

## The contribution of tourism revenues to economic development during the terrorism crisis

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### ABSTRACT

Tourism revenues have contributed to economic development in many countries, whether developed or developing, all over the world. It is one of the sources of foreign cash flows that contribute to increasing the Gross Domestic Product (Henceforth GDP). Tourism also contributes to providing employment opportunities as it is a labor-intensive industry. Egypt has many factors that attract tourists, especially cultural and natural tourism. However, its share in global tourism is still lower than its touristic position, especially during the terrorism crisis that Egypt has suffered from since 2011 and which contributed to the decline in tourism revenues from \$ 11.6 billion to \$ 3.8 billion during the period (2009-2010: 2014-2015). Because of the importance of tourism revenues, this study aims at identifying the extent to which it contributes to financing the services balance and analyzing its impact on both the services balance and the GDP during the study period (2001-2002: 2016-2017). The present study relied upon the descriptive and analytical methodology. The descriptive methodology describes the contribution of tourism revenues to economic development in light of the terrorism crisis in Egypt. It also identifies the development of the relationship between the tourism sector and terrorism. Regarding the analytical methodology, regression analysis is used to measure the impact of tourism revenues on Egypt's GDP. The descriptive approach was generally adopted with the help of statistical analysis tools to measure the statistical relationship of tourism revenues with the number of tourists, the services balance, and the GDP. The study showed a positive relationship between tourism revenues and GDP. Therefore, it recommends focusing on the development of the industrial and tourism sectors.

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### 1. Introduction

Tourism revenues are one of the sources of financing economic development in many countries, whether developed or developing, all over the world. This prompted many countries of the world, including Egypt, to allocate financial resources to improve the infrastructure, such as airports, roads, transportation, hotels, and museums, to increase its proportion of global tourism. Tourism revenues are also a source of foreign cash flows that contribute to financing the economic development process. It is considered as one of the most important receipts in

the services balance, as well as in the development of the GDP. The tourism sector is characterized by being heavily used for employment, and its recovery will positively affect many economic sectors that are intertwined with it. Despite its many touristic attractions, especially cultural and natural tourism, Egypt's share in global tourism is still lower than its touristic position due to the negative repercussions of the terrorism crisis that Egypt has suffered from since 2011. Hence, it is important to study tourism revenues' contribution to economic development during the terrorism crisis in Egypt.

The study aims at identifying the extent to which tourism revenues contribute to the services balance and GDP. Moreover, the study attempts to analyze the impact of the number of tourists on tourism revenues as it aims to reveal the impact of tourism revenues on the services balance, especially services revenues, and on the GDP. The study assumes a statistical relationship between the number of tourists and tourism revenues. It also assumes that

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there is a statistical relationship between tourism revenues, the services balance, and the GDP.

The research follows a descriptive approach with the help of statistical analysis tools to measure the impact of the number of tourists on tourism revenues and the impact of tourism revenues on both the services balance and the GDP. As such, this study was divided into three sections. The first section reveals the relationship between tourism activity and terrorism in Egypt. The second one clarifies tourism revenues' contribution to the services balance. In the third section, the study analyses tourism revenues' contribution to the GDP.

## 2. The development of the relationship between tourism activity and terrorism in Egypt

Tourism activity is one of the most important sources for increasing the economic growth rate, especially in developing countries such as Egypt. The rise in the number of tourists contributes to the increase in tourism revenues that contributes, in turn, to the services balance. Thereby, it improves the balance of the payment. According to Hechscher-Ohlin's theory in foreign trade, countries that possess high-density tourism attractions in the employment component have to specialize in providing tourism products and exchange them with goods with high density in the capital component. The establishment of foreign trade between countries of the world is important as it can satisfy needs that can only be satisfied through international trade between countries.

Tourism has interrelationships with many economic sectors; however, terrorism is one of the most important challenges facing this sector. Terrorism is defined as the unlawful use of arms that takes place with violence to threaten the rights of others with full responsibility for explosions, killing, destruction, and the explicit declaration of criminal acts that have been developed by technological advances. There is no flow of tourists in the presence of terrorist actions, especially when terrorists target foreign tourists, which results in a decrease in their number. The question is whether terrorist attacks are random individual or group organized actions?

The international organization of the Brotherhood is considered the leading terrorist organization in Egypt and the legitimate father of the terrorist organizations. The most important ones are Ansar Bayet Almakdes, the organization of the hosts of Egypt, Al-Furqan Brigades, Ansar al-Sharia in the land of Alkanana who defected from the organization of Bayet Almakdes, the Jihadist Salafist groups and groups Incitements such as The Tawhid and Jihad group, the Takfir and Hijra group, and the Black Banners group. These groups, especially, Bayet Almakdes organization, are credited with participating in the ongoing killings of the Egyptian army and police forces.

As [Table 1](#) shows, the number of tourists visiting Egypt has increased from 4.3 million to 13.8 million

during the period 2001/2002- 2009/2010 with a rate of 220%. During the same period, tourist nights have increased from 28.5 million nights to 115.6 million nights, with a rate of 305%, and tourism revenues have as well increased from \$ 4.3 billion to \$ 11.6 billion, with a rate of 241%. However, the proportion of tourism payments to revenues has decreased from 35.3% to 26.7%, despite the increase in tourism payments from \$ 1.2 million to \$ 2.3 million during the same period.

The increase in tourism activity is due to the various touristic attractions that characterize Egypt, to name some, beaches along the Mediterranean and the Red Sea, distinct climate, tourist services, hotels, and resorts. Egypt has an advanced infrastructure and an excellent air, sea, river, and land transportation network. In addition to the distinguished and diversified natural reserves that reached 30 reserves spread throughout Egypt, the most famous of which is Saint Catherine, Taba, and Siwa reserves.

Nonetheless, the number of tourists has decreased from 11.9 million to 6.7 million, with a rate of 39% during the period 2011/2011-2016/2017. During this period, the number of tourist nights has decreased from 125 million nights to about 51 million nights with a rate of 59%. Furthermore, tourism revenues have decreased from \$ 10.6 billion to \$ 4.4 billion with a rate of 58%, and the proportion of tourism payments to revenue has, as well, decreased from 20.1% to 108.6% during the period 2010/2011-2015/2016, but it improved to 62.6% on the year 2016/2017. Conversely, the tourism balance recorded a deficit of 323.5 million dollars in 2015/2016, which is the only deficit during the period of this research (2001/2002-2016/2017).

Moreover, hotel capacity declined from 1433 to 1179 hotels, especially floating hotels, which dropped from 194 to 47 floating hotels only during the period 2010-2017, and the overall average hotel occupancy rate fell from 55% to 34% during the same period.

The decline in tourism activity in Egypt is due to the events of January 25, 2011, the ensuing disturbances, terrorist attacks, and factional demonstrations, then the events of June 30, 2013, and the terrorist crisis that followed. Egypt has witnessed a violent wave of terrorist attacks during the period 2013/2016 that differed from the pattern of terrorism that struck the country during earlier periods of the twentieth century. The number of terrorist attacks reached 1165 during the period 2014/2016, and most of them occurred in Sina, especially North Sina. The most prominent of which was the terrorist bombing of the Russian plane that crashed after leaving Sharm el-Sheikh International Airport on October 31, 2015, and killed all the 224 onboard people). [Al-Behari \(2017\)](#) asserted that the organization (Jerusalem) was involved in the largest number of terrorist actions, which took various forms, the most important of which are monitored as follows:

1. Targeting the country's infrastructure, such as electricity, telecommunications, and Railways.
2. Increasing attacks targeting the police and army security forces.
3. Increasing attacks targeting the judiciary institution.
4. High rates of terrorist actions directed against economic companies, such as telecommunications companies and major restaurants.
5. High rates of using improvised explosive devices in terrorist operations" (Al-Behari, 2017).

**Table 1:** The development of tourism activity during the period (2001/2002: 2016/2017)

Statement/year	Number of tourists (Per thousand)	Number of tourist nights in a thousand	Tourism revenues in a million dollars	Tourism payments in a million dollars	Ratio Tourism payments/Tourism revenues
(1)2001/2002	4341	28542	3422.8	1207.9	35.3%
2002/2003	4239	33011	3796.4	1372.4	36.2%
2003/2004	7512	73002	5475.1	1315.1	24.0%
2004/2005	8650	85730	6429.8	1438.3	22.4%
2005/2006	8693	85113	7234.6	1619.6	22.4%
(2)2006/2007	9788	96270	8183.0	1917.6	23.4%
2007/2008	12294	127371	10826.5	2895.3	26.7%
2008/2009	12293	123383	10487.6	2739.3	26.1%
(3)2009/2010	13758	136370	11591.3	2327.5	20.1%
2010/2011	11931	124571	10588.7	2112.6	20.0%
2011/2012	10953	131769	9419.0	2497.6	26.5%
2012/2013	12213	142432	9751.8	2928.8	30.0%
(4)2013/2014	7968	72919	5073.1	3044.5	60.0%
2014/2015	10243	99246	7370.4	3338.2	45.3%
(5)2015/2016	6874	51779	3767.5	4091.0	108.6%
2016/2017	6624	50900	4379.7	2739.9	62.6%

ACPSS (2018) reported that the year 2017 also witnessed a significant decline in the number of terrorist attacks, reaching less than half the number of attacks that occurred in 2016. Almost 338 terrorist attacks occurred compared to about 807 terrorist attacks in 2016. Despite this, the year 2017 witnessed the most violent terrorist incidents in the history of modern Egypt, the most prominent of which was the attack on the Al-Rawda Mosque on November 27, 2017, which killed 311 citizens bypassing the terrorist bombing of the Russian plane. It is worth noting that suicide attacks recorded four attacks during 2016, which is the highest number of human casualties in Egypt for more than three decades. The four suicide attacks were the suicide bombing inside the Petrus Church in Cairo and three others in North Sina. As related to that, Egypt is ranked the sixth in the Middle East in terms of suicide attacks after Iraq (146 attacks), Syria (55 attacks), Yemen (34 attacks), Libya (28 attacks), Turkey (21 attacks), and equal to Saudi Arabia (4 attacks). Suicide attacks have arisen to 10 attacks in 2017, including two in the Egyptian depth, namely, the two bombings of one of the fronds in the churches of Tanta and Alexandria on April 9, 2017, and the other eight occurred in North Sina, all of which were by ISIS (ACPSS, 2018).

Thereupon, it is clear that terrorist actions have not only led to the decline in tourism revenues but also the increase in tourism payments abroad as the proportion of tourism payments to tourism revenues increased from 35% to 109% in the years 2001/2002 and 2015/2016 respectively. The repercussions of the negative impact of the terrorist crisis in Egypt have also led to the decline of tourism revenues' contribution to the balance of services and then to the balance of payments.

### 3. Contribution of tourism revenues to the balance of services

Tourism revenues are considered one of the most important sources of foreign cash flows that contribute to the services balance, which, in itself, contributes to a course in the balance of payments. To study the contribution of tourism revenues to the balance of services, the study period has been divided into two phases. The first phase (2001/2002-2008/2009) and the second phase (2009/2010-2015/2016) to clarify the relationship between tourism revenues and service revenues, the relationship of tourism payments to service payments, and the relationship of the net tourist balance with the net services balance during each phase.

Table 2 shows the contribution of tourism revenues to the balance of services during the period 2001/2002-2015/2016.

#### 3.1. The first phase (2001/2002-2008/2009)

The contribution of tourism revenues to services revenue ranged from 35.6% to 44.1%, and the contribution of tourism payments to services payments ranged from 17.5% to 25.0% during the period 2001/2002-2008/2009. As such, the contribution of tourism balances to the balance of the payments ranged from 49.0% to 68.9% during the same period. The increase in the contribution of tourism revenues to services revenues is due to the forced increase in the number of tourists that led to an increase in tourism revenues during that period.

The contribution of tourism payments fell to the lowest level in 2005/06, which amounted to only 17.5%. It resulted in an increase in the contribution of tourism balance in the services balance to 68.6% during the same year.

Although tourism revenues increased by 32% during the period 2006/2007-2007/2008, tourism payments increased by 51% in the same period. This is because of the successive terrorist events in the city of Sharm El-Sheikh in July 2005, which left about a hundred dead, and two hundred injured. Added to that, the terrorist events in the city of Dahab in South Sina in April 2006, which left dozens of dead foreign and Egyptian tourists (Al-Zahar, 2014). The Egyptian economy sectors were also affected by the global financial crisis based on Central Agency for Public Mobilization and Statistics in Egypt both the decline of exports by about 4.2 billion dollars and foreign direct investment received from abroad by 5.1 billion dollars. In the same vein, Suez Canal revenues declined by 434.4 million dollars, and tourism revenues decreased by 339 million dollars, directly reaching 10.5 billion dollars in 2008/2009 compared to about \$ 10.8 billion in 2007/2008. Meanwhile, tourism revenues were expected to reach the same growth rate as the previous year, and tourism income has lost about \$ 2.7 billion because of the global financial crisis.

However, the government has taken many measures to face this crisis. For example, it has increased its spending by about 15 billion pounds during the next six months in the areas of investments and supporting economic activities, especially in the field of revitalizing the tourism sector (Nazif, 2008). The government has also intensified joint promotional campaigns with major tourism agencies, reduced airline prices, continued to support the chartered flight support program (Marsa Alam, Taba, North Coast, Aswan), and focused on Eastern European countries, India, and China.

As a result, the Egyptian tourism sector has achieved a quick balance by correcting its path in the short term, which is consistent with the many negative events that the tourism sector has witnessed and managed to correct its path. Therefore, it is clear that the global financial crisis has negatively affected many sectors of the Egyptian economy, including the tourism sector. Tourism revenues were the least affected by the negative repercussions of the global financial crisis compared to exports, foreign direct investment, and the Suez Canal revenues.

### 3.2. The second phase (2009/2010-2016/2017)

The contribution rate of tourism revenues in services revenue has risen from 23.4% to 49.2%, as did the contribution rate of tourism payments to tourism payments that have ranged from 17.6% to 62.6% during the period 2009/2010-2016/2017. In the same period, the contribution rate of the tourism balance in the balance of the payments has increased from -5.0% to 207.3%. As opposed to that, the contribution of tourism revenues to service revenues decreased due to the decrease in the number of tourists because of the terrorist crisis that Egypt witnessed during that period. Thus, the contribution

of tourism payments increased to the highest level in 2015/2016, reaching 62.6%, which led to the decline of the contribution rate of tourism balance in the services balance -5.0%. That was the only year during which the tourism balance recorded a negative value during the research period 2001/2002-2016/2017.

There is no doubt that the terrorist actions have resulted in a decline in the number of tourists and thus the decline of tourism revenues. Although Egypt ranked second in the price competitiveness index in the travel and tourism competitiveness index in 2017, it ranked 130th out of 136 countries in the safety and security index in the same year (WEF, 2017). While tourism revenues have decreased from 11.6 billion dollars to 3.8 billion dollars, which is about 7.8 billion dollars during the period 2010/2011: 2015/2016, it witnessed an improvement in the year 2016/2017, as it increased to 4.4 billion dollars.

To put it differently, tourism revenues had a total decrease of about \$ 7.2 billion during that period. The government took many measures to face this crisis, especially by increasing its spending by about 15 billion pounds during the next six months in the fields of investments and supporting economic activities (Nazif, 2008).

Moreover, the government intensified joint promotional campaigns with major tourism agencies, especially in the field of revitalizing the tourism sector, by reducing airline prices, continuing to support the chartered flight support program (Marsa Alam, Taba, North Coast, Aswan), and focusing on Eastern European countries, India, and China. This indicates that the main reason for the decline in tourism revenues is the unprecedented terrorist crisis that Egypt witnessed during the period 2011/2011-2016/2017.

Tourism activity is highly sensitive to terrorist actions and political stability anywhere in the world, especially in a country like Egypt, for which tourism revenues represent one of the most important sources of cash flow in the balance of payments.

It is worth noting that some believe that the difference between tourism revenues and tourism payments is the net contribution of the tourism sector to the balance of payments. However, the most indicative thing for estimating the net return from the tourism sector is that part of the tourism income includes a certain cost to the national economy, which is necessary to obtain this same income. This cost is manifested as leakage abroad in the form of imported goods and services such as food and beverages for tourists and insurance services and a transfer abroad of interest of foreign capital invested in the hotel and restaurant sector as well as a percentage of profits.

Furthermore, the indirect leaks, as part of the income generated in the tourism sector, are spent in the form of imported consumer goods used by wealthy citizens.

Moreover, there is an increase in the tendency to consume imported goods among workers in the



tourism sector, which is called the effect of simulation. Therefore, it is difficult to estimate the size of these leaks. From this, it follows that the impact of the global financial crisis during the first stage was limited on tourism revenues.

The terrorist crisis that Egypt witnessed during the second stage contributed to the decline in

tourism revenues to their lowest levels during the research period where tourism revenue recorded 3.4, 3.7 billion dollars on the years 2001/2002 and 2015/2016 respectively. Thus, tourism revenues declined compared to its rate fifteen years ago. As a result, its contribution to the GDP was affected due to the terrorist crisis in Egypt.

**Table 2:** The contribution of tourism revenues to the services balance during the period (2001/2002:2016/2017) in million dollars

Statement/Year	Tourism revenues	Tourism payments	Tourism balance	Service revenue	Service payments	Services balance	Ratio Tourism revenues/Service revenue	Ratio Tourism payments/Service payments	Ratio Tourism balance/Services balance
(1)2001/2002	3422.8	1207.9	2214.9	9618.1	5739.8	3878.3	35.6%	21.0%	57.1%
2002/2003	3796.4	1372.4	2424.0	10441.4	5492.8	4948.6	36.4%	25.0%	49.0%
2003/2004	5475.1	1315.1	4160.0	12981.0	5663.2	7317.8	42.2%	23.2%	56.8%
2004/2005	6429.8	1438.3	4991.5	15029.6	7187.4	7842.2	42.8%	20.0%	63.6%
2005/2006	7234.6	1619.6	5615.0	17437.9	9247.2	8190.7	41.5%	17.5%	68.6%
(2)2006/2007	8183.0	1917.6	6265.4	20455.5	8957.2	11498.3	40.0%	21.4%	54.6%
2007/2008	10826.5	2895.3	7931.2	27211.0	12244.9	14966.1	39.8%	23.6%	53.0%
2008/2009	10487.6	2739.3	7748.3	23801.3	11298.9	112502.4	44.1%	24.2%	68.9%
2009/2010	11591.3	2327.5	9263.8	23562.9	13223.9	10339.0	49.2%	17.6%	89.6%
2010/2011	10588.7	2112.6	8476.1	21873.1	13994.7	7878.4	48.4%	15.1%	107.6%
2011/2012	9419.0	2497.6	6921.4	20872.2	15287.5	5584.7	45.1%	16.3%	126.9%
(3)2012/2013	9751.8	2928.8	6823.0	22224.4	17185.0	5039.4	43.9%	17.0%	135.4%
2013/2014	5073.1	3044.5	2028.8	17631.4	16652.9	978.5	28.8%	18.3%	207.3%
2014/2015	7370.4	3338.2	4032.2	21811.8	10742.9	10742.9	33.8%	31.1%	37.5%
(4)2015/2016	3767.5	4091.0	(323.5)	16079.3	6533.0	6533.0	23.4%	62.6%	-5.0%
2016/2017	4379.7	2739.9	1639.8	16597.0	9785.9	6811.1	26.4%	28.0%	24.1%

**4. Contribution of tourism revenues to GDP**

Tourism revenues are considered one of the most important indicators that contribute to increasing the rate of economic growth. The tourism activity contribution to the GDP is limited only to the revenues of the restaurants and hotels sector, which indicates the presence of other revenues that do not help in the tourism activity revenues contribution in GDP, such as internal tourism revenue that ranges from 9% to 10% of the total population in Egypt.

Tourism activity also includes many economic activities other than the restaurants and hotels sector, such as the museums and tourist destinations sector, as one of the sources of tourism revenue, the food industries sector, and all sectors of the infrastructure. This includes the building and construction sectors, furniture, engineering industries, transport and communications, banks, internal trade. Therefore, the spending of a large segment of the population in the field of tourism does not fall within the tourism revenues in Egypt. Table 3 clarifies the contribution of restaurants and hotel revenues to the GDP during the period 2001/2002: 2016/2017.

**4.1. The first phase (2001/2002: 2008/2009)**

The revenues of restaurants and hotels increased from 6.5 billion pounds to 34.4 billion pounds during the period 2001/2002: 2008/2009 with an increased rate of 27.9 billion dollars for eight years, as revenues from restaurants and hotels witnessed a steady increase during that period. This led to an increase in the tourism sector contribution from 0.4% to 0.8% in the services sector during the period 2006/2007: 2007/2008 due to the increase in the number of tourists arriving by 25.6% during the same period. The services sector contributed about

4.1% in the GDP growth rate, which recorded a growth rate of 7.2% in 2007/08, which is higher than Egypt's growth rate during that period.

Conversely, the number of tourists has dropped by about one thousand tourists during the period 2007/2008: 2008/2009 and the number of tourist nights for departures has decreased from 127.4 million nights to 123.4 million nights. Tourism revenues have also declined from 10.8 billion dollars to 10.5 billion dollars during that period, which led to a decline in the tourism sector contribution in the services sector from 0.8% to 0.5% during the same period (2007/08: 2008/2009). Thus, the rate of GDP growth has fallen from 7.2% in 2007/08 to 4.7% in 2008/2009. This is due to the negative repercussions of the global financial crisis that the world witnessed in 2008, which overshadowed many economic sectors, especially the tourism sector.

**4.2. The second phase (2009/2010: 2016/2017)**

Revenue from restaurants and hotels increased from 40.0 billion pounds to 64.6 billion pounds during the period 2009/2010: 2016/2017 with an increased rate of 24.6 billion dollars for eight years, but it witnessed a clear fluctuation between rising and declined during this period. It decreased from 53.8 billion pounds to 46.6 billion pounds during the period 2012/2013: 2013/2014 and from 58.9 billion pounds to 48.8 billion pounds during the period 2014/2015: 2015/2016. This has led to a decline in the tourism sector contribution in GDP growth rate from 0.4 points in 2014/2015 to -0.7 points in 2015/2016. The decrease in revenues from restaurants and hotels is due to the terrorist crisis that many Egyptian cities have witnessed since the January 25, 2011 revolution, which was exacerbated after the June 30, 2013 revolution. As for the

increase in the revenues of restaurants and hotels from 48.4 billion pounds to 64.6 billion pounds, during the period 2015/2016: 2016/2017, it was affected by the liberalization of the exchange rate and the depreciation of the national currency (the pound against the US dollar). Indeed, the exchange rate of one dollar increased from 8.78 pounds at the end of June 2016 to 18.91 at the end of June 2017. Moreover, the number of tourists decreased from 6.9 million tourists to 6.6 million tourists during the period 2015/2016: 2016/2017, as did the number of tourist nights from 51.8 million nights to 50.9 million nights during the same period. Meanwhile, the growth in the rate of GDP from 2.3% to 3.6% during the period (2015/2016: 2016/2017) and the rate of tourism contribution in GDP by 0.1 points in 2016/2017 compared to -0.7 points in the year 2015/2016 were due to the liberalization of the Egyptian pound exchange rate, and improvement in tourism activity.

**Table 3:** Tourism's contribution to the GDP during the period 2001/2002-2016/2017 in million pounds

Statement Year	Revenue (restaurants and tourist hotels)	Gross Domestic Product (at factor cost)
2001/2002	<b>6457.0</b>	<b>354563.8</b>
2002/2003	7704.1	390619.4
2003/2004	12661.6	456322.4
2004/2005	16712.8	506511.0
2005/2006	18797.9	581144.1
2006/2007	<b>25862.9</b>	<b>710387.0</b>
2007/2008	32423.6	855301.8
2008/2009	34381.9	994055.1
2009/2010	40027.9	1150589.6
2010/2011	41755.0	1309905.7
2011/2012	45675.1	1713146.0
2012/2013	53827.4	1924807.9
2013/2014	46560.7	2205594.3
2014/2015	58876.9	2473099.8
2015/2016	<b>48413.7</b>	<b>2674409.7</b>
2016/2017	64566.6	3409503.7

## 5. Statistical analysis

### 5.1. Analysis of the impact of the numbers of tourists on tourism revenues during the period 2001/02: 2016/2017

The multiple regressions have been applied to examine the effect of Tourists Numbers (as an independent variable) on the Tourism Income (as dependent variable); as shown in [Table 4](#), the F value was 26.214, and it is significant at 0.000. Consequently, the Standardized Beta value was 0.968 and t value 3.662 with a significant level of 0.000 indicates to the significant effect of Tourism Income. Therefore, R Square value 0.936, revealing the unique contribution of the Tourists Numbers (as an independent variable) on the Tourism Income (as dependent variable).

The explained variance of the studied variable was significant, and this is consistent with a study by [Drakos and Kutan \(2003\)](#), which included three countries, Greece, Israel, and Turkey. It analyses the regional effects of terrorism on the proportion of those countries in the global tourism market. The

results of the study concluded that there are significant effects of terrorism on the ratio of each of the three countries to the global tourism market. Thus, terrorism is one of the most important challenges facing the tourism industry in the world. The results of the statistical analysis are consistent with the study of [Zidan \(2013\)](#), which concluded that terrorism has very serious political and economic impacts on economic development operations, whether at the local or international level.

**Table 4:** The Relation between tourism income and tourists (2001/2002: 2016/2017)

Variable	Standardized Beta	t value	Significant	R Square
Independent	0.968	3.662	0.000	0.936
F value=26.214**				
SignificantLevel=0.000				

\*\*0.01 level

Terrorism leads to increased military spending and thus a negative impact on funding for other technological sectors. In this study, the results of the statistical analysis are consistent with the study of [Mohamed \(2017\)](#), whose results have concluded that there are several obstacles facing tourism, topped by terrorist actions that specifically target tourism in Egypt.

Terrorist operations on tourist establishments where tourists or citizens are killed or injured have an immediate impact on the choice of tourists' destinations. Indeed, many reservations are canceled, and the recovery of tourism activity takes more than a year after each influential terrorist operation ([Fielding and Shortland, 2011](#)).

Terrorist groups are aware of the important role of tourism in the development of economic activity due to the intertwined of the tourism sector with many other products and service sectors.

It is noteworthy to mention that terrorism has a dual negative impact on tourism activity. Terrorist actions work in the direction of decreasing the number of tourists coming to the state and consequently causing the decline in tourism revenues and then the decrease of its foreign cash flows. As [Table 1](#) shows, it is clear that the unprecedented increase in terrorist actions in Egypt during 2015/2016 had contributed to a deficit in the tourism balance that is the first and only during the research period, as tourism revenues decreased to 3.8 billion dollars, while tourism payments increased to 4.1 billion.

Tourism balance recorded a deficit of about 300 million dollars in the same year, while instability periods the numbers of tourists increase and so do tourism revenues, as the aim is to reduce tourism payments. The year 2009/2010 witnessed an increase in tourism revenues to about 11.6 billion dollars, and tourism payments fell to only 2.3 billion dollars. As a result, the tourism balance achieved a surplus of about 9.3 billion countries in the same year, which is the highest during the research period, indicating a significant relationship between the numbers of tourists and tourism revenues.

Tourists avoid the areas that witnessed terrorist operations out of fear that he would be the next victim. The terrorist operations have increased spending on the security and military sectors at the expense of other sectors, and therefore the economic cost of terrorism is very prohibitive.

**5.2. Analysis of the impact of tourism revenues on the balance of services during the period 2001/2002: 2016/2017**

The multiple regression has been applied to investigate the effect of Tourism Income (as an independent variable) on the Services Income (as dependent variable); as shown in Table 5 F value was 52.679, and it is significant at 0.000, consequently; Standardized Beta value was 0.889 and t value 7.258 with significant level 0.000 indicates to the significant effect of Tourism Income. Therefore, R Square values revealing the unique contribution of the Tourism Income (as an independent variable) to the Services Income (as dependent variable). The explained variance of the studied variable was significant (Richter and Steiner, 2008). The state has paid great attention to the development of the tourism sector to provide the financial system in the Egyptian economy with foreign currency to offset the continuing deficit in the trade balance, improve the balance of services and the balance of payments. Concerning Table 2, the importance of tourism revenues contribution in the services revenue side becomes clear, as it increased from 35.6% to 44.1%, as well as tourism balance contribution to the services balance which increased from 57.1% to 68.9% during the period 2001/2002 to 2008/2009. Tourism payments contribution to services payments ranged between 17.5% and 25.0% as a result of political, economic and security stability during that period, and as a result of the terrorist crisis that Egypt witnessed during the second period 2010/2011 to 2016/2017, the decrease in tourism revenues has contributed to a decrease in services revenue.

**Table 5:** The Relation between tourism income and services income 2001/2002: 2016/2017)

Variable	Standardized Beta	t value	Significant	R Square
Independent	0.889	7.258	0.000	
F value=52.679**				
SignificantLevel=0.000				

\*\*0.01 level

Tourism revenues decreased from \$ 7.4 billion to \$ 3.8 billion was revenue decreased from \$ 21.8 billion to \$ 16.1 billion during the period 2014/2015 to 2015/2016, while tourism payments contribution rose to 62.6% in the payments services in 2015/2016.

The tourism balance achieved a negative contributor to the services balance, estimated at -5.0% due to the exacerbation of the terrorist crisis in the same year. The goals of terrorist threats vary in place, time, and type, and target economic

institutions, particularly the tourism sector, in order to drain the efforts and resources of the state. This indicates a significant relationship between tourism revenues and service revenues.

**5.3. Analysis of the impact of tourism revenues on GDP during the period 2001/2002: 2016/2017**

The multiple regression has been applied to investigate the effect of the Restaurant and Hotels Income (An independent variable) on the GDP (as dependent variable); as showed in Table 6, the F value was 12.907 and it is significant at 0.000, consequently; Standardized Beta value was 0.693 and t value 3.593 with significant level 0.003 indicates to the significant effect of GDP. Therefore, R Square values revealing the unique contribution of the Restaurant and Hotels Income (as an independent variable) on the GDP (as dependent variable). The explained variance of the studied variable was significant. This is consistent with the study (Depuma, 2015), which included Brazil, India, Egypt, Russia, and the United Kingdom, and the results of the study concluded that there is an inverse relationship between the risks of terrorism on tourists and foreign direct investment, and the levels of terrorism risks are inversely related to GDP in the countries surveyed.

**Table 6:** The relation between restaurant and hotels income and GDP

Variable	Standardized Beta	t value	Significant	R Square
Independent	0.693	3.593	0.003	
F value=12.907**				
SignificantLevel=0.003				

\*\*0.01 level

The tourism sector can contribute more to the GDP by achieving the basic goals of sustainable development. (Mohamed and Alseyoufi, 2018)

From Table 3, it is clear that the increase in the rate of the GDP growth to 7.2% in Egypt in the year 2007/2008 was supported by an increase in the flow of tourist numbers and then the increase in restaurants and tourist hotel revenues. This, in turn, has led to an increase in the tourism sector contribution in the rate of GDP growth from 0.4 points to 0.8% point during the period 2006/2007 to 2007/2008. As a result of the global financial crisis, the contribution of the tourism sector declined to 0.5% in 2008/2009, and the rate of GDP growth fell to 4.7% in the same year.

The GDP growth rate and the tourism sector contribution to the GDP in 2013/2014 were also negatively affected by the escalation of the terrorist crisis in Egypt, where the GDP growth rate was 2.1%, due to the decline in the tourism sector contribution to negative 0.9% in the same year. As a result of the confinement of terrorist actions and political security stability, the GDP growth rate increased from 2.3% to 3.6% in 2015/2016: 2016/2017. The contribution of the tourism sector increased from (-

0.9) points to (0.1) points during the same period. As such, Egypt climbed nine ranks to rise from 74<sup>th</sup> to 65<sup>th</sup> globally, according to the Travel and Tourism Competitiveness Report. It achieved the third rank in price competitiveness due to the stability it witnessed during the period 2015-2017, which contributed to increasing the number of tourists (WEF, 2019). Because of the global financial crisis, the tourism sector contribution declined to 0.5% in 2008/2009, and the GDP growth rate decreased to 4.7% in the same year.

From this, it follows that the escalation of the terrorist crisis in Egypt in 2013/2014 resulted in the GDP growth rate to record 2.1% due to the decline in the tourism sector contribution to -0.9% in the same year.

The tourism sector is considered as an industry without chimneys. It is the largest sector that is negatively affected by terrorist operations for tourists who prefer safer destinations. When a terrorist attack occurs, the number of tourists decreases, and consequently, tourism revenues shrink. (Akça and Ela, 2017), The Middle East region has witnessed an increase in the rate of growth of tourism revenues from 4.6% to 4.7% during the period 2012/2013-2013/2014 (UNWTO, 2016). However, the Egyptian tourism revenues decreased from \$ 9751.8 million in 2012/2013 to \$ 5073.1 million in 2013/2014, which is about 48% during that period. This is due to the unprecedented and specific terrorist operations. Meanwhile, tourism revenues have increased in more stable and secure countries in the region, such as the United Arab Emirates.

## 6. Results

The results of the study showed that terrorism has a dual negative impact on tourism activity. Terrorist actions work towards the decline in the number of tourists coming to the country, which results in the decline in tourism revenues and then the decline in foreign cash flow. It also works towards increasing tourism payments outside the state. Conversely, periods of stability work towards increasing the number of tourists and then increasing tourism revenues, as well as reducing tourism payments to improve the tourism balance. Therefore, terrorism comes at the forefront of obstacles to tourism activity in Egypt, which requires an increase in military spending, which negatively affects the financing of development in other economic sectors.

The decrease in tourism revenues contributed to the decline in services revenue, while the increase in tourism payments led to an increase in service payments. Consequently, the improvement of the tourism balance contributed to improving the services balance in periods of stability, while the decline in the tourism balance had contributed to the decline in the services balance during the period of the terrorist crisis. Moreover, the increase in tourism revenues resulted in an increase in the GDP growth

rate during the first phase (i.e., while stability) except for the financial crisis that led to a decline in the GDP growth rate as a result of the decline of some economic indicators, including a decline in the tourism revenue contribution to GDP.

The results of the study also showed an inverse relationship between terrorism and GDP, as the terrorist crisis in Egypt contributed to the decline in both tourism revenues and GDP. This is, especially because tourism activity is linked to networking with many economic sectors, and that terrorist actions target tourism in the first place to negatively affect the economic development rates. The results of the statistical analysis showed significant relationships between the numbers of tourists and tourism revenues, between tourism revenues and service revenues, and between tourism receipts and GDP in Egypt during the research period.

## 7. Recommendations

It is necessary to increase political and security stability besides draining the sources of terrorism by addressing economic and social causes such as unemployment, poverty, and illiteracy. This goes in parallel with the pre-emptive security confrontations to deter terrorists, achieving security and safety in society, and convincing the world that Egypt enjoys security and safety through international conferences and foreign media campaigns in the different mass media.

It is important to coordinate and exchange information on terrorist organizations at the regional level to confront terrorist organizations through making regional agreements between countries that suffer from terrorist actions because it is difficult to agree on a unified international definition of terrorism in the presence of some countries that support and protect those terrorist organizations.

It is fundamental to increase the development of the productive economic sectors, especially the industrial sector, in parallel with the development of the tourism sector, due to the high impact of local terrorist actions on the tourism sector as well as external crises, while it has a limited impact on productive economic sectors.

Working to increase cultural awareness among citizens about the importance of the contribution of tourism revenues to increasing economic development rates, and then dealing with upscale behaviors with tourists gives positive impressions that can push a tourist to be the best advertising factor for Egyptian tourism upon his return to his homeland.

Holding conferences for all those interested in tourism activities in Egypt, including colleges and institutes of tourism, hotels, tourism and communications companies, aviation, the Tourism Promotion Authority, banks, and government agencies concerned with tourism. The aim is to present the best plan to promote Egyptian tourism, especially cultural tourism, to attract more tourists



from different countries of the world and extend their stay in Egypt and then increase tourism revenues.

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### Compliance with ethical standards

### Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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