourists' travel decision and political instability?
2. Is regional tourism in safe countries from other countries within the same region positively affected by the political turbulences in the region? Does a substitution effect exist?

3. Is international tourism in safe countries from other countries outside the political instability region negatively affected by the political turbulences in the destination region? Does a spillover effect exist?
4. Is there a relationship between extremely attractive destinations (historical and natural heritage) and tourism decision despite the political turbulence?

Based on the research questions the hypotheses will be:

1. There is no correlation between tourists' travel decision and political instability.
2. Regional tourism in countries adjacent to political turmoil but are not directly involved or do not have internal conflict themselves is negatively affected by the political turbulences in the region.
3. International tourism from outside the region taking place in countries adjacent to political turmoil but are not directly involved or do not have internal conflict themselves are positively affected by the political turbulences in the region.
4. There is a negative relationship between extremely attractive destinations (historical and natural heritage) and tourism despite the political turbulence.

This research is among the few studies to use Panel Data regression model to investigate the impact of political turbulence on tourism for countries adjacent to turmoil but not involved in it. It uses serial political turbulences/events as the political variables instead of an individual event. In addition, it analyzes other potential factors that impact the tourism industry in a given country. The research proves the coexistence of the Spillover Effect and the Substitution Effect simultaneously for a certain country that is surrounded by political turbulences in the region but

not directly involved with them. This helps provide an explanation of why the literature so far has produced different results for the tourism growth in such a region.

Tourism research in the Middle East, which encounters a huge amount of instability, is still limited and relatively old. This study adds to the knowledge of tourism in the Middle East and North Africa and proves the nexus between political turmoil in one country and the impact on tourism in the neighboring politically stable country. An essential contribution of the research is the capturing of both the spillover and the Substitution Effect at the same time. To the best of the author's knowledge, this study is among the few that illustrates the reasons behind the occurrence of either the Spillover Effect or the Substitution Effect. These are significant contributions to a fast-growing area of research in tourism and adds to a small body of research dealing specifically with tourism in the Middle East and North Africa.

## Chapter 2

### Literature Review

*“Tourism is Seeks Peace”* (Mansfeld, Y., and Pizam, A. (Eds.), 2006).

#### 2.1 Mainstream Theories

The study of tourism is relevantly recent and is complicated due to its holistic nature. The psychological aspect includes need and ambition; the social aspect includes roles and relationships, and the cultural component includes knowledge transfer and agent of change (Burns, 2004). Moreover, the economic aspect includes supply and demand, business and markets. Studies have intensively examined the economic benefit of the tourism industry and highlighted the economy-tourism nexus. In addition, several other theories from transportation, travel behavior, and public health fields were developed with regards to tourism. Consequently, as the study of tourism is multidisciplinary, it requires a comprehensive research approach. For this study, three triangle categories of theories will be reviewed: tourism theories, social and economic theories, and terrorism theories.

##### 2.1.1 *Tourism Theory*

In the early stages of research in tourism, it was thought of as an area of study for economists (Burns, 2004). Economist were the sole researchers studying the tourism industry. Typically, they studied the impact of tourism on the economy (Eugenio-Martin, et al., 2004). The body of research grew as researchers started to consider tourism studies on the global as well as local economies. Once the study of tourism became more theoretical, sociologist started studying tourism on the local level and anthropologists looked at the global context (Mead, 1928; Sahlin, 1972). The research in tourism started to grow then and the initial theories developed to explain the foundation of tourism studies. Although such theories are limited, it is still important

to comprehend them to establish a base for understanding the development of the tourist industry of today.

The principle tourism theory is divided into four main stages of development: The Advocacy Platform, the Cautionary Platform, the Adaptancy Platform and the Knowledgebase Platform (Weaver, 2006). The model was initially developed by Jafari in 1989 as he tried to relate the chronological development of tourism. Because of the global context of the tourism industry, the four platforms are co-existing in Jafari's 2001 study (Macbeth, 2005). These platforms set as the basic block for each other and upon which the next level emerged. Research in tourism continues to rely heavily on these four platforms (Korstanje, 2015). Although its development was chronological, they are evaluated as solid independent theories.

The Advocacy Platform is the first stage and it explains the reasons behind the development of the tourism industry from 1950 to 1960. After World War II, there was a period of peace and stability which helped to give rise to a middle class (Weaver, 2006). Members of the middle-class were more able to afford travel and tourism. In addition, technological advancements helped to decrease the costs involved in travel. The availability of various travel modes such as automobiles and aircrafts facilitated their travel. These factors lead to the expansion of international mass tourism. In turn, the increase in tourism helped economies with the creation of direct and indirect employment opportunities in both urban and rural areas (Weaver, 2006). Tourism sites and markets required employees to provide services for tourists.

The Cautionary Platform is considered the second stage of tourism development which took place in the late 1960s into the early 1970s. With the influx of high numbers of tourists, many locations suffered unintended economic, environmental, and socio-cultural impacts. In

some instances, the consequences of being a popular tourist location lead to loss in local assets and resources (Almughrabi, 2007). With the loss of assets and resources, many locations began to experience negative impacts such as threatened endangered species, loss of tropical forests, loss of cultural heritage, and increase in poverty. The reduction/loss of the resources that attracted tourists made loss to be considered greater than the gain from tourists (Weaver and Lawton, 1999). Therefore, the impact was bigger than expected.

In addition, mass tourism at this point created low wage, part-time, and seasonal employment. Thus, the local economic benefits were lower than the damage tourists brought (Weaver, 2006). Furthermore, as the local community started to meet the need of the tourists instead of the local community, some tourist destinations lost their identity and crime rates increased (Weaver, 2006). This, in turn, increased the damage and led to unstable tourism. With the influx of international companies and tourists, local residents adapted to some of the tourists' behaviors (Almughrabi, 2007). Although this had some positive impact, the negative effect on the community and its structure was huge.

In this period of tourism resulting in pollution and congestion, environmentalists began to recognize the factors that negatively impact the environment. They realized that a large number of tourists in environmentally sensitive areas cause damage to the environment. Even in less sensitive areas, construction and waste were destroying tourist destinations. As a result, the tourism industry started to get organized, and the Environmental Movement emerged (Weaver, 2006). Environmentalists started to regulate tourism to mitigate its impact on the environment.

The Adaptancy Platform occurred in the late 1970s and early 1980s. This was a period of trying to find a way between the previous two platforms by acknowledging the negative impacts

of mass tourism. It recognized that residents can work toward mitigating the negative effect of tourism in their own community. The focus shifted to the consideration of what was best for the local community. Alternative tourism was a valid way to balance the needs of tourists and local communities (Weaver and Lawton, 1999). Therefore, local communities were more involved in tourism activities. Priority was given for the development of local hotels rather than international chains and locals were given priority for employment (Weaver, 2006). Consequently, local communities benefited significantly from the tourism industry and the economy was enhanced.

During the movement, Eco-tourism principles were adopted. Eco-tourism focused on decreasing negative impacts while maximizing the tourism benefits (Almughrabi, 2007). The main effort was to protect the physical environment and conserve the social and cultural aspects of the site (Burns, 2004). This conservative view maintained the sociocultural values and protected the environment. In addition, it called for the empowerment of the local community such as selling local products to tourists. The intent was to keep tourist income local and reinvest in infrastructure and services (Burns, 2004). In fact, some of the tourism revenue was allocated to the maintenance and redevelopment of the tourism infrastructure and services. Although the Advocacy Platform highlighted the negative impacts of mass tourism, it lacked a scientific approach to analyzing it along with the Cautionary, and Adaptancy Platforms which are the base factors of the tourism industry.

The Knowledge Base Platform was utilized in the late 1980s to the 1990s. This platform brought scientific analysis to the tourism industry. It analyzed features of tourist destinations in order to better manage local tourism. The platform also established the fact that every tourist site has its own features; and, accordingly, policy should be customized to serve it (Weaver 2006). Thus, finding a general policy that can be applied to different tourist destinations at the global

level is almost impossible. However, during this period the sustainability concept emerged. It called for the moderate use of resources to preserve them and to reduce the harmful impact while increasing the positive impact (Weaver, 2006). Although it was broad, the concept was applied to the tourism sector as well. Sustainability for the tourism industry means to continue having economic development while maintaining the environment and the culture. The concept of sustainable development remains debatable in terms of truly being able to satisfy the tourism demands and at the same time preserve the sense of place represented by environmental and cultural uniqueness (Weaver and Lawton, 1999). The success of sustainability in tourism is still being studied.

Sustainability, not lending itself sufficiently to the Knowledge Base Platform has led to a Fifth Platform, called the Rational Platform (Macbeth, 2005). It is a platform based on creating plans and programs that help reach a specific goal for a certain community. Therefore, it worked as a guideline for developing step by step strategies for increasing tourism revenue. It also calls for the preservation of the sense of place. The platform analyzes the relationship between factors and promotes the profitability of tourism destination (Korstanje, 2015). Revenue plays a major role when planning for tourism activities. Its logic is based on profits and business-related programs (Korstanje and Skoll, 2014). Tourism was dealt with only as a money generator and income producer. Unfortunately, this platform focused on the profit of the tourism market, ignoring the actual value of the tourism industry.

While sustainable development connects the governmental- environmental policies with theory, it benefits some groups at the expense of others (Macbeth, 2005). It lacks ethical power which has resulted in another platform or Sixth Platform. The Sixth Platform addresses the value-free tourism research that is based exclusively on objective technical analysis and political

need (Macbeth, 2005). A professional level of analysis was involved in this type of platform. Indeed, this type of platform was needed to balance the objectives and goals for developing the tourism sector.

The Sixth Platform calls for raising ethical positions for sustainable development and tourism by researchers, planners, economists, and politicians through acknowledgment of Just Tourism Concept (Macbeth, 2005). This concept includes the idea that tourism should be dealt with as a development factor that could affect the overall sustainable development on the local, regional, and global scale. Also, as a social unbiased platform, it calls for the fair distribution of benefits for all regardless of race, gender, class, ethnicity, and religion (Macbeth, 2005). This platform was also called the Social Justice Platform that supports equity and provides benefits for all. Unfortunately, the previous platforms illustrate a chronological platform of tourism but lack in depth analysis of tourism and tourists' typology so other tourism theories/ models needed to be introduced and developed.

In addition to the previous platforms, other tourism theories were developed. The connection between tourism and economic growth has expanded in the last decade. Tourism-Led Growth (TLG) theory is based on tourism development boosting economic growth. Growth-Led Tourism (GLT) theory is based on economic growth enhancing the tourism sector and the Middle Ground Theory that economic growth and tourism development impact each other as a result of bidirectional causality (Odhiambo, 2012). There have been several studies testing these hypotheses such as Odhiambo's 2012 study showing that Tourism-Led Growth occurs in Zambia while a study by Lee and Chang in 2008 show that tourism development affects the GDP in non-OECD countries, especially the Sub-Saharan African nations. In addition, the study shows that the

exchange rate provides a significant impact on economic growth in Organization for Economic Co-Operation and Development nations (OECD).

Researchers has also studied the different types of tourists and divided them based on their characteristics. The Cohen's Model of Typologies of Tourists (1972) identifies four types of tourists that starts with seeking familiarity and end at the novelty level. The model identifies the Institutionalized tourists as the ones who participate in individual mass tourism or organized group mass tourism. In fact, these types of tourists are interested in familiar tours and destinations. Both types provide organized travelling with a limited communication with the local community. On the contrary, the Non-institutionalized tourism includes the explorer and the drifter. Explorers organize their own trips independently to have more freedom with some sort of communication with the local community. However, they still look for comfortable accommodations and safety. In addition, drifters have no connection to the tourism industry and have no fear of travel. With no fixed itinerary, they are willing to travel far away from home and have a great exposure with local communities. Drifters are the most outgoing type of tourists who are willing to take the risk of travel as safety and comfortability are the least important criteria for them. Cohen's model has shaped the tourism destinations since the Institutionalized tourism resulted in creating a unified pattern of tourism (Fan, Zhang, Jenkins and Tavitiyaman, 2017). These classifications probably affect tourists' destinations travel decision.

Another Classification of tourists' typology was identified by Stanley Plog (1974). This classification of tourists' typology depends on their personality: allocentric, psychocentric and mid-centric. Psychocentric are the conservative ones who are interested in visiting familiar tourism destinations (So'nmez and Graefe, 1998). In general, this type of tourists is psychologically aware of the risk of travel and are less interested in communication with the

local community. However, about 68% of the population are mid-centric which means they are neither adventurists nor conservatives (Litvin and Smith, 2016). In fact, this kind of tourists is open to new experiences but with limitations. Therefore, they are interested in visiting new destinations but would rather have an organized trip in advance with some kind of communication with the local community. On the other hand, Allocentric refers to the adventurists type of tourists who look for exploring new places and wants no limitations. This type of tourists is interested in destination adventure regardless of risk or danger and are highly interested in communicating with local communities. Although these classifications described tourists' preference, they lack illustrations of communication with local communities.

### *2.1.2 Socioeconomic Theory*

The Social Exchange Theory (SET) is a sociological theory that shed light on the communication method among people while considering the exchange of resources (Látková and Vogt). In other words, individuals exchange depending on the value and advantages of the exchange. These benefits may include but not limited to economic, social, cultural, and environmental aspects. Tourism is considered a change agent for communities and their cultures due to the cultural exchange between the host community and the tourist community (Burns, 2004). Since it provides mutual benefits, tourism is considered an exchange power.

Many studies have focused on the notion that residents of local communities have differing opinions regarding tourism. The Social Exchange Theory shows that residents of the tourist destination will support tourism activities in their community only if the benefits exceed the expenses including economic, social, cultural and environmental costs (Yoo, Gursoy, and Chen, 2001). Therefore, not only the benefits are required to be present, but also it need to overweight the cost of the product. In addition, since tourism industry requires the support of

local residents, decision makers should evaluate the exchange benefits and balance it in a way that gets local communities to support tourism development; Local communities should have more benefits than cost to gain their support.

Evaluated by the SET, the economic aspect is considered the primary factor for a local community to support tourism development. In addition to other development factors, the economy highly affects the decision of local communities to encourage tourism. In fact, it was noticed that while economic and cultural advantages increase the total tourism benefits, the social and environmental impact decrease the tourism advantages (Yoon, Gursoy, and Chen, 2001). Therefore, the more positive economic and cultural impact occurs, the higher the support for tourism takes place. Due to the importance of the economic aspect, the economic theory focus on tourism research and several theories and models illustrates the framework behind tourism.

#### 2.1.2.1 Tourist decision making

Economic theories focused on the process that tourists go through to make a decision about travel and tourism. Along with the Consumer Choice Theory, the Decision-making Models constitute the base block for tourists' decision making. International tourism demand is explained using a combination of economic theories: Tourism demand models, international trade theoretical model grounded on supply, destination image model, and gravity theories (Siscan and Cazacu, 2017). Many of these theories/ models are derived from a pure economic base but were developed to address the tourism industry. Indeed, the decision-making models were developed several times to cover different aspects such as psychological, physical, social, and financial ones. Some of these models include, but not limited to, the Utility Model, the

Destination Decision Model, the Risky Decision Making, and The Information Integration Theory (IIT).

Decision-making models constitute a substantial part of the research done in the 21<sup>st</sup> Century. Destination competitiveness/ image theories has several factors that contribute to the tourist's decision-making process. Therefore, image is highly important to increase the chances of competitiveness for a tourism destination. Some of the used models evaluated destination competitiveness based on a mix of various factors including environmental attractiveness, convenience, population, place architecture and structure, local culture, security, regulations, personal preference, travel times, and accommodation (Siscan and Cazacu, 2017). Whether a tourist destination is considered attractive or not is still understudied and a clear definition of attractiveness is unclear.

The Random Utility Model (1927) that is derived from the Utility Model is one of the most used models in studying tourism. The model assumes that individuals choose from a list of alternatives to maximize utility using probability prediction. The choice from available options is distinct and random as its benefits is different for each person. This model is used to explain the rationale behind tourists' destination choice and decision-making process (Arana and Leon, 2008). The discussed model illustrates that tourists are rational when deciding on their travel destination based on the maximum utility and on the personal or social limitations (Sirakaya and Woodside, 2005). Therefore, tourists decide on travelling to destinations that provide them with the maximum benefits.

An early study in 1999 used a Utility Model to develop principle forms of fundamental tourism to assist in decision making. The model uses two variables (1) the scale of tourism

activity, i.e., how intense is the tourism activity; and, (2) the extent of commitment to sustainability regulation in a certain destination at a certain time, i.e., how much sustainability regulations are followed. The model shows that four main tourism types existed: Circumstantial Alternative Tourism (CAT), Deliberate Alternative Tourism (DAT), Unsustainable Mass Tourism (UMT), and Sustainable Mass Tourism (SMT). Circumstantial Alternative Tourism exists with a low scale of tourism activity intensity and low scale of regulations applied; Deliberate Alternative Tourism uses regulatory framework that applies a low scale of tourism activity intensity and high scales of regulations. Unsustainable Mass Tourism exists when there is a high scale of tourism activity intensity and low scales of regulations applied; and Sustainable Mass Tourism exists when there is a high scale of tourism activity and high scales of regulations applied (Weaver and Lawton, 1999). Although it illustrates the relationship between tourism scale and regulations, these decision-making models are limited and descriptive at a certain point in time. Therefore, more models were needed to investigate the tourism industry.

Tourism is considered a type of services and is analyzed using international trade models. Extracted from the consumer's utility theory, Gravity models are major models to study international trade, migration, and foreign direct investment (Morley, Rosselló, Santana-Galleg, 2014). The model explains that the trade between nations is positively correlated with the size of these nations and inversely correlated with the distance between them. Therefore, the larger the countries, the more trade and tourism occur between them. In addition, the farther away they are, the less likely tourism activities will take place (Morley, Rosselló, Santana-Galleg, 2014; Siscan and Cazacu, 2017). Consequently, countries within the same region should have a higher rate of tourism than the ones in two different regions.

On the other hand, the economic theory proposes that price and income are two central factors of demand (Dogru, Sirakaya-Turk and Crouch). Therefore, tourist's income is a major determinant of travel decision. In fact, based on the Gravity Model, tourists with higher income is correlated positively with demand (Siscan and Cazacu, 2017). Hence, country size, distance between countries, price, and income are major variables that can determine tourism demand and affect tourists' decision making. Although these variables are important, a more comprehensive tourism demand model is needed to include internal factors in addition to the external ones.

The Push and Pull Theory by Dann (1977) explains that a travel decision is affected by push factors, internal and psychological, and pull factors which are external. Push factors are reasons behind this travel such as increase knowledge, visit family, adventure, or relaxation. On the other hand, pull factors are destination attractions such as climate, beaches, culture, or history. For example, national travel versus international tourism decision is made based on internal factors such as personality type and perception of risk level and/ or based on the demographic factors as income and education (Soñmez and Graefe, 1998). In fact, internal and external factors can be interrelated. For instance, education level that represents the social class has an impact on individual's perception of risk (Soñmez and Graefe, 1998). People with higher education might have a different point of view with regards travel decision as they might be willing to collect more information and conduct in-depth analysis and processing.

The Information Integration Theory (IIT) is one of the main theories of risky decision-making. The theory deals with tourist decision making where tourists collect data about the intended destination, which clarifies the risk component before the tourist makes the decision on the final destination (Soñmez and Graefe, 1998). The collected data is processed to help tourists evaluate the danger associated with their tourism alternatives. Studies have shown that results

vary depending on the situation of the country (Soñmez and Graefe, 1998). Therefore, since travel decision is associated with great risk, intensive information exploration and processing is essential (Sirakaya and Woodside, 2005). Countries with different characteristics might be perceived differently by tourists based on information collected including media coverage.

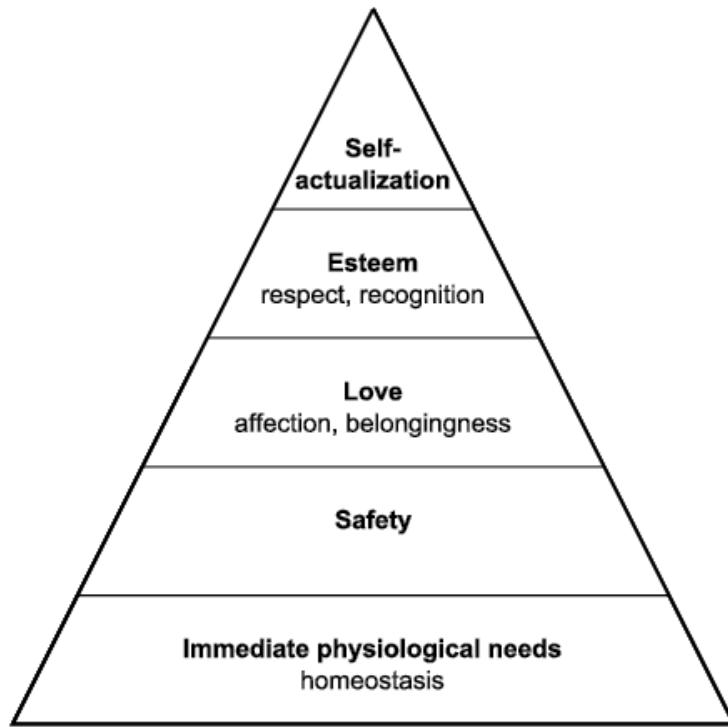
Tourism studies have also researched mass media's impact on tourists' decision making. Because social media is such a rapid means of communication to a great number of people, it has a major impact on tourism (Soñmez, 1998). Tourists have more access to information through social media. For example, Soñmez 's study showed that knowledge about terrorist activities through the media affects the travel behavior for international tourists. Since international political violence and instability is magnified by the media, concrete possibilities of attacks are unclear but perceived risk still affects destinations decision making (David and Baker, 2014). Therefore, media coverage might have a negative impact in the process of decision making of tourists' destination.

In addition to exaggerated media coverage, some travel agencies tend to remove countries from their destination market once they have terrorist activities (Soñmez, 1998; Soñmez and Graefe, 1998). The dropped destinations have decreased tourist activity while "safer" destinations have increased activity. It has also been shown that when a country warns residents of traveling to destinations where violence exists, tourists alter their destinations (Neumayer, 2004). Thus, external combination of factors can alter tourism activity including government policy. Moreover, the neo-technology theory assumes that novelty organized traveling and internet advertising are important contributors to pull tourists (Siscan and Cazacu, 2017). Therefore, tourism marketing should depend heavily on technology including, but not limited to, e-marketing to boost economic development.

Decision making research lacks adequate implementation of the Decision-Making Theory (Seow, Choong, Krishna and Chan, 2017). Several models have been used to determine the sociology behind tourists' choices of destinations while global tourists take into consideration the of potential of victimization (Altindag, 2014). The psychological aspect identifies factors that are major for the decision-making process. Consumer Choice Theory, on the other hand, explains the motivation for tourists to travel to a tourism destination. Several models were developed to explain the rationale behind the motivation and the process of decision making.

Figure 2.1 shows the Hierarchy of Needs (Theory of Human Motivation) developed by Maslow, 1943. The model includes five psychological stages of needs that believed to be the base for behavior motivation. However, although each level motivates people to satisfy their needs, it only moves to the next level in the pyramid once the previous need is completely met (Singleton, 2013). The basic level in the pyramid is the basic psychological needs such as water, food, and accommodation. Immediately after that safety comes in at the second level where tourist's behavior is motivated by safe trip arrangements and settings such as reserving an organized guided service.

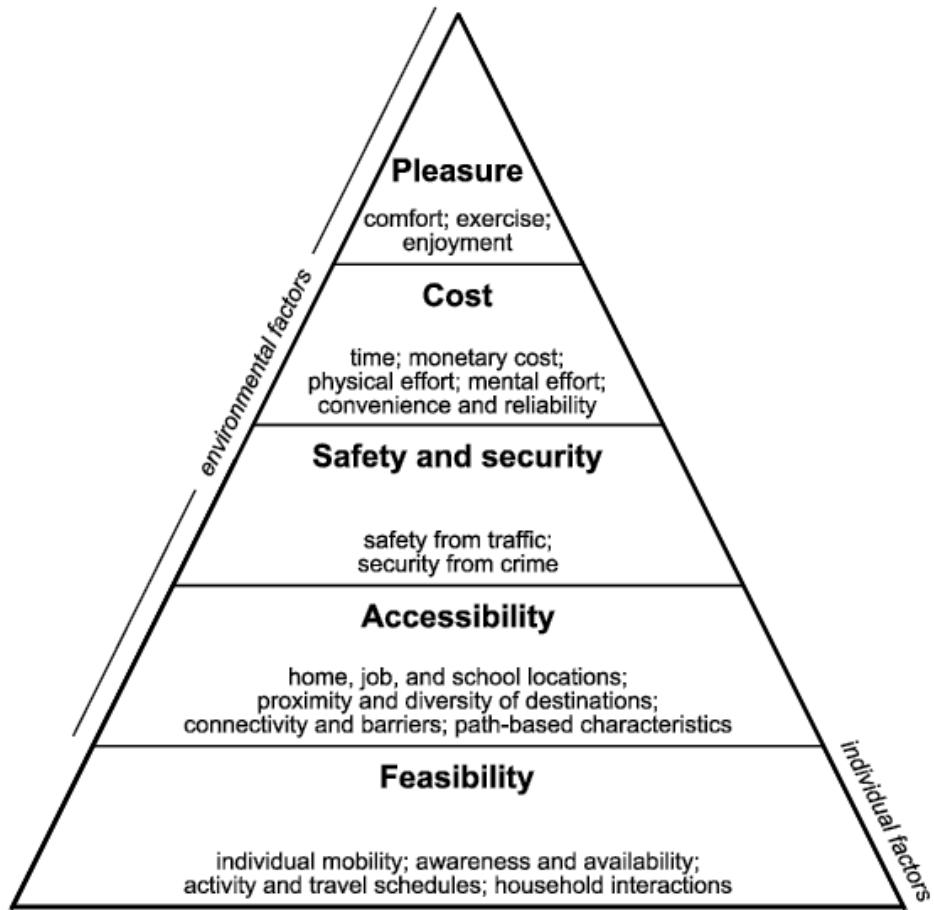
*Figure 2-1: Hierarchy of Needs for Human Motivation*



*Source: Maslow, 1943*

Based on this model, a more specific model was developed to explain the Hierarchy of Travel Needs (Singleton, 2013). This model explains the necessity to satisfy each level of need before moving to the next to make a travel decision including feasibility, accessibility, safety and security, cost, and pleasure as shown in Figure 2.2. Once again, safety and security take a major part for evaluating travel destinations and assessing travel decision process. This level indicates that travelers will look at choices that provide safety and security (Singleton, 2013). Therefore, unless it provides a level of safety, travelers in general would not consider a destination. However, the extent to which this can be applied, and effect tourists' decision might vary based on the tourists' types explained earlier.

*Figure 2-2: Hierarchy of Travel Needs*



*Source: Maslow, 1943*

Another important theory used in tourism studies is the Theory of Planned Behavior (TPB). The theory assumes that external features have an impact on the people's behavior as well as all other internal factors (Singleton, 2013). For instance, an individual who believes that terrorism affects his safety will have an impact on his attitude and behavior and then will probably not take a trip to an unsafe destination. On the contrary, an individual who thinks that terrorism has a minimal impact would still travel to such destination. In addition to the internal factors (such as attitudes, motivation, beliefs, intentions, and risk lessening approaches) and the

external factors (such as time and pull factors), the type of tour and its experience are also involved in shaping the decision-making process (Sirakaya and Woodside, 2005). External factors, which might affect the travel behavior consequently affect the travel decision making, might include built and natural environment. In general, consumer behavior decision models are affected by individual variances (consumer resources; knowledge; attitudes; motivation; personality, values and lifestyle), environmental impacts (culture, social class, personal influences, family and the situation), and psychological processes (decision-process behavior of consumers). Together Consumer Choice Theory and Decision-making Models draw a road map for tourism theories and tourism destination decision making. As safety and security constitute a major factor for decision making process, perception of risk and terrorism theories were developed to justify risky decision making.

### *2.1.3 Terrorism Theory*

Disparities and income variation resulted from economic globalization benefiting some countries/ groups over others lead to international frustration, terrorism, and political instability (David and Baker, 2014). Terrorism and political instability have an impact on tourism. Either directly attacked or not, tourists in general fear the risk of being victimized. Tourist attacks usually convey a message to the government and are used to identify the enemy (David and Baker, 2014). Since tourist locations/ destinations are easy to determine, they are targeted by extremist's terrorism attacks. Terrorism that targets tourists harm the destination/ city image and increase tourists' horror and risk perception (David and Baker, 2014). Destinations that have encountered terror have a bad reputation that effect tourism. Both the Consumer Choice Theory and Decision-making Models, as explained earlier, are used to explain factors that affect tourist

decisions of travel. Specifically, the Information Integration Theory illustrates the risk factors taken into consideration during decision making including risk perception.

Roehl and Fesenmaier (1992) study divided tourists based on their perception of risk: risk neutral, functional risk, and place risk. Different types of tourists have different opinion about tourism and risk perception. The results of the study indicated that risk neutral group think that there is no relationship between risk and tourism as they were very interested in adventure. Those are probably the Drifters and the Allocentric travelers. On the other hand, while functional risk group believe that organization and processing are the main source of risk, the place risk group believe that specific travel destinations are highly risky. The latter group includes Psychocentric and Institutionalized tourists. In addition, risk perception depends on individual personality and is different based on the nation of origin (Qi, Gibson and Zhang, 2009). Therefore, sociocultural factors affect tourists' perception of risk.

Moreover, Consumer Behavior literature classifies seven kinds of risk including equipment risk, financial risk, physical risk, psychological risk, satisfaction risk, social risk, and time risk (Qi, Gibson and Zhang, 2009). In addition to the internal factors; cost, time, process, and physical risk such as threat and damage are major concerns to tourists when there is violence associated with travel destinations. Escalated levels of violence increase travel cost and since tourists consider cheaper options as part of the decision-making process, safer destinations are more desirable (Soñmez and Graefe, 1998). Destinations perceived as unsafe require more safety and security preparations and this increase the cost of travel. However, harm that results from terrorism and political instability is imbedded within the physical risk that might result due to other reasons.

Soñmez and Graefe study (1998) recognize more risk categories that include financial, health, physical, political instability, psychological, satisfaction, social, terrorism, and time. In addition to physical risk, terrorism and political instability were among the main effecting factors. This model gives more details of the physical risks a tourist might go through during their trip. In fact, terrorism, transportation reliability, political instability, and satisfaction were the most risks considered for international travel by US travelers (Qi, Gibson and Zhang, 2009). Although other studies used different variables, terrorism and political instability risks were almost always present which highlight their importance.

Once risk factors are identified, the decision-making process starts. The Prospect Theory illustrates the risky decision-making process. According to the theory, risky decision making starts with eliminating options of destinations based on perception of risk and then choosing the best alternative (Soñmez and Graefe, 1998). The best alternative is the one that have the least risk associated with it. Risk perception could be reached though different channels of media as well as other direct and indirect effect by others. For example, due to its socioeconomic justification, Islam was perceived as a religion that is in opposition to international tourists which influenced tourism in Egypt (Aziz, 1995). Western tourists believe that they are targeted by extremists when travelling to Egypt. Based on this perception, fewer westerners might visit Egypt. Therefore, tourists might adjust their plans based on risk perception.

Tourists not only tend to decide on future travel destinations based on their risk perception but also modify existing plans if necessary. Rogers' (1975) Protection Motivation Theory (PMT) illustrates the relationship between risk perception and intention/attitude can be modified. PMT postulates that risk perception and intention/attitude modification depend on the extent of the harmfulness, likelihood of the incidence, and the effectiveness of handling the

situation (Qi, Gibson and Zhang, 2009). The modification takes place based on the impact of the event and possibility to adapt to the situation. For instance, a traveler might collect information about a new political condition in a certain country and based on the PMT changes travel intention to adjust an existing reservation.

This analogy in fact could lead to a Spillover Effect where travelers would think that an existing event might lead to more instability and consequently perceive the destination as risky and unsafe. Since tourism destination image might jeopardize tourism activities if perceived as unsafe, tourists normally overgeneralize terrorism risk identified in a certain nation and assume that the whole region is unsafe including countries that are not involved in violence activities (David and Baker, 2014). In this case, neighboring countries not directly involved are perceived as unsafe. Therefore, perception of risk and safety are essential elements to build a general image of a certain destination (Qi, Gibson and Zhang, 2009). Moreover, certain events can have a major change in risk perception for a long period of time although the event is over. For instance, September 11, 2001 attacks raised the amount of perceived risk related to international travel (Qi, Gibson and Zhang, 2009). Indeed, international travel policy has changed tremendously since that day. Tourists' behavior is adjusted based on the risk perceived and risky destinations are substituted with safer alternatives that has a good image.

In addition to the Spillover Effect, a Substitution Effect might take place spontaneously. While tourism industry would decrease region wise, adjacent countries of terrorism attack might benefit from the Substitution Effect, (Drakos and Kutan, 2003). Therefore, although risk perception might harm some destinations, it might benefit others as well during the decision-making process. If the tourism destination is perceived as dangerous, it would be substituted by less risky one (David and Baker, 2014). In this case a Substitution Effect takes place and tourists

choose safer destinations over politically unstable and risky locations. For example, as international tourism in Hawaii was dropped, it was substituted by US residents (Bonham, Edmonds and Mak 2006). While inbound tourism decreased, national domestic tourism increased.

In addition to tourist's risk perception, policy decisions and indicators can complicate the decision-making process and result in reducing tourism in a certain country. For example, the perception that the US visa procedure included more complicated steps and eliminations after 9/11 has reduced tourism (David and Baker, 2014). In fact, the new policy of tourism visa processing used more concentrated inspection which required more time for processing, thus, perceived as complications. The truth is the visa regulations has slightly changed but security screening process became more detailed (Yale-Loehr et al., 2005 as cited in Drakos and Kuton, 2003). However, in addition to physical terrorism and political instability risks, time risk is taken in to consideration in this case.

## 2.2 Tourism, terrorism, and Political Instability

There are many factors that could affect the health of tourism industry in a country. The recent emergence of terrorism and political turmoil has brought many challenges to the tourism industry. Political instability might develop because of awakening social movement that encounter new vision (Mansfeld, Y., and Pizam, A. (Eds.), 2006). Disparity, social turbulence, and violence are reasons for the development of such a movement. The Theory of Relative Deprivation by Gurr (1970) assumes that dissatisfaction occurs due to the differences between predicted and gained economy (Ezcurra and Palacios, 2016). Although the main complaint might be the unfair economy, the weakening of the tourism industry has an impact on the economy. In general, tourism industry has experienced decline due to the political instability in

certain regions of the world (Weaver, 2006). There are three types of political instability and violence: crime, terrorism, and political turbulence.

First, crime is defined as homicide, rape, robbery, and assault actions. It is related to the local victimization within a country and is concerned with one-on-one interaction. It is usually related to psychological and economic motivation. Terrorism, on the other hand, is defined as the rapid, temporary actions that receive instant public attention (Soñmez, 1998). It might be a single event or series of events adapted by one group/ entity. Usually, it is conducted by politically motivated groups who attack people to have power over a political situation (Smith, 1998). Although victims are civilians, terrorism attacks are used to send a message to the government. Even though terrorism could in fact be a part of a revolutionary movement, it is unlike other forms of political violence such as civil war (Ezcurra and Palacios, 2016). It is one-sided attack led by other entities against the government believing that harming the government would help them reach their goals. However, doing this hurts both the country's tourism sector and its economy. Thus, terrorism is used as a tool to attack the government and destroy the tourist industry (Aziz, 1995) as well as create loss of tourism revenue (Smith, 1998).

Political turmoil is defined as the use of violence that is politically motivated and can be used by governmental or antigovernment groups (Neumayer, 2004). It is different than terrorism since it can be done by either the government or other civilian groups and could be one-sided or two- sided unrest. In addition, political turmoil takes place slowly and disturbs tourism activities at the national and international levels (Soñmez, 1998). Therefore, the impact of political turbulence on tourism is great and have a lasting effect that might destroy the destination image. Also, war, which is considered a political turmoil, typically has a negative impact as it directly affects the safety of the tourists and has a long-term impact on tourism. For instance, more than

six million USA tourists went to Europe in 1985; however, in the following year, about 54percent of the projected seven million travelers canceled their trip because of the US-Libya military conflict (Sönmez, 1998). However, violence impact might vary based on several factors such as the length and type of the event.

While political turmoil, terrorism and crime have negative impacts on tourism, the extent of impact may be different for each one. For example, the higher the level of violence, the more impact it has on tourism (Soñmez, 1998). Small scale events affect tourism differently than major events such as the international terrorism of tourism sites. In addition, the length of the violence event can increase the impact. Therefore, crime and terrorism that occur on a short term will have a lower impact than the extended political instability. For example, the Egyptian revolution that extended for several months had a different effect than a single extremist terrorism event in Egypt. Despite the different definitions of terrorism, political turmoil, and crime, all forms of violence seem to have severe impacts on tourism. However, an empirical evidence is required to prove this perception.

Tourists think about the danger of being victimized as they decide on travel destinations. A survey done by Gallup Poll for Newsweek in April 1986 revealed that 79 percent of the U.S. population was not willing to travel overseas due to their fear of terrorism (Soñmez and Graefe, 1998). This decision constitutes a serious concern for tourism industry. In general, a decrease in tourism means a decrease in exchange receipts (Altindag, 2014). As a result, the economic development of a country is affected. Although violence has an impact on tourism during and after the terrorist event, the impact of violence lags because tourists may have already made their travel arrangement and it may require time to understand the level of instability (Neumayer, 2004). For example, the international tourism to Spain has decreased by over 140,000 in 1988,

due to an international terrorist attack, but the drop started three months after Spain experienced the attacks (Enders and Sandler, 1991). In general, tourism has a delayed reaction to violence and other factors might influence tourists' decision.

Victimization danger and attractiveness of the tourism site can be compensated for by dominate attractions (Altindag, 2014). Although visitors highly consider victimization during their visit, extremely appealing destinations might not be affected by this concern. For example, when international tourists are extremely attracted to a certain destination such as the pyramids in Egypt, the crime rate does not appear to prevent international tourists from traveling to the sites. Nevertheless, although attractive countries are considered to have lower impact on their tourism, the impact will still be great (Neumayer, 2004). To avoid confusion, evidence is required to show the impact on extremely attractive sites.

Based on the Risky Decision-Making Theory, tourists generally overgeneralize terrorism risk and hypothesize that the entire region is dangerous. It has been argued that nations dependent on tourism, but are not victims of terrorist attacks, are impacted by tourism activities in general (Fyall, Prideaux, and Timothy, 2006). According to the Spillover Effect Theory, tourists use the facts they have about one country to make a decision about other nations. The result is that all countries in a region are perceived unsafe because a small percentage of countries in the region are in turmoil (Neumayer, 2004). While some tourists seem to prefer safe countries adjacent to the ones with conflict; others prefer to stay away from the whole region where violence surrounds them. An example is the fall of tourism in Iraq's neighboring countries during the Gulf War (Sönmez, 1998). Therefore, adjacent countries within the same region could have a serious impact on tourism.

When turmoil is war conflict, the impact might be even greater. Although it is not clear why there is a Spillover Effect, the combination of tourism destinations that tourist intend to visit in a region could be one reason (Neumayer, 2004). The itinerary could include several destinations in the region and a turmoil in one might result in cancelation of the whole trip. In general, the net economic impact of wars on adjacent nations depend on several factors: original economic conditions, the number and economic characteristics (income level) of refugees, the degree of economic transaction with the conflict country, the degree of economic transaction with the rest of the world, and the amount of international aid given to the country (Sab, 2014). These factors are major determinants to the type and amount of the impact on the neighboring countries.

In addition to the Spillover Effect within regions, there has also been research on the Substitution Effect. A Substitution Effect occurs when tourists start to travel to a different country due to the instability in the original tourism destination. Although some literature suggests that adjacent nations may have an advantage due to the instability of the original tourism destination, the only country that has benefited from this is Italy in western Europe because tourists think of it as a safe country that provides the same uniqueness of Middle East region (Neumayer, 2004). Although Italy is in a different region, the characteristic uniqueness of the original target country qualifies it for a Substitutional Effect. Moreover, political aggression would have more impact on less attractive countries with few special features where tourism plays a minor role in the economies of such countries. A study by Neumayer (2004) about the impact of political terrorism on tourism on the global level illustrated that both Spillover Effect within the region and interregional substitution existed. However, since there is a limited

amount of research on the Substitution and/ or Spillover Effects, it is difficult to really know when one occurs but not the other is essential.

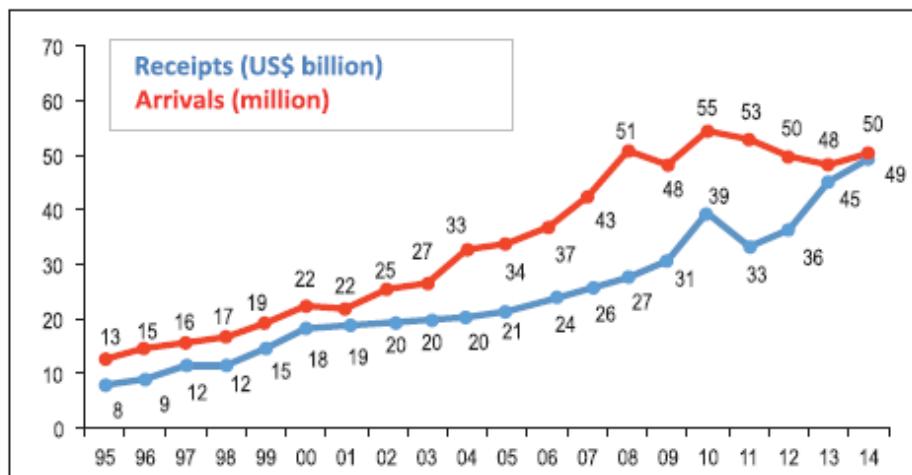
Political turbulences might not be the sole reason that has an impact on tourism industry. Other factors contribute. For example, the political unrest impact on tourism is high in Muslim countries and is inversely associated with inbound tourism but is positively associated with outbound tourism (Sarwar and Siddiqi, 2014). Therefore, religion has an important influence on the level of impact upon tourism industry. In general, tourism declined in the Islamic nations due to modification of safety measurement by tourists with regards to geographic and ethnic-religious distance (Ahlfeldt, Franke, and Maennig, 2015). Islamic countries perceived as risky destinations and tourists believed that they are targeted by violence. Therefore, distance between any two countries plays a major role in the decision-making process in addition to the demographic characteristics. Furthermore, the relationship between tourism growth and economic development has different results for different political regimes (Po and Huang, 2008). Since democratic countries have less suppression, they are perceived as less risky and more attractive.

On the other hand, tourism numbers of other studies prove that there is no correlation between political turbulences and tourism. Although many challenges faced the tourism sector, including international instability, tourism was still able to have a good share of the economy. Many tourist locations were even able to have international growth (Saleh, Assaf, Ihalanayake, and Lung, 2008). Unexpectedly, in 2014, international tourism grew 3.7 percent, which was about \$1,245 billion (World Tourism Organization, 2015). This growth took place despite all the international turmoil.

The World Tourism Organization (2015) estimates that the annual growth of tourism between 2010 and 2020 will be 3.8 percent regardless of international turmoil. Therefore, political instability impact may still allow tourism growth but limit the extent of the growth. The data indicates that the tourism industry has remained stable and strong although there was a significant international turbulence. The long-term forecast of the WTO shows that the United States had the strongest tourism industry growth at 8 percent, Asia at 5 percent, Pacific at 5 percent, and the Middle East at 5 percent (World Tourism Organization, 2015). While some of these regions experienced political turmoil, they were still able to boost tourism income.

Although the Middle East had a higher growth between 2000 to 2008, the continuous, long-term political turbulences have had an impact on the tourism industry in the region. The World Tourism Organization forecasts that the Middle East will be one of the fastest growing tourism regions in the coming decades, tripling its present numbers by the year 2030 (Figure 2.3) (World Tourism Organization, 2015). Sadly, according to a more recent statistics, the international tourism of the Middle East that was one of the fastest growing industry among developing nations became the fourth in the list (UNWTO, 2018). This is probably due to the fact that political instability is continuous in the Middle East and Arab countries which extend the impact on tourism. While tourism is considered a major economic force in developing countries, there are several challenges such as competition, political unrest, and environmental instability that play major roles in the development of tourism (Eugenio-Martin, Morales and Scarpa, 2004; Weaver, 2006). Therefore, it is important to study factors that can affect the tourism development in the region to help boost tourism industry in general. Some examples are used from the literature to give an overview of factors influencing tourism growth.

*Figure 2-3:Middle East Inbound Tourism*



*Source: World Tourism Organization, 2015*

### 2.3 Empirical Studies about Tourism and Methodologies

Several research studies identified the factors that have potential impact on the tourism development. Some of these studies used economic variables only while others used economic and noneconomic variables. Most of these variables were derived from the discussed theories of tourism demand models. However, since tourism research is multidisciplinary, variables were chosen from a mix of theories. In order to better identify potential variable for this research, a brief summary of tourism studies was analyzed.

There are different ways to measure the tourism health. Some studies used the number of international tourist arrivals as the dependent variable such as in Odhiambo (2012), Eugenio-Martín, Martín Morales, and Scarpa (2004). Others used the tourism receipts as the dependent variable such as in Saha and Yap (2013) and Saleh, Assaf, Ihalanayake, and Lung (2008). In fact, some studies used both of them in different models to verify the results. Therefore, both the tourism number of arrivals and the tourism receipts are used in the literature interchangeably.

Many of the tourism research studied the tourism relationship with the economic growth. In fact, tourism- economic nexus had intensive examination. For example, Odhiambo (2012) study proved that Zambia has a long-run one-way causal flow from tourism development to economic growth. These results are consistent with the TLD theory providing another evidence of tourism impact on economic growth. In addition, Saleh, Assaf, Ihalanayake, and Lung (2008) study showed that just like other sectors, the tourism receipt has an impact on the economic development and there exists a long-run association linking tourism growth and GDP.

Po and Huang (2008) analyzed the relationship between tourism and economic development as well as the degree of tourism specialization. The study shows that when the degree of specialization is low, tourism will not lead to economic growth and vice versa. Also, it showed that the relationship between tourism development and economic growth has various results based on their regimes. Tourism specialization was used in many other studies. For instance, Nunes and Sequeira (2008) study showed that small nations have the advantage of tourism specialization just like regular ones as the results illustrated an obvious positive correlation linking tourism specialization and economic growth. On the other hand, the study shows that tourism specialization profits poor nations constantly and recommend that such countries depend heavily on tourism in their policy. Lee and Chang (2008) also studied the long-run co-movements and causal association linking tourism development and economic growth. It was proved that all nations are able to take advantage of tourism development and economic growth on the regional and international level except Asian nations that have a weak association between the measured factors.

In addition, many studies used the GDP per capita to represent the economic growth in a country such as Odhiambo (2012). Lee and Chang (2008) study exhibited that tourism

development highly affects the GDP in non-OECD countries especially the Sub-Saharan African nations. Eugenio-Martín, Martín Morales, and Scarpa (2004) study proved that in developing countries with elevated percentage of unemployment and limited per capita GDP, tourism creates jobs and decreases unemployment as well as it generates revenue which in return improve the economic growth. The study revealed that tourism development was more essential to economic growth in low- and medium-income nations rather than high income ones. Moreover, the study proved that while low- income nations require development of infrastructure and education to increase tourism, medium-income nations require social improvements including health services and elevated GDP per capita. It was found that tourist numbers are correlated with GDP per capita, international trade, life expectancy at birth, infrastructure, education rather than relative price of goods and services. On the other hand, Saha and Yap study (2013) study used income, relative prices, and real exchange rate in 1999 as the economic variables to measure the economic effect. The income was measured by the GPD. The study indicated that tourism demand is elevated with more real GDP per capita. Hence, GDP per capita and international trade are adequate variables to measure tourism development. Therefore, this proves that economic development can highly be affected by tourism growth and developing countries can focus on tourism specializing to reach this goal.

Site attractiveness is another factor that was used in tourism study such as in Altindag (2014). The study stated that although tourists consider being in danger while travelling, tremendously attractive destinations could still receive a high number of tourists. In addition, Saha and Yap study (2013) study provided evidence of the destination uniqueness and tourist decision making based on attractiveness and tourism profits of well-known locations reflects the location uniqueness. The study used a dummy variable for UNESCO World historical Heritage

site and another dummy variable for UNESCO World Natural Wonders. The study indicated that tourism demand is elevated with tourist attraction level, and historical and natural heritage.

Other variables were used in tourism to measure its health included life expectancy to measure safety and education to measure affordability and level of awareness in Eugenio-Martín, Martín Morales, and Scarpa (2004). In addition, political regime was used in Neumayer (2004). The latter study proves that democratic countries receive more visitors than dictatorial countries even if they do not exercise violence. Sarwar and Siddiqi (2014) studied the developing nations using the government nature such as democratic and nondemocratic as well as being characterized as Muslim nations or not where people link that to the behavioral of terrorism. The analysis displayed that in democratic countries, political terrorism is positively associated with inbound tourism due to the positive function of democratic institutions within the political administration that balances the political turbulence influence of the political parties. In addition, the impact of political unrest is high in Muslim courtiers for both inbound and outbound tourism. Ahlfeldt, Franke, and Maennig (2015) results showed that tourism dropped in Islamic nations that constitute most of the Middle East region. This decline is due to tourists' change of safety dimension due to geographic and ethnic-religious distance. Hence, Religion and Democracy are adequate variables to measure tourists' safety perception and decision making as well as tourism development.

Tourism research focuses least on countries/ regions in the Middles East. For instance, while Eugenio-Martín, Martín Morales, and Scarpa (2004) study focused on Latin America, Europe appears to be studied in many research papers such as Altindag (2014). Moreover, Ahlfeldt, Franke, and Maennig (2015) provided evidence of outbound tourism for Europe. Another study was done by Lee and Chang (2008) for Organization for Economic Co-Operation

and Development (OECD) and non-OECD countries counting the ones in Asia, Latin America, and Sub-Saharan Africa. Indeed, many researchers tried to provide evidence for Europe, a region with lower intensity of political instability.

On the other hand, some of the few studies investigating the Middle East region is done by Saleh, Assaf, Ihalanayake, and Lung (2008). The study analyzed three countries in the Middle East region that have a significant impact on tourism including Bahrain, Jordan, and Saudi Arabia where tourism is also considered the economic drive lately. The study indicates that these three nations should consider tourism as a major economic development driver and invest more in the tourism sector and provide a strong policy to support marketing tourism for the global market. Although it studied tourism – economic relationship, it does not analyze the political instability issue. Moreover, Sarwar and Siddiqi (2014) tried to find the impact of political instability and absence of terrorism on both inbound and outbound tourism. As proved by these studies, the Middle East that has the highest intensity of political instability seems to be adequate to investigate the political instability and tourism research.

On the other hand, while some studies focused on the individual country level, others studied the regional impact. Abu- Ghunmi and Larkin, 2015 studied the economic impact of regional turbulence over nations placed within the turmoil region and Jordan was used as a case study to represent the Middle East. The study indicated that Jordan's economy decreased during some events and increased during others. This indicates that other factors should be taking into consideration since they might be the reason for this difference. What are the reasons behind the different impact of conflicts/ political instability remain a valid question that requires more investigation. Although this study is more recent and focuses on Jordan, it does not investigate the tourism sector.

Moreover, the regional impact was examined by Drakos and Kutan (2003) as the study used the consumer-choice model for three Mediterranean countries including Greece, Israel, and Turkey. The study aimed at analyzing the regional impact of terrorism on tourism. The study proved that an inverse impact of terrorism on tourism exists. The study also took into consideration the amount of terrorism events in tourism destinations and the location of terrorist attacks if it was in town or city. These are factors that can be considered when studying the political instability in tourism research. Also, since an evidence exists, more investigation is needed from the Middle East region.

In addition to the country's governance, the political structure performance and the index of political stability are used in some studies to measure the level of violence and the extent that effects the capability to rule such as in Eugenio-Martín, Martín Morales, and Scarpa (2004). Furthermore, Neumayer (2004) results showed that political violence is inversely associated with tourism where an addition of one standard deviation in political violence decreased 32 percent of tourism activities, and an addition of one standard deviation in terrorists' attacks decreased 8.8 percent of tourism activities. This might, after a while, decrease the international tourism by 27 percent.

Another study by Feridun (2011) considered the influence of violence events on tourism in Turkey, a country that depends heavily on tourism and suffered highly from terrorism. It is illustrated that tourism has a long-run equilibrium association with terrorism. However, both long and short run results showed an inverse impact of violence on tourism. Moreover, Altindag (2014) research tested the relationship between crime in a certain destination and the number of international tourists and global tourism profits. Again, the study illustrated that there is an inverse relationship between crime in a certain destination and the number of international

tourists and global tourism profits. Therefore, an addition of 10 % in total crime rate results in approximately \$140 million turns down in global tourism profits for nations of 25 million inhabitants.

Furthermore, Sarwar and Siddiqi (2014) reported that political unrest is highly affecting tourism but is positively associated with outbound tourism and inversely associated with inbound tourism. On the contrary, the absence of terrorist activities in general is positively correlated to inbound tourism and inversely correlated to outbound tourism. Finally, Saha and Yap study (2013) results showed that although political turbulence has a significant effect on tourism, terrorism slightly boosts tourism demand in political turbulence nations with small and medium potential risk. On the other hand, terrorism provides a tremendous decrease of tourism demand in elevated potential political turbulence nations. In addition, the interaction effect of political turbulence and terrorism might result in severe harm for the tourism sector. Although an evidence was provided by many studies, there is limited focus on safe countries adjacent to political instability/ or within the same region.

The Spillover Effect and the Substitution Effect are poorly studied in the tourism research and a little evidence is provided. Ahlfeldt, Franke, and Maennig (2015) concluded that while the recovery effect was rapid, temporary Substitution Effects took place using Southern European as a replacement and regional Spillover Effects highly impacted non-Islamic adjacent nations in Southeast Asia region. In addition, Drakos and Kutan (2003) study validates the existence of the Spillover and Substitution Effects. It was found that a number of Mediterranean nations could benefit from visitor's Substitution Effect from the adjacent attacked countries. For instance, tourism locations such as Greece and Turkey could substitute for each other if one is under terrorist attacks. The result shows that although neighboring countries could benefit from that,

the whole region would have a negative impact. Since the study validates the existence of the Spillover and Substitution Effects, it would be suitable to investigate these effects. In addition,

Panel Data was used in the tourism research on different levels. International in bound tourism on the country level was analyzed. For instance, Po and Huang (2008) studied the association between tourism and economic development for 88 nations and Altindag (2014) studied European nations. In addition, Saha and Yap study (2013) used 139 nations to study the relationship between political violence and terrorism and tourism demand. On the other hand, the outbound tourism was studied as well. Ahlfeldt, Franke, and Maennig (2015) analyzed the behavior of German visitors to other countries based on some international political turbulence using the influx of German visitors using 192 nations. Moreover, other studies focused on the regional effect on tourism. Drakos and Kutan (2003) studied the Spillover and Substitution Effects for the Mediterranean region.

Different but limited techniques for Panel Data were utilized in analyzing the relationship between political instability/ terrorism and tourism development. The Dynamic Panel Generalized Method of Moments (GMM) Estimator and the Fixed-Effects Panel Estimator with contemporaneous effects were used by Neumayer (2004), the Unit Root and co-integration were used by Sarwar and Siddiqi (2014), the Autoregressive Distributed Lag (ARDL) bounds testing by means of Unrestricted Error Correction Model (UECM) was used by Feridun (2011), the Seemingly Unrelated Regression (SURE) technique that measures both the contemporaneous and the lagged effects used by Drakos and Kutan (2003), the dynamic panel estimation using the FMOLS and DOLS models were used to determine the long run estimation by Sarwar and Siddiqi (2014), the Difference-in-Difference-Approach (DiD) used by Ahlfeldt, Franke, and Maennig (2015). The Generalized Least Squares (GLS) Panel Data Model was not present in this

type of research. In addition, different/ mixed techniques can be used to reach the best model that fit the used data and predicted hypotheses.

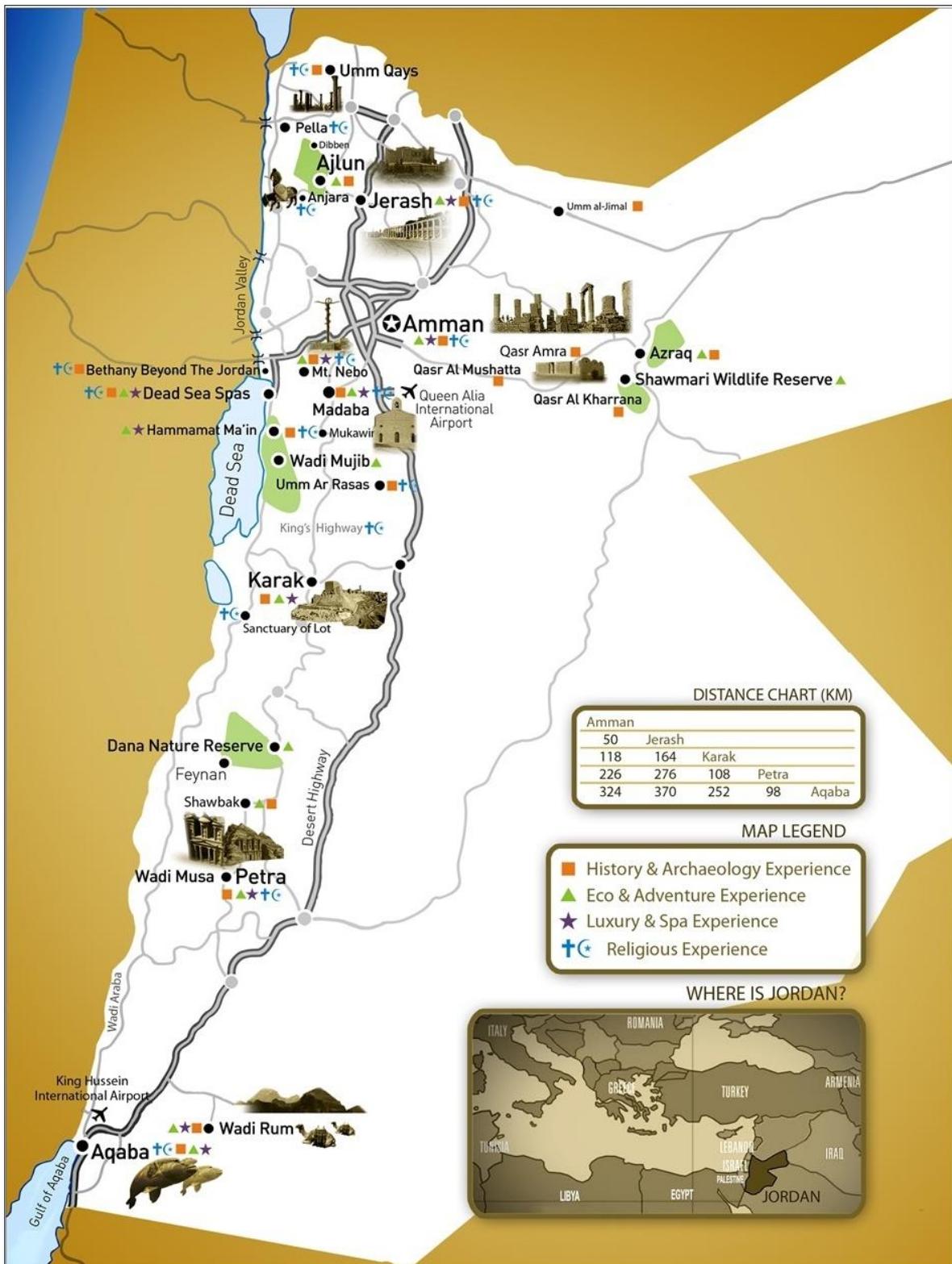
Although, political instability/ terrorism and tourism studies provided evidence for several hypotheses, it only covered an old period of time that does not cover recent events. For instance, Neumayer (2004) used the time period between 1979 and 2000, Drakos and Kutan (2003) studied the period between January 1991 and December 2000, Lee and Chang (2008) studied the period between 1990 and 2002, Feridun (2011) used the period from 1986 to 2006, Ahlfeldt, Franke, and Maennig (2015) used the period between 1993and 2005, Saha and Yap study (2013) used the period between 1999 and 2009, and Sarwar and Siddiqi (2014) used the period between 1995 and 2011. Although a study done by Abu- Ghunmi and Larkin (2015) used the most recent time period from 1980 to 2012, it only studied the relationship between political instability and the economy. Once again, some studies provided evidence of the correlation between violence and tourism is relatively old and current political instability and violence needed to be included.

#### 2.4 Case Study: Jordan

Tourism plays a major role in some Middle Eastern countries including Jordan, a country with limited resources in the Middle East. Since it has no supply of oil, tourism is one of the major economic forces in the country, and it is considered the largest export industry and the second top provider of foreign exchange income (Saleh, Assaf, Ihalanayake, and Lung, 2008). Therefore, tourism in Jordan, like many developing nations, is considered an economic driver that links tourism growth and GDP, which makes tourism an important issue to analyze in the country. Jordan has several tourism sites and destinations, some of which are single development and others are clustered. In addition, Jordan has various tourism types as shown in Figure 3.1, so it has different types of destinations including Religious, Medical, Heritage, Natural tourism

sites. In fact, Jordan has several World Heritage Sites and one of the world's Seven Wonders Site, Petra. This makes Jordon a good case study to determine the impact of exterior turbulence on all types of tourism.

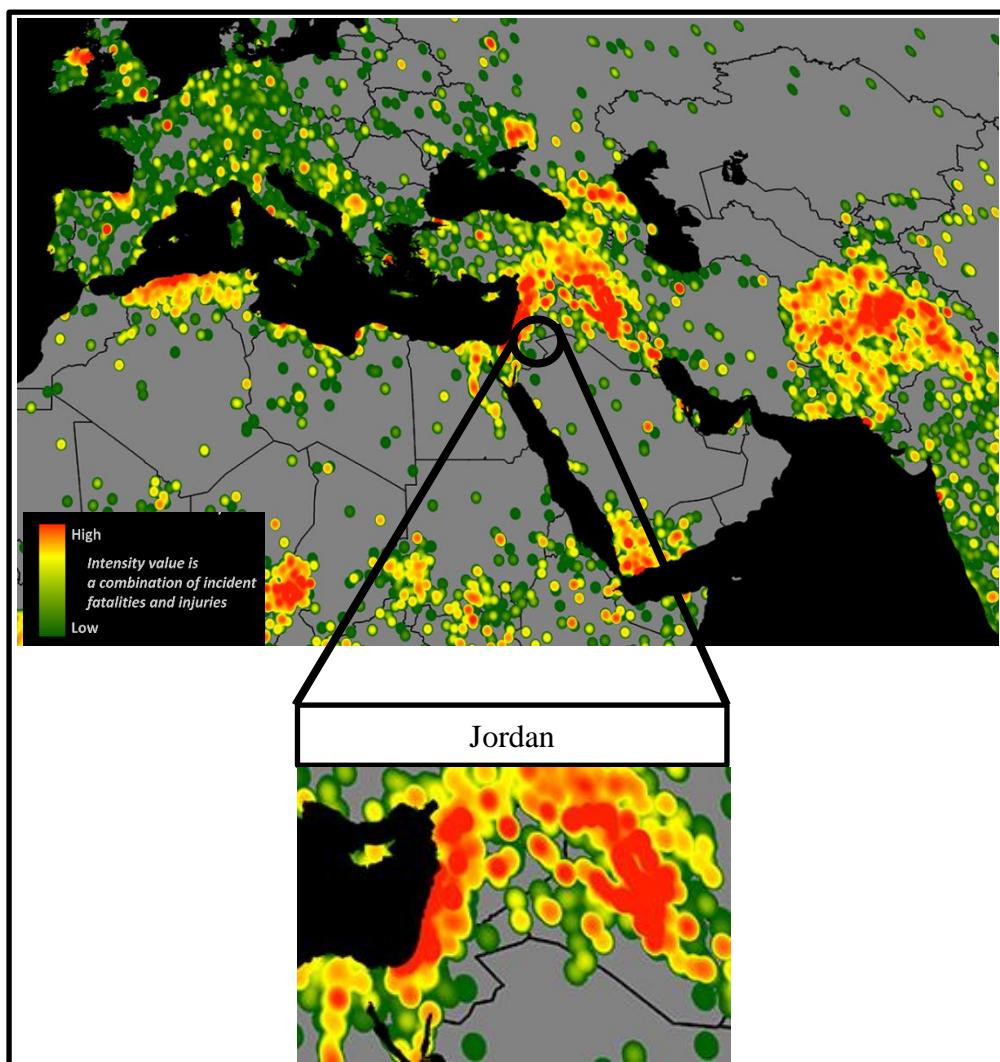
Figure 2-4: Jordan's Tourism Sites



Source: Jordan Tours and Travel

Tourism development is affected by terrorism and political instability. Unfortunately, the Middle East region has been going through continuous political instability for many years. While Jordan has not been involved in wars and only experienced limited internal terrorism or political instability, it is surrounded by countries experiencing both (Figure 3.2). Therefore, the impact on tourism sector in Jordan is worthy of study to understand the extent of the impact of neighboring turbulence.

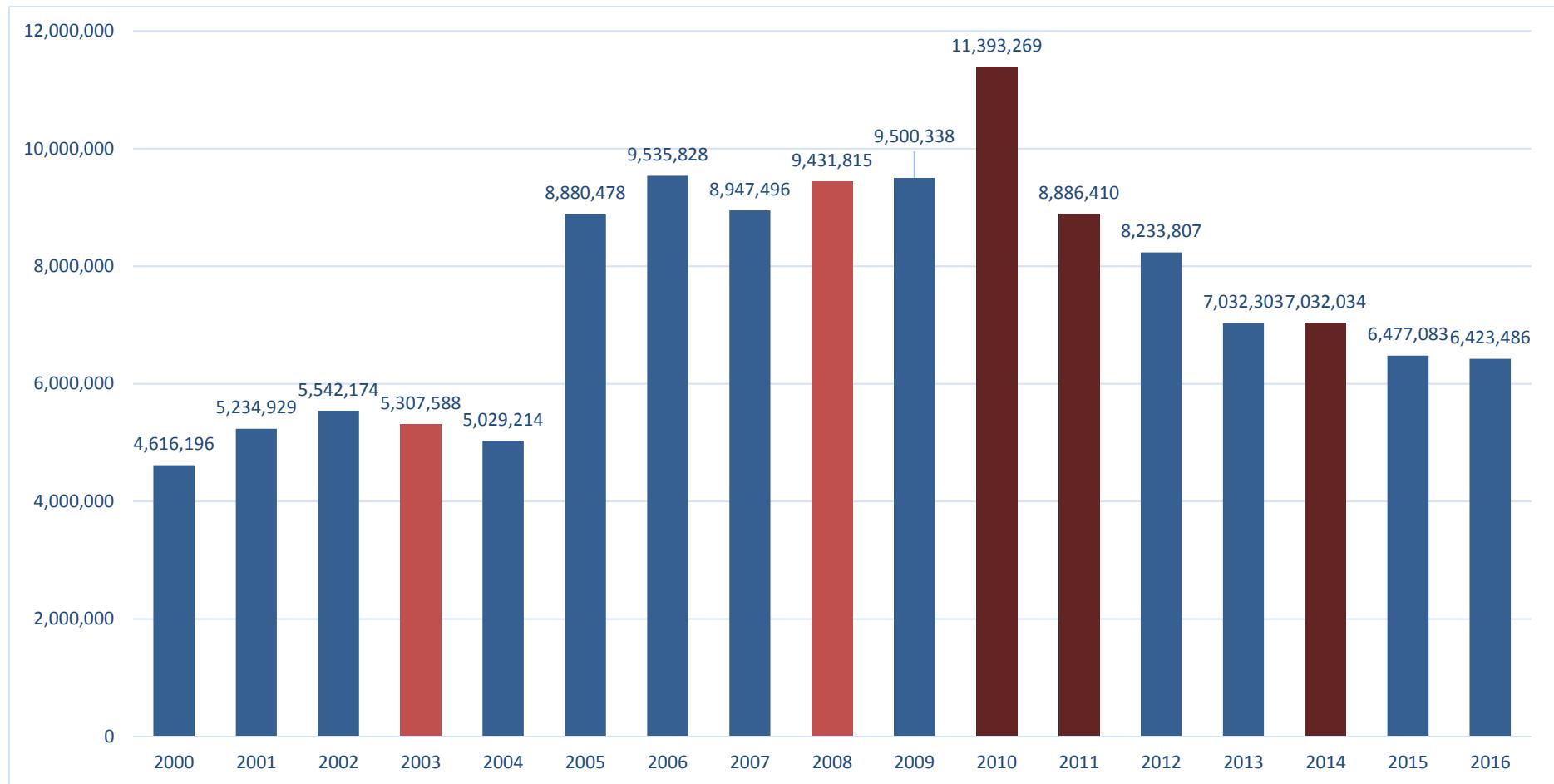
*Figure 2-5:Terrorism Attacks, 1970- 2018: Concentration and Intensity*



*Source: Global Terrorism Databases, 2018*

Tourism in Jordan has been fluctuating in the past two decades (Figure 3.3). The number of tourists initially dropped slightly from about 5.5 million visitors in 2002 to reach about 5.3 million visitors in 2003 and kept dropping in the year after to reach 5 million visitors in 2004. This decrease in tourism numbers is due to the impact of the Iraqi War in 2003. While the Global Financial Crisis had an impact on tourism in Jordan, the economy recovered a year later; and, the tourism industry in Jordan was successful and flourishing prior to the Arab Spring in 2010. Jordan has gone through hardship since the establishment of the Arab Spring (World Bank, 2014). Although the Arab Spring was an international incident, national stability was affected due to the low percentage of economic growth. Before the Arab Spring incidents, Jordan had about 11.4 million visitors in 2010, but the number declined in 2011 to about 8.9 million visitors (Jordanian Ministry of Tourism and Antiquities, 2018). Therefore, the tourism sector lost a great percentage of its tourists which caused a serious challenge for a country that depends heavily on tourism. In fact, tourism activities dropped by 17 percent in 2011 (World Bank, 2013); creating a dilemma for Jordan. In addition, the tourism dropped again after the Egyptian revolution and the Syrian war that started in 2011 to reach about 8.2 million visitors in 2012. This decline of about 7 percent occurred in tourists' arrivals in 2012, probably as a result of the consistent decrease in Syrian tourists visiting Jordan (World Bank, 2013). In 2014, tourism started to gain stability but was dropped again when ISIS was established in 2014 after which tourism in Jordan has kept dropping. It appears that the lengthy political instability in the region has had a long-term effect.

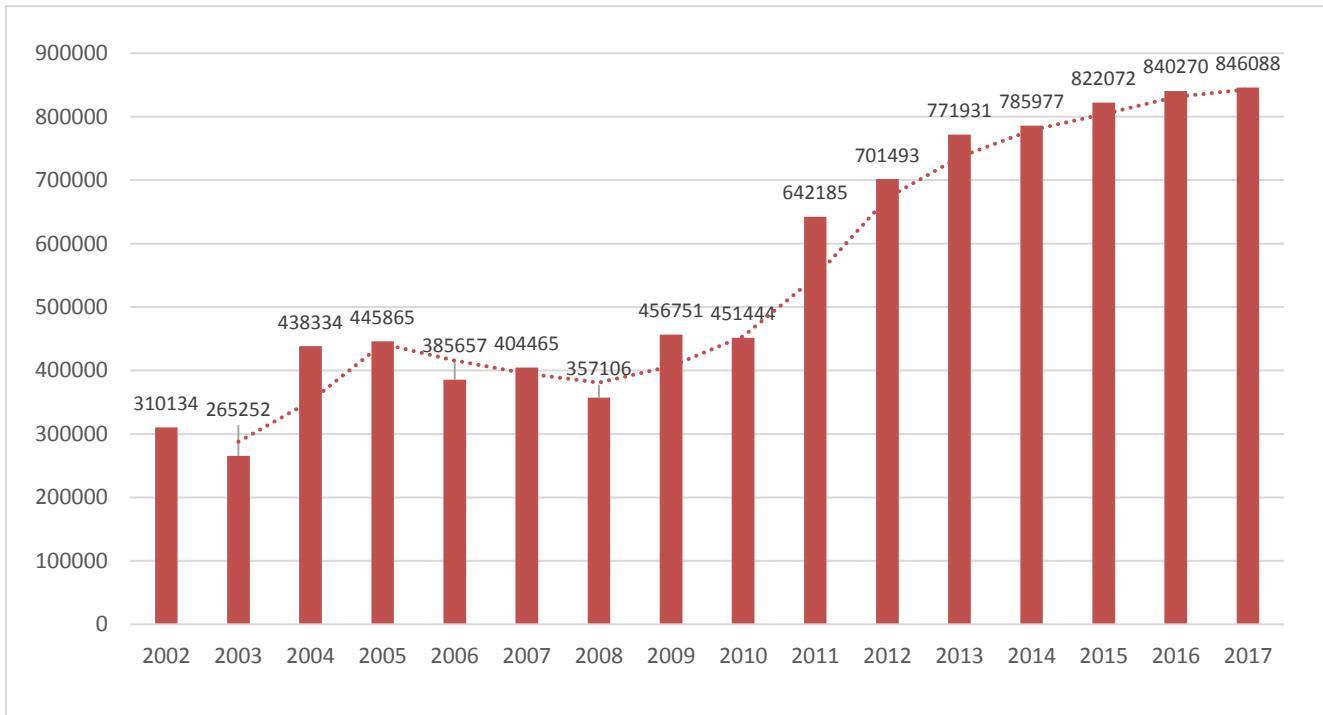
*Figure 2-6:Jordan's Total Tourism*



*Source: Jordanian Ministry of Tourism and Antiquities, 2018*

On the other hand, while the total tourism in Jordan went thorough instability, domestic tourism in Jordan has steadily been increasing since 2011(Figure 3.4). The number of domestic tourists decreased during the Iraqi war in 2003 and reached 265,252 thousand visitors but started to recover in the following year to reach 438,334 thousand visitors in 2004. While domestic tourism decreased and increased slightly before 2011, it was booming and progressively increasing and reached 642,185 after to the Arab Spring, the Syrian War, and the Egyptian Revolution in 2011. Although the international inbound tourism has dropped during the same period, the domestic tourism benefited as local residents of Jordan stopped visiting Syria and Egypt. In fact, a local Substitution Effect took place where Jordan was the substitution for these two countries. Definitely, the longer the impact of the war and political instability in the MENA region increased the domestic tourism in Jordan which mitigated the effect of the total impact.

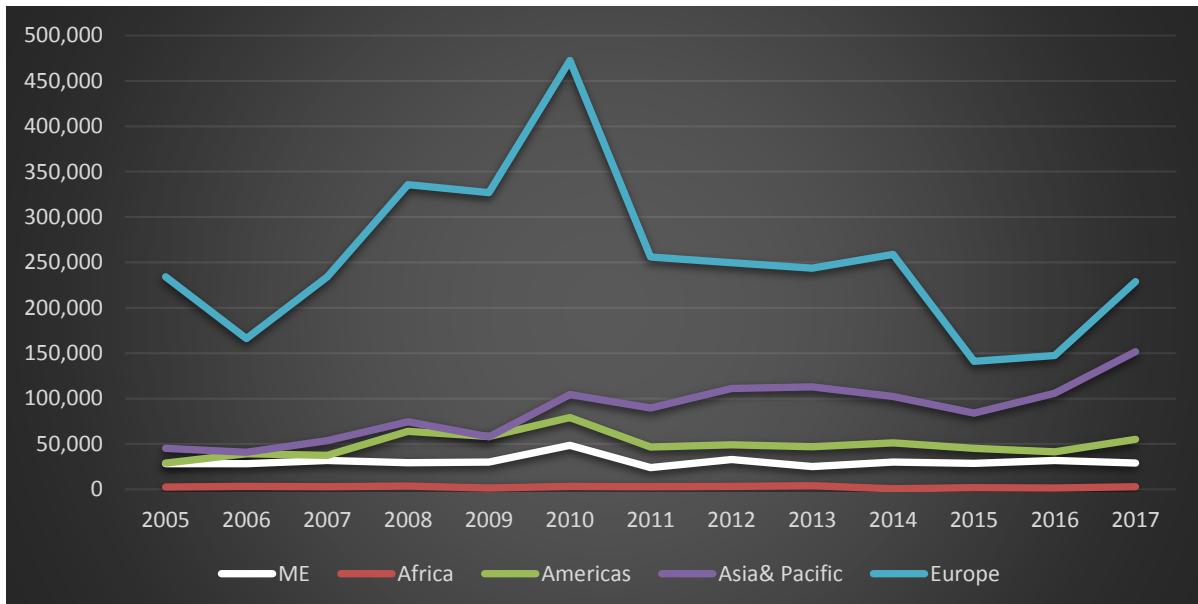
*Figure 2-7:Domestic Tourism*



*Source: Jordanian Ministry of Tourism and Antiquities, 2018*

It is obvious that the political instability in the region has different effect on the international tourism and the domestic one. In addition, while the total tourism in Jordan was fluctuating and mainly decreased after major events, the domestic tourism seems to be affected positively. Therefore, the impact could have a different effect for different regions as shown in Figure 3.5. In general, the total number of tourists coming to Jordan from Europe is much higher than the other regions and the total number of tourists coming to Jordan from Africa is the lowest throughout the years. Moreover, Asia and Pacific region has the second most tourists' numbers visiting Jordan. Then, tourists' numbers from the America and ME region that are close in range ranked as number three and four, respectively. Thus, the reasons behind the various tourists' behavior needs to be investigated.

*Figure 2-8:Jordan's International Tourism by Region*



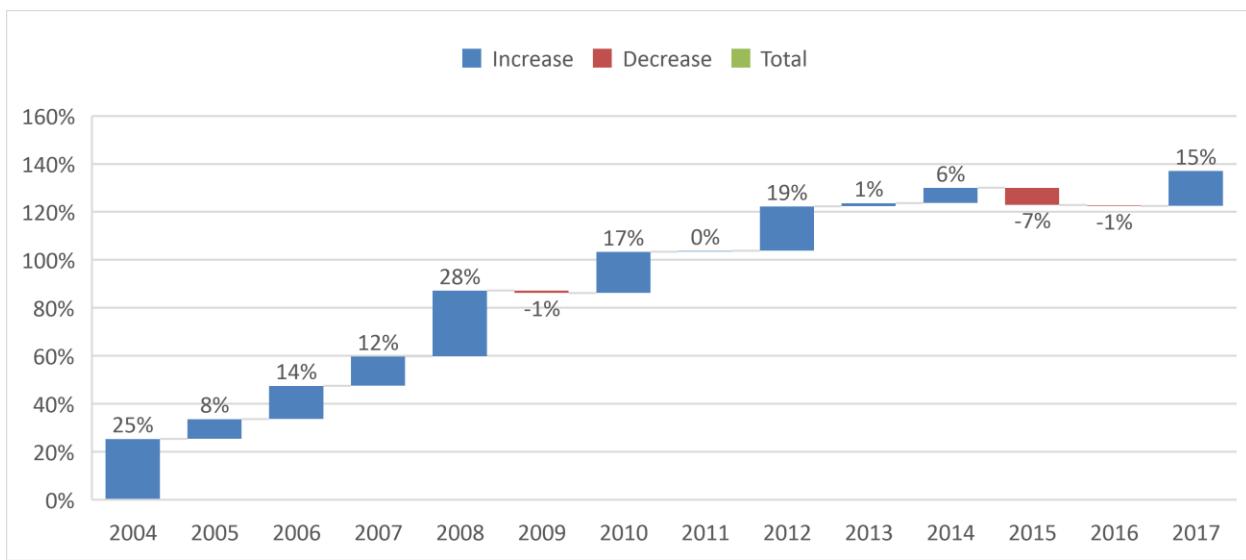
*Source: Jordanian Ministry of Tourism and Antiquities, 2018*

In general, tourists from all regions were gradually increasing until the political instability took place in the ME region in 2011. The numbers of tourists in 2010 were 3,142 from Africa, 48,503 from the ME, 79,096 from America, 104,512 from Asia and Pacific, and 472,537

from Europe. These numbers significantly dropped in 2011 to be 3,050 from Africa, 23,958 from the ME, 46,760 from America, 89,631 from Asia and Pacific, and 256,174 from Europe. After that tourists' numbers started to fluctuate.

Surprisingly, tourism receipts from international tourism in Jordan was still able to grow despite the decrease of tourists' numbers (Figure 3.6). Indeed, the political instability was able to affect tourism numbers but not necessarily tourism receipts in most years. However, the existence of ISIS in 2014 resulted in the reduction of tourism receipts in Jordan in the year after, 2015. Although Africa had witnessed an increase of about 173 percent of the tourists' number visiting Jordan in 2015, all other regions had a decrease percent. In addition, while the tourists' number visiting Jordan in the same year form ME, America, and Asia and Pacific had a decrease of about 4 percent, 12 percent, 18 percent, respectively, the number of Europeans visiting Jordan had a severe impact as it dropped by about 46 percent from the previous year. Since tourists' numbers from Europe are the highest in Jordan, this drop could be the reason behind the tourism receipt decrease in Jordan.

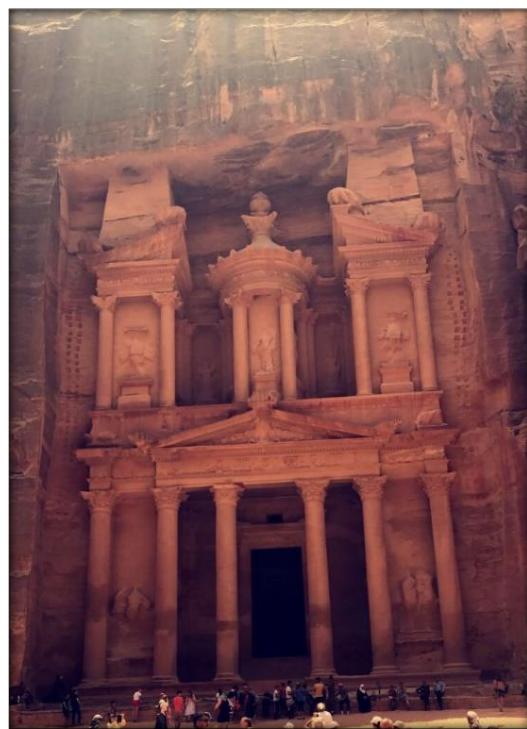
*Figure 2-9:Jordan's Tourism % Change of Receipt*



*Source: Jordan Central Bank, 2018*

In addition, Petra shown in Figure 3.7, one of the seven wonders and a UNESCO World Heritage site, has witnessed a huge decrease in tourism for the year 2015. Hotels were almost vacant because about half of the tourists visited Petra only for day trips rather than spend the night (Laub, 2015). The less time tourists stay means less money was spent which causes a decrease in the total tourism receipt. According to the Jordanian Hotel Association, the yearly tourists' number has declined from 800,000 in 2010 to 400,000 in 2014 (Laub, 2015). As the destination is considered one of the most important destinations in Jordan, this decrease has had a great impact on the Jordanian economy.

*Figure 2-10:Petra, Jordan*



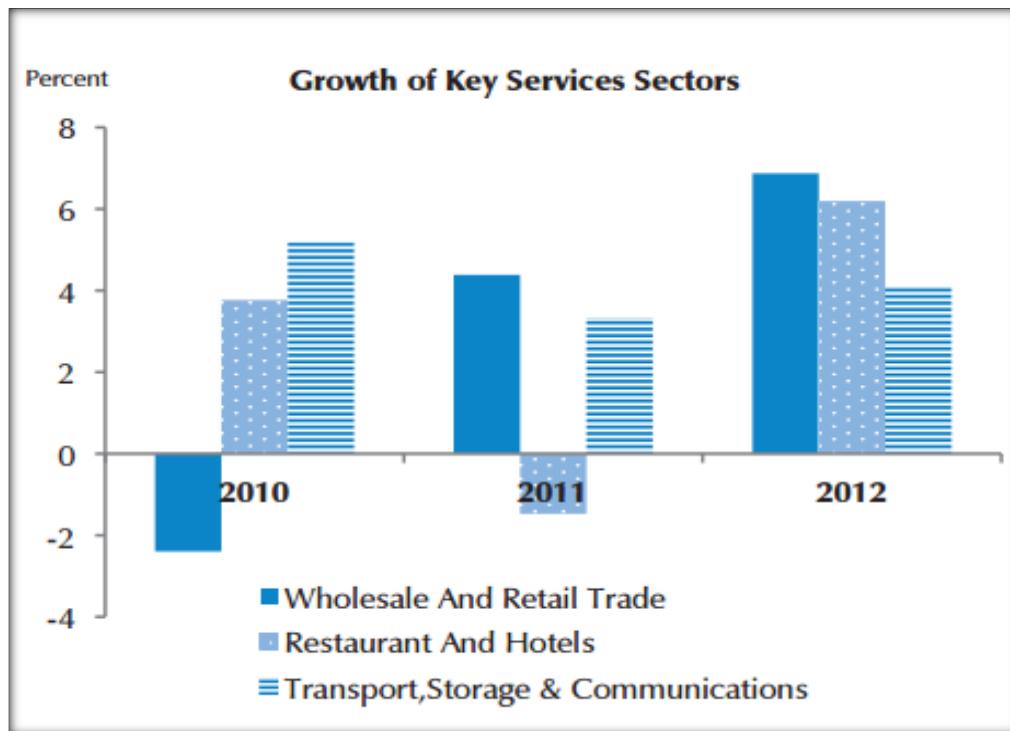
*Source: Fares Alfayez, 2017*

This drop-in tourism has affected the unemployment rate as officially registered at 12 percent (Laub, 2015). Unemployment creates an environment for extremism. The decline in tourism jeopardizes not only the economy; but its political stability. According to the Jordanian

government spokesman at the time, Mohammed Al-Momani, “The instability in the region affected the economic indicators, mainly tourism, as well as foreign direct investment”. Jordan was impacted even before the direct involvement of the Jordanian government in fighting ISIS (Laub, 2015). Once again, as Jordan was forced to be in a region that has high degree of political instability, even extremely attractive destinations have had to suffer from the turmoil.

Unexpectedly, as tourism activities dropped, income in Jordan increased by 15 percent in 2012. This is relatively similar to the 2010 number (World Bank, 2013). This may be due to the Substitution Effect where regional tourism was shifted to Jordan from Syria and Lebanon (World Bank, 2013). Tourists started to realize the political stability in Jordan and that encouraged tourism (Abu- Ghunmi and Larkin, 2016). Moreover, additional medical tourists have arrived in Jordan from Yemen and Libya in 2012 (World Bank, 2013). Although Syrian refugee camps added pressure on public services provided by the country, the World Bank (2013) argues that the Syrian conflict has created a positive impact on Jordan because several service sectors and formal employment have witnessed growth. For example, some of the services sectors that had growth in 2012 right after the war started are: retail trade, restaurants and hotels, and transport and communications (Figure 3.8) (World Bank, 2013).

*Figure 2-11:Tourism & Syrian Refugee growth Support in Key Services Sectors*



*Source: CBJ, World Bank Calculations, 2016*

In addition, Jordan's economy benefited from the Gulf War and the 2003 invasion of Iraq due to the increased demand from the refugees and international aid (Sab, 2014). In fact, Jordan witnessed a crucial economic recovery from the war in Iraq as the real GDP rebounded by approximately 14 percent in 1992 and by 4 percent in the last part of 2003 despite the negative impact on tourism and transportation (Sab, 2014). It is important to note that recovery of such events is possible, but it requires some time to be achieved (Abu-Ghunmi and Larkin, 2016).

Tourism recovery after political turbulences depends on several factors: the economic and institutional development of that nation, the structure of the economy (oil versus non-oil), the length of the war, and the participation of the international community (Sab, 2014). For example,

the international tourism destinations in the Middle East started to recover and brought in an additional 2 million tourists in 2014, after 3 years of low numbers of tourists (World Tourism Organization, 2015). However, the longer the impact, the longer it takes for the tourism industry to recover. In fact, "a quick recovery appears doubtful as neighboring Syria and Iraq sink deeper into violence and ISIS militants continue to control large areas of both countries"(Laub, 2015). The impact of the political turbulence length and the lagged effect are important measurements that require more investigation and discussion.

## 2.5 Research Status and Gaps

Tourism plays a major role in the economy and any drop-in tourism directly affects the economy. As tourism was used to enhanced economic growth, more research in the field occurred (Korstanje and Skoll, 2014). However, there are still a fairly limited number of empirical studies in tourism research. Even the existing ones are mostly focused on the tourism-economic nexus. While economically significant, there has been very limited research on the impact of crime on tourism (Altindag, 2014). In general, tourism analysis studies focus the least on terrorism and political turbulences.

Additionally, the existing tourism studies focus on tourists' motives for choosing a destination, possible solutions for tourists to help minimize their risks, recovery marketing efforts, and safety of a destination. Destination image is poorly investigated (David and Baker, 2014). Due to its strong relationship with a country's image, tourism industry might suffer highly from political instability when perceived as unsafe. Although it has a major effect on tourism decision making, destination image lacks adequate research. Since tourism studies are inconclusive as they do not cover all aspects related to the tourism industry, especially with the

current global challenges, a more in-depth analysis and empirical evidence is needed to prove the relationship between tourism and political turmoil.

In addition, the high volume of tourism studies that have looked at the tourism-economic growth nexus have focused least of all on the Middle East region (Saleh, Assaf, Ihalanayake, and Lung, 2008). The Middle East region that depends highly on tourism is understudied. Moreover, studies that have focused the most on this region have attempted to capture the Spillover Effect but more research using the developing countries as an example is required (Sandler and Enders, 2008). Therefore, an empirical evidence of spillover is required. In fact, the Middle East region is an understudied area that has the potential for the highest growth rates in tourism. Furthermore, no recent studies have been conducted focused on the Middle East region. Most of the empirical research is relatively old and does not cover recent events, including the Syrian War, which has put a huge burden on the international community. Therefore, tourism research needs to be updated with current data and events.

Neighboring countries of politically unstable nations pay the price of proximity. The impact is not limited to one aspect but is numerous and includes socioeconomic effect. It is also argued that in addition to the negative impact, political instability and tourism might have a positive correlation due to a Substitution Effect. Since the empirical evidence is limited and focuses mainly on affected countries, an investigation is essential to provide a solid evidence of the impact on neighboring countries. In addition, both the Spillover and the Substitution Effects are understudied, and limited evidence is provided.

In fact, there is a disagreement on the impact of political turbulences on tourism since it is sometimes seen as it has no impact and other times as it either has positive or negative impact

on the neighboring countries of the affected nations. Evidence is limited on either qualitative case studies or small-sample quantitative studies. In addition, most of the existing studies focus on countries that are going through political instability. Also, there have been limited studies focusing on the Spillover Effect and the Substitution Effect. Moreover, several analysis techniques were used in the research to analyze the impact of international political turbulence on tourism, but Panel Data technique is limited (Ahlfeldt, Franke, and Maennig, 2015).

In summary, Consumer Behavior Theory, Decision-Making Models, and Risky Decision-Making theories are used to form the groundwork of this research. Based on the earlier explained models and theories, this research studies the relationship between political instability (perceived as a risk) and the inbound tourism that depends on the tourists' decision to travel. The choice of the explanatory variables has been influenced by the theory of consumer behavior and the theory of Travel Decision-Making models including demand for travel and activities, Hierarchy of Travel Needs, and demographic and socioeconomic factors of personal perception of travel needs.

Jordan, in particular, is a Middle Eastern nation that sits as a safe island surrounded by war zones. Even though different refugees from both Syria and Iraq have forced changes in Jordan, it is still considered safe. Jordan has several tourism sites for locally oriented travel and others are international destination such as Petra. As tourism is a major driving force in the country, political instability, terrorism, and war in the region has a great impact on the Jordanian economy including tourism. The data of political turbulences and tourism in Jordan seem to suggest that there is a correlation between the two. However, correlation is not causality.

The Middle East region is underrepresented in the tourism research in general and the political instability and tourism research specifically. In addition, the existing empirical research is outdated and does not include recent main instability activities and events such as the Syrian War that is considered a gigantic problem on the global level. Moreover, most of the studies focus on affected countries and ignore the safe adjacent ones. Therefore, there is a lack of evidence regarding the Substitution and Spillover Effects. Political instability impact on tourism decision making was studied mostly using the time series analysis (Arana and Leon, 2008). Although time series method helps capturing the impact of political instability over the years, it does not allow for capturing the effect across countries. On the other hand, Panel Data that is considered advanced econometrics and capture both the cross sectional and time series effects is limited, thus, more investigation using this method is required. This research will study the impact of international political turbulence on tourism in the Middle East region, specifically Jordon using Panel Data Approach.

## Chapter 3

### Methodology

#### 3.1 Research Objectives and Plan

The purpose of this empirical study is to add to the tourism knowledge by examining the international political turbulences correlation with tourism growth using a safe country within the turmoil region. Safe countries within the political turmoil includes countries that are not directly involved with the political turbulences or have internal conflict but might still suffer from being close to such countries in the same region. This study will use the Middle East region that suffers from political instability as an example, and Jordan specifically will be the case study.

The research questions in this study investigates the relationship between political instability and tourism on the country and the regional level. In fact, it aims at providing an evidence for either a positive or a negative relationship based on tourists' travel decision. Moreover, it studies factors that might have an effect on tourists' travel decision as well as investigates the reasons that lead to a Substitution Effect or a Spillover Effect. The research questions are:

1. Is there is a relationship between tourists' travel decision and political instability?
2. Is regional tourism in safe countries from other countries within the same region positively affected by the political turbulences in the region? Does a substitution effect exist?
3. Is international tourism in safe countries from other countries outside the political instability region negatively affected by the political turbulences in the destination region? Does a spillover effect exist?

4. Is there a relationship between extremely attractive destinations (historical and natural heritage) and tourism decision despite the political turbulence?

The methodology and variables of this study come from the existing empirical research and economic and travel theories discussed in Chapter Two. The dependent variables are the number of tourists visiting Jordan by country of origin and the number of tourists by the tourism site in the destination country. The main Independent variables are the number of fatalities in the country of origin, the number of fatalities in the Middle East and North Africa region, the number of fatalities in the Middle East and North Africa region interacted by the countries of the MENA region, and the existence of a conflict of the tourists' country of origin.

In addition, other variables that are used include the Gross National income per capita of the tourists' country of origin, trade between the tourists' country of origin and the destination country, the Gross Domestic Product of the tourists' country of origin, the distance between tourists' country of origin and the destination country, the crime rate in the tourism country, the visa requirement for the tourists' country of origin to visit the destination country, the Royal Jordanian direct flights between the tourists' country of origin and the destination country, the National airline direct flights of the tourists' country of origin to the destination country, the religion of the tourists' country of origin, tourists' region, democracy status of the tourists' country of origin, GDP, Population, and the destination's site type.

The mentioned variables are used to examine the research hypotheses using several countries for the period 2000 to 2016. The study uses the Panel Data analysis specifically the Fixed Effect and the Random Effect techniques. This chapter describes in detail the data sources, the study area, and the variable and measurements included in the study counting the

dependent and independent variables. Moreover, it will discuss the quantitative methods and techniques, and the four research questions and the hypothesis of this study.

### 3.2 Population Sample

The study population constitutes different countries around the world and covers the time period from 2000 to 2016. This relatively long period is ideal since variation can be captured better with longer periods of time. There is a total number of 112 countries in the first model of this study (See Annex A). The sample was selected based on the data availability of the dependent variable (DV). Therefore, other countries are excluded from the sample. In addition, countries with one or more missing observation for the DV were dropped. Furthermore, the case study country, Jordan, was dropped from the study sample due to the nature of the study's hypotheses. Since the study hypotheses focus on international tourism, Jordanian tourists had to be eliminated as the factors and rational that affect their opinion might be different than all other tourists. Thus, the final number of countries used in the study consists of 74 which covers all regions of the world. In addition, there is a total number of 26 sites in the second model of this study. The sample was selected based on the data availability of the dependent variable (DV). Consequently, other sites with no tourism data are excluded from the sample.

### 3.3 Data Sources

This study uses data that comes from different sources. The main data sources include: the Jordanian Ministry of Tourism and Antiquities (MOTA), Uppsala Conflict Data Program (UCDP), Global Terrorism Database (GTD), World Bank Indicators, Center for Systemic Peace (CSP), Jordanian Department of Statistics (DOS), Royal Jordanian (RJ), Ministry of Transport (MOT), and Distancefromto.net website. In addition, while most of the variables are based on the literature including the Dependent Variable (DV) and most of the Independent Variables (IV),

there are some variables that are based on the researcher's interest. The sources of the data used in this research is provided in Table 3.9 and Table 3.11.

### *3.3.1 Jordanian Ministry of Tourism and Antiquities*

The Jordanian Ministry of Tourism and Antiquities provides data about the tourism sector in Jordan. Several data were used from this source including tourists' number of arrivals by country of origin, tourists' number of arrivals by tourism sites in Jordan, and visa requirements.

### *3.3.2 Global Terrorism Database*

The University of Maryland provides the Global Terrorism Database that includes terrorism incidents over a period of time such as the number of fatalities. The database is maintained by the National Consortium for the Study of Terrorism and Responses to Terrorism (START).

### *3.3.3 Uppsala Conflict Data Program*

Uppsala Conflict Data Program is a project developed by the Department of Peace and Conflict Research at the University of Uppsala, Sweden. The database provides violence and conflict datasets in different levels and for a period of time. The database includes dyadic conflicts and one-sided violence that are governmental and non-governmental ones.

### *3.3.4 World Bank Indicators*

World Bank Indicators provide database on the international level. The World Bank is concerned with the development of nations on several factors including welfare, affordability, education, health, transportation, tourism, and economic and urban development. Some of the variables that come from the world bank include Gross Domestic Product (GDP), Gross National Income Per Capita (GNIPC), Consumer Price Index (CPI), and Education Level.

### *3.3.5 Center for Systemic*

The Center for Systemic Peace provides data about the political regimes in the world. The database uses several criteria including the Political regime characteristics and transitions to determine the stability of a country. The data coverage starts from 1800 until 2016. The data obtained from this source includes the status of the country such as democratic, autocratic, or somewhere in between.

### *3.3.6 Jordanian Department of Statistics*

The Jordanian Department of Statistics provide the database on the national level. The data is concerned with the development of the country in all possible aspects. For example, several types of data related to demographics and development are used as indicators. The database includes welfare, housing, education, health, transportation, tourism, and economic and urban development. Some of the variables that come from this database includes trade and crime.

### *3.3.7 World Heritage Center UNESCO*

The World Heritage Center, UNESCO, provides data about the tourism sites that are designated under one of the following criteria: cultural, natural, and mixed. These sites are protected and preserved by UNESCO.

### *3.3.8 Royal Jordanian Airlines and the Jordanian Ministry of Transport*

The Jordanian Ministry of Transport is concerned with all means of transportation systems in Jordan including aviation. In addition, the ministry oversees the Royal Jordanian Airlines, the official Jordanian airlines. The data provided by MOT and the RJ includes the number of arrival and departure flights from/ to Jordan of all airlines including the RJ.

### *3.3.9 Other Data Sources*

Other data sources were used to include the required variables. Distancefromto.net website is a website that provides options for measuring the distance using either straight line or the actual air travel time. The distance can be measured using miles or other units of measurement. In addition, a mix of data sources were used to collect the information regarding the official religion of each country.

### **3.4 Analysis Techniques and Steps**

This study attempts to demonstrate continuity to the theoretical work and provide a new and substantial contribution in the field of tourism. Although several methods were used to measure the political instability impact on tourism, Panel Data is the a more advanced technique (Wooldridge, 2015) and is used in this study. The analysis that included data entry and analysis was done using Excel and Stata.

Policy analysis and program evaluation benefit highly from using Panel Data models to analyze existing relationships (Wooldridge, 2015). Panel Data allows for the track of individuals, in this case countries, over time. The Panel Data regression model is used to study the cross-sectional data with time series data. It allows for many data points that would be useful for the analysis of this study since it has many cross-sectional and time series variables. Therefore, at a certain time (year) several individuals (country) will be observed to catch the individual heterogeneity across countries. This analysis allows us to capture both effects. In other words, Panel Data Analysis will be used because it allows the collection of a cross-sectional data for individuals while investigating the relationships among wide range of variables.

Although it has some complexity, Panel Data has many benefits such as allowing for fixing the possible removed variables issue due to constant variables. Some of our explanatory variables such as distance, education, and site type might not change over time. Panel Data allows the use of Random Effect which controls for time-consistent unobserved factors of each entity. This cannot be done with non-Panel Data. Also, it permits the unobserved effect to be correlated with the explanatory variables in some models and uncorrelated in other models, which gives more than one option based on our data. Usually other models might not allow such correlation. In addition, Panel Data permits an increase of degrees of freedom, estimation of great sample properties, and a decrease of endogeneity to reduce errors (Nunes and Sequeira, 2008). In fact, it provides more explanation through decreasing the multicollinearity and improving the degrees of freedom (Dogru, Sirakaya-Turk and Crouch, 2017). Indeed, higher degree of freedom improves the results of the analysis.

Since the higher degree of freedom means lower standard error, this can generate a better model with a lower P value. With the lower P value < 0.05, we have more statistical power and precision to reject the null hypothesis. Also, the increase of the degree of freedom results in more accurate results and explains more of the variations between individuals. The degree of freedom can be calculated using the following equation:  $DF=N-K-1$  where N equals the number of observations and K is the number of explanatory variables.

In Panel Data, the data can be either Balanced or Unbalanced. In the case of the balanced data, both Unit Root and Co-integration tests are used to ensure that the data meet the requirements of Panel Data and increase the power of the tests. In addition, there are three types of models in Panel Data analysis: Independent Pooled Cross Section Model, Fixed Effect Model, and the Random Effect model. The Independent Pooled Cross Section Model as the name

indicates uses independent sample observations that are randomly picked from the population at several points of time. It is used to increase the sample size and investigate the time effect using year dummies. This model ignores the Panel Data since it has constant coefficients and does not allow for variation, in addition to the existence of heterogeneity bias. The Fixed Effect Model allows each individual to have different  $a_i$  that varies across individuals to capture the unobserved heterogeneity. This helps in illustrating the unexplained time consistent variation in the dependent variable that cannot be clarified by the regressor. The intercept  $a_i$  does not change over time and is also allowed to be correlated with the regressors. In contrast, the Random Effect Model includes  $a_i$  in the error term assuming its independent distribution of regressors not allowing correlation with the regressors. In this model, there is a composite error term and each individual has the same slope. This model allows for including time invariant models such as distance.

Since a variety of options are available when using Panel Data method, based on the existing data several tests can be used to determine the best model to follow in the study as well as the type of estimator. For example, the Breusch and Pagan LM test is used to decide between using Ordinary Least Square Regression (OLS) or Random Effect. In addition, the Hausman test is used to determine the use between Fixed Effect and Random Effect Models. Nevertheless, the two models are true models to achieve the consistency and efficiency properties required for such analysis.

Hence, incorporating political turbulences and tourism data using tourists' arrival numbers will be evaluated using Panel Data. This will be used to examine relationships between the individual countries using the cross-sectional analysis and within each individual/entity using time series. Because other factors could have an impact on the tourism industry, analyzing the

between individuals' effect is important to capture some of these factors. Moreover, since the data is expected to change from year to year and according to the existence of political turbulences, it is important to analyze the data over time.

There are two models in this study. The model selection process for both models started with using several estimation methods and tests. First, Pooled Ordinary Least Square (OLS) was used in both models to achieve the main purpose of the study and to show the stability of the data. However, as the model has limitations, the results of the Pooled OLS are inconsistent and biased (Gujarati, 2003).

Second, Pooled Ordinary Least Square (OLS) and Random Effect Model were compared using the Breusch and Pagan LM test. The Breusch and Pagan LM test determines the significant difference between the true models if it is close to zero or not. The null hypothesis for each model indicates that variances across countries/ sites equals zero. If the result value is close to zero, it means there is no significant difference and OLS should be used.

Third, the Hausman test which is used to choose between Random Effect Model and Fixed Effect Model was conducted. The test determines the significant difference between the true models if it is close to zero or not. If the result value is close to zero, it means there is no significant difference and Random Effect could be used. In general, the analysis uses the Fixed Effect Model if the test is significant and shows significant difference or the Random Effect Model if it is insignificant. The test uses the following equation:

$$(\hat{B}_{RE} - \hat{B}_{FE})' \left( V(\hat{B}_{RE}) - V(\hat{B}_{FE}) \right) (\hat{B}_{RE} - \hat{B}_{FE}) \quad (1)$$

where;

$\hat{B}_{RE}$  = Estimated coefficient for Random Effect

$\hat{B}_{FE}$  = Estimated coefficient for Fixed Effect

V = Covariance

Finally, a comparison was used to illustrate the impact of some major international political turmoil events that have taken place in some parts of the world, especially the MENA region, during the last seventeen years starting from 2000 until 2016. These events include: the 2001 attack on the World Trade Center and the Pentagon on September 11, the 2003 Iraq War and Invasion, the 2010 Arab Spring, the 2011 Egyptian Revolution (January- February), the 2011 Civil Syrian War (March), and the 2014 ISIS terrorism.

### 3.5 Regression Models, Variables, and Hypotheses

Based on the Consumer Behavior Theory, Decision-Making Models, and Risky Decision-Making theories, tourists take into consideration the danger of being victimized when deciding on travel destinations. In general, international tourists are attracted to safe destinations and are not willing to travel overseas due to their fear of terrorism (Sönmez and Graefe, 1998). This provides that tourism is affected by political turbulences and terrorism activities. Therefore, it suggests that there is a relationship among political turbulences, safety, and tourism. While several research studies identified factors that have potential impact on the tourism development, the independent variables were chosen based on the literature review, data availability, and hypotheses validation. It is possible to expand the use of the independent variables to provide essential clarification of the dependent variable (Lewis-Beck, 1980). Therefore, several independent variables were used in this study to examine different phenomena.

### *3.5.1 Regression Model One*

The first model in this study investigates the relationship between political instability and tourism on the country level. In fact, it tries to answer the following questions: Is there a relationship between the political turbulences and tourism in safe countries located within the turmoil region? What are the additional factors that influence the development of tourism? Consequently, this study investigates some factors behind tourists' travel decision by evaluating the impact of the Independent Variables on the number of tourists' arrivals by the country of origin as the Dependent Variable. In addition, it provides an evidence to whether a Substitution Effect or a Spillover Effect coexists and tries to illustrate the reasons behind the emergence of one but the other. The general equation for the Random Effect Model that was used is as the following:

$$Y_{it} = \beta_0 + \beta_1 X_{1,it} + \beta_2 X_{2,it} + \dots + \beta_k X_{k,it} + U_2 D_2 + \dots + U_n D_n + \varepsilon_{it} \quad (2)$$

Where;

$Y_{it}$  = Number of tourists' arrival to Jordan by site (DV)

$\beta_0$  = intercept

$\beta_k$  = Coefficient for explanatory variable

$X_{it}$  = Political Instability and Safety Variables, Socioeconomic Variables, and Country Specification Variables (IV) (time variant variables) (IV)

$U_n$  = Coefficient for (Binary) dummy variable

$D_n$ = Political Instability and Safety Variables, Ease of Travel variables, and Country Specification  
Variables (IV) (time constant variables) (IV)

$$\varepsilon_{it} = \text{Composite error term} = (a_i + e_{it})$$

Political instability is the main independent variable in this study. Tourism research has shown that there is a relationship between political instability and tourism. Therefore, increased terrorism activities decrease tourism receipts (Ajogbeje, Adeniyi and Folarin, 2017). For example, the Arab Spring caused a tremendous decline of tourists' arrivals in some of the Middle Eastern countries (Afonso-Rodríguez and Santana-Gallego). Therefore, the political instability is used in this research to measure the impact on tourism. The number of fatalities in terrorism conflicts and the existence of any type of conflicts will be used as proxies to measure the impact.

On the other hand, tourism was proved to be associated with other factors some of which are used as independent variables in this study. The economic theory proposes that price and income are major determinants of travel decision. Also, the gravity model indicates that a higher income of a tourist results in a higher tourism demand. The GDP measures the level of prosperity in the country and the GNI Per Capita usually measures the quality of life and partially indicates the country's level of development and welfare (World Bank, 2018). Therefore, it is expected that countries with higher GNI Per Capita can afford travelling and this factor increases international tourism. Due to data availability on the international level, the GNI Per Capita that serves the same purpose of the GDP will be used in this model.

According to the Decision-Making Models, tourism demonstrates a correlation with GDP per capita, international trade, and education (Eugenio-Martín, Martín Morales and Scarpa,

2004). Based on the IIT theory, travel decision includes great risk and requires an excessive information investigation and processing. Therefore, on the ground of the Push and Pull Theory, education level affect tourists' perception of risk since with increased level of education, more in depth information is collected during the analysis and process. Moreover, it is assumed that people with higher education have higher income which leads to an increase potential for travel.

In addition, based on the Hierarchy of Travel, several elements are taken into consideration when making a travel decision including cost, safety, proximity and connectivity. In other words, affordability, stability, closeness, and accessibility and linkage are important factors. Affordability is measured using GNI Per Capita and GDP, stability is measured using the number of fatalities and the existence of conflicts, connectivity and linkage is measured by using the Royal Jordanian and direct flights of tourists' country of origin airlines, other than RJ, to Jordan. Proximity is measured using distance and region. The consumer's utility theory and Gravity models theorize that trade, which is one form of tourism, is increased by closer distance between countries, making distance an important variable.

Destinations/ countries facing terrorism are perceived as unsafe which effects tourism. Prospect Theory and risky Decision-Making process indicates that perception of risk is essential for excluding some options after which a best alternative is chosen. It illustrates that socioeconomic factors such as Islam seems to be thought of as a religion that dislike international tourists. Therefore, if the religion of the sending country is different than Islam, fewer tourists will come from that country.

Moreover, physical terrorism, political instability risks, and time risk are taken into consideration when deciding on a trip based on the Risky Decision-Making Theory. For

example, new U.S policy of tourism visa processing requiring higher processing time which results in time risk based on this theory. Although poorly mentioned in the literature, travel procedures such as obtaining a visa or visa fees could influence the tourist's decision as well. In addition, various political regimes have not encouraged tourism growth development (Po and Huang, 2008). Therefore, democratic nations are perceived as safer than autocratic ones.

Moreover, it is argued that when some countries are in the turmoil, all countries in the region are perceived unsafe and tourists stop travelling to the whole region (Neumayer, 2004). This could be true for the tourists coming from outside the region. Therefore, regional Spillover Effects could be related to many reasons such as the geographic distance and/ or the ethnic-religious nature for some countries (Ahlfeldt, Franke, and Maennig, 2015). Due to generalization effect, people tend to assume stereotype behavior for certain groups or people of certain religions.

On the other hand, regions adjacent to political turmoil but are not directly involved or have internal conflict are able to boost tourism receipts due to the Substitution Effect (World Bank, 2013). Tourists tend to look for other destinations regionally that provide the same quality of the targeted tourism destination as they might still want to travel to politically stable countries. Several Mediterranean nations might profit from the Substitution Effect since tourists possibly substitute such destinations for those with political instability/ terrorism (Drakos and Kutan, 2003). Therefore, distance is a major factor in determining the Substitution Effect.

In conclusion, while investigating the relationship between political turbulences and tourism, the stated factors are reasonable to be tested to study the way they impact tourists' travel decision. Therefore, in answering the main research question, the study should also contribute to

answering what factors influence the development of tourism and what factors contribute to the emergence of the Spillover and/or Substitution Effect.

The number of tourists' arrivals to Jordan by country of origin is used as the Dependent Variable. In addition, several independent variables which are either quantitative or qualitative (dummy variables). The quantitative variables include the Number of Fatalities (Fatality), the number of fatalities in the MENA region (MENA), the Number of Fatalities in the MENA Region Interacted with MENA Countries (FatMENA), total Trade (Trade), Gross National Income Per Capita (GNIPC), Education Level (EDUPC), Crime Rate (Crime) in Jordan, and Distance (DIST) between Jordan and other countries. The qualitative variables include Conflict, Region, Religion, Visa, Royal Jordanian Airlines (RJ), Direct Flights to/from Jordan of tourists' country of origin airlines (DFL), Democracy (Democ). The quantitative variables in this research are log transformed. The log transformation is used to provide normal data distribution, reduce the range of variables, and show constant elasticity model (log- log form) (Wooldridge, 2015). Therefore, a percent change in the independent variable results in a percent change in the dependent variable.

The total number of tourists' arrivals to Jordan from their country of origin (**Tourists<sub>it</sub>**) is a quantitative variable that is used as the Dependent Variable. The DV measures the health of the tourism industry and the data for this variable is measured for seventeen years from 2000 to 2016. The tourism data come from MOTA.

On the other hand, the independent variables have either overall variation (both within and between variations) or within entities/ between entities variation. First, the first four variables demonstrate an overall variation that includes both time and individual variations (Fatality<sub>it</sub>, FatMENA<sub>it</sub>, GNI<sub>it</sub>, Trade<sub>it</sub>, and EDUPC<sub>it</sub>). The Number of fatalities (**Fatality<sub>it</sub>**) is a

numerical variable that measures the instability effect. The variable is defined by the GTD as the overall count of associated deaths during a specific event/ attack including victims and aggressors. The Fatality variable is on the country of origin level and is log transformed to show the percent of change. In addition, fatality in the MENA region was interacted with the MENA region countries (**FatMENA<sub>it</sub>**) to measure the impact of the regional political instability on the countries within the region that are visiting Jordan. The Fatality data come from GTD.

The Gross National Income Per Capita (**GNIPC<sub>it</sub>**), defined by the World Bank as the gross national income divided by midyear population, is used. The interval data are in constant 2010 U.S Dollars. It reflects the average income of a country's residents and is used to determine affordability and standards of living. Due to data availability, the GNIPC provides similar results of the median income variable, so it serves as a proxy satisfying the target of explaining the impact of individual income in a country on the tourism decisions. The GNIPC data come from the World Bank Indicators.

Trade (**Trade<sub>it</sub>**) is another interval variable that is used in this study. It is assumed that more trade and exchange lead to an increase in tourism due to the increase in connections and relationships, which lead to elevated business trips and other visits. Trade variable uses the total trade value between the tourism country and the tourists' country of origin. The total trade is defined as the total export plus the total import between two countries for all commodities. The variable was manually adjusted for inflation for all years to have a real value after removing the effect of general inflation. Trade was adjusted for by using the monetary value divided by the Consumer Price Index for Jordan. The Consumer Price Index (CPI) is used to adjust for inflation when using financial measures. The World Bank Indicator define the CPI as "the changes in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or

changed at specified intervals, such as yearly” (World Bank, 2018). The Trade variable is log transformed to show the percent of change. The trade data comes from the Jordanian Department of Statistics.

Tourist’s Education Level variable (**EDUPC<sub>it</sub>**) uses the percent of total working-age population with advanced education. Advanced level of education is defined by World Bank as having a bachelor’s degree or higher for the population in labor force. The data for this variable was obtained through the World Bank Indicators.,

Fatality in the MENA region, crime, and distance are important elements in tourism travel decision. Although they are quantitative variables, they either have a Between or Within variation. Number of fatalities in the Middle East and North Africa (**MENA<sub>i</sub>**) is another numerical variable that has a Between variation and is a time invariant used to measures the instability impact. The variable uses aggregated data on the MENA region level from the Fatality variable discussed earlier. The MENA region was used instead of the Middle East region as it follows the world bank regions. The variable is log transformed to show the percent of change. Both variables’ data come from GTD.

Crime in Jordan (**Crime<sub>t</sub>**) has a Within variation as it is an individual invariant. International tourists are attracted to safe destinations and might avoid travelling to countries/regions with active terrorism events. The Crime rate in Jordan is an interval variable that is used in this study. It measures the safety of the tourism destination. Crime categories that were used are illustrated in Table 3.1. The crime rate was calculated by dividing the total crime numbers for each year by the total population for the same year in Jordan. Then it was multiplied by 100,000 to find the crime rate per 100,000 inhabitants. The Crime variable is log transformed to show the

percent of change. Data for this variable was obtained from the Jordanian Public Security Directorate through DOS.

*Table 3-1: Crime Rate Categories*

<b>Attempted Murder</b>
<b>Intended Murder</b>
<b>Criminal Robbery</b>
<b>Rape</b>
<b>Kidnapping</b>
<b>Sexual Abuse</b>
<b>Criminal Falsification/ forgery</b>
<b>Money Falsification</b>
<b>Heavy Injury</b>
<b>Bribery</b>
<b>Criminal Conspiracy</b>
<b>Others</b>

*Source: DOS, 2017*

Distance (**DIST<sub>i</sub>**), on the other hand, has a Between variation as it is a time invariant. People tend to travel less with longer distance between two countries. Air Distance is a continuous variable that measures the air travel distance in miles. The distance is measured between Jordan and the tourist 's country of origin. The log transformation is used on the distance variable. The Distance variable come from the Distancefromto.net website.

The qualitative variables are factors that might encourage/ discourage tourists' travel decisions as well. These variables include Visa Requirement (Visa<sub>i</sub>), Religion (RELGN<sub>i</sub>), Democracy (Democ<sub>i</sub>), Direct Flights (DFL<sub>i</sub>), Royal Jordanian flights (RJ<sub>i</sub>), and Interior Conflict (Conflict<sub>it</sub>) variables. Although Conflict change over time and between entities (overall), the rest of the qualitative variables are time invariant and have between variation.

Visa (**Visa<sub>i</sub>**) is a qualitative variable. While some countries are required to obtain prior visitation visas, others can just get the visa at the airport which might affect the tourism decision and consideration. A dummy variable is used to show if a visa is needed in advanced. The variable takes the value of one if the country's residents' needs to obtain a visa in advanced and will take the value of zero if no visa is required in advanced (Table 3.2). The data for the dummy variable comes from the Jordanian Ministry of Tourism and Antiquities and the Jordanian Ministry of Interior.

*Table 3-2: Dummy Variable for Visa*

Need to Obtain Visa	1
No need to obtain Visa	0

*Source: Abeer Almughrabi, 2018*

Religion (**Religion<sub>i</sub>**) is a dummy variable that is used to illustrate the impact of religion on tourists' decision to visit a tourism destination. Religion might impact travelers differently and affect their decisions for visiting an international location. The variable takes the value of one if the country is Islamic and takes the value of zero otherwise (Table 3.3). The data comes from different sources based on the country information.

*Table 3-3: Dummy Variable for Religion*

Religion is Islam	1
Religion is not Islam	0

*Source: Abeer Almughrabi, 2018*

Democracy level (**Democ<sub>i</sub>**) is a dummy variable that measures the regime instability effect. The variable is defined by the CSP as institutional democratic if it gains the highest number of points (out of 11 point) and as institutional autocratic if it gains the least number of points. The variable was then coded for the purpose of this study as democratic if > 5 and autocratic otherwise. The variable then takes the value of one if the country is democratic takes a value of zero otherwise (Table 3.4). The data for this variable was obtained from the CSP.

*Table 3-4: Dummy Variable for Democracy*

Country is Democratic	1
Country is Autocratic	0

*Source: Abeer Almughrabi, 2018*

Direct Flights to/ from Jordan by tourists' country of origin airlines (**DFL<sub>i</sub>**) is a qualitative variable. A dummy variable that represents direct flights from/to Jordan of any airline other than Royal Jordanian. The variable takes the value of one if the other airlines flies to the country and takes the value of zero otherwise. (Table 3.5) The data for the dummy variable comes from the MOT.

*Table 3-5: Dummy Variable for Direct Flights*

A country with at least one Direct Flight	1
A country with no Direct Flight	0

*Source: Abeer Almughrabi, 2018*

Royal Jordanian (**RJ<sub>i</sub>**) is a qualitative variable (Table 3.6). It represents the direct flight of the official Jordanian Airline “Royal Jordanian”. A dummy variable is used to show if there is a direct RJ flight from/to Jordan goes to other countries. The variable takes the value of one if the RJ flies to the country and takes the value of zero otherwise. The data for the dummy variable comes from the MOT and RJ.

*Table 3-6: Dummy Variable for RJ Direct Flights*

A country with at least one Direct RJ Flight	1
A country with no Direct RJ Flight	0

*Source: Abeer Almughrabi, 2018*

Interior Conflict (**Conflict<sub>it</sub>**) is a dummy variable that measures the instability effect (Table 3.7). Although it is a dummy, it has an overall variation with time and individuals. The variable is defined by the UCDP as the Incidence of intrastate conflict in all country-years with at least one active conflict. It takes the value of one if the country is directly involved with political turbulences or have internal conflict and takes the value of zero if the country is safe/stable. This variable is another main variable of the study focus. The data for this variable was obtained from the UCDP.

*Table 3-7: Dummy Variable for Conflict*

Conflict Exists	1
No Conflict	0

*Source: Abeer Almughrabi, 2018*

Region (**Region i**) is a categorical variable that is used in this study. The variable is categorized into five regions based on the World Bank regions. Each region was given a number based on its closeness to the Middle East as the following: MENA region 1, Asia 2, Europe 3, Sub-Saharan Africa 4, and US 5 (Table 3.8). The data for the regions was obtained from the World Bank.

*Table 3-8:Categorical Variable for Regions*

MENA	1
Asia	2
Europe	3
Sub-Saharan Africa	4
U.S.	5

*Source: Abeer Almughrabi, 2018*

Based on the previous explanation of the Panel Data analysis, the used equations for this model included two equations: The Fixed Effect and the Random Effect. While the first model includes only continuous variables, the second model includes all variables including continuous, dummy, and time constant variables. Both equations for this model are shown below:

### **Fixed Effects**

$$\ln(\text{Tourists})_{it} = \beta_0 + \beta_1 \ln\text{Fatality}_{it} + \beta_2 \ln\text{MENA}_t + \beta_3 \ln\text{MENA} * \text{ME}_{it} + \beta_4 \text{EDUPC}_{it} + \beta_5 \ln\text{GNIPC}_{it} + \beta_6 \ln\text{Trade}_{it} + \beta_7 \ln\text{Crime}_t + \alpha_i + U_{it} \quad (3)$$

## **Random Effects**

$$\ln(Tourists)_{it} = \beta_0 + \beta_1 \ln(Fatality)_{it} + \beta_2 \ln(MENA_t) + \beta_3 \ln(MENA * ME_{it}) + \beta_4 EDUPC_{it} + \beta_5 \ln(GNIPC_{it}) + \beta_6 \ln(Trade_{it}) + \beta_7 \ln(Crime_t) + \beta_8 \ln(DIST_i) + \beta_9 \ln(Visa_i) + \beta_{10} \ln(Religion_t) + \beta_{11} \ln(Democ_i) + \beta_{12} \ln(DLF_i) + \beta_{13} \ln(RJ_i) + \beta_{14} \ln(Region_i) + \varepsilon_{it} \quad (4)$$

Table 3.9 shows a summary of the variables used in this model. It summarizes the data sources, definition, and the expected relationship between the dependent variable and the independent variables.

*Table 3-9: Definition of Variables Used in Model One*

Variable abbreviation	Definition	Source	Expected sign
	<b>Dependent Variable</b>		
Tourists	Number of Tourist coming to Jordan by country of origin	Ministry of Tourism and antiquities 2000-2016	
	<b>Independent Variables</b>		
	<b>Ease of Travel</b>		
Visa	Visa requirement: need to obtain a visa before visiting Jordan	Ministry of Tourism and antiquities 2000-2016	-
RJ	RJ direct flights from Jordan to other world destinations	Ministry of Transport and RJ 2000-2016	+
DFL	Direct flights of tourists' country of origin airlines to/from Jordan to other world destinations	Ministry of Transport and RJ 2000-2016	+
DIST	Distance between Jordan and tourists' country of origin	Distancefromto.net website	-
Region	World Bank major five regions	World Bank regions 2000-2016	-
	<b>Socioeconomic Variables</b>		
GNIPC	Gross national income divided by midyear population, constant 2010 U.S Dollars	World Bank indicators 2000-2016	+
Trade	Total export plus the total import between two countries for all commodities	DOS 2000-2016	+
	<b>Political Instability and Safety</b>		
Conflict	Incidence of intrastate conflict in all country-years with at least one active conflict	University of Uppsala, Sweden.2000-2014	-
Crime	Total crime in Jordan for each year / total population for same year multiplied by 100,000	DOS 2000-2016	-
Fatality	Total confirmed fatalities for the incident in the country of origin level	Global Terrorism Database 2000-2016	-
MENA	Aggregated number of fatalities in the Middle East and North Africa	Global Terrorism Database 2000-2016	+
FatMENA	MENA region aggregated fatalities was interacted with the MENA region countries	Global Terrorism Database 2000-2016	-
	<b>Country Specification</b>		
Religion	The religion of the tourists' country of origin	Various sources 2000-2016	+
Democracy	The political regime of the tourists' country of origin	Center for systemic of peace 2000-2016	+
EDUPC	Tourist's Education Level uses the percent of total working-age population with advanced education	World Bank Indicators 2000-2016	+

*Source: Abeer Almughrabi, 2018*

There are three hypotheses in this model. While the null hypothesis ( $H_0$ ) suggests that there is no relationship between the independent variable and the DV, the alternative hypothesis ( $H_a$ ) provides that there is a relationship once the null hypothesis is rejected. Therefore, the null hypothesis is ( $H_0: \beta = 0$ ) and the alternative hypothesis is ( $H_a: \beta \neq 0$ ). However, before indicating the hypotheses, it is reasonable to clarify the assumptions used to build these hypotheses.

1. There is a positive relationship between tourism and tourists', GNI Per Capita, Trade, RJ, DFL, and Democracy despite the political turbulence.
2. There is a negative correlation between tourists' travel decision and visa requirement, geographic distance between tourists' country/ region and the tourism destination, and Islamic religion.
3. The Substitution Effect occurs when tourists' country of origin has a similar religion to the tourism destination's country/ region and when tourists come from the same region as well.
4. The Spillover Effect occurs when tourists' country of origin has different religion than the tourism country/ region and is located in different region other than the turmoil one and is located within significant geographic distance.

Model One (Equation 3 and 4) should answer the following null hypotheses  $H_0$ :

1. There is no correlation between tourists' travel decision and political instability.
2. Regional tourism in countries adjacent to political turmoil but are not directly involved or do not have internal conflict themselves (such as the Middle East and North Africa region) is negatively affected by the political turbulences in the region.

3. International tourism from outside the region taking place in countries adjacent to political turmoil but are not directly involved or do not have internal conflict themselves are positively affected by the political turbulences in the region.

### *3.5.2 Regression Model Two*

The second model used in this study focuses on explaining the effect of site image and attractiveness on tourists' decision-making process. The literature stresses the importance of this factor in travel decision made by tourists. In fact, the Push and Pull Theory theorizes that external factors that affect tourism decision includes destination attractions such as climate, beaches, culture, or history. Therefore, a tourism site image and attractiveness might affect the decision of tourists as they might still travel there despite the political turmoil (Altindag, 2014). Tourism demand is increased with extremely attractive destinations such as historical and natural heritage (Saha and Yap study, 2013). On the other hand, other studies show similar results regardless of site attractiveness. The perception of risk and safety are important factors for a destination image (Qi, Gibson and Zhang, 2009), as theorized by the Theory of Risky Decision. Consequently, tourists might consider such a destination as unsafe and alter their decision to visit it. Thus, this model answers the following research question: Is there a relationship between extremely attractive destinations (historical and natural heritage) and tourism decision despite the political turbulence? The Random Effect Model used in this research uses the general equation as the following:

$$Y_{it} = \beta_0 + \beta_1 X_{1,it} + \beta_2 X_{2,it} + \dots + \beta_k X_{k,it} + U_2 D_2 + \dots + U_n D_n + \varepsilon_{it} \quad (5)$$

Where;

i= Site, i=1, ...., 26

t= time (yr), t=2000,...., 2016

$Y_{it}$  = Number of tourists visiting Jordan by site (DV)

$\beta_0$ = intercept

$\beta_k$  = Coefficient for explanatory variable

$X_{it}$ = Political Instability and Safety Variables and Socioeconomic Variables (IV)

$U_n$ = Coefficient for (Binary) dummy variable

$D_n$ = Site Type Variable (IV)

$\varepsilon_{it}$  = Composite error term =  $(a_i + e_{it})$ ;

Since Model One explains the relationship between different countries and Jordan but does not go to the site level, the second model that explains the tourists' arrival numbers in Jordanian sites is used as this variance is important to include. The model uses the tourism sites in Jordan as the unit of analysis. There are about 26 tourism sites in Jordan used in this study. The total number of tourists' arrivals to every Jordanian site is examined and tourism in different sites is compared. Also, tourism site type using UNESCO World Heritage Sites and UNESCO World Natural Wonders is used as a proxy. This is used to determine the attractiveness of the site to provide evidence of image impact on tourist decision.

Tourists arrivals in Jordan by destination site is used as the Dependent Variable. In addition, several independent variables which are either quantitative (integers) or qualitative

(dummy variables) are used. The quantitative variables include World Aggregated Number of Fatalities (Fatality), GDP, and Population (POP). In addition, the qualitative variables include site type (Sitetype).

Tourists (**Tourists<sub>it</sub>**) is a quantitative variable that is used as the Dependent Variable. The DV that measures the health of the tourism industry using the number of tourists' arrivals to Jordan by each tourism site. The data for this variable is measured for seventeen years from 2000 to 2016. The log transformation is used on this variable to determine the percent change. The tourism data come from MOTA.

The site type (**Sitetype<sub>i</sub>**) is a dummy variable used to identify the effect of the site attractiveness on tourism in Jordan. This variable has a Between variation due to time constant nature. If the tourism destination is a UNESCO World Heritage Site and/or UNESCO World Natural Wonder, then the site will be considered attractive (Table 3.10). The variable takes the value of one if the site is a UNESCO World Heritage Site and/or UNESCO World Natural Wonder and takes the value of zero otherwise. The tourism data was collected from the World Heritage Center UNESCO.

*Table 3-10: Dummy Variable for Site Type*

UNESCO World Heritage Site and/or UNESCO World Natural Wonder	1
Otherwise	0

*Source: Abeer Almughrabi, 2018*

On the other hand, with exclusion to the (SiteType) variable, all other independent variables demonstrate Within variation where they change over time but not between sites ( $\text{FatWorld}_t$ ,  $\text{GDP}_t$ , and  $\text{POP}_{it}$ ).

World Number of fatalities (**FatWorld<sub>t</sub>**) is a numerical variable that measures the instability effect. The variable is defined by the GTD as the overall count of associated deaths during a specific event/ attack including victims and aggressors. The Fatality variable is aggregated on the world level and then log transformed to show the percent of change. The Fatality data come from GTD.

The Gross Domestic Product (**GDP<sub>t</sub>**), defined by the World Bank, 2018 as “the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources”. The interval data are in constant 2010 U.S Dollars. It reflects country’s level development. The GDP data come from the World Bank Indicators.

Population (**POP<sub>t</sub>**) is another interval variable that is used in this study. It is assumed that population growth leads to an increase in tourism due to the domestic tourism. The population variable uses the total number of populations in Jordan for every year between 2000 and 2016. The population data comes from the Jordanian Department of Statistics.

Table 3.11 shows a summary of the variables used in model two. It summarizes the data sources, definition, and the expected relationship between the dependent variable and the independent variables.

*Table 3-11: Definition of Variables Used in Model Two*

Variable Abbreviation	Definition	Source	Expected Sign
	<b>Dependent Variable</b>		
Tourists	Number of Tourist coming to Jordan by tourism site	Ministry of Tourism and antiquities 2000-2016	
	<b>Independent Variables</b>		
	<b>Site Image</b>		
Site Type	UNESCO World Heritage Site and/or UNESCO World Natural Wonder	World Heritage Center UNESCO 2000-2016	+
	<b>Socioeconomic variables</b>		
GDP	Gross Domestic Product constant 2010 U.S Dollars	World Bank indicators 2000-2016 2000-2016	+
POP	Total number of populations in Jordan for every year	Jordanian Department of Statistics 2000-2016	+
	<b>Political instability and Safety</b>		
FatWorld	Total confirmed fatalities for the incident on the world aggregated level	Global Terrorism Database 2000-2016 2000-2016	+

*Source: Abeer Almughrabi, 2018*

There is one hypothesis in this model. While the null hypothesis ( $H_0$ ) suggests that there is no relationship between the site type and the tourism numbers per site, the alternative hypothesis ( $H_a$ ) provides that there is a relationship between the two. Therefore, the null hypothesis is ( $H_0: \beta = 0$ ) and the alternative hypothesis is ( $H_a: \beta \neq 0$ ).

Model Two (Equation 6 and 7) should answer the following null hypothesis  $H_0$ :

1. There is a negative relationship between extremely attractive destinations (historical and natural heritage) and tourism due to the world political turbulence.

Based on the previous explanation of the Panel Data analysis, the used equations included two models: The Fixed Effect and the Random Effect. Both equations for this model are shown below:

### **Fixed Effect**

$$\ln(Tourists)_{it} = \beta_0 + \beta_1 \text{Sitetype}_i + \beta_2 \ln\text{Fatality}_{it} + \beta_3 \text{Sitetype} * \ln\text{Fatality}_{it} + \beta_4 \ln\text{GDP}_{it} + \beta_5 \ln\text{Pop}_{it} + \alpha_i + U_{it}^{**} \quad (6)$$

### **Random Effect**

$$\ln(Tourists)_{it} = \beta_0 + \beta_1 \text{Sitetype}_i + \beta_2 \ln\text{Fatality}_{it} + \beta_3 \text{Sitetype} * \ln\text{Fatality}_{it} + \beta_4 \ln\text{GDP}_{it} + \beta_5 \ln\text{Pop}_{it} + \varepsilon_{it}^{**} \quad (7)$$

\*\*The interaction effect is used to test the political turbulence impact on the site type (UNESCO).

In conclusion, using the previous two models to investigate the relationship between the dependent and independent variables should assist in answering the main research question that examine the relationship between international political turbulences and tourism growth. Based on the research design including the quantitative methods and techniques, the statistical tests, and the four research questions and hypotheses, this study concentrates on countries within the political turmoil which are not directly involved with the political turbulences or have internal conflict. The independent variables that are derived from the economic and travel theories and the literature review are used to examine the research hypotheses using about 112 countries for the period 2000 to 2016 in the first model. However, each model (Fixed Effect or Random Effect) includes a different number of countries based on the missing data and dropped variables. On the other hand, 26 sites were used in the same time period for the second model. Building the models went through a series of vetting stages until the best model was found. Therefore, the two chosen models are considered the best fit to utilize the available data and methods in order to answer the main research question.

## Chapter 4

### Results and Discussion

*“Tourism and Terrorism know no borders”* (Mansfeld, Y., and Pizam, A. (Eds.), 2006).

In this chapter the results of running the two models discussed in the methodology chapter are explained. In addition, the chapter includes an analysis discussion of the result and their relationship to the hypotheses. However, before displaying the models, it is important to discuss the tests used during the model choosing process in order to attain the best appropriate models.

#### 4.1 Statistical Tests: Independent Variables Selection (Model One)

##### 4.1.1 *Summary of Statistics*

The summary of statistics includes descriptive statistics of the dependent variable as well as the independent variables for the sample used in this study. Table 4.1 shows the number of observations, the mean value, the standard deviations, the maximum and minimum values of the variables. The number of tourists visiting Jordan by country of origin is the dependent variable with a mean of (0.48) and a (1.92) standard deviation. It has a minimum value of (0.00) and a maximum value of (2,500,000). This shows that tourism in Jordan is different from one country to another and varies by year with a significant variation.

As for the independent variables, all the integer explanatory variables have variations although they have different means. The number of fatalities in the tourists' country of origin has a mean of (135.88) with a (731.94) standard deviation. The minimum value for fatalities is (0.00) and the maximum value is (13,079.00). This indicates the large number of fatalities and a substantial variation between countries. In comparison, the number of fatalities in the Middle

East and North Africa has a mean of (5,325.76) with a (5,976.02) standard deviation. The minimum value for fatalities in the MENA is (591.00) and the maximum value is (19,074.00). Again, this variable shows variation between the number of fatalities in the MENA region. However, the minimum number of ME fatalities is higher than the mean of the country level fatalities. Although the total observations for all variables are between 1648 and 1681, only the GNI Per Capita has a smaller number of observations at 1377 due to the availability of data.

*Table 4-1: Summary of statistics*

Variables	Obs	Mean	Standard Deviation	Minimum	Maximum
TOURISTS*	1681	0.48	1.92	0.00	25.00
Fatality	1669	135.88	731.94	0.00	13,079.00
MENA	1681	5,325.76	5,976.02	591.00	19,074.00
GNIPCA*	1377	0.21	0.22	0.00	132,755.00
TRADE**	1681	142.00	340.00	0.00	3,700.00
DISTMILES	1681	2,831.43	2,242.88	88.34	10,046.70
VISA	1681	0.22	0.41	0.00	1.00
RELGN	1681	0.33	0.47	0.00	1.00
DEMOC	1648	0.63	0.48	0.00	1.00
DLF	1681	0.24	0.43	0.00	1.00
RJ	1665	0.35	0.48	0.00	1.00
Region	1681	2.70	1.18	1.00	5.00

\*Explanatory variable divided by 100,000

\*\* Explanatory variable divided by 1000,000

*Source: Abeer Almughrabi*

#### 4.1.2 Multi-collinearity Test (*VIF*)

The Variance Inflation Factor is a multi-collinearity test that investigates the existence of collinearity and perfect collinearity among variables. If the multi-collinearity increases, the model becomes unstable and the errors increase and become inflated. In general, the VIF should not exceed 10 and the 1/VF should be less than 0.1. In this model, as shown in table 4.2 there is no multicollinearity between the variables. In general, the VIF values ranges from (1.07) and (3.11) with a mean of (1.98).

*Table 4-2: VIF Test*

Variable	VIF	1/VIF
LnFatality	1.84	0.542384
LnMENA	1.07	0.937441
FatMENA	2.02	0.493949
LnGNIPC	3.11	0.321221
Lntrade	2.16	0.463168
LnDIST	1.77	0.566319
Visa	2.19	0.457172
Relgn	2.18	0.458791
Democ	1.85	0.540542
DLF	1.91	0.524516
Rj	1.41	0.708431
Region	2.29	0.436181
Mean	1.98	

*Source: Abeer Almughrabi*

#### 4.1.3 Pearson Correlation

A Pearson correlation is used to measure the correlation between all variables. It is another test that is used to investigate the collinearity issue in more depth. A correlation is considered high if the value is between of +0.70 to 1.00 or -0.70 to -1.00. In this case, the correlated variables have to be dropped from the model. The correlation matrix for this study

provides that no variables are highly correlated as shown in Table 4.3. In fact, the Pearson correlation coefficients of the fist model starts at (0.0012) and the highest is (0.6481) regardless of the sign. The sign indicates the direction of the relationship if it was positive or negative one. Therefore, there is a moderate correlation among all the variables and no multi-collinearity exists.

*Table 4-3: Pearson Correlation Matrix*

	Fatality	MENA	FatMENA	GNIPC	Trade	DIST	Visa	Religion	Democ	DLF	RJ	Region
Fatality	1											
MENA	0.1373	1										
FatMENA	0.384	0.1065	1									
GNIPC	-0.4626	0.0709	0.0706	1								
Trade	0.0414	0.1365	0.2754	0.364	1							
DIST	-0.0562	-0.0267	-0.5427	0.0351	-0.1225	1						
Visa	0.4587	-0.0119	0.0153	-0.6481	-0.2409	0.0048	1					
Reign	0.1755	0.0085	0.3069	-0.3908	0.0429	-0.4002	0.2758	1				
Democ	-0.1269	0.0218	-0.3316	0.2992	0.0719	0.2502	-0.3038	-0.6166	1			
DLF	-0.0291	0.012	0.4583	0.2535	0.4651	-0.3543	-0.1325	0.2444	-0.1691	1		
RJ	-0.1273	-0.0024	-0.1168	-0.0533	-0.0454	0.0769	-0.1365	-0.0731	0.0037	-0.2719	1	
Region	-0.2002	-0.0248	-0.5882	-0.0054	-0.2929	0.4736	-0.0012	-0.4024	0.422	-0.344	-0.0966	1

*Source: Abeer Almughrabi*

#### 4.1.4 Normality Test

##### 4.1.4.1 Shapiro-Wilk W test for Normal Data

The null hypothesis for the Shapiro-Wilk W normality test indicates that the sample in the study model is normally distributed. The P value is used to measure the significance level that is required to be more than 0.05. According to the normality test, the P value is less than the significant level (Table 4.4). Therefore, we are able to reject the null hypothesis that the data was normally distributed. In general, this indicates that more investigation is required for the effect of

the size since the large sample could lead to the inflated result. The effect size tests that are used include the Q-Q Plot, the P-P Plot, and the Kernel Density Estimates.

*Table 4-4: Shapiro-Wilk W test for Normal Data*

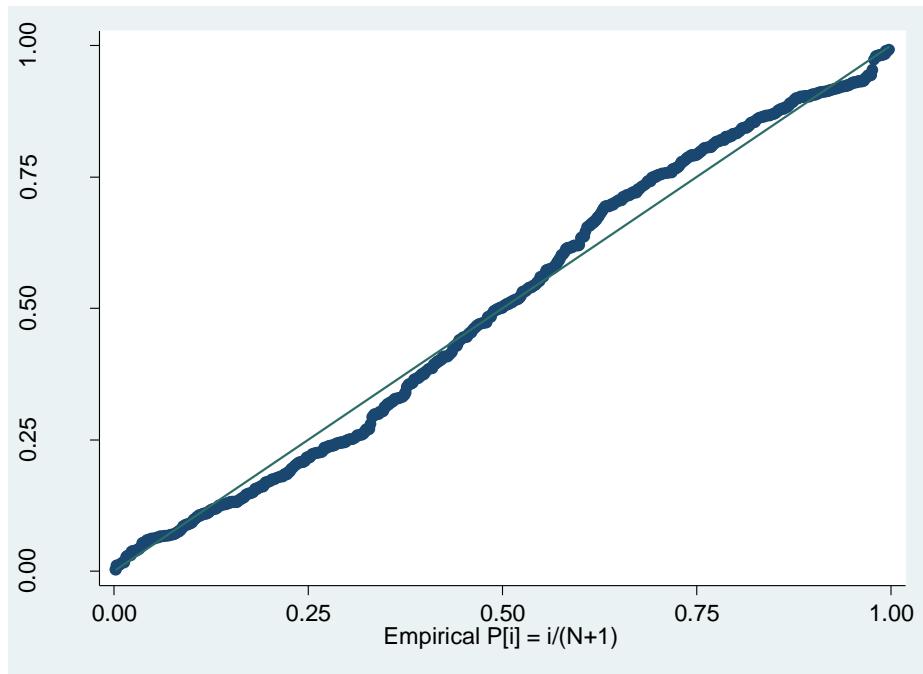
Variable	Obs	W	V	Z	Prob>z
LnTourists	1,670	0.99766	2.359	2.169	0.01505
resid3	516	0.98326	5.793	4.229	0.00001

*Source: Abeer Almughrabi*

#### 4.1.4.2 P-P and Q-Q plot tests for Normal Data

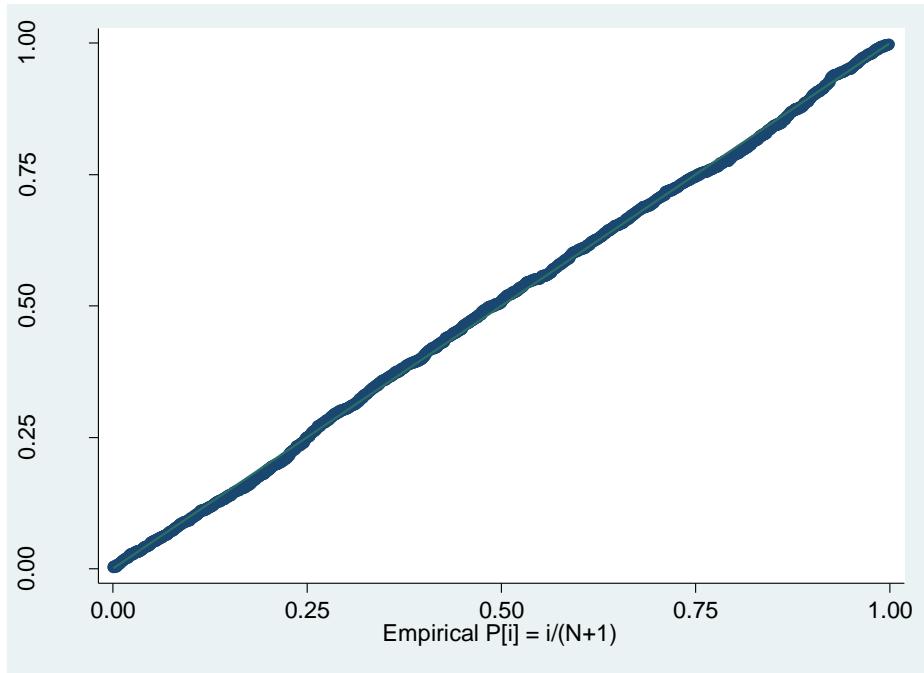
The standardized normal probability is measured using the P-P plot. On the other hand, the Q-Q probability plot uses quantiles of a variable compared to quantiles of a normal distribution. While the first test measures the normality of data in the middle range, the later one measures the normality close to tails. Graph 4.1 shows a small deviation from normality for the residual. The deviation is in the upper and lower range of the middle of the data. Moreover, graph 4.2 indicates that a normality issue appears at the upper tail. However, the deviation from normality appears to be minimal. On the other hand, the P-P plot for the dependent variable shows a normal distribution but the Q-Q plot shows a slight deviation at both tails (Figure 4.3 and 4.4). Therefore, it is safe to assume that the value data indicates that it is normally distributed.

*Figure 4-1:P-P Normality Test for Residual*



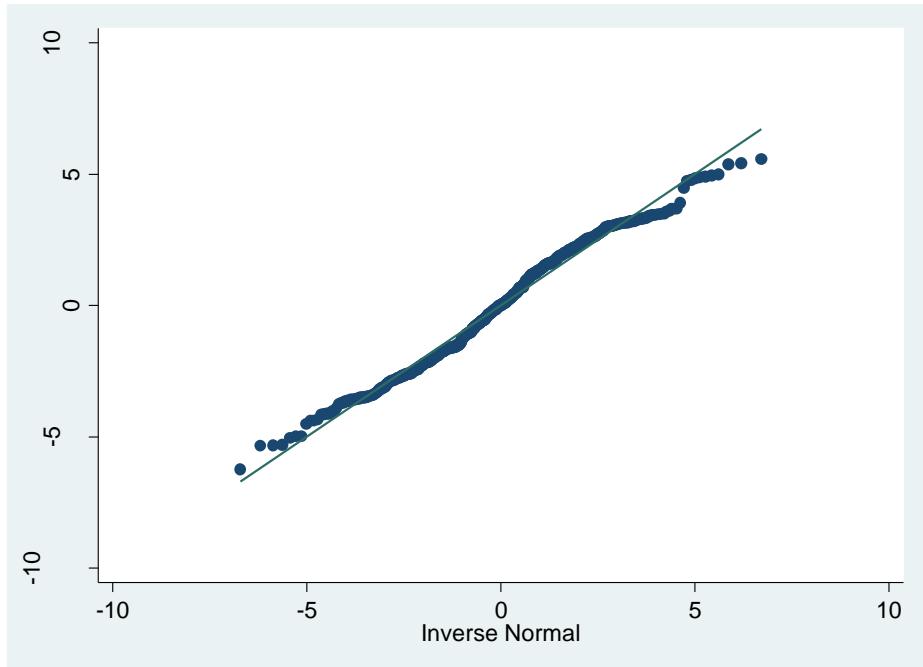
*Source: Abeer Almughrabi*

*Figure 4-2:P-P Normality Test for Dependent Variable*



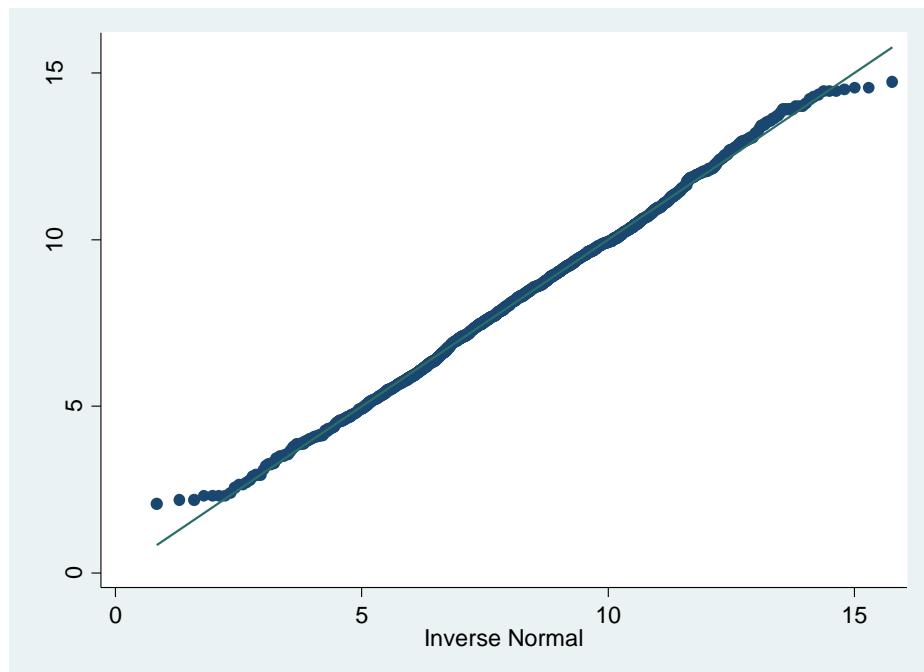
*Source: Abeer Almughrabi*

*Figure 4-3: Q-Normality Test for Residual*



*Source: Abeer Almughrabi*

*Figure 4-4: Q-Q Normality Test for Dependent Variable*

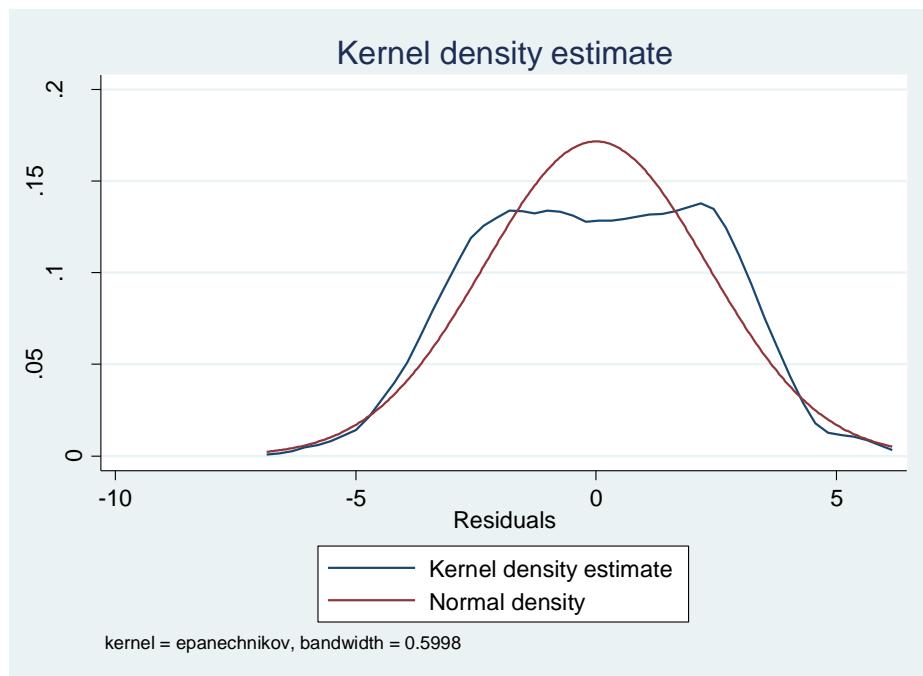


*Source: Abeer Almughrabi*

#### 4.1.4.3 Kernel Density estimate

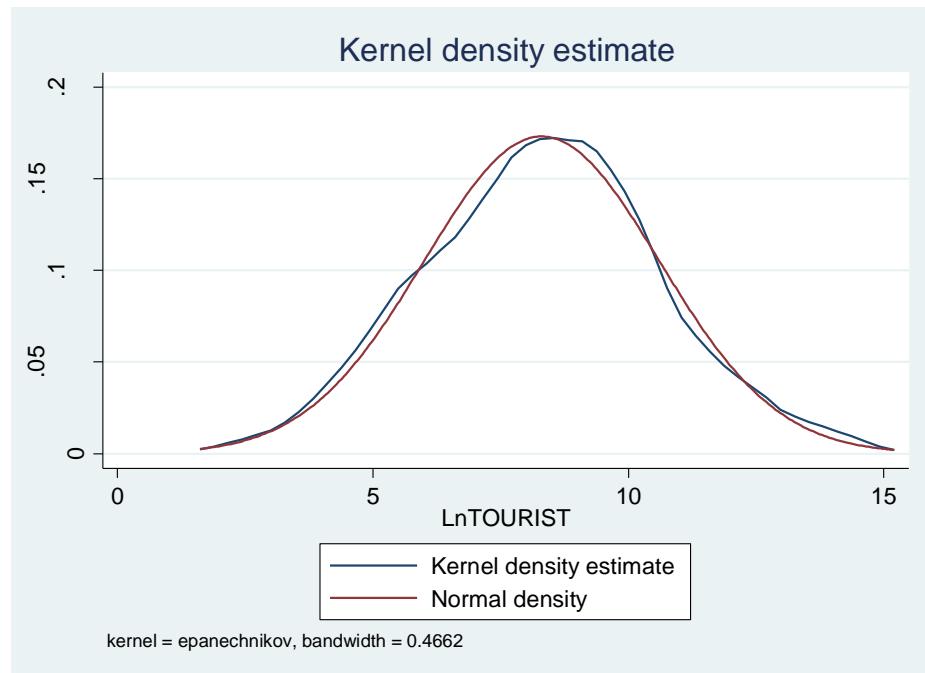
The Kernel Density estimate are used to show the normal density on the plot. While the residual plot shows an up normal distribution (Figure 4.5), the dependent variable plot shows a slight deviation which can be considered normal (Figure 4.6). The residual plot also shows that more frequencies surrounding the center frequency while the residual is distributed on a flat wider area.

Figure 4-5:Kernel Normality Test for Residual



Source: Abeer Almughrabi

*Figure 4-6:Kernel Normality Test for Dependent Variable*

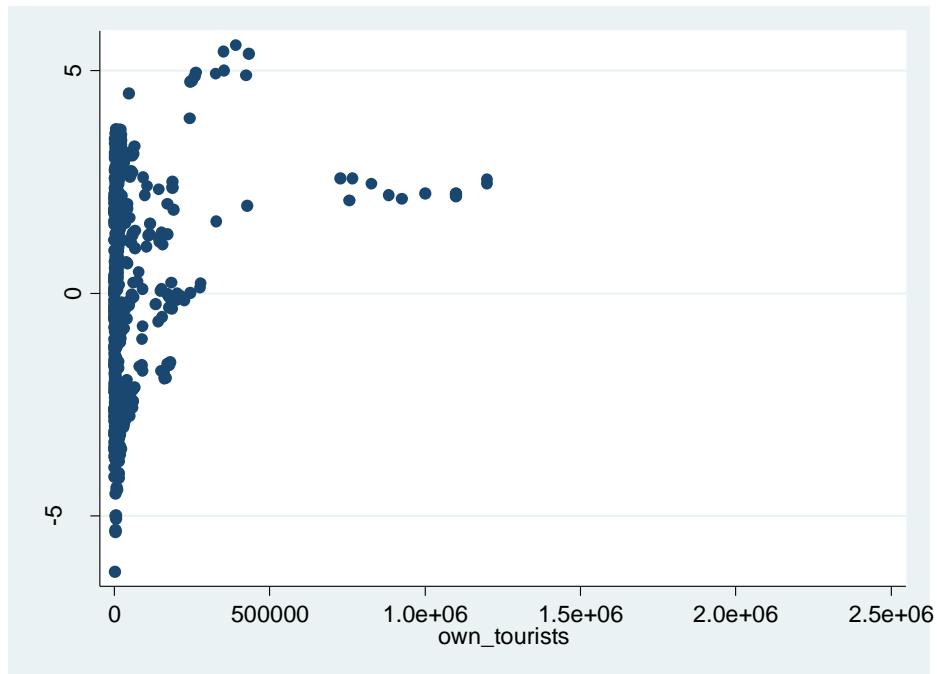


*Source: Abeer Almughrabi*

#### 4.1.5 Homoscedasticity Test

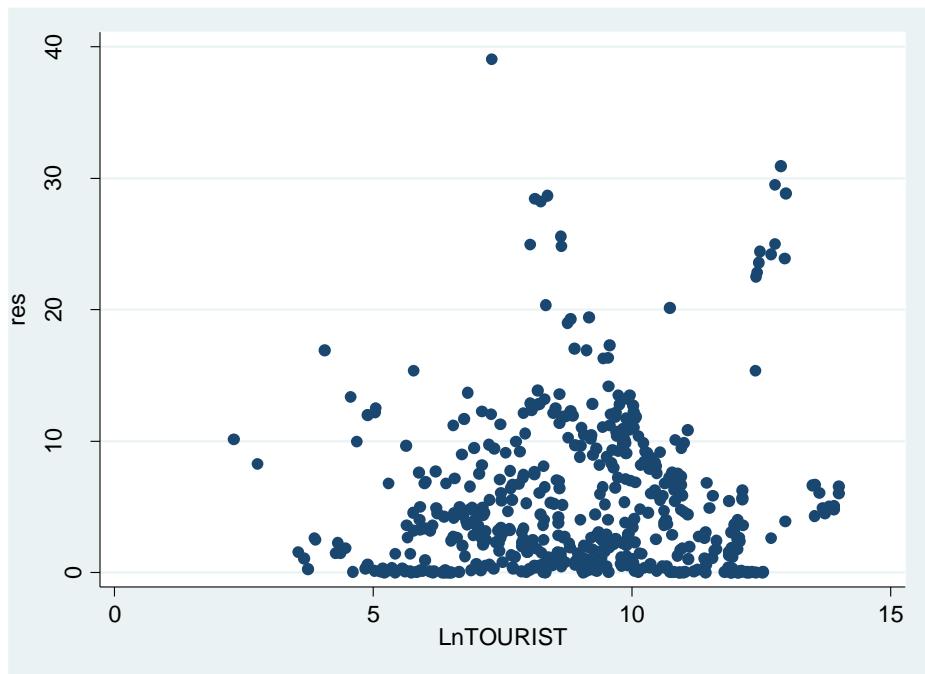
The homoscedasticity test is used to test for the linear relationship between the variables. If the variance of the error term is not constant and equally distributed, then there is a heteroscedasticity issue. In addition, the pattern should not be funneled, fanned, or curved, otherwise heteroscedasticity exists. The error term for this model is not randomly distributed so it violates the homoscedasticity assumption as shown in Figure 4.7. Therefore, since the linear regression is not adequate for the data in this model, the natural logarithm transformation was used to fix the heteroscedasticity issue as shown in Figure 4.8. Then, since heteroscedasticity still exists, a robust that produces consistent standard errors was used to fix the data linearity as well Figure 4.9.

*Figure 4-7:Homoscedasticity Test for Dependent Variable*



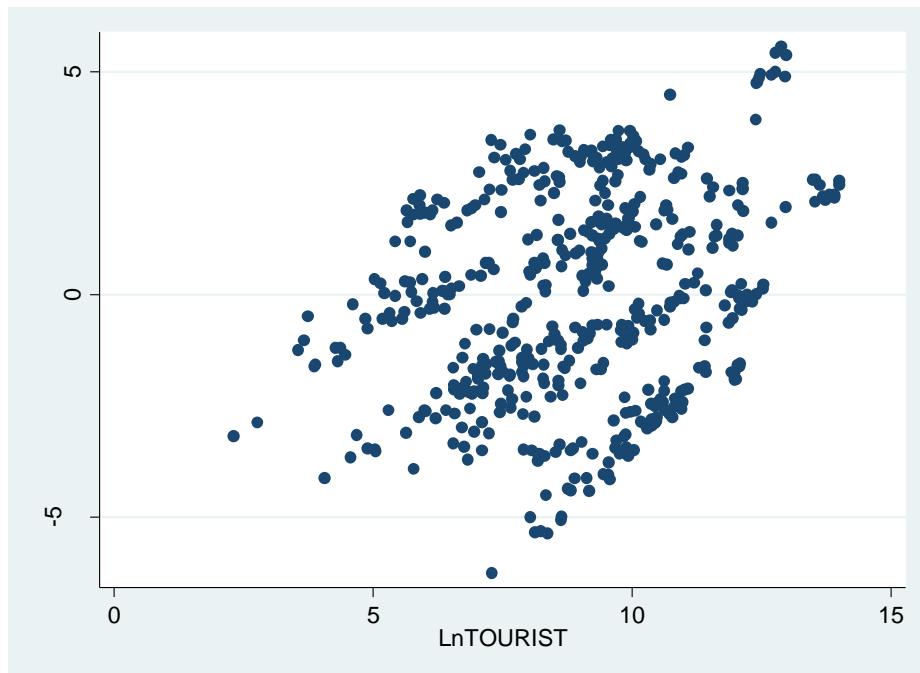
*Source: Abeer Almughrabi*

*Figure 4-8:Homoscedasticity Test for Log Transformed DV*



*Source: Abeer Almughrabi*

*Figure 4-9:Homoscedasticity Test for Robust Transformed DV*



*Source: Abeer Almughrabi*

## 4.2 Statistical Tests: Independent Variables Selection (Model Two)

### 4.2.1 Summary of Statistics

The summary of statistics includes descriptive statistics of the dependent variable as well as the independent variables for the sample used in this model. Table 4.5 shows the number of observations, mean value, standard deviations, maximum and minimum values of the variables. The number of tourists visiting Jordan by site is the dependent variable with a mean of (105,095) and a (133,190) standard deviation. The minimum value is (638) and the maximum value is (975,285). This shows that tourism in Jordan is different from one site to another and from one year to another. As for the independent variables, all the integer explanatory variables have variations although they have different means. The natural logarithm of the number of fatalities in the world has a mean of (9.3) and a (0.8) standard deviation. The minimum value is (7.9) and the maximum value is (10.6). In comparison, GDP has a mean of (24,100) and (5,410) standard deviation. The minimum value is (14,300) and a maximum value of (30,800) since it is a dummy variable. In addition, although the total number of observations for all variables is 348, there is a variation between the variables indicated by the mean and other statistics.

*Table 4-5: Summary of statistics*

Variable	Obs	Mean	Std. Dev.	Min	Max
Tourists	348	105,095.10	133,190.50	638.00	975,285.00
Sitetype	348	0.13	0.33	0.00	1.00
Ln_FatWorld	348	9.29	0.80	7.88	10.61
Gdp*	348	24,100.00	5,410.00	14,300.00	30,800.00
Population	348	7,093,563.00	1,662,481.00	4,857,000.00	9,798,000.00

\* Explanatory variable divided by 1000,000

Source: Abeer Almughrabi

#### 4.2.2 Multi-collinearity Test (*VIF*)

The Variance Inflation Factor is used to capture the multi-collinearity among variables. Table 4.6 shows that the variables have a high level of multi-collinearity. The VIF for the interaction term world fatality and the site type is highly elevated at around (134) for each one of these variables. Therefore, with such a high collinearity, a Pearson correlation matrix is needed to identify the collinear variables. In addition, the model needs to be adjusted since it is considered unstable. Table 4.7 shows the adjusted model based on the correlation matrix. Therefore, the variable that is highly correlated was dropped from the model. The new VIF for the new model shows that no multi-collinearity exists.

*Table 4-6: VIF Test Model 2*

Variable	VIF	1/VIF
Fatalitywsite	134.44	0.007438
Sitetype	134.06	0.00746
LnGDP	9.77	0.102367
LnPop	7.93	0.126032
In_FatWorld	4.22	0.236871
Mean VIF	50.54	

*Source: Abeer Almughrabi*

*Table 4-7: VIF Model 2 Adjusted*

Variable	VIF	1/VIF
Sitetype	1	0.996693
Ln_FatWorld	4.48	0.223194
Year		
2001	1.52	0.657932
2003	2.21	0.453321
2010	1.67	0.600422
2011	1.62	0.61542
2014	2.11	0.474453
Mean VIF	1.79	

*Source: Abeer Almughrabi*

#### *4.2.3 Pearson Correlation*

A Pearson correlation is used to measure the correlation between all variables in model two. The correlation matrix indicates that some variables are highly correlated as shown in Table 4.8. First, the total number of world fatality is correlated with GDP and population at (0.8559) and (0.8422), respectively. Moreover, the world fatalities by site type are correlated with site type at (0.9957). Finally, the GDP and the total population are correlated at 0.8603. Therefore, there is multiple high correlations among the model's variable; consequently, an adjustment of the model is required. Based on the correlation matrix, highly correlated variables were dropped from the model. Table 4.9 shows the new model that has no correlation between the variables.

*Table 4-8: Pearson Correlation Matrix Model 2*

	Tourists	Sitetype	LnFatWorld	Fatwsite	gdp	Population	Refugees
Tourists	1						
Sitetype	0.3453	1					
	0.000						
LnFatWorld	-0.0136	0.025	1				
	0.8009	0.6416					
Fatwsite	0.3428	<b>0.9957</b>	0.0586	1			
	0.000	0.000	0.2757				
GDP	0.0589	0.0281	<b>0.8559</b>	0.0565	1		
	0.2733	0.6008	0.000	0.2932			
Population	0.0402	0.0317	<b>0.8422</b>	0.0606	<b>0.8603</b>	1	
	0.4544	0.5552	0.000	0.2596	0.000		
	0.1071	0.6726	0.000	0.3467	0.000	0.000	0.1071

*Source: Abeer Almughrabi*

*Table 4-9: Pearson Correlation Matrix Model 2 Adjusted*

	LnTourists	Sitetype	In_FatWorld
Tourists	1		
Sitetype	0.176	1	
	0.001		
In_FatWorld	-0.0739	0.025	1
	0.1692	0.6416	

*Source: Abeer Almughrabi*

#### 4.2.4 Normality Test

##### 4.2.4.1 Shapiro-Wilk W test for Normal Data

According to the Shapiro- Wilk W normality test, the P value for model 2 is less than the significant level 0.05 (Table 4.10). Therefore, we fail to reject the null hypothesis that the data was normally distributed. Although the natural logarithm was used to normalize the data, it was still not normally distributed. Therefore, more investigation using the effect of the size tests is needed.

*Table 4-10: Shapiro-Wilk W test for Normal Data*

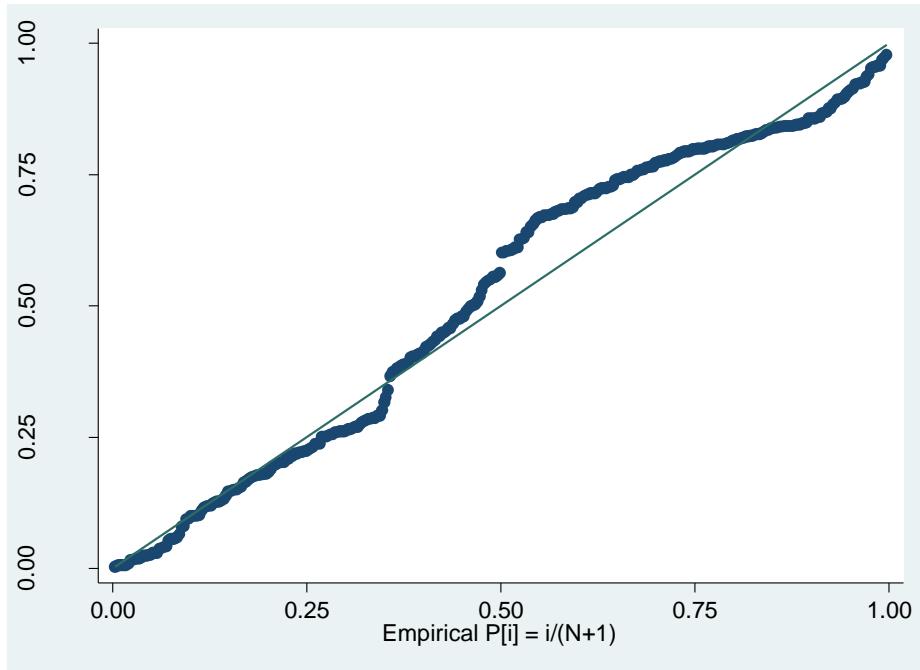
Variable	Obs	W	V	Z	Prob>z
Lntourists	348	0.95974	9.786	5.392	0
resid3	348	0.95471	11.01	5.671	0

*Source: Abeer Almughrabi*

##### 4.2.4.2 P-P Plot and Q-Q Plot Tests for Normal Data

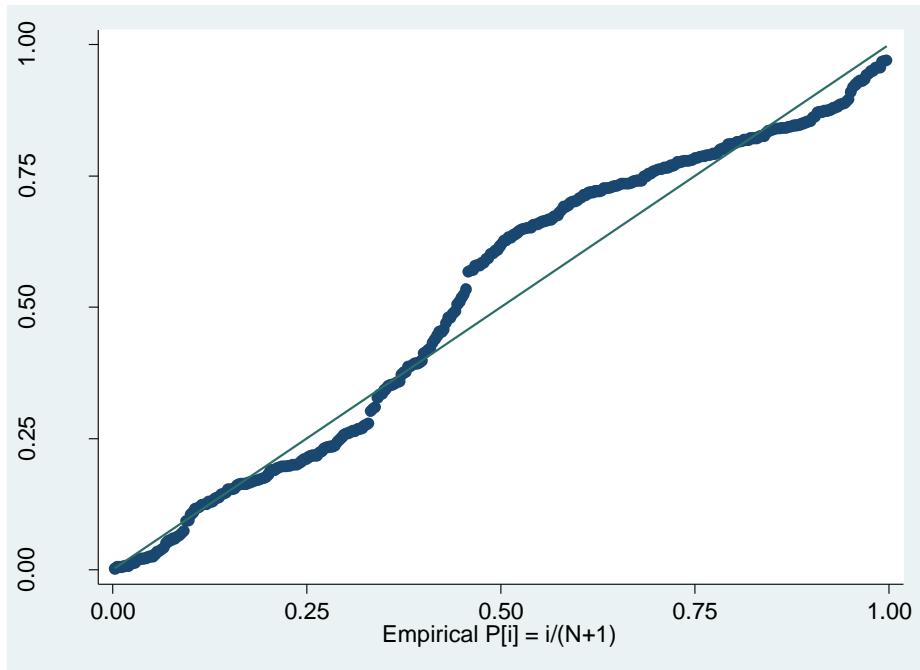
The standardized normal probability (P-P plot) shows a small deviation from normality for the residual. The deviation is in both sides range of the middle of the data. On the other hand, the Q-Q probability plot of a normal distribution suggests a normal distribution although it indicates a slight deviation at the upper and the lower tails. Consequently, it is reasonable to assume that the data shows a normal distributed.

*Figure 4-10:P-P Normality Test for Dependent Variable*



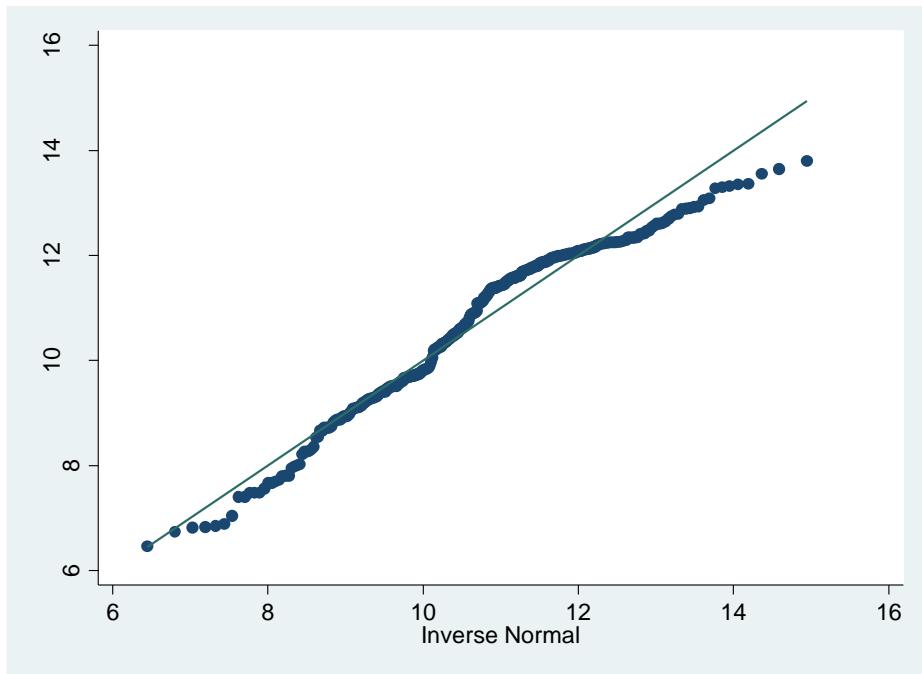
*Source: Abeer Almughrabi*

*Figure 4-11:P-P Normality Test for Residual*



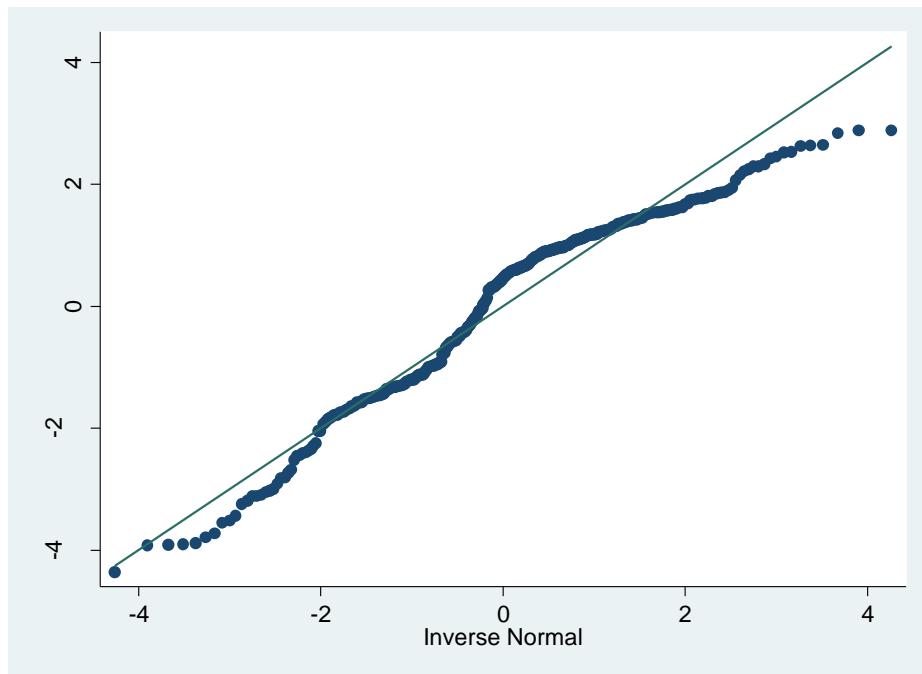
*Source: Abeer Almughrabi*

*Figure 4-12: Q-Q Normality Test for Dependent Variable*



*Source: Abeer Almughrabi*

*Figure 4-13: Q-Q Normality Test for Residual*

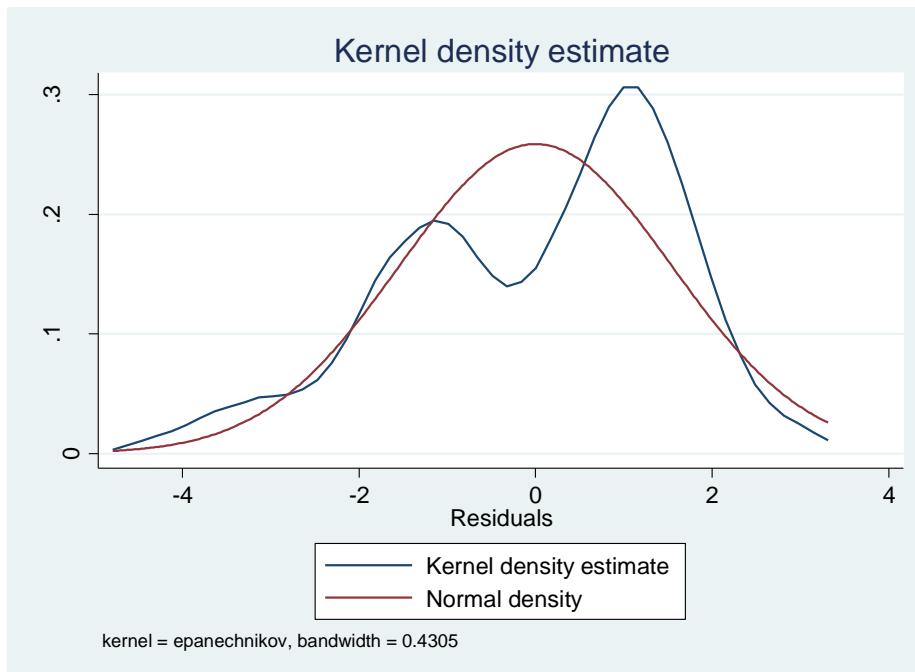


*Source: Abeer Almughrabi*

#### 4.2.5 Kernel Density Estimate

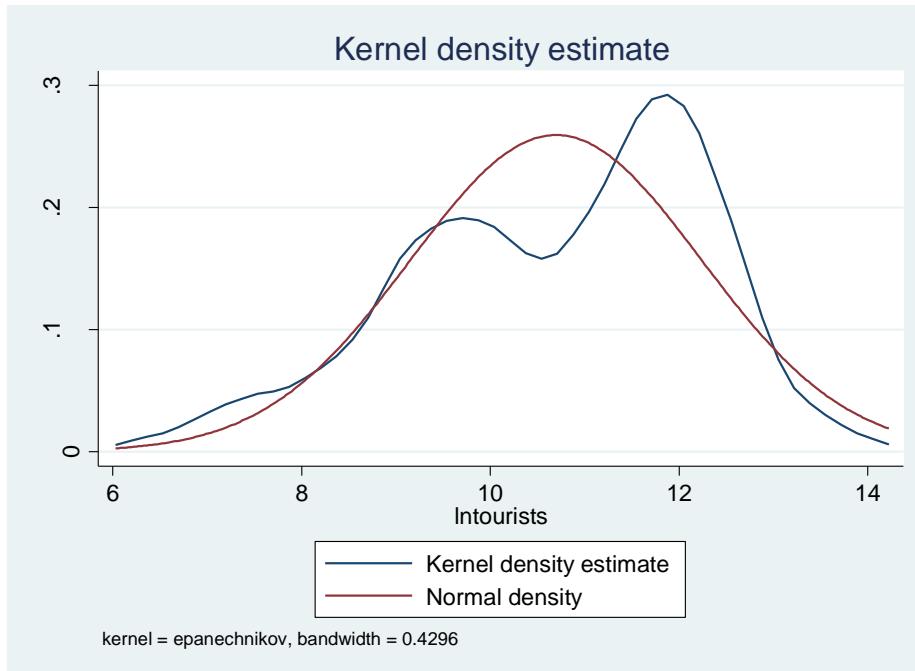
The Kernel Density estimate plot was used and shows that the normal density for both the residual and the dependent variable are identical as shown in Figure 4.14 and 4.15. Both plots show some spot of deviation in the right side. Therefore, more frequencies occurring to the left side and it is considered negatively skewed.

Figure 4-14: Kernel Normality Test for Residual



Source: Abeer Almughrabi

*Figure 4-15: Kernel Normality Test for Dependent Variable*

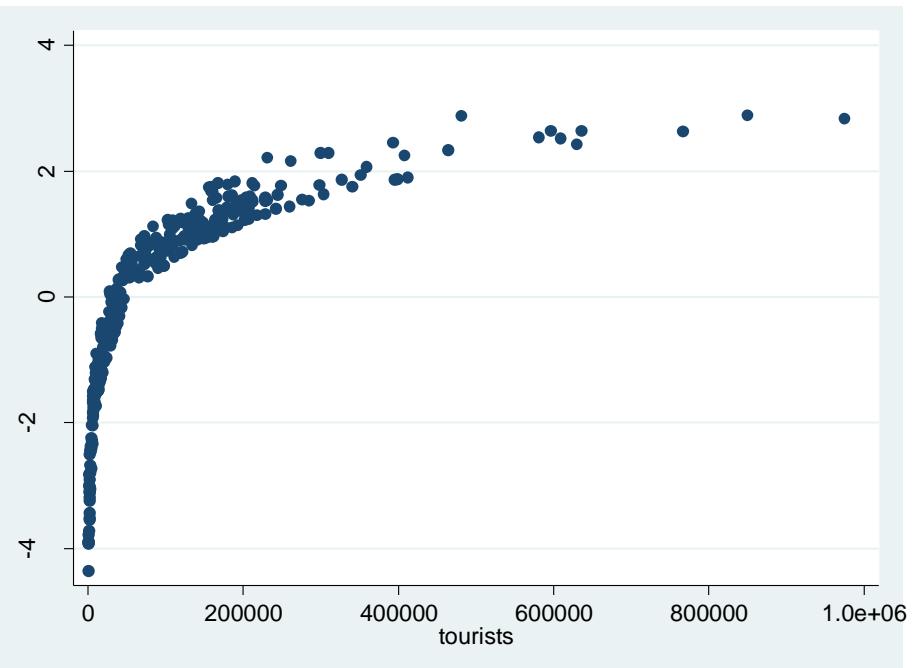


*Source: Abeer Almughrabi*

#### 4.2.6 Homoscedasticity Test

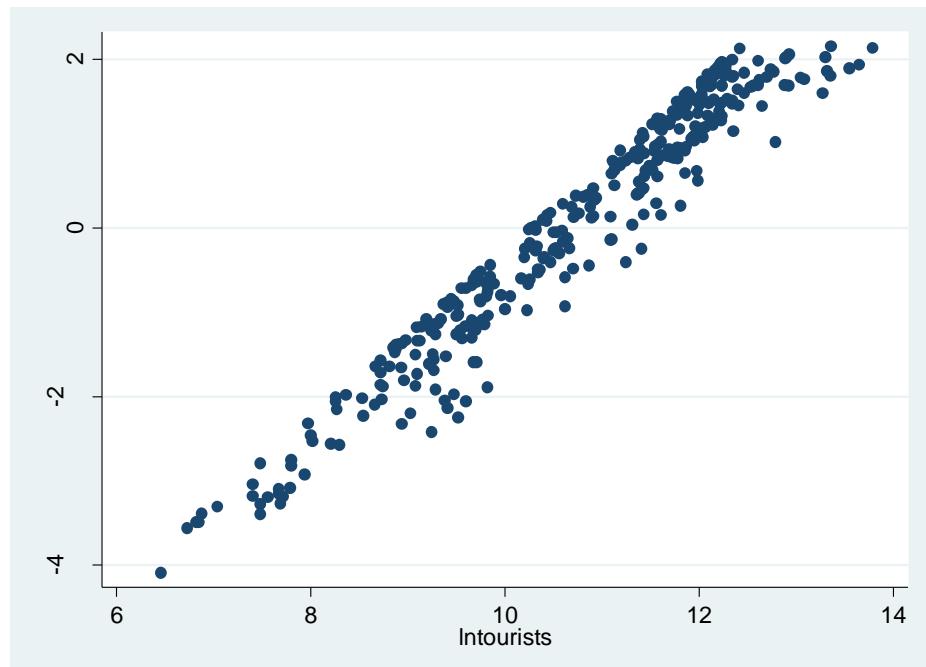
The variance of the error term is not constant and not equally distributed, so there is a heteroscedasticity problem. The error term for this model is not randomly distributed and this results in violating the homoscedasticity assumption as shown in Figure 4.16. Consequently, the linear regression is not adequate for the data in this model; and, needs to be fixed. Consequently, since the linear regression is not suitable for the data in this model, the natural logarithm transformation was used to fix the heteroscedasticity issue as shown in Figure 4.17. Then, since heteroscedasticity still exists, a robust that produces consistent standard errors was used to fix the data linearity as well (Figure 4.18).

*Figure 4-16:Homoscedasticity Test for Dependent Variable*



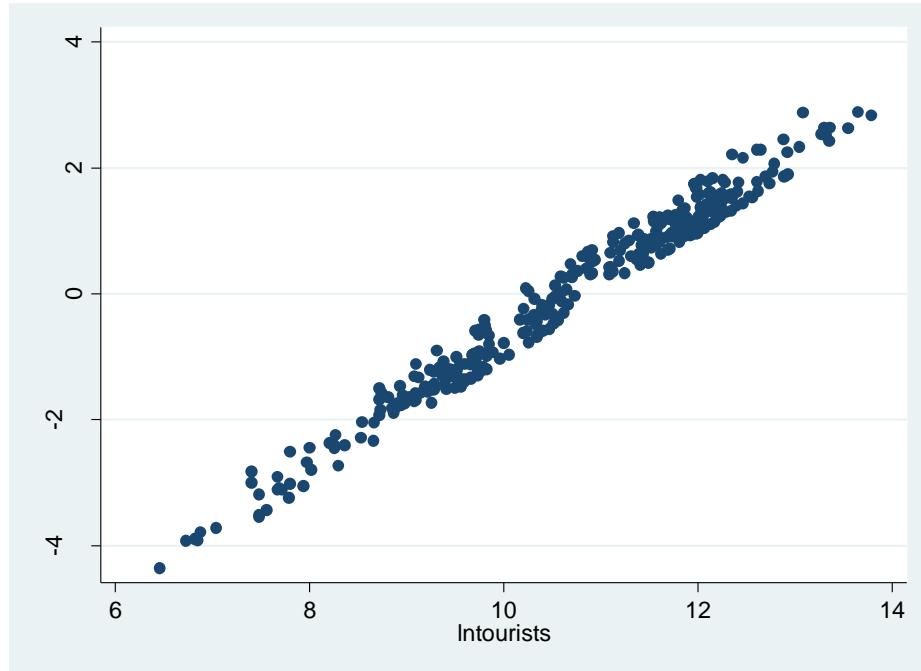
*Source: Abeer Almughrabi*

*Figure 4-17:Homoscedasticity Test for Transformed Dependent Variable*



*Source: Abeer Almughrabi*

*Figure 4-18: Homoscedasticity Test for Robust Transformed DV*



*Source: Abeer Almughrabi*

### 4.3 Model Selection Process: Tests and Results (Model One)

#### 4.3.1 Model Selection Tests

Incorporating political turbulences and tourism data using tourists' arrival numbers by country of origin is evaluated using Panel Data. This is used to examine relationships between the individual countries using the cross-sectional analysis and within each individual/entity using time series. Because other factors could have an impact on the tourism industry, analyzing the between individuals' effect is important to capture some of these factors. Moreover, since the data is expected to change from year to year and according to the existence of political turbulences, it is important to analyze the data over time.

The model selection process for the first model started with using several models and tests. First, Pooled Ordinary Least Square (OLS) was used. Second, the Random Effect Model was used to compare the results. Then, a Breusch and Pagan Lagrangian multiplier LM test was used to decide on using one of the models indicated. The result of the test indicated that there is variance across countries as shown in Table 4.11, so we were able to reject the null hypothesis. Since the results are significant, we conclude that there is a significant difference. Therefore, the OLS regression is not appropriate and the Random Effect Model was used.

*Table 4-11: ML Test for Random Effect*

	<b>Var</b>	<b>sd = sqrt (Var)</b>
<b>LnTourists</b>	4.773435	2.184819
<b>E</b>	.2846094	.5334879
<b>U</b>	.8531132	.9236413
<b>Test: Var(u) = 0</b>		
<b>chibar2(01) = 1291.58</b>		
<b>Prob &gt; chibar2 = 0.0000</b>		

*Source: Abeer Almughrabi*

Later on, the Hausman test which is designated to choose between Random Effect Model and Fixed Effect Model was used. The result of the test indicated that the unique errors ( $u_i$ ) are correlated with the regressors and the difference is significant as shown in Table 4.12. Therefore, we reject the null hypothesis. Thus, the Random Effect Model is not appropriate, and the Fixed Effect should be used.

Table 4-12: Hausman Test

Coefficients				
	(b) F	(B) R	(b-B) Difference	Sqrt (diag(V_b- V_B)) S.E.
InFatality	-0.00197	0.017572	-.0195385	.
LnMENA	0.055214	0.116799	-.0615857	.013855
FatMENA	-0.07599	-0.07913	.0031361	.
LnGNIPC	1.632929	0.538357	1.094572	.2004149
LnTrade	0.154257	0.261234	-.1069771	.0171813
Relgn	-0.24979	0.072113	-.3219035	.4868967
Democ	0.3999	0.34852	.05138	.0102086
chi2(17) = 41.83				
Prob>chi2 = 0.0000				

Source: Abeer Almughrabi

Although the Hausman test shows that the Fixed Effect Model is the best model to use for the data of this model, the Random Effect Model was still used as well. Since we are interested in some dummy variables and time- constant variables that cannot be estimated by the FE model and would be dropped from the model, the RE model is used in addition to the FE Model. In addition, the goodness of fit measured by the  $R^2$  for both models varies. The Random Effect  $R^2$  is higher than the Fixed Effect Model which are (0.73) and (0.34), respectively. Therefore, the Random Effect Model is used. However, based on the tests conducted, some variables were

dropped due to either collinearity and multicollinearity (Crime) or due to the high number of the missing data points (Education). The final Random Effect Analysis used in this research for this model is illustrated below:

### **Random Effects**

$$\ln(Tourists)_{it} = \beta_0 + \beta_1 \ln(Fatality)_{it} + \beta_2 \ln(MENA_t) + \beta_3 \ln(MENA * ME_{it}) + \beta_4 \ln(GNIPC_{it}) + \beta_5 \ln(Trade_{it}) + \beta_6 \ln(Dist_i) + \beta_7 \ln(Visa_i) + \beta_8 \ln(Religion_t) + \beta_9 \ln(Democ_i) + \beta_{10} \ln(DLF_i) + \beta_{11} \ln(RJ_i) + \beta_{12} \ln(Region_i) + \varepsilon_{it} \quad (8)$$

#### *4.3.2 Regression Model Results*

As shown in Table 4.13, this model investigates the dependent variable, number of tourists visiting Jordan by country of origin, and the main independent variables: fatality in the country of origin, fatality in Middle East and North Africa, and fatality in Middle East and North Africa interacted with the MENA countries. This analysis is used to capture the correlation between the variables, the Spillover Effect, and the Substitution Effect. The results show that the model has eight significant variables.

Although the number of fatalities in every country is statistically insignificant, the number of fatalities in the Middle East and North Africa for all countries is positively correlated with the number of tourists visiting Jordan. In fact, it is significant at the 1% level. Therefore a 10% increase in Middle East and North Africa fatalities results in about 1.2% increase in tourism in Jordan. In addition, the interaction term between the total number of fatalities in the ME region has a negative relationship with the number of tourists in Jordan. In fact, a 10% increase in the number of fatalities in the Middle East and North Africa decrease the number of tourists

from MENA countries in Jordan by about 0.8 %. The result is statistically significant at the 10% level.

On the other hand, GNI Per Capita, trade, visa, democracy, and direct flights of the country of origin airlines which are other than the RJ are positively correlated with the number of tourists at a 1% significant level. Therefore, a 10% increase of GNI, Trade, democracy, and DFL increase tourists' number in Jordan by 4.4%, 2.8%, 6.6%, 3.6%, and 10%, respectively. Moreover, although the distance between Jordan and the tourist's country of origin is not significant, region is negatively correlated with the tourists' number of arrivals in Jordan and significant at the 1% level. Therefore, since the regions are numbered based on their distance from the Middle East and North Africa, a 10% increase in distance between two regions leads to a about 4.6% decrease of tourists coming to Jordan from that region. Unexpectedly, Royal Jordanian and religion have no significant level although the expected relationship was accurate.

Table 4-13: Model One Results

VARIABLES	(1) Random Effect Model	(2) Fixed Effect Model
Fatality	0.0203 (0.0215)	-0.00197 (0.0214)
MENA	0.123*** (0.0269)	0.0552* (0.0302)
FatMENA	-0.0792* (0.0409)	-0.0760* (0.0419)
GNIPC	0.444*** (0.107)	1.633*** (0.231)
Trade	0.278*** (0.0314)	0.154*** (0.0359)
Distance	-0.276 (0.178)	
visa	0.658* (0.367)	
Religion	0.124 (0.272)	
Democracy	0.356*** (0.107)	
Direct Flight	1.001*** (0.350)	
RJ	0.354 (0.280)	
Region	-0.459*** (0.130)	
Constant	1.570 (1.615)	-8.058*** (1.722)
Observations	516	516
R-squared	0.725	0.339
Number of Country	74	74
Hausman		YES
Lagrangian multiplier test	YES	
Standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		
Source: Abeer Almughrabi		

### 4.3.3 Discussion and Analysis

#### 4.3.3.1 Hypothesis One

*H<sub>o</sub>: There is no correlation between tourists' travel decision and political instability.*

The model provides evidence that there is a relationship between political instability and tourism. While political instability in tourist's country of origin is insignificant, the fatality numbers in the Middle East and North Africa increase tourism in Jordan at a highly significant rate. Therefore, it seems that Jordan is benefiting from the political instability in the region when it comes to tourism. Although accepted theories would predict declining tourism in the Middle East rather than growth, the result of the model illustrates the opposite. Usually tourists are attracted to destinations that provide certain characteristics including savings, services, variety of choices, ease of use, and safety. While terrorism, political turmoil, and crime can frighten future tourists and reduce their numbers in a certain destination (Neumayer, 2004), it appears that tourism to a safe destination that is not involved in the political turmoil but is located within the same region of turmoil is affected positively by the political instability in turmoil region in general. However, tourism from the Middle East and North Africa countries appear to decline as the political instability increases in the MENA region. Therefore, an evidence was provided, and the first hypothesis is rejected.

Other factors affecting tourism industry showed different results. In general, the results are consistent with the expected relationship illustrated by the assumptions. It is proved that a positive relationship between tourism and Gross National Income Per Capita, trade, Direct Flight to Jordan for the country of origin airlines, Visa, and Democracy despite the political turbulences. Surprisingly, visa requirements, appear to be significant but has a reverse relationship than what was expected. Although it is expected to discourage travelers, prior visa

requirements are increasing tourism in Jordan. It is probably because people tend to be more serious about their travel plans once they apply for the required visa and pay the visa fees. In addition, some embassies require visa applicants to show their travel reservations to grant them a visa which makes people commit to their travel itinerary.

Other factors that appear to positively affect tourism in Jordan are related to the tourist's characteristics and specification of their country. For example, with higher GNIPC, people can afford travel, so the number of tourists increase with increased GNIPC. In addition, democracy affects the decision of tourists to travel. Democratic countries tend to be more open and their population have greater access to information. This allows tourists to investigate the country/ destination they are willing to visit and reasonably evaluate the risk associated with their trips. Moreover, since democracy and GDP measure the development of a country, this can indicate higher income. Therefore, residents of countries with higher GDP and GNIPC are most likely to afford travelling to other regions. Moreover, trade is considered an important factor as it affects the relationship between tourist's country of origin and the destination country. This model proves that higher volume of trade results in a significant raise in the number of tourists.

Moreover, proximity can be a reason for the existence of direct flight from/ to a nation. European countries have more direct flights to Jordan than any other regions, so Jordan receives a large number of tourists from Europe as it is the closest to the Middle East region as well. This is important as the regression results indicates that the availability of direct flights has a significant impact on tourism. In addition, the cost of travel is lower with shorter distances which encourage residents to travel to close by countries/ regions. It is obvious that the ease of travel matters when travel decisions are made by tourists. On the contrary, the model regression indicates a negative correlation between tourists' travel decisions the geographic distance

between the two countries/ regions. It appears that regional distances discourage tourists from visiting a destination.

Based on the regression results, we are able to reject the null hypothesis and accept the alternative hypothesis. Since there is negative relationship between Middle East and North Africa political turmoil and Middle East and North Africa countries' residents visiting Jordan, we are able to reject the null hypothesis and accept the alternative hypothesis. On the other hand, as there is a positive relationship between tourism in Jordan and political instability in MENA region in general, another evidence is provided for the correlation between the two variables. Therefore, this study provides an evidence to the association between the dependent variable and two of the main independent variables "FatMENA" and "MENA" that are used as proxies for political instability. Although a correlation between tourists' travel decision and political instability exists, positive and negative effects are demonstrated.

#### 4.3.3.2 Hypothesis Two

*H<sub>o</sub>: Regional tourism in countries adjacent to political turmoil but are not directly involved or do not have internal conflict themselves is negatively affected by the political turbulences in the region.*

The effect of political instability is measured within the region to capture the Substitution Effect. According to the assumptions developed for this study, a Substitution Effect happens as tourists' country of origin has a similar religion to the tourism destination's country/ region and when a tourist comes from the same region. The results of the regression demonstrate that political instability in the Middle East and North Africa negatively affects the MENA region tourism numbers in Jordan. Although tourists from these countries have Islam as their dominant

religion, tourism still seems to drop from these nations. On the other hand, despite the close distance, tourism to Jordan has declined within the Middle East and North Africa region.

Several reasons could contribute to the decline of tourist numbers visiting Jordan from the Middle East and North Africa. For example, residents of the MENA might themselves be going through hardship due to turmoil which results in decreasing their travel. In addition, with increased violence and political instability, economic conditions decline which can also eliminate the travel opportunity for residents in countries with turbulences. Finally, as they are experiencing political instability, or they are within a close distance from turmoil, residents of the Middle East and North Africa have a higher factor for risk perception that discourage them from travelling within the region. Therefore, as we fail to reject the null hypothesis, we fail to accept the alternative hypothesis that indicates a positive relationship between Middle Eastern and North African countries and tourism in Jordan. In general, this study provides an evidence to the association between the dependent variable and one of the main independent variables of interest “FatMENA” that is used as a proxy for Middle East and North Africa political instability effect on MENA countries. Although it attempts to prove the exitance of the positive correlation, negative effect was confirmed.

#### 4.3.3.3 Hypothesis 3

*H<sub>o</sub>: International tourism from outside the region taking place in countries adjacent to political turmoil but are not directly involved or do not have internal conflict themselves are positively affected by the political turbulences in the region.*

The effect of political instability is measured outside the Middle East and North Africa region to capture the Spillover Effect. According to the assumptions developed for this study, a

Spillover Effect occurs as tourist's country of origin has a different religion to the tourism destination's country/ region and when tourists come from a different region other than the turmoil one. In addition, it takes effect if a country is located within substantial geographic distance that is far away from the country/ region. The results of the regression demonstrate that political instability in the Middle East and North Africa positively affects the international tourism numbers to Jordan that are coming from outside the turmoil region. Although tourists from these countries might have different religions, tourism still appears to increase from outside of the Middle East and North Africa region.

Moreover, regional distance from a tourism destination/ country to Jordan has contributed to the overall decline. This decline is represented by the negative relationship between the region and tourists' coming to Jordan by the region of the country of origin. The distance and the region of tourists go hand in hand with each other to explain this Spillover Effect. However, the coefficient of the "MENA" variable that represents the number of fatalities in the MENA region indicates that tourism from any country is affected positively by the Middle East and North Africa region political instability regardless of its location.

There are several reasons behind this increase in tourism. First, the tourists could have already made their reservations and could not change their travel plans regardless of the turmoil. Second, the stability of Jordan, uniqueness of its characteristics, biodiversity, and its rich culture most likely attract tourists regardless of the political instability in the region. For example, Petra, one of the Seven Wonders of the World, could influence tourists' decisions to visit Jordan. Moreover, medical and religious tourism contributes to the international tourism increase in Jordan. For instance, the visit that the pilgrims take to the baptism site in the Jordan river takes place in Jordan every year regardless of the political instability.

In conclusion, as the Middle East and North Africa political instability positively influences tourism in Jordan, a Substitution Effect appears to occur. In fact, since political instability is taking place in major tourism destinations such as Egypt and Syria, tourists appear to substitute Jordan for these countries. Indeed, Jordan has the same unique characteristics of these countries and it would be reasonable to substitute it by those who are interested in having the same kind of experience. In addition, other factors that could have an impact on tourist's travel decisions might exist, which can affect their risk perception that encourages them to travel to Jordan. Therefore, as we fail to reject the null hypothesis, we fail to accept the alternative hypothesis that indicates a negative relationship between the Middle East and North Africa political turbulence and international tourism in Jordan from outside of the region. In general, this study provides evidence of an association between the dependent variable "Tourists" that uses the number of tourists from the country of origin, and one of the main independent variables of interest "MENA" that is used as a proxy for ME political instability effect on all countries. Although it attempts to prove the exitance of the negative correlation, positive effect was established on the international level.

#### 4.4 Model Selection Process: Tests and Results (Model Two)

##### 4.4.1 *Model Selection Tests*

The model selection process for the second model followed the same process of the first model selection. Several estimations and methods were used. First, Pooled Ordinary Least Square (OLS) showed that the model has limitations. Second, Pooled Ordinary Least Square (OLS) and Random Effect Model were compared using the Breusch and Pagan Lagrangian multiplier LM test. As shown in Table 4.14, the estimated results show that there is a significant

variance across countries, so we were able to reject the null hypothesis. Therefore, the OLS regression is not appropriate and the Random Effect Model should be used.

*Table 4-14: ML Test for Random Effect*

	Var	sd = sqrt (Var)
<b>LnTourists</b>	2.367515	1.538673
<b>E</b>	.1618292	.40228
<b>U</b>	1.846029	1.358687
<b>Test: Var(u) = 0</b>		
<b>chibar2(01) = 1862.36</b>		
<b>Prob &gt; chibar2 = 0.0000</b>		

*Source: Abeer Almughrabi*

Next, the Hausman test which is used to choose between Random Effect Model and Fixed Effect Model was conducted. The results of the test indicated that the unique errors ( $u_i$ ) are not correlated with the regressors and the difference is not significant (Table 4.15). Therefore, we fail to reject the null hypothesis as the Random Effect Model is appropriate, and the Random Effect could be used. The Random Effect Model and the Fixed Effect are equally appropriate, and their results are very close to each other. In this model both the Random Effect Model and Fixed Effect are used but since the first model used the Random Effect, the same model is used to be consistent. Consequently, the Random Effect model was used.

*Table 4-15: Hausman Test*

-----Coefficients-----				
	(b) F	(B) R	(b-B) Difference	Sqrt (diag(V_b- V_B)) S.E.
sitetype	0.141146	0.111229	0.029917	.
In_FatWorld	-0.1998	-0.19563	-0.00416	0.007397
Year				
2001	-0.43463	-0.43765	0.003017	0.016114
2003	-1.08798	-1.08725	-0.00073	0.019463
2010	0.522508	0.52567	-0.00316	0.014133
2011	0.215646	0.219672	-0.00403	0.013959
2014	0.47215	0.470053	0.002097	0.015793
chi2(17) = 0.01				
Prob>chi2 = 1.0000				

*Source: Abeer Almughrabi*

In addition, the goodness of fit measured by the  $R^2$  for both models slightly varies. The Random Effect and the Fixed Effect had almost the same  $R^2$  at (0.0452) and (0.0462), respectively. Therefore, it is proved that using either one of the Random Effect Model or Fixed Effect is equally the same. However, based on the tests used, some variables were dropped due to collinearity or multicollinearity including GDP, Population, and the interaction term of site type and number of fatalities. The final Random Effect Analysis used in this research for this model is illustrated below:

## **Random Effect**

$$\ln(\text{Tourists})_{it} = \beta_0 + \beta_1 \text{Sitetype}_i + \beta_2 \ln\text{FatalityWorld}_t + \varepsilon_{it} \quad (9)$$

### *4.4.2 Regression Model Results*

The site type is investigated in this model when the main fatalities is happening on the world level (Table 4.16). Although the site type is not significant, the number of fatalities worldwide is positively significant at the 1% level. Therefore, a 10% increase in world fatalities results in 2% decrease in tourism in Jordan. therefore, there is no effect on the site type on tourism in Jordan but there is an impact of international fatalities on tourism in Jordan. In addition, all the five years that have major political turbulences are significant. While four out five of them are significant at the 1% level with the number of tourists visiting Jordan, only the year 2011 is significant at the 5% level. In addition, some of them are positively correlated and others are negatively correlated. Tourism in Jordanian sites has increased by 5.2% in 2010, 2.2% in 2011, and 4.7% in 2014. On the contrary, other years were inversely correlated with tourism. Jordan sites had witnessed a decrease of 4.4% in 2001 and 1.1% in 2003.

*Table 4-16: Regression Results*

VARIABLES	(1) Random	(2) Fixed
Sitetype	0.141 (0.174)	0.111 (0.176)
Fatality World	-0.200*** (0.0595)	-0.196*** (0.0590)
Year 2001	-0.435*** (0.125)	-0.438*** (0.124)
Year 2003	-1.088*** (0.150)	-1.087*** (0.149)
Year 2010	0.523*** (0.110)	0.526*** (0.109)
Year 2011	0.216** (0.108)	0.220** (0.107)
Year 2014	0.472*** (0.123)	0.470*** (0.122)
Constant	12.21*** (0.627)	12.44*** (0.560)
Observations	348	348
R-squared	0.0452	0.0462
Number of SITE	26	26
Hausman	YES	YES
B&P Lagrangian multiplier test	YES	

*Standard errors in parentheses*

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

*Source: Abeer Almughrabi*

#### **4.4.3 Discussion and Analysis**

##### **4.4.3.1 Hypothesis**

*H<sub>o</sub>: There is a negative relationship between extremely attractive destinations (historical and natural heritage) and tourism despite the political turbulence.*

The results of the model demonstrate no significant relationship between the site type and the tourist's numbers visiting Jordan. Therefore, all sites are equally considered, and the site type has no effect on tourism. This might be due to the fact that tourists usually visit several tourism destinations that are within the same country. Other factors might have different results for each site such as the length of stay but not the site type. However, evidence would be needed for this assumption.

The effect of political instability is measured using the aggregate numbers for fatalities in the world. The numbers show a significant impact on tourism sites in Jordan. Also, this result confirms the first alternative hypothesis that assume a relationship between tourism and political instability. This relationship in this model is significant at the 1% level. According to the assumptions developed for this study, the negative impact of some major international political turmoil events that have taken place in some parts of the world especially the MENA region during the last seventeen years starting from 2000 until 2016 is expected to be high. These events include: the 2001 attack on the World Trade Center and the Pentagon on September 11, the 2003 Iraq War and Invasion, the 2010 Arab Spring, the 2011 Egyptian Revolution (January–February), the 2011 Civil Syrian War (March), and the 2014 ISIS terrorism. The results of the regression reveal that political instability in the Middle East and North Africa in certain years significantly affect tourism in Jordan. This effect is either positive or negative. For instance, September 11 attacks and the 2003 Iraq War and Invasion seems to have a negative relationship

with tourism in Jordan. However, based on the perception of risk theory, tourism would drop due to the Arab Spring, Egyptian Revolution, Civil Syrian War, and ISIS emergence. However, this was not the case and tourism in Jordan increased during these events.

Once again, as we fail to reject the null hypothesis, we fail to accept the alternative hypothesis that indicates a positive relationship between extremely attractive destinations (UNESCO sites) and tourism despite the political turbulence. Consequently, this study provides evidence for no correlation between the dependent variable (Tourists) that represents the total number of tourists visiting each site, and the main independent variable of interest in this model “site type” that represents UNESCO sites. Even though it attempts to prove the exitance of the positive correlation, “no effect” was confirmed.

#### 4.5 Summary

The first model hypotheses suggest a significant relationship between tourism numbers and the political instability. An evidence was provided through the political instability of the Middle East and North Africa region. Another evidence was provided using the political instability in the second model on the world level. Thus, political instability has an impact on tourism that is sometimes positive and other times negative. Indeed, various levels of instability results in having different impact on tourism. For instance, political instability on the country of origin in the MENA and the regional and world levels had different effect on tourism. Tourism is affected on the regional and world level of the political instability but not on the national level.

Also, other factors can also affect the increasing and declining number of tourists. Some of these factors were tested and an evidence was provided in the first model. Factors that influence the tourism industry positively include GNI Per Capita, trade, democracy, and the

direct flights from country of origin airlines. On the other hand, factors that affect the tourism decision negatively are distance and region. Unexpectedly, tourism site type was not significant and did not have an impact on tourism.

The use of quantitative methods was able to reject the null hypothesis regarding the relationship between tourism and political instability but was not able to reject the null hypothesis regarding the regional and international tourism from outside the region to the destination country. Thus, an evidence was provided for the political instability impact on tourism on the local, regional, international levels. As for the rest of the hypotheses, I was not able to reject the null hypothesis since the opposite relationship of what was expected was proved. Additionally, there are some general notes about the two models. Although political instability signifies a relationship with tourism, both models proved the existence of the correlation. In addition, there are various significant levels for different variables and the control variables. However, some variables were removed from both models due to collinearity. For example, the crime rate was dropped from both models due to collinearity or lack of data. Moreover, religion and Royal Jordanian direct flights do not have any significant level int the first model. Furthermore, the site type and some years had no significant level in the second model. Finally, after comparing the results of the two models of political instability impact on tourism with the previous studies, the results indicate that political instability is significant in both models and regional and world political turbulence have an impact on the international tourism.

## Chapter 5

### Conclusion and Policy Recommendations

*“Tourism require globalization, while terrorism cannot live with globalizatio”* (Mansfeld, Y., and Pizam, A. (Eds.), 2006).

#### 5.1 Findings Summary

This research expands on the knowledge of the existing literature in the field of urban planning in general and specifically in tourism and political science. It provides, through empirical evidence, the correlation between international political turbulence and tourism development. In addition, it adds to the theory of safe neighboring countries in the region of turmoil as it provides empirical evidence for the Substitution and Spillover Effects. This study adds to the empirical research on the impact of the international turmoil on tourism on the country level on one hand and the regional and international level on the other hand.

Although some studies proved that the impact is negative, others showed that the Substitution Effect brings several benefits for the neighboring countries in the turmoil region. However, which one exists and what are the contributing factors behind each effect was not clear. The results of this study not only prove the political instability and tourism nexus, it also illustrates that the Substitution Effect and the Spillover Effect co-exist. Therefore, tourism from Middle East and North Africa to a safe country within the turmoil region is affected negatively by the political instability within the same region. On the other hand, tourism to a safe country within the region is positively impacted by political instability in the MENA region when tourists are arriving from outside the region.

The fatality number in tourists' country of origin had no relationship with tourism but the fatality number in the Middle East and North Africa and the world has an effect on tourism. This

research provide evidence that the Substitution Effect happens as tourists travel to the tourism destination from outside the region of turmoil. Therefore, political instability in the Middle East and North Africa positively influence travelers from regions other than the Middle East to travel to Jordan. In addition, the positive impact of tourists' numbers visiting Jordan from any country is happening regardless of the country of origin's religion and distance. On the other hand, it was proved by this study that the Spillover Effect arises when tourists visit Jordan from the Middle East and North Africa region that is going through turmoil. Thus, political instability in MENA inversely impact the number of the MENA tourists visiting Jordan.

In addition, years of major political instability provide a substantial relationship between tourism and the political instability for safe countries located within the region in turmoil. While September 11 attacks and the 2003 Iraq War and Invasion had an inverse relationship with tourism in Jordan, tourism increased during the Arab Spring, Egyptian Revolution, Civil Syrian War, and ISIS emergence. Therefore, other factors contribute to the type of the relationship between tourism and political instability. In general, the results of both models used in this study confirms that political instability has an impact on tourism.

Moreover, the study provides evidence to other factors that are related to the tourism development. GNI Per Capita, trade, democracy, visa, and direct flights of country of origin airlines positively influence tourism development. According to the Hierarchy of Travel Needs, cost, accessibility, safety and security, and feasibility are essential to decision making process. Therefore, with increased GNIPC, people are more likely to afford to take a trip. In addition, elevated trade, adequate visa requirement, and increased direct flights to the tourism destination provide better accessibility and increase feasibility of travel. Furthermore, democracy decrease

the risk perception associated with travel and increases the safety and security perceptions that are taken into consideration by tourists which results in improved tourism growth.

In contrast, regional distance is an important factor that affect the tourism decision negatively. Although the Substitution Effect occurs when tourists come from outside the Middle East and North Africa region, the proximity of other regions to the MENA region affects the number of tourists travelling to the destination country. The further the region from the Middle East and North Africa, the fewer tourists travel to Jordan from that region and vice versa. However, distance between the country of origin and the destination country appears to have no effect on tourism development although regional distance is significant. Therefore, it does not matter how far the tourist's country is from the tourism destination, but what matters is how far the region is from the tourism destination region. Also, this study proves that religion does not appear to have any effect on travel and tourism decision making.

Furthermore, this study provides an evidence that no relationship exists between the site type inside the destination country and tourism. Tourism sites are divided into either a World Historical and Natural Heritage site or not. However, all sites were equal and there was no effect on tourism by site. Therefore, it was concluded that site types, which was used as a proxy to measure attractiveness, has no effect on decision making. Consequently, other factors are more related rather than the site type.

## 5.2 Policy Recommendations

Tourism is a major economic development force since it provides employment, foreign exchange, economic diversity, infrastructure development, and environmental protection and conservation. Policy makers should propose policies that enhance the tourism demand and reduce the political instability impact. In order to help the tourism sector recover from the

political turbulence impact, local and central government's political, planning, financial, logistic, and social support is required. There are several policies used in this section based on the study results. For example, the Substitution Effect results proved that tourists substitute Jordan for other countries only if they were travelling from a different region. Therefore, global tourism marketing is important for the tourism development; but, as the Spillover Effect is regional, marketing efforts should also concentrate primarily on regional tourism. For most countries, additional investment in their tourism industry is required to allow for the existence of a strong policy to fund tourism marketing on the global level (Saleh, Assaf, Ihalanayake, and Lung, 2008). This can enhance the image of the tourism destinations and encourage inbound tourism. However, tourism marketing should focus on attracting regions that are close to the destination country since regional distance has a negative impact on tourism. For instance, due to its closeness, tourists' number of arrivals to Jordan from Europe is the highest.

Promoting the tourism industry for both inbound and outbound tourists is essential. Since tourists' perception of risk has an effect on choosing a destination before travelling, providing and promoting safety is important. Decision makers should allocate adequate budget for marketing in local and international media, specifically social media, to convey the positive characteristics and uniqueness of a destination. Moreover, tourism stakeholders should invest in marketing for different types of tourism to increase inbound tourism. For example, since religious tourism is a major attraction for tourism in Jordan, the Jordanian Ministry of Tourism and Antiquities should focus on developing the related sites and efficiently promote them. Such sites are crucial for the development of religious tourism as part of ancient civilizations and history. Although the results of this study indicate no relationship between the site type and the number of tourists, there is no doubt that those sites are the reason behind tourism development

in Jordan. Those who visit the Baptism Site would potentially visit other religious tourism sites in Jordan.

Besides lowering prices and waiving some fees, such as airport fees (Laub, 2015), decision makers should concentrate on policies that enhance the tourism development. For instance, increasing the number of direct flights travelling from the tourists' country of origin to the destination contributes to increasing the tourist's number of arrivals in a destination country. In general, local airlines can take part in advertising a certain destination. However, in the case of Jordan, instead of investing in Royal Jordanian airlines, the government should focus on expanding the cooperation between Jordan and other airlines by providing them with benefits and incentives. Moreover, as visa contributes to increasing the number of tourists, policy makers should rethink visa applications and processing. Instead of granting the visa at the airport, the government can impose prior to arrival, online applications to facilitate the visa processing. In addition, if tourists pay fees for their visa, they are more likely to take the trip.

In addition, policy makers should provide incentives for private investors to improve and enhance tourism destinations' infrastructure to encourage and support tourism development. Based on the results in this study, improving the GDP and the GNIPC in a given country contributes to the development of that country which in turn increases the number of tourist arrivals. Moreover, foreign trade positively contributes to tourism development and should be fully considered for expansion by the policy makers to improve the relationship between two countries and allow access to the international market. This should result in increased tourism activities. Therefore, generating effective economic policies is a key element in tourism industry development.

Moreover, other general policy recommendations derived from the literature and tourism theories are beneficial for the recovery of the tourism industry. For instance, policy makers should consider planning for resilient cities and tourism destinations that are able to recover from the terror attacks and political instability impact. Indeed, advanced planning is crucial, and a proactive tourism emergency and recovery plan needs to be implemented instead of the current practice of being reactive. For example, in the case study, the Jordanian government should try to create successful economic policies to attract Foreign Direct Impact and improve the economy (Abu- Ghunmi and Larkin, 2015).

Also, technological advancement should be used to elevate the level of transparency. For example, Jordan is directing domestic and foreign investments towards technology and skill-concentrated sectors through institutional reform (World Bank, 2014). Furthermore, since tourism has a direct and indirect impact on the local community, decision makers should increase the level of public participation in order to increase the awareness for local communities and encourage public involvement in tourism development. Educating the local community and provide a tourism awareness program for the local communities should help the government gain the trust and support of the local community.

In addition, governments should use a recovery marketing technique. Different countries use several procedures today to reduce terrorism and violence and to protect international tourism. The procedures include becoming part of anti-terrorism activities, taking part of law enforcement, intelligence and government involvement, and conducting conferences and summits (Sönmez, 1998). Political leaders have started to play a major role in fighting terrorism. For example, the United Nations Security Council approved extensive and broad antiterrorism resolution (1373) in September 28, 2001 that added restrictions to eliminate terrorism activities

and ensure adequate procedures to defeat terrorists including preventing the provision of funds for international terrorism and escalation of international cooperation (United Nations, 2018).

Moreover, nations that are seriously affected by the terrorist events use excessive recovery marketing as part of their crisis management actions (Sönmez, 1998). Nations striving to improve their tourism should use policies of flourishing tourism destinations such as the United Arab Emirates (Saleh, Assaf, Ihalanayake, and Lung, 2008). Finally, using several technical assistance missions and workshops and capacity-building programs is essential as the United Nations World Tourism Organization (UNWTO) has helped its member states in the Middle East (World Tourism Organization, 2015). These programs help them manage the tourism industry during the tourism decline. In fact, participating in tourism and political instability research can affect and help in forming public policy and improve the performance of the decision makers as they would have a better understanding of the issue. Thus, as the main impact is considered regional, focusing on the regional impact is essential.

### 5.3 Limitations

This research provides evidence for two main research categories: tourism health and the political instability impact. This study establishes a mile stone in providing evidence of the political instability impact on tourism on the regional level and illustrates the ambiguity behind the Spillover and Substitution Effects and explains when one of them occurs and when the other one takes place. Spillover occurs on the regional level as tourists who live within the same region of political instability reduce their travel to a destination/ country adjacent to political turmoil but not directly involved or which do not have internal conflict. On the other hand, Substitution occurs on the international level when tourists travel from outside the region to the

tourism destination that is adjacent to political turmoil but not directly involved or do not have internal conflict.

In addition, this study proves that gross national income per capita (GNIPC), trade, visa requirement, political structure (democracy), and direct flights to destination's country encourages tourists to travel to a destination. Moreover, the region that a tourist comes from affect their decision since closer regions have higher number of tourists. Therefore, regional distance is an important element in the decision-making process. These factors influence tourism development; thus, it provides a foundation for future studies.

This study has some limitations few of which were easily identified while others were hard to define. Data availability on the international level constitutes a problematic issue for the research. Several variables were dropped due to the availability of data. In addition, some of the data required further analysis and processing prior to their use in the study. This process was complicated and time consuming. Therefore, as this study had time limitation, less data mining was considered.

#### 5.4 Future Studies

The sample of this study investigates the Middle East and North Africa region. Thus, future studies can expand on exploring the regional effect to have a comparison with other nations/ regions to provide more evidence of political turmoil on tourism in countries adjacent to but not directly involved or do not have internal conflict themselves. Besides, future studies should explore the long term versus the short-term impact. Different techniques and methods can also be used to analyze the lagged effect and provide more evidence.

This research lightly touched on site image and attractiveness. In fact, the model was used to provide an evidence of attractiveness with the presence of political instability. However, this variable was dropped due to collinearity. However, the proxy for site attractiveness in this model might not be adequate as it reflects only one idea. Other proxies could be used and achieve different results and outcome than this study. In general, a more developed model is needed to investigate the relationship between the site attractiveness and tourism which can be recommended for future studies.

Finally, this research focuses on the political instability impact on international inbound tourism. Additional future research can examine this impact on the outbound tourism to measure the regional benefit from political instability. In addition, the political instability impact on domestic tourism can be investigated to direct decision makers and planners toward forming policies that encourage local tourism. Furthermore, tourism clustering and destinations connectivity on the national and regional level can reverse the political instability impact on tourism. Future studies can elaborate on this idea and provide an evidence that can help decision makers to plan for tourism.

While these future studies will help in understanding factors impacting tourism, this research has established a theoretical contribution to the relationship between political instability and tourism for destinations/ countries adjacent to political turmoil but not directly involved or do not have internal conflict. It has confirmed that political instability has an impact on tourism but only when the political turbulence is on the regional level. Therefore, political instability within a tourist's country of origin has no impact on tourism for a destination country adjacent to political turmoil but not directly involved or do not have internal conflict. Thus, this study created a solid foundation for the distinction between the occurrence of either Spillover or

Substitution Effects on the regional level. This research also concludes that travel and tourism decision making process is affected by the characteristics of the tourist's country of origin including democracy level, regional distance, and GNIPC. In addition, it is influenced by factors that provide connectivity and accessibility such as trade, visa requirement, and direct flights to the destination's country. This research adds to the literature as it provided evidence for the factors that influence the tourism development and established a framework for the connection between political instability and tourism for destinations/ countries adjacent to political turmoil but not directly involved or do not have internal conflict.

**Appendix A**  
**Countries of the Study**

Afghanistan	Iceland	Peru
Algeria	India	Philippines
Argentina	Indonesia	Poland
Armenia	Iran	Portugal
Australia	Iraq	Qatar
Austria	Ireland	Romania
Azerbaijan	Israel	Russia
Bahrain	Italy	Saudi Arabia
Bangladesh	Jamaica	Senegal
Belarus	Japan	Singapore
Belgium	Kazakhstan	Slovakia
Bosnia-Herzegovina	Kenya	Slovenia
Brazil	Kuwait	Somalia
Bulgaria	Latvia	South Africa
Canada	Lebanon	South Korea
Chad	Libya	Spain
Chile	Lithuania	Srilanka
China	Luxembourg	Sudan
Colombia	Macedonia	Sweden
Croatia	Malaysia	Switzerland
Cyprus	Mali	Syria
Czechrep	Malta	Taiwan
Denmark	Mauritania	Tanzania
Djibouti	Mauritius	Thailand
Egypt	Mexico	Tunisia
Eritrea	Moldova	Turkey
Estonia	Morocco	Ukraine
Ethiopia	N_Korea	United Arab Emirates
Fiji	Nepal	United Kingdom
Finland	Netherlands	United states
France	New Zealand	Uruguay
Georgia	Nigeria	Uzbekistan
Germany	Norway	Venezuela
Ghana	Oman	Vietnam
Greece	Pakistan	Yemen
Guatemala	Palestine	Yugoslavia
Hong Kong	Panama	
Hungary	Paraguay	

## References

- Abu-Ghunmi, D., & Larkin, C. (2016). The economic opportunity cost for countries located in crisis zones: Evidence from the middle east. *Research in International Business and Finance*, 36, 532-542. doi:<http://dx.doi.org.ezproxy.uta.edu/10.1016/j.ribaf.2015.10.010>
- Afonso-Rodríguez, J. A., & Santana-Gallego, M. (2018). Is Spain benefiting from the Arab Spring? on the Impact of Terrorism on a Tourist Competitor Country. *Quality & Quantity*, 52(3), 1371-1408. doi:[10.1007/s11135-017-0527-2](https://doi.org/10.1007/s11135-017-0527-2)
- Ahlfeldt, G. M., Franke, B., & Maennig, W. (2015). Terrorism and international tourism: The case of germany. *Jahrbücher Für Nationalökonomie Und Statistik*, 235(1), 3. Retrieved from <http://uta.summon.serialssolutions.com>
- Ajogbeje, K., Adeniyi, O., & Folarin, O. (2017). The effect of terrorism on tourism development in Nigeria. *Tourism Economics: The Business and Finance of Tourism and Recreation*, 23(8), 1673-1678.
- Almughrabi, A. (2007). Eco-tourism in Jordan: A sustainable approach of tourism. University of Arizona, Tucson, Arizona. Retrieved from <http://docplayer.net/28789222-Ecotourism-a-sustainable-approach-of-tourism-in-jordan.html>
- Altindag, D. T. (2014). Crime and international tourism. *Journal of Labor Research*, 35(1), 1-14. doi:[10.1007/s12122-014-9174-8](https://doi.org/10.1007/s12122-014-9174-8)
- Araña, J. E., & León, C. J. (2008). The impact of terrorism on tourism demand. *Annals of Tourism Research*, 35(2), 299-315. doi:<http://dx.doi.org.ezproxy.uta.edu/10.1016/j.annals.2007.08.003>
- Aziz, H. (1995). Understanding attacks on tourists in Egypt. *Tourism Management*, 16(2), 91-95. Retrieved from [http://dx.doi.org/10.1016/0261-5177\(94\)00016-4](http://dx.doi.org/10.1016/0261-5177(94)00016-4)
- Bell, A., & Jones, K. (2015). Explaining fixed effects: Random effects modeling of time-series cross-sectional and panel data. *Political Science Research and Methods*, 3(1), 133-153. doi:[10.1017/psrm.2014.7](https://doi.org/10.1017/psrm.2014.7)
- Bonham, C., Edmonds, C., & Mak, J. (2006). The impact of 9/11 and other terrible global events on tourism in the united states and hawaii. *Journal of Travel Research*, 45(1), 99-110. doi:[10.1177/0047287506288812](https://doi.org/10.1177/0047287506288812)
- Burns, G. L. (2004). Anthropology and tourism: Past contributions and future theoretical challenges. *Anthropological Forum*,

Cohen, E., & Cohen, S. A. (2012). Current sociological theories and issues in tourism. *Annals of Tourism Research*, 39(4), 2177-2202. Retrieved from  
<http://dx.doi.org/10.1016/j.annals.2012.07.009>

David Mc. A Baker. (2014). The effects of terrorism on the travel and tourism industry. *International Journal of Religious Tourism and Pilgrimage*, 2(1)

Dogru, T., Sirakaya-Turk, E., & Crouch, G. I. (2017). Remodeling international tourism demand: Old theory and new evidence doi:<https://doi-org.ezproxy.uta.edu/10.1016/j.tourman.2016.11.010>

Drakos, K., & Kutan, A. M. (2003). Regional effects of terrorism on tourism in three mediterranean countries. *The Journal of Conflict Resolution*, 47(5), 621-641.  
doi:10.1177/0022002703258198

Enders, W., & Sandler, T. (1991). Causality between transnational terrorism and tourism: The case of spain. *Terrorism*, 14(1), 49-58. doi:10.1080/10576109108435856

Eugenio-Martin, J. L., Martín Morales, N., & Scarpa, R. (2004). Tourism and economic growth in latin american countries: A panel data approach.

Ezcurra, R., & Palacios, D. (2016). Terrorism and spatial disparities: Does interregional inequality matter? doi:<https://doi.org/10.1016/j.ejpoleco.2016.01.004>

Fan, D. X. F., Zhang, H. Q., Jenkins, C. L., & Tavitiyaman, P. (2017). Tourist typology in social contact: An addition to existing theories doi:<https://doi-org.ezproxy.uta.edu/10.1016/j.tourman.2016.12.021>

Feridun, M. (2011). Impact of terrorism on tourism in turkey: Empirical evidence from turkey. *Applied Economics*, 43(24), 3349; 3349-3354; 3354.

Fyall, A., Prideaux, B., & Timothy, D. J. (2006). War and tourism: An introduction. *International Journal of Tourism Research*, 8(3), 153-155. doi:10.1002/jtr.564

Gren, M., & Huijbens, E. H. (2012). Tourism theory and the earth. *Annals of Tourism Research*, 39(1), 155-170. doi:<http://dx.doi.org.ezproxy.uta.edu/10.1016/j.annals.2011.05.009>

Gujarati, D. (2003). Basic econometrics 4th edition McGraw hill united states military academy. *West Point*.

Korstanje, M., & Skoll, G. (2014). The inception of the rational platform. *Turismo y Desarrollo Local*, (17)

Korstanje, M. (2015). Discussing the methodological inconsistencies of tourism research.

Látková, P., & Vogt, C. A. (2012). Residents' attitudes toward existing and future tourism development in rural communities. *Journal of Travel Research*, 51(1), 50-67.  
doi:10.1177/0047287510394193

Laub, K. (2015). Tourism in ancient Petra hit by Jordan's war on terror. Retrieved from <http://www.thenational.ae/world/middle-east/tourism-in-ancient-petra-hit-by-jordans-war-on-terror>

Lee, C., & Chang, C. (2008). Tourism development and economic growth: A closer look at panels. *Tourism Management*, 29(1), 180-192.  
doi:<http://dx.doi.org.ezproxy.uta.edu/10.1016/j.tourman.2007.02.013>

Lewis-Beck, M. (1980). Applied regression: An introduction. SAGE: Newbury Park, CA

Litvin, S. W., & Smith, W. W. (2016). A new perspective on the plog psychographic system. *Journal of Vacation Marketing*, 22(2), 89-97. doi:10.1177/1356766715580187

Lust, E. (2015). Syrian spillover  
National tensions, domestic responses, & international options. Washington, D.C.: Project on Middle East Democracy.

Macbeth, J. (2005). Towards an ethics platform for tourism. *Annals of Tourism Research*, 32(4), 962-984. doi:<http://dx.doi.org.ezproxy.uta.edu/10.1016/j.annals.2004.11.005>

Mansfeld, Y., & Pizam, A. (Eds.). (2006). Tourism, security and safety. Routledge.

Mansfeld, Y., & Winckler, O. (2015). Can this be spring? assessing the impact of the "Arab spring" on the arab tourism industry. *Turizam: Znanstveno-Stručni Časopis*, 63(2), 205-223.

Mead, M. (1928). *Coming of age in samoa; a psychological study of primitive youth for western civilisation*. New York: W. Morrow & Company. Retrieved from [http://uta.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwdV1NS8NAEB2kXrxZrRirMKdepLL5zuJRLAVF0Papg2WzSSWoazCmNP\\_emSTSqPUaNmQ3y8yb2eS9B-A6V2L8KydIk7qxJ7QmPIgSrZPlj4RMktD4oRvX1ocPs-DpXs6nzt2WI1aUhAsKdiIo\\_77VYb6GsIE8zDwWT9fPD7\\_YC4wbqx0Bzcmh9BjLkEf9tL8CAaNJEeFI2S9V1176lbH8EIxSY\\_C5QIpuDHLcaY\\_lvoaNRbd9IS1FCwPK9iLi\\_MUVuyAh1R4Yit5gCZbZ\\_tPzoDsCa385vpmOal2oMa1SzDOYEedf7pKWDA8BvSSyZc9xLXRDG2RuRStvYcebxMNouUpV5lrOHsyqNrZiaE9RMW496Bgsudw90IP58U1QFBkKt5KvnBxyxsaD\\_d1oWDLsXv3dBEfLJwD\\_bdcSDqh-jJoDi3PYX1BApRf1XnwBYD-j\\_g](http://uta.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwdV1NS8NAEB2kXrxZrRirMKdepLL5zuJRLAVF0Papg2WzSSWoazCmNP_emSTSqPUaNmQ3y8yb2eS9B-A6V2L8KydIk7qxJ7QmPIgSrZPlj4RMktD4oRvX1ocPs-DpXs6nzt2WI1aUhAsKdiIo_77VYb6GsIE8zDwWT9fPD7_YC4wbqx0Bzcmh9BjLkEf9tL8CAaNJEeFI2S9V1176lbH8EIxSY_C5QIpuDHLcaY_lvoaNRbd9IS1FCwPK9iLi_MUVuyAh1R4Yit5gCZbZ_tPzoDsCa385vpmOal2oMa1SzDOYEedf7pKWDA8BvSSyZc9xLXRDG2RuRStvYcebxMNouUpV5lrOHsyqNrZiaE9RMW496Bgsudw90IP58U1QFBkKt5KvnBxyxsaD_d1oWDLsXv3dBEfLJwD_bdcSDqh-jJoDi3PYX1BApRf1XnwBYD-j_g)

Morley, C., Rosselló, J., & Santana-Gallego, M. (2014). Gravity models for tourism demand: Theory and use doi:<https://doi.org.ezproxy.uta.edu/10.1016/j.annals.2014.05.008>

Neumayer, E. (2004). The impact of political violence on tourism: Dynamic cross-national estimation. *The Journal of Conflict Resolution*, 48(2), 259-281.  
doi:10.1177/0022002703262358

- Nunes, P. M., & Sequeira, T. N. (2008). Does tourism influence economic growth? A dynamic panel data approach. *Applied Economics*, 40(18), 2431; 2431-2441; 2441.
- Odhiambo, N., & Nicholas M Odhiambo. (12). Is tourism development an engine for economic growth? the zambian experience. *Economics, Management and Financial Markets*, 7(4), 87; 87.
- Po, W., & Huang, B. (2008). Tourism development and economic growth—a nonlinear approach. *Physica A: Statistical Mechanics and its Applications*, 387(22), 5535-5542. doi:<http://dx.doi.org.ezproxy.uta.edu/10.1016/j.physa.2008.05.037>
- Qi, C. X., Gibson, H. J., & Zhang, J. J. (2009). Perceptions of risk and travel intentions: The case of china and the beijing olympic games. *Journal of Sport & Tourism*, 14(1), 43-67. doi:10.1080/14775080902847439
- Roehl, W. S., & Fesenmaier, D. R. (1992). Risk perceptions and pleasure travel: An exploratory analysis. *Journal of Travel Research*, 30(4), 17-26. doi:10.1177/004728759203000403
- Sab, R. (2014). Economic impact of selected conflicts in the middle east: What can we learn from the past? (). International Monetary Fund. Retrieved from [http://uta.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwvV1LS8NAEB6kXjxZX\\_iEOQuVvJsEiofYUvFBsAXBS1iSDRQkLWkK\\_TX-1s6OmxrNRS9elyFsMss8Nt\\_3DYBt3Ri9HzGBzk4q\\_Jw8LjIjo6yaupQa-r7jZnkmmG7xPPFeHoPp2KK-cQvr0jdIdZTk0K3HSinBxJa7qUVNqFMerMtZuGBhXSVvxI5rL4faOaGqe3ybGcK-bagBEHcPcetHdCPvjPbho2bvMOh6CztZVaIBxW5oOv7zq3RhNxYLWR7AjiwOoavRdOIddcw4grea-oz3TMjEeY4THr4jM4w0KWWJswKpFMUnvi\\_BoVhWISpZcYxEga8SWQcWFRmG7WIyuD0GczScRuPe9y-YfG04sVRr5ynBus8N2yfQKeaFPAV0PLdPoSbwckNS7nSpBvXS1AnMPDAdV8gzuP79c8\\_\\_YnwBe2pJQcFM8xI6VbmSV1R0VGIDs57i1A](http://uta.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwvV1LS8NAEB6kXjxZX_iEOQuVvJsEiofYUvFBsAXBS1iSDRQkLWkK_TX-1s6OmxrNRS9elyFsMss8Nt_3DYBt3Ri9HzGBzk4q_Jw8LjIjo6yaupQa-r7jZnkmmG7xPPFeHoPp2KK-cQvr0jdIdZTk0K3HSinBxJa7qUVNqFMerMtZuGBhXSVvxI5rL4faOaGqe3ybGcK-bagBEHcPcetHdCPvjPbho2bvMOh6CztZVaIBxW5oOv7zq3RhNxYLWR7AjiwOoavRdOIddcw4grea-oz3TMjEeY4THr4jM4w0KWWJswKpFMUnvi_BoVhWISpZcYxEga8SWQcWFRmG7WIyuD0GczScRuPe9y-YfG04sVRr5ynBus8N2yfQKeaFPAV0PLdPoSbwckNS7nSpBvXS1AnMPDAdV8gzuP79c8__YnwBe2pJQcFM8xI6VbmSV1R0VGIDs57i1A)
- Saha, S., & Yap, G. (2013). The moderation effects of political instability and terrorism on tourism development: A cross-country panel analysis. *Journal of Travel Research*, , 0047287513496472.
- Sahlins, M. D. (1972). Stone age economics. Chicago: Aldine-Atherton. Retrieved from [http://uta.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwhV1NS8NAEB2kXsSLrYqxFXLqrZJkdje7Z7EULAVrD96WdHcDHgwF7cF\\_70yT0PhRegkkbMKQZGfmzfDeAGB2n0x--QRPrtitDtPjR6dK1FIgJdPoC5WvU-YNL17Ucm5Ws-xpzxHbbCksKZgLY56uCtDgZVlt3MIWT8\\_eX5t\\_ynKdyhpTzQDMsL53AjSuhHeac\\_FD5oDB5nPohNkphfQY-JBH05CNYDzzgSDr0sY7ESzY9r8cWioxB9XEE0fVw-zCT3INmUYWxuZXUOPcH24gdj5XIZSYCE9Eggw2rFYmcSQFtpLJyIY762y2-qt4gnN9t1vbF2oYLVAYZQ5vhDJrVEecHyh5L6uSSL\\_o\\_zU9gmH3YvsdCEMQhEtv\\_7tlCGc81qwuWYzgtKQtFe52L\\_gb8A2aKw](http://uta.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwhV1NS8NAEB2kXsSLrYqxFXLqrZJkdje7Z7EULAVrD96WdHcDHgwF7cF_70yT0PhRegkkbMKQZGfmzfDeAGB2n0x--QRPrtitDtPjR6dK1FIgJdPoC5WvU-YNL17Ucm5Ws-xpzxHbbCksKZgLY56uCtDgZVlt3MIWT8_eX5t_ynKdyhpTzQDMsL53AjSuhHeac_FD5oDB5nPohNkphfQY-JBH05CNYDzzgSDr0sY7ESzY9r8cWioxB9XEE0fVw-zCT3INmUYWxuZXUOPcH24gdj5XIZSYCE9Eggw2rFYmcSQFtpLJyIY762y2-qt4gnN9t1vbF2oYLVAYZQ5vhDJrVEecHyh5L6uSSL_o_zU9gmH3YvsdCEMQhEtv_7tlCGc81qwuWYzgtKQtFe52L_gb8A2aKw)

- Saleh, A. S., Assaf, A. G., Ihalanayake, R., & Lung, S. (2015). A panel cointegration analysis of the impact of tourism on economic growth: Evidence from the middle east region. *International Journal of Tourism Research*, 17(3), 209-220. doi:10.1002/jtr.1976
- Sandler, T., & Enders, W. (2008). Economic consequences of terrorism in developed and developing countries. *Terrorism, Economic Development, and Political Openness*, 17
- Sarwar, S., & Siddiqi, M. W. (2014). Terrorism or political terrorism vs tourism: New evidence from developing countries. *International Affairs and Global Strategy*, 19, 1-9.
- Seow Ai, N., Choong, Y. O., Krishna, M., & Chan, L. M. (2017). Intention to visit malaysia for medical tourism using the antecedents of theory of planned behaviour: A predictive model. *International Journal of Tourism Research*, 19(3), 383-393. doi:10.1002/jtr.2120
- Singleton, P. A. (2013). A theory of travel decision-making with applications for modeling active travel demand. *Portland State University*. Retrieved from [https://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&htpsredir=1&article=2493&context=open\\_access\\_etds](https://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&htpsredir=1&article=2493&context=open_access_etds)
- Sirakaya, E., & Woodside, A. G. (2005). Building and testing theories of decision making by travellers doi:<https://doi-org.ezproxy.uta.edu/10.1016/j.tourman.2004.05.004>
- Siscan, Z., & Cazacu, S. (2017). The contemporary methodological approaches and theories explaining international tourism flows. *Studia Universitatis Moldaviae: Stiinte Exakte Si Economice*, (2)
- Smith, V. (1998). War and tourism an American ethnography. *Annals of Tourism Research*, 25(1), 202-227. doi:10.1016/S0160-7383(97)00086-8
- Sönmez, S. F. (1998). Tourism, terrorism, and political instability. *Annals of Tourism Research*, 25(2), 416-456. doi: [http://dx.doi.org.ezproxy.uta.edu/10.1016/S0160-7383\(97\)00093-5](http://dx.doi.org.ezproxy.uta.edu/10.1016/S0160-7383(97)00093-5)
- Sönmez, S. F., & Graefe, A. R. (1998). Influence of terrorism risk on foreign tourism decisions. *Annals of Tourism Research*, 25(1), 112-144.  
doi:[http://dx.doi.org.ezproxy.uta.edu/10.1016/S0160-7383\(97\)00072-8](http://dx.doi.org.ezproxy.uta.edu/10.1016/S0160-7383(97)00072-8)
- Weaver, D., Lawton, L., De Lacy, T., & Tourism, C. (1999). Sustainable tourism: A critical analysis.
- Weaver, D. B. (2006). Sustainable tourism: Theory and practice. Amsterdam: *Routledge*.  
Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=189673&site=ehost-live>
- Wooldridge, J. M. (2015). Introductory econometrics: A modern approach. *Nelson Education*.

World Bank. (2013). Maintaining stability and fostering shared prosperity amid regional turmoil. (*JORDAN ECONOMIC MONITOR*). World Bank.

World Bank. (2014). Resilience amid turmoil. (*JORDAN ECONOMIC MONITOR*). World Bank.

World Bank. (2018). Why Use GNI Per Capita to Classify Economies into Income Groups.  
Retrieved from <https://datahelpdesk.worldbank.org/knowledgebase/articles/378831-why-use-gni-per-capita-to-classify-economies-into>.

World Tourism Organization (2015), UNWTO Annual Report 2014, *UNWTO*, Madrid

World Travel and Tourism Council (2015). *WTTC Economic Impact World 2015*, Retrieved from <http://www.wttc.org/-/media/files/reports/economicpercent20impactpercent20research/regionalpercent202015/world2015.pdf>

Yale-Loehr, S., Papademetriou, D. G., & Cooper, B. (2005). Secure Borders, Open Doors: Visa Procedures in the Post-September 11 Era (*Washington, DC: Migration Policy Institute*): 37,

Yoon, Y., Gursoy, D., & Chen, J. S. (2001). Validating a tourism development theory with structural equation modeling. *Tourism Management*, 22(4), 363-372.  
doi: [http://dx.doi.org.ezproxy.uta.edu/10.1016/S0261-5177\(00\)00062-5](http://dx.doi.org.ezproxy.uta.edu/10.1016/S0261-5177(00)00062-5)

United Nations World Tourism Organization (2018, June 26), Retrieved from  
<http://media.unwto.org/content/infographics>

United Nations (2018, August 20), *UN Security Council Resolution 1373(2001)*, Meeting Coverage and Press Release Retrieved from <https://www.un.org/press/en/2001/sc7158.doc.htm>

## Biographical Information

Abeer Almughrabi holds a Ph.D. degree in Urban Planning and Public Policy from the University of Texas at Arlington. Her research interest focuses on tourism, sustainability, economic development, and community development. She gained her master's degree in Urban Planning from the University of Arizona, with a focus on environmental and land use planning.

Abeer is an urban planning management Specialist with over 10 years of experience. She has worked in more than one country and many different states and jurisdictions. She worked as a Researcher and a Public Participation Manager on the North Texas Regional Housing Assessment (NTRHA), a federally mandated equity-focused research and analytical assessment with a strategic emphasis on community engagement. She is also a public engagement expert. Previously, she worked as a Researcher and a Project Manager at the Institute of Urban Studies, the University of Texas at Arlington and managed different interdisciplinary projects in the Dallas Metroplex region including the Dallas Executive Airport Land Use Study as a project lead and as a member of the executive committee to assist the director.

Abeer was able to work on managerial and executive levels early on her career path. She also worked on developing and accommodating communications with the local and central governments in Jordon. In addition, she took the initiative in establishing some non-profit organizations including sustainability and community involvement and development ones. Abeer, worked as an Assistant Dean at the Applied Science University and mixed the academia and professional projects to maximize the outcome and assisted in managing the overall faculty and staff resources.

With her strong passion to community development and equity and outstanding public speaking skills, Abeer ran for Parliament to assist in equitable development regulations. She is a member of various professional associations, including the American Planning Association and the Jordanian Renewable Energy Society.