THE IMPACT OF TOURISM ON THE JORDANIAN ECONOMY

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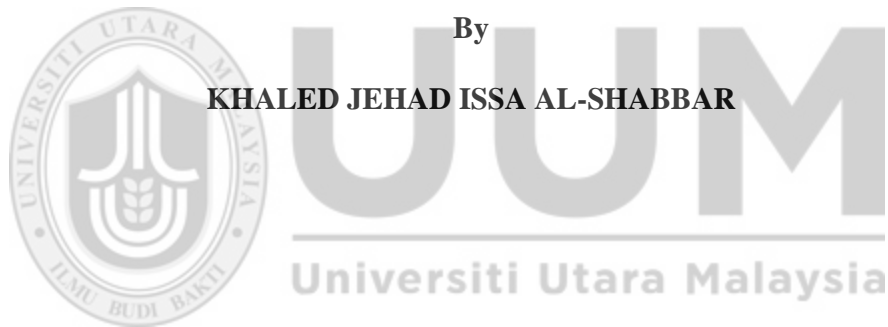**January 2016**

THE IMPACT OF TOURISM ON THE JORDANIAN ECONOMY

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ABSTRACT

The world is heading to improve tourism sectors. And so do Jordan. Currently, tourism is Jordan's important foreign exchange generator. Tourism, one of the world's largest and fastest growing industries is a strategic factor for the economic growth. Since the empirical results associated with the relationship among economic growth and tourism within neoclassical framework are inconsistent, this study has been placed to show that tourism sector has a role in the economic growth using the Jordanian context by using data from 1981-2014. The objectives are to determine the long run and the short run relationships among economic growth, tourism receipts, and government tourism expenditures. The study employs econometric techniques such as unit roots, Johansen cointegration, and Error Correction Model (ECM). the results from Johansen cointegration show a positive and statistically significant relationship between tourism receipts and economic growth. On the other hand, the test shown negative and significant relationship among government tourism expenditures and economic growth. Short run relationships expose only tourism receipts is significant and positively related to growth. The coefficient of the speed of adjustment was not high when there is a state of disequilibrium. Besides improving the present knowledge, the findings also proposed to policy makers to further improve and sustain tourism sector in order to generate higher economic growth.

Keywords: Economic Growth, Neoclassical Growth Model, Tourism Receipts, Government Tourism Expenditures, Johansen Cointegration, Error Correction Model ECM.

ABSTRAK

Banyak negara di dunia termasuk Jordan sedang menuju ke arah meningkatkan sektor pelancongan. Pada masa ini, pelancongan di Jordan merupakan penjana pertukaran asing yang penting. Pelancongan adalah salah satu industri terbesar yang mengalami perkembangan pesat di dunia dan merupakan faktor penting dalam pertumbuhan ekonomi. Kebelakangan ini banyak keputusan empirikal yang berkaitan dengan hubungan antara pertumbuhan ekonomi dan pelancongan dalam rangka kerja neoklasik adalah tidak konsisten. Justeru itu kajian ini akan menunjukkan bagaimana sektor pelancongan mempunyai peranan dalam pertumbuhan ekonomi Jordan dengan menggunakan data tahun 1981-2014. Objektif kajian adalah untuk menentukan hubungan jangka panjang dan jangka pendek antara pertumbuhan ekonomi, pendapatan pelancongan, dan perbelanjaan pelancongan kerajaan. Kajian ini menggunakan kaedah ekonometrik seperti punca unit (*unit root*), kointegrasi Johansen, dan Model Pembetulan Ralat (ECM). Hasil daripada kointegrasi Johansen menunjukkan hubungan yang positif dan signifikan antara pendapatan pelancongan dan pertumbuhan ekonomi. Sebaliknya, ujian yang menunjukkan hubungan yang negatif dan signifikan antara perbelanjaan pelancongan kerajaan dan pertumbuhan ekonomi. Hubungan jangka pendek menunjukkan hanya hasil pelancongan yang penting dan positif terhadap pertumbuhan. Kelajuan pelarasan pekali tidak tinggi apabila terdapat ketidakseimbangan. Selain meningkatkan pengetahuan semasa, dapatan juga mencadangkan kepada pembuat dasar untuk meningkatkan lagi dan mengekalkan sektor pelancongan bagi menjana pertumbuhan ekonomi yang lebih tinggi.

Kata kunci: Pertumbuhan Ekonomi, Model Pertumbuhan Neoklasik, Penerimaan Pelancongan, Perbelanjaan Pelancongan Kerajaan, Kointegrasi Johansen, Model Ralat Pembetulan (ECM).

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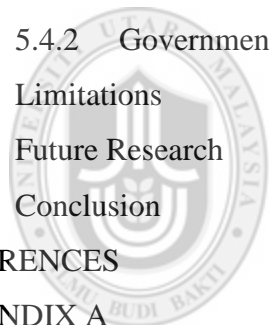
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List of Abbreviations

CBJ   Central Bank of Jordan

GDP   Gross Domestic Product

UNWTO   United Nation World Tourism Organization

ECM   Error Correction Model

WTO   World Tourism Organization

WTTC   World Travel & Tourism Council

CHAPTER ONE

INTRODUCTION

1.1   Introduction

This chapter shed some light on the background information related to the current tourism situation in Jordan such as tourism industry, tourism planning and development in Jordan. The chapter also presents the problem statement, research questions, research objectives, significance of the study, scope of study, and the organisation of the study.

1.2   Background of the Study

Recently, tourism sector has expanded and becomes one of the main sectors in the economy. World tourism organization has announced in its annual report for the year 2013 that more than 1.087 million people were travelling around the world, which generates more than USD 1.4 trillion revenues. World tourism organization predicted that there will be around 16 billion tourists travelling internationally in 2020, spending more than USD 2 trillion annually or USD 5 billion daily (UNWTO, 2015). Therefore, governments are taking more attention to the tourism sector and trying to improve it because of its benefits in creating jobs opportunities, attracting foreign exchange earnings and contributing to tax revenues. Therefore, countries are

competing each other to expand and improve its tourism sector and trying hardly to attract as huge as possible of tourist numbers.

1.2.1   The Definition of Tourism

Tourism is travelling for leisure or recreational purposes. The world trade organization has defined tourism as people who 'travel to and stay in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited'. Tourism can be defined as the sum of the marvels and relations rising from travelling and staying of non-residents, as long as they don't become a permanent residence and they are not associated with any permanent or temporary job (McCabe, 2005). Three forms of tourism have been classified by The United Nations in 1994 in its Recommendations on Tourism Statistics: Domestic tourism, which includes residents of the given country travelling only within this country; Inbound tourism, including non-residents travelling in the given country; and Outbound tourism, including residents travelling in a foreign country.

A study by Sathiendrakumar and Watson (1997) defined tourism as a sector that brings together various type of services; it is the business of creating services to people who are travelling for relaxation. These services include restaurant service, accommodation, transportation, sightseeing and recreation.

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According to Quinn and Gagnon (1986) service is 'all those economic activities in which primary output is neither a product nor construction'. Moreover, service can be defined as an activity or a sequence of activities of additional or fewer imperceptible nature that usually, but not certainly, take a place in the exchanges between clients and service workers and/or physical resource or goods and/or system of the service supplier, which are provided as solution to client issue (Kearsey & Varey, 1998).

1.2.2 Tourism Industry in Jordan

There are many tourism products in the Kingdom of Jordan. Some historical places such as Petra, Rum Valley, and Ajloun Castle. Some religious tourism places such as Jordan River, Madaba, and Mount Nebo. In addition to some therapeutic spas and mineral water such as Afra Falls, Hamma springs, and Ma'in Falls. Furthermore, Jordan also has some coastal places such as the Bay of Aqaba, and the Dead Sea.

Tourism is considered as one of the important sectors in the Jordanian economy. Jordan's tourism sector has achieved a revenues reached to USD 3.5 billion in 2012 achieving an increase of more than 15% for the year 2011 which amounted to three billion dollars by 15.3% according to the Central Bank of Jordan (CBJ, 2015). However, the revenues of the sector did not reach the expectations WTTC.

1.3   Problem Statement

Although the Hashemite Kingdom of Jordan has a variety of tourism resources, financial resources, human resources, and convinced of the importance of the tourism sector in economic and social development, but the tourist sector in the Kingdom still not sufficient enough to meet the increasing needs of the demand for these services, and the investments in this sector still below the desired level. Moreover, World Travel and Tourism Council (WTTC) has expected the visitor exports to generate USD 5,580.7 million as a minimum and the expected value for the investment in the tourism sector to be USD 694.9 million as a minimum, but the actual generated value for the visitor exports was USD 5,474.7 million and USD 671.2 million for the investment in the sector in 2014 (WTTC, 2015). Thus, the major concern of this study is to determine the relationship between economic growth and tourism sector.

As Jordan moves along the process of the economic expansion, almost all of the component of the Gross Domestic Product (GDP) exhibit an upward trend. This movement along the time might show some kind of behaviour. Moreover, GDP, tourism receipts (TR), and government tourism expenditures (GT) are also experiencing an upward trends as shown in Figure 1.1. this incensement has created sufficient time to examine the relationship among tourism receipts, government tourism expenditures, and economic growth.

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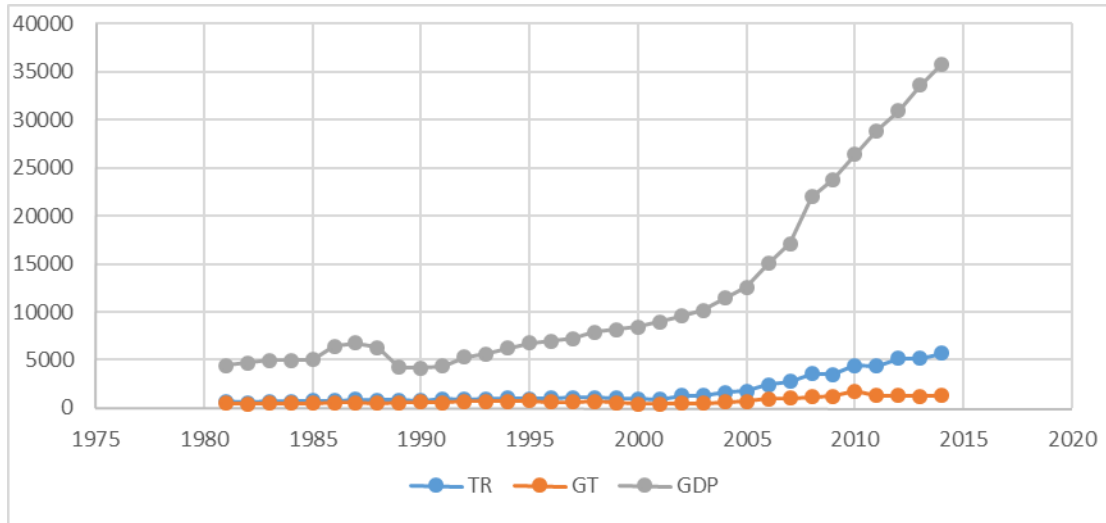
Figure 1.1
GDP, TR, and GT in Jordan from 1981 to 2014

Moreover, Jordan is one of the countries that have very limited natural resources, which leads to an increase in our imports and limits our abilities to produce and export to other countries. This deficit in the trading balance causes more deficits in the balance of payments (Santos-Paulino & Thirlwall, 2004). For example, the deficit in the balance of payments in 2014 captured by CBJ was USD 27.2 billion. This huge deficit requires finding a new resource of foreign currencies. From this point of view, we can conclude the importance of tourism sector as a source of the foreign currencies to make up the deficit in the balance of payments in the Jordanian economy.

There is no doubt that tourism contributes to economic growth through tourism receipts, which generates foreign exchange earnings. Jordanian governments have been taking care of the tourism sector from the last quarter of the last century by establishing the Tourism Promotion Authority in Jordan in 1998. Although tourism

sector was a priority for the governments, but the revenues from the sector was not
and still did not reach the expectations of WTTC.

1.4 Research Questions

1. Which factors such as tourism receipts and the government tourism expenditure significantly influence the economic growth in Jordan?

2. Is there a significant long-run relationship between economic growth, tourism receipts, and government tourism expenditures?

3. What is the short-run relationship among economic growth, the tourism receipts, and the government tourism expenditures in Jordan?

1.5 Research Objectives

The objectives of this study are identified from the problem statement and the

research questions. These objectives can be divided into two categories: general

objective, and specific objectives.

1.5.1 General Objective

The general objective of the study is to determine the role of tourism receipts

and government tourism expenditures to economic growth in Jordan.

1.5.2   Specific Objective

This study aims to:

1.   Calculate the long-run relationship between economic growth, tourism receipts, and government tourism expenditures.

2.   Calculate the short-run relationship among economic growth, the tourism receipts, and the government tourism expenditures.

1.6   Significance of Study

This study would increase the understanding of the relationship between the tourism sector and the economic growth in the Jordanian economy. This study would have attempted to provide a practical understanding on the current tourism situation in Jordan, and would give a better picture of the changes that need to be done so as to stay on track towards achieving the goals of the government. The recommendations of this study would help the government to enhance the performance appraisal process to increase and sustain the tourism sector.

1.7   Scope of the Study

The general function of this study can be written as GDP=f(TR,GT) where the focus variables are gross domestic product (GDP), tourism receipts (TR), and government tourism expenditures (GT). Moreover, the study will use a secondary time series data

from 1981-2014. The growth theory is employed in the study to determine the relationships among economic growth, tourism receipts, and government tourism expenditures.

1.8   Organisation of the Study

This study is organised into five chapters. Chapter One includes the background of the study, the problem statement, the research questions and objectives, and explains the scope of the study as well as the significance of study. Chapter Two discusses the theoretical and the empirical reviews of the study. Chapter Three explains the methodology used in the study. Chapter Four presents the results and the discussion on the findings. Finally, Chapter Five outlines the conclusion and the recommendations.
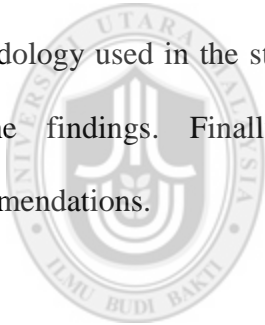
CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

This chapter builds upon the literature review, which focuses on the contribution of the tourism sector in the development and economic growth, the impact of tourism receipts, and the impact of government tourism expenditures on the economic growth. Reviewing these subjects is vital to have a better understanding of the development of tourism.

2.2   Theoretical Review

Tourism activity leads to a set of positive economic effects in the economies of countries, both developing and developed, as it contributes to increased sales and profits, tax revenues, increased income, and operation of labour. The most direct effects occur within the primary tourism sectors of housing, hotels, restaurants, nightclubs and retail activities, in addition to the secondary effects in most other economic sectors in the economy, especially in the transport and communications industries that produce goods serving the tourism sector.

The researchers believe that it must be distinguish between growth in GDP using traditional sources of growth, such as investment in physical and human capital and

growth through tourism activity, through the measurement of exports and imports relative to GDP, and the index of economic freedom, and foreign direct investment and household expenditures, and the model that can be used in this area is Cobb-Douglas model.

The international tourism has a very significant impact on the levels of trade and foreign exchange earnings in the developing countries (Dwyer & Forsyth, 1997). The economic impact analysis focuses on changes in the volume of production and sales, income, and employment. Moreover, tourist activity works to achieve the following positive effects on the national economy, which is the following:

1. Achieving the economic development and increase economic growth rates and generate the income.
2. Providing employment opportunities.
3. Improving the balance of payments.
4. Developing the economic structure.
5. Encouraging the trade activities.
6. Increasing tax revenues

The achievement of these positive effects in the national economy depends on the availability of the following factors (Mathieson & Wall, 1982):

1. The nature of the main tourist facilities and its attractiveness.
2. The size and intensity of capital spending.
3. The level of economic development in tourist destinations.

4. The size of the economic base in the tourist destination.

5. The degree of redistribution the income within the tourist destination.

6. The degree in which can adjust the seasonal tourism demand within the tourist destination level.

The study of these factors and its availability and its effects on the positive impacts for the various tourism sectors, requires the study of comparative advantages and competitive advantages for the tourism sector in the national economy. The tourism sector development works to create the external benefits such as the development of transport and communication, health education and banking services and sanitation sector, and increase the sales of their products. The tourism sector is enhances the internal trade, through opening the communication channels between businessmen, and helps the development of the trade sector, this depends on the ability of suppliers and businessmen to meet the demand, in addition to the historical development of the sector, and the size of the development of tourism in the region (Mathieson & Wall, 1982). On the other hand, it encourages the establishment of the industries that depends on the tourism sector, where the World Tourism Organization included about 52 industry works to support and nurture the tourism industry.

2.2.1 Economic Growth Theory

Solow (1956) and Swan (1956) have developed the most significant contribution to the economic growth literature. Although their work was on

the same year, but they were independent of each other and their models have been published in different journals and different countries. From their observations they concluded that the economic growth relied on capital and labour which determine the technological change in return. In the literature of growth, their models are considered the most outstanding models (Kan & Omay, 2011).

The next model involved in Growth Theory was developed by Cass & Koopmans (1965) which is known as the Diamond model. Their model was developed by adapting Ramsey's analysis and accounting savings as internal in the model. The model ensures that worker and capital's productive elements are rated according to their marginal products, which is very similar to decentralised competitive structure (Kan & Omay, 2011).

After Cass & Koopmans (1965), the next model developed in Growth Theory was introduced by Arrow (1962) and Sheshinski (1967). Their models were about increasing the return of scale which produced by production and investment.

Romer (1986) and Lucas (1988) reinvented the economic growth theory and they replaced 'new growth theories with internal technological developments' with 'neoclassical models with external technological developments'.

2.2.2 Keynesian Theory on Government Expenditure and Economic Growth

Policy makers and the economists in the developed and the developing countries have been concerned from long time about the role of governments expenditures in generating the economic growth. Government expenditures are an exogenous factor which can encourage the economic growth, this is known as Keynesian theory. Government tourism expenditures plays a positive role in the economy, this statement is supported by Keynes (1933). This theory is based on the government roles implemented on aggregate demand when the economy is remained constant or declining. Keynes believed that government expenditures might significantly enhance the economic growth through the increase in aggregate demand. This expansionary fiscal policy will result the incomes and the economic activities to increase and the unemployment to reduce.

Moreover, Keynes (1936) said that when the government increases the expenditures, the national income will increase as well. Therefore, the causality in Keynes approach runs from the government expenditures to the national income. Providing that government expenditures is an exogenous variable to be included as an instrument to estimate economic growth. Although Keynesian in not a government growth theory, but it is a more appropriate economic stabilization theory. The proposition of the Keynesian

on government expenditures is based on the experiences of developing countries that strongly built their economic growth on the expansionary fiscal policies. Even though, this theory is effective in some of the developing countries, but it is not necessary that this theory is always correct and should be implemented and followed by the governments.

2.2.3   Economic Growth, Tourism and Government Expenditure

From the theory presented in the previous section, this section will discuss the contribution of tourism to economic growth and the role of government tourism expenditure. This section draws a conclusion that these two variables are certainly important to the economic growth. Nevertheless, to what extend the relationship among tourism (tourism receipts and government tourism expenditure) and economic growth in Jordan is uncertain. This has strongly prompted the study to adopt these variables as the independent variables in the present study.

2.2.3.1   Tourism Impacts and Economic Significance
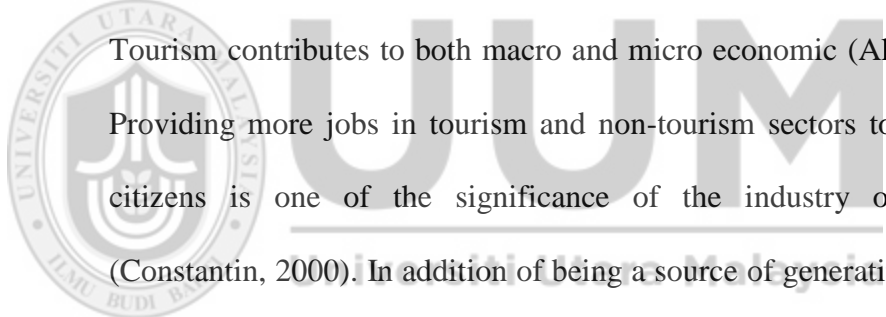
To provide a significant utility to the economic activities, tourism industry includes many different fragments of the populations (Cascante, 2008). Meanwhile, tourism is a combined system in the economy (Leiper, 1995), which said to have a closed connection with

other economic activities. This enables the tourism sector to be connected to the global economic system through tourism economic impact multiplier (Minciu, 2000).

This multiplier starts with the tourist spending on goods and services that directly contribute to the place that the money paid for (direct impact). As a result, this money will contribute indirectly to other sectors related to that place such as the payment for the workers and the payment for the supply of the goods and services from other sectors business in the economy to be used in their business (indirect effect). These payments for the workers who work in the tourism sector may purchase goods and services from other sectors, which are not related directly to tourism by their income for their own use (induced effect). This creates a chain effect in the economy. This aggregate result is the impact of tourist expenditures in the economy (Frechtling, 1994). Bringing an additional money by the tourists to the host area encourages additional business activities in that area and generates extra activities such as income, employment, sales, and government revenues generated by the taxes in that area. The result from this process is the multiplier effect in the economy (Yu, 1997).

According to Burkart & Medlik (1981) the spending of the money that the tourists gained in their origin in the places they visit in the form of
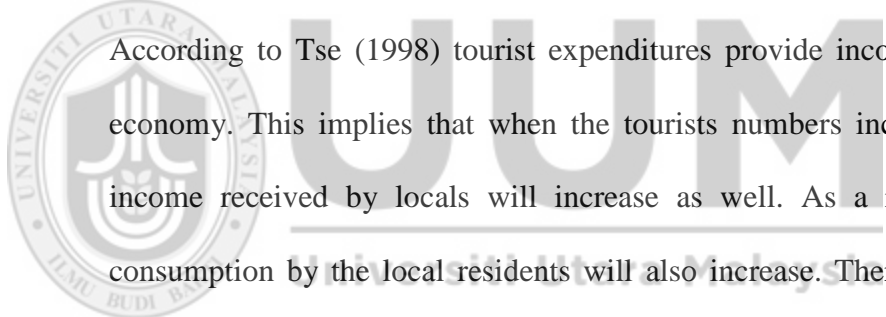
tourist expenditures is the main economic significance by the tourism multiplier effect. This flow of money from the expenditures of tourist is recycled and re-spent during their tours. Therefore, this increases the income by a greater amount than itself, which is known as the multiplier effect. The main factor that identifies the size of the multiplier effect is the number of times that the original income is recycled at each stage and the level of the savings and the imports as leakages from purchases (Cooper, Fletcher, Wanhill, Gilbert, & Shepherd, 2005).

Tourism contributes to both macro and micro economic (Akal, 2009). Providing more jobs in tourism and non-tourism sectors to the local citizens is one of the significance of the industry of tourism (Constantin, 2000). In addition of being a source of generating income and employment (Gulcan, Kucstepeli, & Akgungor, 2009), tourism provides services for the local citizens (Burkart & Medlik, 1981). Local citizens can have better services such as shopping and entertainment facilities, transportation systems, and other public facilities with the increase of tourists numbers in the area.

In addition, tourism benefit from microeconomic effect such as utilize sources from business competition efficiently, improve the quality of employment, and economic of scale (Akal, 2009). Moreover, tourism

would lead the economic growth through the foreign exchange gained from tourism activities which can be utilized to buy capital goods from other countries to be used to produce other goods and services (McKinnon, 1964), this gives a good indicator that tourism significantly influence the economic development. Furthermore, tourist arrivals affect the household consumption (Jackman & Lorde, 2010). Keynesian believed that when the number of tourists increases, this would increase the private spending in the host area through the multiplier effect.
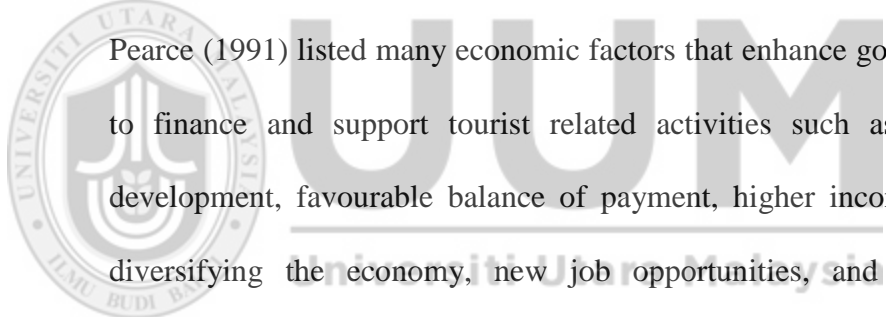
According to Tse (1998) tourist expenditures provide income to the economy. This implies that when the tourists numbers increase, the income received by locals will increase as well. As a result, the consumption by the local residents will also increase. Therefore, the production and the income gains from the multiplier effect will be increased as well (Durbarry, 2004), (Lee & Chang, 2008) and (Sanchez Carrera, Brida, & Risso, 2008). Furthermore, many of the developing countries are capable to increase their government revenues significantly from the international tourism (Wickremasinghe & Ihalanayake, 2007). According to WTO (1998) most of the specialized topical tourist countries have increased their revenues from 10 to 20% from tourism activities. Besides, IMF (2009) affirmed that in terms of the correlation among the earning shares from tourism and

the economic growth, tourism contributes to the economic growth of the host countries, ceteris paribus, 1% increase in tourism revenues from total exports produces an increase by 0.5% in annual GDP growth (Brau, Lanza, & Pigliaru, 2003). The significance of tourism is the main factor that the government rely on to decide whether to invest and to finance the tourism sector or not.

2.2.3.2 Government Expenditure and Tourism

There is no way to avoid engaging tourism with environmental and public economics because of the market failures in the industry due to its dependency, to a great extent, on the natural or the man-made environments (Tisdell, 1997). This point that involves the role of the government. This role is very important as it realises that the country reaches prosperous economic growth and is always in a stability state. To be more specific, the role of the government is important in developing the tourism sector (Akama, 2002) as it identifies the critical function of tourism on the economy and therefore is trying to achieve its prospects (Brida, Pereyra, Risso, Devesa, & Aguirre, 2008). This takes into account the preparation of efficient transportation infrastructure; protecting the political stability of the country to guarantee the safety of tourists; providing favourable environment for the private sector to grow and flourish in addition to

designing an effective tourism strategies and planning to develop the sector. According to Loutif, Moscardini & Lawler (2000) the infrastructure and the resources are the most critical features for a country to fight for to get the market share in the competitive world. This implies that a significant budget is required from the government to offer the infrastructures and the basic facilities in the first place to develop tourist desirability area (Wong, 1996). In practice, the government funds a large part of the necessary infrastructure for the tourism sector (Tisdell, 1997).

Pearce (1991) listed many economic factors that enhance governments to finance and support tourist related activities such as regional development, favourable balance of payment, higher income levels, diversifying the economy, new job opportunities, and increased government revenues (taxes).

The spending and collection of the money back as revenue in future is the basic behaviour of governments in their fiscal policies or public finance. However, spend and collect tax is not the only work for the government. Economic researchers give more attention to the relationship between government fiscal policy on tourism expenditures. This attention by the economic researchers to understand the long-run relationship among government tourism expenditures and

economic growth has increased (Louca, 2006). Increasing the expenditures on the tourism sector can provide possible benefits the economies of the countries (Sinclair, 1998). Expenditure by private and public sectors on tourism sector is important to determine a wise level of economic activities, this view is supported by Keynesian approach.

The economic of government spending theory says that whether there is an impact of the government spending on the economy is not derived automatically, however it is based on conditions. According to Mitchell (2005) there are times when smaller government spending is desired to improve growth and there are times when higher spending is necessary to increase the economic growth of the country. Additionally, the cost would be more important than the benefit and this becomes an issue to the economy when the government expenditures become heavy or when it is misassigned.

Rationally and logically, the governments should spend more on the productive sectors and industries to gain benefits to the country by creating higher rate of return. Oppositely, the governments should reduce the spending especially in the areas that generates the lowest returns or acquire highest costs (Mitchell, 2005). If the government

reduced the spending, the economy might become healthier in the long run, but if it is in the short run it could be otherwise.

2.3   Empirical Review

In addition to the important theories discussed earlier, it is also important to know about the empirical evidences of the study. The contribution of tourism receipts and the government tourism expenditures to the economic growth have been explored by many of the empirical studies. This section discusses the empirical revenues of the study.

2.3.1   The Contribution of the Tourism Sector in the Development and Economic Growth

Most researchers believe that the economics of tourism development and the development of the tourism sector, especially in developing countries, works to achieve positive growth rates in GDP, and is working to achieve economic and social development in these countries. The attention of various governments on the tourism sector has started to grow over the past decades, in the belief that this sector contributes to the economic and social development, and increase the economic growth rates, and with the emergence of many researches and studies that highlight the importance of the role and contribution of the tourism sector in the GDP, many of the studies showed the

positive impact of the tourism sector on the economic development in many countries, and its role in economic growth, and its changes over the time (Witt & Song, 2001).

In a study by Proenca and Soukiazis (2005) on measuring the impact of tourism on the growth rates in the areas of Portuguese, the study found that increasing the capacity of the accommodation sector by 1% leads to an increase in per capita income from tourism by 0.01%. on the other hand, another study carried out by Ivanov and Webster (2007) showed that the countries that uses its resources in tourism development have achieved growth rates faster than those countries who uses its resources to develop other sectors.

Another study conducted by Eugenio-Martin (2004) on a number of states in Latin America during the period 1985-1998 showed the positive impact for the development of the tourism sector on the economic growth and development in these countries, where the study showed the positive relationship between the increase on the number of arrivals of tourists to the state and the increasing rates of economic growth (Subregional Headquarters for the Caribbean, 2010). In addition, Balagure and Cantavella-Jorda (2002) has built a model that includes the relationship between real GDP and the revenues of international tourism and the impact of the real exchange rate,

which found that international tourism revenues positively affect the rate of economic growth in Spain, and that this relationship is stable in the long run.

A study by Kareem (2009) about the importance of the tourism sector to increase growth rates in Africa, showed that the increase in the export of tourism services help to get the necessary foreign exchange to purchase capital goods needed by the economy, which is working to accelerate economic growth rates. In a study by Fayissa and Tadesse (2008), about the impact of the tourism sector on sub-Saharan Africa, the study showed that tourism revenue has contributed significantly to the current level of GDP for these countries, and on the level of economic growth that has been made in these countries, it also contributed to promote the investment in the physical and human capital in these countries, and it also showed that increasing economic growth rates in the long-run depends on the strategies that used to develop the tourism industry in these countries. The previous studies and other studies have shown the importance of the tourism sector to increase the economic growth and development rates and increase the individual welfare.

2.3.2   Other Economic Effects of the Tourism Sector

In addition to the above, the tourism sector contributes many other positive effects on the economies of the countries. Tourism sector also contribute to the increase of tax revenue of the country, and access to hard currency, and to

encourage the commercial sector. It's also contributes the improvement and development of other services such as transportation, sanitation services, the water and electricity networks, banking services, internet networks and communications, and other services needed by tourists as needed by citizens alike.

The increase in the number of tourists in a specific area, will lead to increase the demand for many goods and services, tourist and non-tourist, which works to strengthen the forward and the backward links with many other economic sectors, such as industry and agriculture sectors, and leads to develop it (Norbert, 2005).

2.3.3 Government, Tourism and Economic Growth

This section discusses the empirical studies built up on the government tourism expenditure and economic growth. In a study conducted by Kareem (2008) on measuring the long-run relationship among tourism and economic growth in 36 African countries between 1995-2004, the study included the real GDP as a proxy for the economic growth while tourism expenditures and tourism receipts were used to capture tourism sector. The test for cointegration showed that a long-run relationship exists between tourism sector and the economic growth.

To address the issue of the ability to promote economic growth by the tourism expenditures. A study by Louca (2006) examined a three main categories of expenditures on tourism sector namely: advertising and promotional, Gross Domestic Fixes Capital formation in hotels and restaurants, and transportations and communications. This study was conducted in Cyprus and supported by the government during the period between 1960-2001 except for Gross Domestic Fixes Capital formation in hotels and restaurants 1975-2001. The study measured the existence and the nature of the long-run relationship among (1) tourism income and tourism expenditures, (2) tourist arrivals and tourism expenditures, and (3) tourism income and tourist arrivals by using Johansen cointegration test and Vector Error Correction Model. The results of the study suggested a two-way pattern among tourism income and categories of expenditures (Gross Domestic Fixes Capital formation in hotels and restaurants and advertising and promotional) on the first hand, and tourist arrivals and Gross Domestic Fixes Capital formation in hotels and restaurants on the other hand.

A study conducted by Ishikawa & Fukushige (2007) examine the long-run fiscal and multiplier in Amami Islands (the remote islands of Japan) employing two econometrics models in the period between 1976-2001. The study found that 1% of fiscal expenditures contribute taxable income of 0.63% only. This indicates that there is relatively a big amount of fiscal expenditures leak compared to other parts of Japan. The second findings showed that the

tourism multiplier in the islands needs some time to take effect and to adjust the fiscal subsidies. After two years, Ishikawa & Fukushige (2009) conducted another research by using panel data on 124 remote islands of Japan. The study measured the effect of government spending. Their population size and the number of tourists on per capita taxable income starting from 1975-2001. They discovered that government spending and population size contributes a positive significant impact to taxable income per capita unlike the number of tourists. From the view point of the political implication, they discovered that to aid the islands economy, a continues financial support is needed. In other words, reducing the government fiscal spending for the island, would progressively affect the local taxable incomes. In a survey carried out by Hanagriff & Lau (2009) from visitors and communications to measure the impact of tourism from state funded tourism events on the local economy in Texas. They found that the supported programs could generate positive returns on investment.

Gulcan et al. (2009) explores whether there is any provided impact to the tourism industry's value added by the government tourism investment in Aegean Region. The study applied econometric model of panel data for 8 provinces in the region during the period from 1995-2001. Their dependent variable was the value added of hotels while the independent variables was number of rooms, number of beds, average number of employees, public investment on tourism, GDP per capita, and public investment on

communications and tourism. Their statistical results confirm that the public investment on tourism significantly increases the value added of the hotels. In other words, the value added in the tourism industry is influenced by the public investment in tourism in the Aegean Region.

A study conducted by Nada Kulendran & Wilson (2000) to examine whether Australia invested the public money to promote the country as a tourist destination to Asia, New Zealand, Japan, the US, and the UK from 1980 to 2005 efficiently and to estimate the returns on per dollar investment. The discovery from their study was that the returns were 17:1, 8:1, 36:1, 3:1 and 7:1 respectively. This indicates that the Australia governments' investment was successful and there might be a probability to increase the investment by the Australia government in addition to target its profitable and potential market segments. Lau, Oh & Hu (2008) have a similar view of point, they claim that tourist arrivals in Sarawak (Malaysia) will exhibit a constant increase annually with the financial and non-financial support of the government.

2.3.4 Government Expenditure and Economic Growth

Regardless of the relationship between the government expenditures and the economic growth in Jordan, other studies showed mixed findings in this area as well. The following are some of these results:

A study conducted by Magazzino (2010) at a disaggregated level Wagner's law using a time series data from Italy during the period between 1970-2008. The study examined the short-run and the long-run among the GDP and 5 public expenditures such as dependent labour income, passive interests, gross capital formation, final consumption, and grants to productions. The results showed an evidence in favour of Wagner's law only for passive interests in the long-run while dependent labour income in the short-run. Another study conducted by Nurudeen & Usman (2010) to examine the impact of disaggregate government expenditures on the economic growth using cointegration and Error Correction Model on Nigeria during 1970-2008. The study found a positive impact of government expenditures on transports and communications on the economic growth. Moreover, Nketiah-Amponsah (2009) examines the relationship between disaggregate expenditures and education, health, and infrastructure on the economic growth by using Ram's (1986) framework in Ghana during 1970-2004. The study found that disaggregate expenditures promote the economic growth in the short run.

Furthermore, Bose, Haque & Osborn (2007) studied the effects of disaggregate and the aggregate government expenditures on the growth using panel data of 30 developing countries during 1970-1990. The variables used were the aggregate current capital, aggregate capital expenditures, sectoral expenditures, and sectoral investment. After the consideration of omitted

variables and the budget constraint, the results showed, in terms of disaggregate government expenditures, that only total expenditures and government investment in education are significantly related to the growth. On the other hand, in terms of aggregate findings, it shows that the share of government expenditures in GDP has positively significant relationship with the economic growth.

In addition, this paragraph includes a few findings found in the period between 1990s and the early 2000s. Easterly & Rebelo (1993) found a positive relationship between public investment in transports and communications and economic growth. Miller & Russek (1997) reveal a negative association between government expenditures and growth rate of real per capita gross product. Fölster & Henrekson (2001) show that there is a drop of per annum growth rate as a result of an increase of government expenditure ratio by 10% as a fraction of GDP. Bassanini & Scarpetta (2002) shown that investment, taxes and government spending could affect directly and indirectly on the economic growth.

2.4   Conclusion

This chapter reviewed the theoretical and the imperial studies related to tourism receipts, and government tourism expenditures. The conclusion shows that many researchers have developed some methodologies from years ago to the most recent

years in order to examine the economic impacts from simple researches to the most complex analyses, from a single country to huge geographical areas, and from aggregate economy sectors to disaggregate economy sectors.

Generally, the findings for government tourism expenditures are not certain, even when this variable is incorporated in neoclassical growth model. The reason for the mixed or inconclusive results is primarily due to the variables used in the model, the used methods, the geographical area, and the period of the study. This has inspired the study to be built up on some theoretical and empirical studies such as Durbarry (2004), Louca (2006), and Kareem (2009) to determine the relationship among the selected variables and the economic growth. The model in this study modified in such way to include tourism receipts, and government tourism expenditure within the conventional neoclassical model.
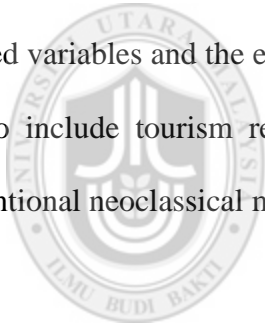
CHAPTER THREE

RESEARCH METHODOLOGY

3.1   Introduction

This chapter presents the details about research methodology. In this chapter the research framework, research design, measurement of variables, data collection, and the techniques of the data analysis are also explained and highlighted.

3.2   Research Framework

Based on the problem statement and the research questions discussed in Chapter One, three research objective have been developed to measure and determine the impact of tourism receipts (TR), and government tourism expenditures (GT) on the economic growth (which is specified by the growth domestic product (GDP) as a proxy for economic expansion) in Jordan, using time series data from 1981 to 2014.

Figure 3.1 illustrates the research framework for this study, it has been designed according to the study's objectives. Therefore, this study is to determine whether TR and GT are the determinants of economic growth (GDP) and to find out the long-run relationship among the study variables. The aims will be achieved by running the time series econometric techniques such as unit root test and Johansen cointegration test and ECM from 1981 to 2014.
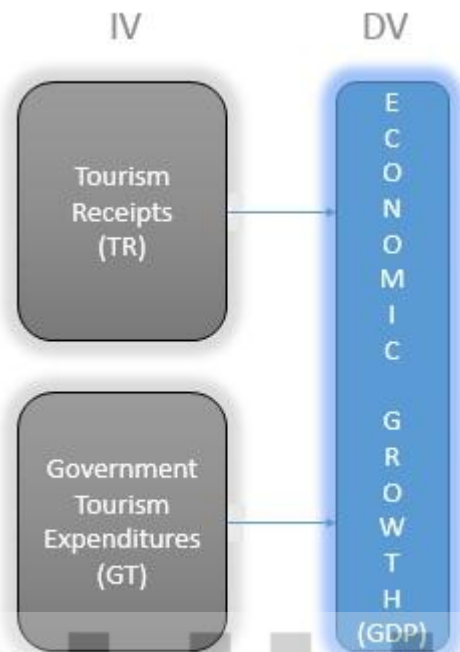
Figure 3.1
Research Framework

3.3 Research Design

The research design is the main strategy that a researcher prepares to lead him in his research project through the stages of the collection and the analysis of the data. There are many research designs can be used and followed by the researcher. According to Zikmund (2003), research methods can be classified into four methods for both quantitative and qualitative researches, these methods are survey, experiment, secondary data study and observation. The information collected through

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the research design is to identify whether the gathered information is appropriate to answer the research questions (Zikmund, 2003).

3.4   Measurement of Variables

This part will explain how the variables in the econometric model of this research will be measured. On the other hand, Gross Domestic Product (GDP) is the dependent variable for the model of this research, while the tourism receipts (TR) and the government tourism expenditures (GT) are the independent variables.

3.4.1   Gross Domestic Product (GDP)

In measuring the economic growth, real GDP is the most relevant variable used (Brida & Pulina, 2010) and the most used macroeconomic indicator to measure the economic growth (Mankiw, Romer, & Weil, 1990; Sinclair, 1998; Barro & Sala-i-Martin, 2004; Durbarry, 2004; Ka, 2009.

3.4.2   Tourism Receipts (TR)

The study of tourism receipts (TR) as a factor of development and growth has drawn many researchers in this area such as (Sinclair, 1998; Durbarry, 2004; Oh, 2005; Kim & Chen, 2006; Brida et al., 2008) but the empirical results were inconsistent. Brida & Pulina (2010) clam that tourist arrivals are the

most recognized variable used in the empirical studies (Sheldon, 1993; Lim & McAleer, 2000; Shareef & McAleer, 2007; and Lin, Liu, Tseng, & Su, 2011). Some studies such as Tremblay (1989), Sheldon (1993), Syriopoulos (1995); Li, Song & Witt (2006), and Song & Lin (2009) use tourism and expenditure, and tourism receipts to represent tourism. Hou, Huang, & Huang (2006), in fact, find both tourist arrivals and international tourism receipts can best describe the behaviour of tourism growth.

3.4.3   Government Tourism Expenditures (GT)

Public expenditure is incorporated in the works of many researchers. Among them are Barro (1991), Barro & Sala-i-Martin (1992), Easterly & Rebelo (1993), Devarajan, Swaroop & Zou (1996), Hulten (1996). The empirical evidence has been mixed (Cooray, 2009). The empirical findings in Jordan have shown conflicting results between the relationship of government expenditure and economic growth (Dandan, 2011). However, as far as the study is concerned, there is limited study being found specifically in measuring the relationship between government tourism expenditure (GT) and economic growth within conventional neoclassical growth model.

3.5   Data Collection

Data has been collected through three of the reliable agencies such as World Bank Organization, Central Bank of Jordan, and World Tourism Organization. The data in use for this research will be the secondary time series data from 1981 to 2014 for the Jordanian GDP, tourism receipts, and government tourism expenditures.

3.6   Specification of the Model

The data analysis process has been conducted by implementing a simple regression analysis to examine the effect of the independent variables on the dependent variable. Moreover, a unit root test will be the primary feature when analysing the impact of tourism on economic growth. Therefore, the Vector Autoregressive (VAR) method has been used to test for cointegration using Johansen cointegration test. On the other hand, the cointegration test has been employed based on Johansen's method to examine the long run relationship between tourism and economic growth, as the short run relationship will be analysed by using vector error correction model.

Basically, the model in use can be written as:

$$GDP = f(TR, GT) \tag{3.1}$$

Where:

GDP = Gross Domestic Product

TR   = Total Receipts from Tourism Sector

GT   = Total Government Expenditures on Tourism Sector

Therefore, the *GDP* functions above can simply be specified as model below:

$$GDP = \beta_0 + \beta_1 TR_t + \beta_2 GT_t + \varepsilon_t \tag{3.2}$$

β = the parameter for the explanatory variables

t = time series

ε = error term

Other variables have been explained in equation (3.1).

3.7   Estimation Procedures

This section discusses the procedures in use for the study such as ADF unit root test, Johansen cointegration test, and Error Correction Model.

3.7.1   Unit Root Test

Unit root test is the main factor when determining the stationarity of the time series data. Therefore, a time series can be considered as stationary if the test for unit root did not show significant results. On the other hand, if the test of unit root shows significant results, the series is considered as a non-stationary

time series. However, the problem of non-stationary can be solved using the differencing of the data. In details,

$$E(Y_h) = (Y_{t+h}) = \mu, \; var(Y_t) = E(Y_k) = \sigma_y^2 \text{ and}$$

$$cov(Y_t, Y_{t+h}) = \gamma_h \text{ (constant) for all } h \neq 0.$$

A non-stationary series must be induced to become stationary in order to yield a meaningful inference (Granger & Newbold, 1974). Ordinary least squares (OLS) is normally used in estimating the slope coefficients of the autoregressive model. However, using OLS rely on the stationarity of the stochastic process. According to Granger and Newbold, the spurious regression will be the result of using OLS if the stochastic process was a non-stationary process. As a result, the values of R^2 and t-ratios will be high, and a non-economic meaning results will be generated.

Unit root test should be applied first by taking the null hypothesis as the data are non-stationary in estimating the slope coefficients. As a result, OLS can be used in the case of rejecting the null hypothesis. On the other hand, if the test was unable to reject the null hypothesis, the difference operator can be applied on the series according to the following equation:

$$\Delta Y_t = Y_t - Y_{t-1} = \varepsilon_t \qquad\qquad (3.3)$$

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In this study, the Augmented Dickey-Fuller (ADF) test has been used to test for the stationarity of the data. ADF is the augmented version of Dickey-Fuller test that can be used to test for unit root in a time series data. Therefore, the hard evidence in rejecting the null hypothesis is the negative sign number when testing unit root using ADF statistic. Therefore, the higher negative number is evidence of the presence of unit root problem. Thus, the ADF test specification equation is given as below:

$$\Delta Y_t = \beta_0 + \beta_1 t + \delta Y_{t-1} + \alpha i \Delta Y_{t-1} + \varepsilon_t \qquad (3.4)$$

Where Y_t is the variable of the study model, ΔY_t is the difference operator, t is the time trend, and ε is the error term which is a white noise process. On the other hand, β_0, β_1, δ, and α are the parameters set that will be estimated from this equation. Thus, the hypothesis for the unit root test from the equation above can be written as the following:

H_0: $\delta = 0$ (Y_t is non-stationary)

H_1: $\delta \neq 0$ (Y_t is stationary)

Based on the results of the test, the null hypothesis can be rejected if t-statistic has lower a negative value than the critical tabulated value. Therefore, we fail to reject the null hypothesis if the value of δ found to be zero. This is

considered as a proof of the presence of unit root problem, and therefore Y_t is non-stationary.

3.7.2 Johansen Cointegration Test

This study will test the tourism sector variables in our model through the use of Johansen cointegration test. Johansen cointegration method will examine and explain the long-run relationship between the variables. Moreover, a series is said to be integrated of order d if we can get stationary by differencing the series for d times. Therefore, if the time series data are stationary, we can test for the long-run relationship among the variables using Johansen method. This includes the test of cointegration vectors.

$$Y_t = \Pi_1 Y_{t-1} + \Pi_2 Y_{t-2} + \dots + \Pi_k Y_{t-k} + \varepsilon_t \quad t = 1, 2, \dots, n \qquad (3.5)$$

Where Y_t is $N \times 1$ vector of stochastic variable, Π_1, Π_2, …, Π_k is the $n \times n$ parameter, and ε_t is the error term. When Y_t is non-stationary, the equation above can be rewritten as:

$$\Delta Y_t = \Gamma_1 \Delta Y_{t-1} + \Gamma_2 \Delta Y_{t-2} + \dots + \Gamma_{k-1} Y_{t-k+1} \, \Pi Y_{t-k} + e_t \qquad (3.6)$$

Where

$$\Gamma_i = -[I - \Pi_1 - \Pi_2 - \dots - \Pi_i] \quad i = 1, 2, \dots, k-1$$

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And

$$\varPi = -[\mathrm{I} - \varPi_1 - \varPi_2 - \ldots - \varPi_k]$$

The matrix $\varPi$ illustrates the long-run relationship between ρ variables which can be separated into two matrices, A and B, such that $\varPi = AB$. A is explained as vector error correction parameter, and B as cointegration vector. Therefore, this procedure can be used to test the existence of the long-run equilibrium relationship among *GDP*, *TR*, and *GT* variables in equation (3.2).

3.7.3   Error Correction Model (ECM)

Error Correction Model is a dynamical system with the attributes that the deviation of the current state will be nourished into its short-run dynamics from its long-run relationship. Thus, ECM is said to be an unordinary case of the Vector Auto-regression for the variables (VAR) for the variables that have been integrated of the first order I(1) which are said to be stationary when using their first differences. Consequently, ECM considers variables that have cointegrating relationships.

Moreover, we can essentially say that there is presence of long-run equilibrium relationship between the series, if we can determine the cointegration relationship between these series and consequently we can

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measure the short-run properties by using ECM. Furthermore, the order of cointegration states the number of cointegrating vectors in the model.

Furthermore, ECM can be calculated by applying VAR approach. Therefore, we can build up ECM by presenting the changes in the dependent variables which work as the level of disequilibrium in the cointegrating relationship and the independent variables through an error correction term. Hence, our error correction model can be developed as the following:

$$\Delta lnGDP_t = \lambda_0 + \lambda_1 \Delta lnTR_t + \lambda_2 \Delta lnGT_t + \lambda_3 ECT_{-1} + v_t \qquad (3.7)$$

From the previous equation, ECT_{-1} is the error correction term and the estimation of the lagged error series, and v_t is the random error term. On the other hand, this method will express the adjustment speed of the model of the study.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1   Introduction

This study includes a two-step procedure to determine the relationship between economic growth (*GDP*) and the selected variables (*TR*, *GT*) in Jordan. The logarithm is commonly used and its defined in the model as the following:

LGDP: the logarithm of real gross domestic product

LTR: the logarithm of real tourism receipts

LGT: the logarithm of real government tourism expenditures
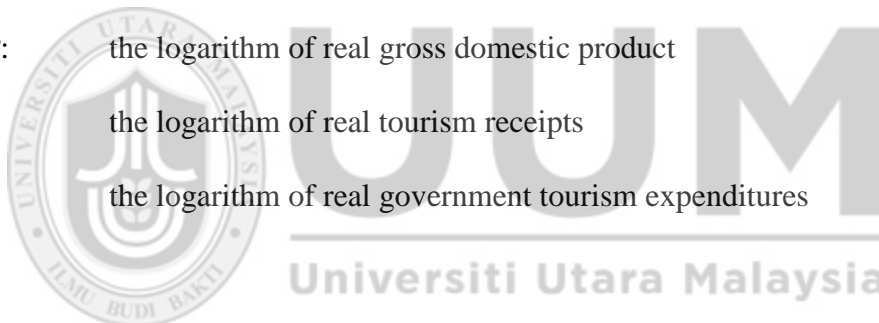
The procedures include unit root test, Johansen cointegration technique, and ECM. The findings of this study are discussed in the following sections.

4.2   Unit Root Test

The ADF unit root test is conducted to examine the stationarity of the data series in this study. The purpose of using this test is to avoid the spurious results in the analysis of the time series. The null hypothesis of non-stationarity has been examined in this test (Dickey & Fuller, 1979). A robust technique for exposing the presence of

unit roots is provided by this test (Awokuse, 2008). The ADF based on constant and no trend are examined. The p-lag based on automatic specified. Table 4.1 shows the ADF results of the unit root test for all the time series data used in this study at level with constant and no trend.

Table 4.1
ADF and PP Tests for Unit Root (Level I(0))

statistics	ADF	PP
Level	coefficient	coefficient
LGDP	0.007429	0.007133
LTR	0.008775	0.008932
LGT	0.004652	0.004652

(*) denote statistical significance at 5 per cent

The table summary shows the unit root test results for the time series data used in this study. The test failed to find any proof of stationarity at level I(0). The ADF test probability was insignificant at 0.05 level of confidence. The calculated t-statistics of ADF test was higher than the critical value of ADF test statistics at 5% level of significance, this implies that the null hypothesis of unit root for *GDP*, *TR*, and *GT* cannot be rejected.

Table 4.2
ADF and PP Tests for Unit Root (First Difference I(1))

statistics	ADF	PP
1st difference	coefficient	coefficient
LGDP	-0.493218*	-0.493218*
LTR	-0.546916*	-0.979027*
LGT	-1.003438*	-1.003438*

(*) denote statistical significance at 5 per cent

Table 4.2 shows the results of the unit root test at first difference. The results show that the null hypothesis of unit root is rejected for all data series at 5% level of confidence when constant is included. This is due to the calculated t-statistics of ADF test is lower than the critical value of ADF test statistic at 5% level of significance. The rejection of null hypothesis implies that there is no unit root and the time series is a stationary process at 5% level of significance when constant is considered. Therefore, the first difference test results from ADF indicating that *GDP*, *TR*, and *GT* are stationary after first differencing at order two, I(1) and that cointegration relations may exist among the variables.

ADF test was the only test for stationarity in many researchers' studies; they include Sinha (1998), Asteriou & Agiomirgianakis (2001), Furuoka (2007, 2008), (Ka, 2009), Lee & Hung (2010), and Mishra, Rout & Mohapatra (2011).

4.3   Johansen Cointegration Test

Johansen cointegration test has been conducted to test for the existence of a long run relationship among the variables of the study that are not stationary at level but stationary after differencing.

The first step of this test is to determine the lag length to be included in the model. The optimal lag length is determined by several criteria such as sequential modified likelihood ration test (LR), final predication error (FPE), Akaike information criterion

(AIC), Schwarz information criterion (SC), and Hannan-Quinn information criterion (HQ). The variables are treated as endogenous variables in VAR with a constant as exogenous.

The lags length test results are shown in Table 4.3. The table confirms that 4 tests favours an optimal lag length of 3. Therefore, 3 lags are chosen in the study to test the cointegration among *GDP*, *TR*, and *GT*.

Table 4.3
VAR Lag Order Selection Criteria

VAR Lag Order Selection Criteria

Endogenous variables: LGDP LTR LGT
Exogenous variables: C
Sample: 1981 2014
Included observations: 30

Lag	LogL	LR	FPE	AIC	SC	HQ
0	0.331952	NA	0.000240	0.177870	0.317990	0.222695
1	73.36729	126.5946	3.37e-06	-4.091152	-3.530673*	-3.911850
2	82.96235	14.71243	3.31e-06	-4.130823	-3.149985	-3.817045
3	96.66061	18.26435*	2.55e-06*	-4.444041*	-3.042843	-3.995786*
4	105.5374	10.06039	2.86e-06	-4.435828	-2.614272	-3.853097

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)

The last section confirmed that the time series data in use for this study are cointegrated of the order I(1), the next step is to determine the long-run relationship between the variables of interest. To test for the existence of long-run relationship among the variables, Johansen cointegration test are performed including two test statistics, trace statistic and maximum eigenvalue statistics as shown in Table 4.4. The null hypothesis indicates that the variables are not cointegrated. The rejection of

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the null hypothesis requires the trace statistics and maximum eigenvalue statistics to be greater than the calculated critical values.

The results of trace statistics indicate that there is one cointegration equation at 5% level of confidence. Moreover, trace statistic value (50.2951) was greater than the calculated critical value (35.1928) at 5% level of significance and the p-value was smaller than 5% with a value of (0.0006). The null hypothesis of no cointegration was rejected, and the test indicates one integration equation.

Table 4.4
Johansen's Test for the Number of Cointegration Vectors

Sample (adjusted): 1985 2014
Included observations: 30 after adjustments
Trend assumption: No deterministic trend (restricted constant)
Series: LGDP LTR LGT
Lags interval (in first differences): 1 to 3

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.707935	50.29506	35.19275	0.0006
At most 1	0.289248	13.37165	20.26184	0.3349
At most 2	0.099036	3.128684	9.164546	0.5570

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.707935	36.92341	22.29962	0.0002
At most 1	0.289248	10.24296	15.89210	0.3127
At most 2	0.099036	3.128684	9.164546	0.5570

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

On the other hand, maximum eigenvalue statistics indicated one cointegration equation at 5% level of significance since maximum eigenvalue statistics value at (36.9234) was greater than the critical value of (22.2996). Moreover, the p-value at (0.0002) was smaller than 5% and the test fail to reject the null hypothesis of no cointegration.

Moreover, trace statistics and maximum eigenvalue statistics have rejected the null hypothesis on the second stage of the tests at 5% level of confidence. The statistics values were smaller than the critical values and the p-values were smaller than 5% as shown on Table 4.4.

From the results above, Johansen cointegration test consist to reject the null hypothesis of no cointegration relationship among the variables. Moreover, trace and maximum eigenvalue tests concluded that at least there is one cointegration vector at 5% level of confidence among *GDP*, *TR*, and *GT*. Therefore, it is said that *GDP*, *TR*, and *GT* are integrated and there is a long-run equilibrium relationship among them.

To achieve the second objective of this study, the results of the long-run model achieved by normalizing on *GDP* are presented on Table 4.5.

Table 4.5
Estimated Cointegrating Equation

1 Cointegrating Equation(s):		Log likelihood	98.85160
Normalized cointegrating coefficients (standard error in parentheses)			
LGDP	LTR	LGT	C
1.000000	-1.141893	0.505253	-4.068901
	(0.07210)	(0.10875)	(0.28241)
Adjustment coefficients (standard error in parentheses)			
D(LGDP)	0.537278		
	(0.25893)		
D(LTR)	1.007157		
	(0.26782)		
D(LGT)	-0.027771		
	(0.38075)		

After the normalization on *GDP*, the cointegration regression of economic growth in Jordan can be written as:

$$LGDP_t = 4.0689 + 1.1419 LTR_t - 0.5053 LGT_t \qquad (4.1)$$

The previous normalized equation shows the signs on the variables whether they are consistent with a prior expectation. Moreover, the results of *TR* is positive and statistically significant at 5% level. This implies that tourism receipts is statistically significant contributing to economic growth in the long-run. Furthermore, the impact of tourism receipts indicates that 1% increase in *TR* will lead to 1.1419% increase in *GDP*. This is in line with a priori expectations supported by Balaguer & Cantavella-Jorda (2002), Kasman & Kirbas (2004), Gunduz & Hatemi-J (2005), Kareem (2008), Lau et al. (2008), Fayissa et al. (2008, 2009), Chen & Chiou-Wei (2009), Ka (2009), Brida et al. (2008, 2010), (Lee & Hung (2010) and Kreishan (2010).

On the other hand, *GT* shown negative relationship with the *GDP*. The result implies that 1% increase in *GT* results a 0.5053% decrease in the *GDP*. The result is also statistically significant at 5% level since the calculated t-statistics 4.646 is greater than the critical t-statistics 1.96. this negative relationship has is consistent with (Engen & Skinner, 1992) and (Folster & Henrekson, 2001).

4.4 Error Correction Model (ECM)

ECM is employed in this study to achieve the third objective of this study. This test is employed to estimate the short-run dynamics model where the equation is regressed with the difference of *GDP* as a dependent variable against the lagged difference of the independent variables namely *TR*, and *GT*. A 1-lag structure is applied due to the limited sample size of this study. The results of the short run error correction model for the GDP is shown in Table 4.6.

Table 4.6
Results of ECM for Short Run Dynamic Variables

	Coefficient	t-statistic
$\Delta LGDP_{t-1}$	0.399110*	2.11803
ΔLTR_{t-1}	0.426406*	2.11668
ΔLGT_{t-1}	-0.118695	-0.77569
ECT_{t-1}	-0.198698*	-1.96419
c	0.032971	1.51496

(*) denote statistical significance at 5 per cent

Table 4.6 relates the lag difference of *GDP* to the lags differences of *TR*, and *GT*. It shows that the short-run changes in *TR* affect the changes in *GDP* positively, this indicates that the independent variable are positively influencing the economic

growth. An increase by one-dollar in ΔTR_{t-1} will lead to the expansion of ΔGDP_{t-1} by 0.061 dollar. This change is statistically significant at 5% level of confidence.

On the other hand, change in *GT* affect change in *GDP* negatively. An increase by one dollar in ΔGT_{t-1} will lead to the decline in ΔGDP_{t-1} by 0.077 dollar. However, this effect is statistically insignificant, this might be due to the small sample size of the study.

The speed of adjustment ECT_{t-1} is negative and statistically significant at 5%. Its value lies between -1 and 1. It exposes a feedback of approximately 19% of the previous year's disequilibrium from long-run elasticity of the independent variables.

The positive relationship between *TR* and *GDP* is in line with Balaguer & Cantavella-Jorda (2002), Kasman & Kirbas (2004), Gunduz & Hatemi-J (2005), Cortés-Jiménez (2008), Kareem (2008), Lau et al. (2008), Fayissa et al. (2008, 2009), Chen & Chiou-Wei (2009), Ka (2009), Brida et al. (2008, 2010), Lee & Hung, (2010) and Kreishan (2010).

The conclusion from the short-run dynamics (ECM) specification suggested that tourism receipts is statistically significant in improving and enhancing the economic growth in Jordan.

4.5   Summary

The results presented earlier in this chapter are based on the analysis of time series statistical procedures in Chapter Three which are unit root, Johansen cointegration, and Error Correction Model tests. The findings are certainly subjected with the time period of this study, the variables in use, and the statistical methods adopted. The main findings of the study are that there is a long-run equilibrium relationship among the Gross Domestic of Product (*GDP*) and the selected variables of interest namely Tourism Receipts (*TR*), and Government Tourism Expenditures (*GT*). secondly, the short-run dynamics exists among *GDP* and *TR*. The detailed discussion on the findings and the policy implication will be highlighted in the next chapter.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1   Introduction

This chapter will discuss the results presented in Chapter Four in more details. In this chapter Recapitulation of the Study, Discussion on the Findings, Policy Implications, limitations, Future Research, and the conclusion of the study will be discussed.

5.2   Recapitulation of the Study

The main objective of this study is to examine the impact of tourism (tourism receipts and government tourism expenditures) on the economic growth of Jordan. The study is based on time series data from 1981-2014 employing some econometric techniques such the Johansen cointegration and Error Correction Model (ECM). The properties of the time series are tested by using ADF unit root test. It is found that the dependent and the independent variables are non-stationary at level but stationary after the second deference. Trace and maximum eigenvalue tests of cointegration analysis indicate that there is at least one long-run relationship among *GDP*, *TR*, and *GT*. the cointegration test shows a significant positive relationship between *GDP* and *TR*. On the hand, the test shows a significant negative relationship between *GDP* and *GT*. The ECM for short-run dynamics among the variables gave a significant positive result

between *GDP* and *TR*. However, the test fails to find any significant result between *GDP* and *GT*.

5.3 Discussion on the Findings

This section discusses the findings on tourism receipts and government tourism expenditures in the economy of Jordan.

5.3.1 Tourism Receipts

Tourism receipts are found to have a short and a long run relation with economic growth in Jordan. When a tourists visit Jordan, they spend on some services such as transportation, food and drinks, accommodation, culture and sports activities, shopping, and recreation. This money flow from tourism receipts is recycled and spend again in the economy. As a result, the income will increase by multi-fold. This gives an indicator that tourism receipts result a double effect in Jordan since it is not contributing only to tourism growth, but it is also the multiplier effect in Jordan. Moreover, when a tourist spends on a good or service, this money contributes directly to that specific place that the money paid for (direct effect). As a result, this money will contribute indirectly to other sectors related to that place such as the payment for the workers and the payment for the supply of the goods and services from other sectors business in the economy to be used in their business (indirect effect).

These payments for the workers who work in the tourism sector may purchase goods and services from other sectors which are not related directly to tourism by their income for their own use (induced effect). This creates a chain effect in the economy.

5.3.2   Government Tourism Expenditures

In terms of government operating expenditures on tourism, the attractive policies of tourism work effectively to enhance the economic growth. Moreover, according to Oluwatobi & Ogunrinola (2011), the operating expenditure contributes more than the capital expenditure. Therefore, giving more funds and attention to this sector should be considered by the government by Jordan as the economic growth does not come from human capital, physical capital, or exports alone, it can also stem from the government tourism expenditure. The efficient utilization of the budget of the government to promote economic growth is a very important objective of the policy (Anaman, 2004). The negative sign generated by the short and long-run relationship may be because of mismanagement or the diversion of the government funds by political and official appointees. Or it might be due to the spending on government tourism expenditures which does not have instant impact on the economic growth.

5.4   Policy Implications

This section discusses the policy implications on tourism receipts and government tourism expenditures in the economy of Jordan.

5.4.1   Tourism Receipts

In order to generate higher tourism receipts, the government should support and encourage the local suppliers of goods and services to enhance the tourism multiplier effects by matching their domestic production with the demand from tourists. This enhancement to the multiplier effects should be in the nation rather than letting import leakages to flow out of the economic system.

On the other hand, when Jordan achieves successful economic growth, the government will have enough funds to provide basic infrastructure and facilities, in addition to designing effective tourism planning and strategies for the development of the tourism sector. As a result, this may increase the attractiveness of tourism sector and might interest tourists from all over the world due to the development in the country.
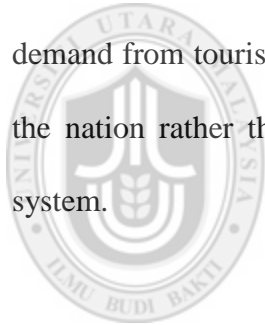
5.4.2   Government Tourism Expenditures

Government have to proceed with the improved tourism policies with more budget allocation by injecting more funds into tourism to meet the demand and attract the international tourists to enhance the economic growth in Jordan.

5.5   Limitations

Tourism impacts have many angles such as environmental, ecological, social, cultural, etc. However, this study focuses only on the perspective from the economic point of view. Therefore, this study is not fully analysing tourism development. The reason is that development is achieved when the multiple goals such as political, environmental, and social are achieved (Seers (1979) and Wilkinson (1991)).

It is more difficult to estimate the economic impact of tourism accurately because some of the economic data might not be able to obtained (Saayman & Saayman, 2006) since a country's national income accounting is categorizing tourism under services items and not specifically identifying tourism.

5.6   Future Research

This study could be expanded in terms of the geographical area to include the middle east countries to see the amount of effect of each macroeconomic variable analysed in the study gives response to their economic growth. Therefore, a competitive study among these middle east countries can be carried out to determine if the macroeconomic variables of these countries support or reject economic growth in both the short-run as well as in the long-run.

The future study could also include the study on the contribution of domestic, in addition to international tourists, towards the economic growth. The tourism economic impact can be massive for a community, state, or a country in terms of employment and revenues even when only taking domestic tourists into account (Gee, Choy, & Makens, 1997). According to Cooper et al. (2005) international and domestic tourism are both equality important to a country as international tourism generates new money while domestic tourism redistributes wealth within a nation.

Moreover, future studies could make comparison between the contribution of domestic and international tourists in Jordan. This is important as government has spent so much on promoting, marketing, and advertising to attract both the international and domestic tourists to visit the country. If the contribution of these two could be determined, it would help tourism businesses and policy makers in identifying the most profitable domestic and international market segments.

5.7   Conclusion

The major findings from this study determined the short-run as well as the long-run relationship between economic growth and the selected macroeconomic variables such as tourism receipts and government tourism expenditure. The significance of short-run long-run relationship between tourism receipts and economic growth indicating that tourism is a potential strategic factor to economic growth. Therefore, as an effort to diversify Jordan economy and to be less dependent on exported goods, tourism should continue to improve in a large scale.

A general policy implication which may be drawn from the study is that Jordan can improve its economic performance not only by investing in traditional main sources of growth such as physical capital, human capital (in education and heath), and exports, the findings also signal to the policy makers that tourism also plays a very important role in Jordan. Hence, more funds are strategically encouraged to be channelled to potential tourism industry to further encourage prosperity and formulating strategies to gain comparative advantage in Jordan.

From the above findings of the study, some recommendations are proposed to the government on setting priorities regarding where and how to utilize its limited resources to achieve optimum economic growth via enhancing the existing policies or formulating new policies. Distinctly, it also suggests that while allocating budget and investment to boost up economic growth in the country, the government should

carefully consider both the benefits and cost of the economic growth in government tourism expenditures. This is because the successful economic growth must be focused on the balance between the costs used to support the whole activities against the economic activities which produce the optimum output.

From the above discussions, it is hope that the study can provide a clear guideline to all the parties involved in utilizing the country's available but limited resources to create higher economic growth – without taking any of the potential industries or sectors into account. A comprehensive economic stability as a result of appropriately managed resources instils confidence among international tourists and multinational investors in the country. With the effective facilities and infrastructure, as well as beneficial business and travelling environment, in addition to social and political stability, not forgetting also the human capital accumulation, all these in turn can effectively mobilize greater economic activities to increase productivity in the economy thus leading to prosperity and the economic growth.

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