Measuring and analyzing the impact of the tourism industry in the Kingdom of Morocco on economic growth for the period (2001-2018)

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Abstract
Tourism is a major economic activity for many developing countries, providing foreign currency, which contributes mainly to the financing of State imports from abroad, as well as adding to the value of exports at the same time, to a degree that has sometimes exceeded the traditional resources of the host State, which It entails an increase in national income. The study aims at analyzing and measuring the impact of some indicators of tourism industry in the economic growth in the state of Morocco for the period 2000-2017 through the use of Eviews9. The study concluded that the experience of the tourist industry in Morocco has proved successful in achieving the objectives planned and making tourism an important economic resource through Achieving a surplus in the trade balance of tourism during the study period, ranking Morocco ranked fourth in the Arab index of travel and tourism competitiveness for the year ,And tourism investment accounted for 13.8% of the total fixed capital formation in Morocco. It is second only to Saudi Arabia (15.6%). The tourism sector contributed 16.4% of the total Moroccan labor force in 2017, which helped to reduce unemployment in Morocco. The contribution of the tourism sector amounted to 7.3% of the GDP and 36% of the exports of goods in 2017. As for the standard aspect, the study showed that there is a positive and linear effect between tourism revenues and GDP growth. This is in line with the hypothesis of the study, and the results of the causality test (Kranger method) showed that here there is a significant causal relation to tourism revenue to GDP, as well as the absence of a self-correlation problem according to the LM TEST, Contrast according to the ARCH TEST. The study suggested that Morocco should prioritize its tourism development by improving air transport with its main tourist markets as well as with new high growth markets, enhancing tourism investment and improving the competitiveness of tourist elements in the country and by better highlighting Morocco for a tourist destination through campaigns. Promoting and hosting major events and promoting local tourism**.**

Introduction

Tourism as an economic activity is of great importance, growing and developing into a standalone industry on which many economies in the world have relied, representing a major source of income, because they have the capacity to move different economic activities and sectors. Tourism is increasingly important by applying it sustainably to meet the needs of tourists, while protecting and promoting the future growth of the sector, minimizing negative impacts on the environment and generating income for local communities. The recovery of tourism also leads to an increase in the demand for employment in the various economic sectors with interrelated and complementary relations with the tourism sector, and to the targeting of expenditure for certain activities of tourist maid, which leads to an increase in public expenditure. The issue of interest in maximizing tourism activity is therefore one of the main issues to be addressed, all aspects of which must be studied and its links to economic growth.

The study covered the period 2001-2018 and used the descriptive and analytical approach as well as the quantification of the impact of tourism activity in some macroeconomic variables, such as the tourism balance, the proportion of tourism revenues in total commodity exports, the unemployment rate, the ratio of tourism investment/total fixed capital formation and GDP to assess the impact of tourism activity through tourism revenues on economic growth.

The State of Morocco possesses many important resources, which are essential components for the establishment of tourism of all kinds, and the importance of the study stems from the importance of this sector and its contribution to increasing and diversifying national income sources, in addition to the contribution of the tourism sector to creating job opportunities and reducing the unemployment rate.

The problematic of this study is as follows: What is the impact of the tourism industry on economic growth, and what is the share of Morocco in the growth in tourism activity at the global level?

Purpose of the study: The study aims to analyze and measure the impact of the tourism industry in Morocco on economic growth.

Study hypothesis: The study starts from the assumption that (the tourism industry has a positive impact on economic growth in the State of Morocco)

Study Approach: To answer the present problem, we used the descriptive and analytical method to clarify the relationship between the tourism industry and economic growth, in addition to using the standard approach to indicate the extent of the impact of the tourism sector activity in Morocco on the economic growth represented by the gross domestic product.

Study structure: The study was divided into three main topics:

The first topic: the theoretical framework that included research concepts and terms as well as previous applied studies.

The second topic: Indicators of the tourism industry in Morocco

The third topic: measuring the impact of some indicators of the tourism sector (tourism revenues) in Morocco on economic growth.

The theoretical framework of the study

First: Research concepts and terms:

1- **Tourism:**
Defined as the global integrated travel, accommodation, and transportation industry and other components, including foundation and support, that serve and satisfy the needs and desires oftravelers (Moses, 2013, 192). The World Tourism Organization (WTO) defines tourism as one of the activities relating to the departure of an individual from the center in which he or she resides and for a period not exceeding one year continuously for the purpose of entertainment, pleasure or other, but not related to the activity aimed at obtaining income (Ashosh, 2011, 4)
The International Society of World Tourism Experts is defined as the set of relationships that result from the travel and temporary residence of a foreigner in a place as long as such temporary residence is not converted into permanent residence and is not linked to an activity that gives a profit to that alien (Bahayawi 2012, 83).

2- **Tourist:**
In this context, the Committee of Economic Experts of the League of Nations defined it in 1973 as anyone who travels for 24 hours or more other than those in which he permanently resides. The United Nations Conference on International Travel and Tourism came to a comprehensive definition, whereby a tourist is considered to be any person visiting a place other than his or her home country for any reason other than the pursuit of work to be rewarded (Dabs, 2009, 29) The International Federation of Tourist Organizations defines a tourist as any person who visits a country, place or destination other than the places within his residence (Saidi and Al-Qalarawi, 2013, 48).

3- **Concept of tourism investment:**
Tourism investment means directing an investor in part or each of its funds in the available tourism investment opportunities (Mohamed, 2006, 277). Tourism investment is also defined as productive capacity aimed at creating physical capital and human capital in the tourism industry, further improving its productive and operational capacities and providing the best different services for this activity (Paul, 1989, 40). Others define it as the employment of funds in one of the areas covered by the tourism sector and include investment in the key components and possibilities of the tourism industry (Zahrani and Qasim, 2008, 16).

4- **Concept of economic growth:**
Economic growth is defined as the increase in gross domestic income with all the increase in real per capita income (Bashir, 2016, 111). Others define it as the continuous and real increase of the economic performance index (Matouk, 2010, 7). According to some economists, economic growth is the quantitative increase in a number of economic indicators (Fahdawi and Radi, 2000, 123).

Second: the importance of tourism:
Tourism is considered one of the most important economic sectors in many developing countries, including the Arab ones, because it is the most important source of foreign currencies, and

related to that of reducing the deficit in the balance of payments. (288Sinclair and Stabler, 1991 :). Also, many Asian countries such as Thailand and Indonesia depend to a large extent on revenues from tourism activity, as is the case with many small island economies such as Fiji (Varly, 1978: 56). Spain is a prime example of a country whose transformation into the ranks of the advanced industrial countries took place following the decline of agriculture and the growth of tourism activities, which in turn financed the expansion of industrialization (Sinclair and Gomez, 1996: 286). The emerging Asian economies also found tourism activity an important source.
To finance imports of capital goods during the industrial transformation they underwent (Song and Ahn, 1983: 112). Likewise, the tourism activity has the potential to create job opportunities not only in the formal sector activities but also in the informal sector activities, which were considered one of the main advantages of tourism for developing countries (Gomez, 1993: 26).
Studies conducted in some developed countries indicate that the volume of direct employment in the tourism sector amounts to (5%) of the total employment in European countries, Canada, the United States of America, Australia and Japan, and increases in other developing countries such as Barbados, the Bahamas and some East Asian countries such as South Korea, Indonesia and Singapore. , As this percentage ranged from (10-15%) of the total employment in those countries (Report of the Specialized National Councils, 2004).

Third: Previous Applied Studies:
In examining the relationship between the tourism industry and economic growth, many studies and research have been completed. Below we will present a brief overview of a selective sample of studies that dealt with the topic of examining the relationship between tourism and economic growth:

1. The researcher (Jackman, 2012) reviewed eighteen papers on the subject in a number of countries, eight of which proved the validity of the tourism hypothesis as a vehicle for economic growth, and eight others validated the two-way hypothesis between economic growth and tourism, while one study led to the neutrality hypothesis, and one study to the hypothesis Economic growth as a locomotive for tourism).
2. The two researchers (Bouzahazah and Menyair, 2013) proved the validity of the tourism hypothesis as a locomotive for economic growth in the short term in both Morocco and Tunisia, while the situation in the long-term reverses so that the opposite hypothesis (economic growth as a locomotive for tourism) is correct.
3. The two researchers (Seqeira and MacasNuncs, 2008) highlight that tourism is a positive determinant of economic growth, but they did not reach a distinction between the role of tourism in small countries specialized in tourism from large countries.
4. (Holzner, 2011) highlighted that the countries dependent on the tourism economy recorded a level of growth that exceeds the average growth rate achieved in (143) countries.
5. (Ivanov and Webster, 2013) demonstrated the positive effect of tourism on real individual growth in (167) countries.
6. The study (Tony Binns and Etienne Nelt) indicated that tourism promotion as a major strategy leads to increasing the activation of the tourism sector and contributing to economic growth and community development, and poverty reduction in developing countries. The study focused on the case of South Africa, which adopted tourism activity during the post-apartheid period, and

concluded that there is a possibility of relying on tourism activity as a driving force for economic and social development.
7. Aliouh (2014), in a study assessing the impact of tourism on economic growth in Egypt, concluded that there is a positive correlation between GDP and tourism revenues.
8. Hamidatou (2015), in a study of the impact of tourism activity in Algeria on economic growth for the period 1997-2013, concluded that there is a positive effect between GDP, total investments and the net trade balance.

Tourism indicators in the state of Morocco

First: The components of the tourism industry in Morocco:
Tourism occupies an important place in the Moroccan economy, as it is a major engine for growth, so Morocco has become one of the most important tourist countries in being able to attract tourists regionally and internationally. The following patterns of tourism in Morocco**:**

1. **Cultural tourism**: Morocco is well known for its ancient history, which has produced a number of archaeological sites in various Moroccan cities, making them distinct tourist destinations in learning and culture. It is distributed among the provinces and cities of Morocco, including the city of Al-Suwayra, which has a distinctive architectural character, and the city of Casablanca, where the Al-Hassan II Mosque is the main landmark of the city. Rabat, the capital of the Kingdom, which is known as the City of Museums, and Marrakech, the third largest Moroccan city, with the most important landmark (Elfina Square), ranked on the World Heritage List in 2001.
2. **Beach tourism**: Morocco is a well-known tourist destination based on beach tourism, along long coasts of the Mediterranean and Atlantic Ocean. Tourists practice swimming, fishing, various water sports and yachting activities. The city of Tangier is the capital of this type of tourism, a link between Africa and Europe, and Agadir, on the Atlantic coast, is one of the largest seaside resorts.
3. **Sports tourism**: It varies between water sports, mountain climbing and bird hunting, in addition to the presence of (17) golf courses, the most important of which is the Dar Al Salam stadium in Rabat. As for winter sports, the (Oukaimeden) area is considered the most important ski station, and there is (Evran), the most famous tourist resort. Which is called in Switzerland Morocco for its natural characteristics in the depth of the Middle Atlas Mountains, where waterfalls, forests, valleys and snow
4. **Ecotourism**: There is a reserve (Sidi Bugabh) close to the city of Quneitra. The city of Marrakesh also has the Akdal Gardens, a natural park on the outskirts of the city, full of fruit trees and a special place for relaxation and tranquillity.
5. **Mountain tourism**: In the summer, the sport of mountain climbing (Atlas Mountains) is important. There's mountain biking. There's desert marathon, which is the trans-Saharan endurance race in Morocco.
6. **Festival tourism**: Morocco is well known for its various festivals, including the Fez Poetry Forum, International Festival of Oud, Summer Youth Music Festival, Oasis Festival, Marrakesh International Film Festival

Second: Human tourism flows for the period 2001-2018:

A- Human Tourist flows for arrivals (2001-2010):
Morocco achieved positive results in the human tourism flow index in the first decade of implementation of the strategic plan (Horizon 2010), where tourist arrivals in Morocco increased from (4.380) million tourists in 2001 to (9.288) million tourists in 2010, with a composite annual growth rate of (8.35%) During that period, of whom there were cans living abroad. (4.378) million at the end of 2010, or 47.14% of the total number of tourists. Table 1 indicates that Morocco's tourism sector has been able to attract about 93% million tourists from the target of the 10-year plan which is 10 million people.
We also note that human flows have experienced maximum annual growth. (15.04%) In 2004, 2008 and 2009 recorded the lowest consecutive annual growth rate (6.36%), (5.86%), due to the effects of the global financial crisis, the sharp rise in oil prices and the swine flu disease, which affected the tourism sector and led to a decline in global arrivals. (4.3%) in 2009 (Center for Statistical, Economic and Social Research of Islamic States, 2013, 8).

B- Incoming tourist flows for the period (2011-2018):
The 2020 plan, which was launched at the beginning of 2011 and is implemented during the second decade (2011-2020), aspires to double the size of the tourism sector in Morocco, and make it among the twenty tourism destinations on the global level, and the main goal of the plan is to double the number of visitors by reaching (20) million tourists in 2020.

C- Tourist flows achieved positive results during 2011-2018, with the number of tourists arriving in Morocco rising from. 9.342 million tourists to 12.289 million tourists in 2018 with a combined annual growth rate ofThe figures show that Morocco's tourism sector has not been able to achieve the expected annual growth rate of 3.91%. and (10%) in view of the target of 20 million tourists at the end of 2020, with an annual average of 4.5% within 7 years.
Owing to the overall security conditions of the Maghreb region and the warnings of some Mediterranean tourism exporting countries, the Morocco-bound tourism index declined significantly from the previous decade (2001-2010), which grew by an increase of 117%, and this emerging data calls for Moroccan tourism operators to reformulate quantitative and monetary targets.

Third: Tourism cash flows (tourism revenues) for the period 2001-2018:

A- Tourism revenues for the period 2001-2010:

International tourism revenues in Morocco recorded a steady growth during the first ten years of the plan (plan 2010), as these revenues increased from (2.966) billion dollars in 2001 to (8.18) billion dollars in 2010, that is, they doubled about three times what it was at the beginning of the plan. As a result of the increase in the number of foreign tourists coming to Morocco, which doubled in size during the same period and as is evident in Table (1).

As it is noticed from the table that tourism revenues increased during the period 2001-2010 at a compound annual growth rate of (11.26%), and the year 2009 recorded a negative growth rate of

(10.2%) compared to 2008, due to the effects of the global financial crisis that affected most countries This led to a decline in tourism revenues on the one hand and a slowdown in the rate of human flows on the other hand. However, Morocco has achieved (92%) of the monetary goals set in the ten-year plan set at (480) billion dirhams, and the accumulated tourism revenues during Decimal (440.6 billion Moroccan dirhams) (Ministry of Economy and Finance Moroccan, 2011: 7).

B- Tourism revenue for 2011-2018:

International tourism revenues in Morocco declined slightly during the first four years of the plan (2011-2020), with tourism revenues falling from $9.10 billion in 2011 to $7.92 billion in 2017, a decline of 2.3% despite growth in arrivals, as shown in table 1. We also note from the table that the 2015 year registered negative growth compared to 2014, due to a decline in the average length of stay, which fell from (8.3) the night of 2014 to (7.9) the night of 2015, i.e. by (5%). (Observatory of Moroccan Tourism, 2014: 32).

Fourth: The balance of international tourism (the balance of tourism) in Morocco:

A- Tourism balance for the period 2001-2010:

The tourism revenues achieved during the first decade of the Moroccan strategy for developing the tourism sector contributed to achieving satisfactory economic returns for the Moroccan economy, and the balance of international tourism achieved a positive surplus during those years due to the lack of reverse tourism payments, that is, Moroccans' spending abroad compared to the spending of foreign tourists in Morocco and Table (1) shows the development in the balance of Moroccan tourism for the period 2001-2010. It is noted from the table that the balance of tourism and travel in Morocco achieved a surplus during the aforementioned period thanks to incoming tourism revenues, which far exceeded the payments of reverse tourism. In 2010, for example, tourism expenditures represented only (23%) of tourism revenues in the same year, and the balance is considered Tourism is the first contributor to bringing in foreign currency, as its contribution to the total Moroccan exports was estimated at (49.2%) in 2010.

B- Tourism balance for the period 2011-2018:

The balance of international tourism in Morocco achieved a positive surplus during the period 2011-2018, and the high revenues generated by inbound tourism compared to the low tourism expenditures spent by Moroccan tourists abroad (reverse tourism) have contributed to achieving that surplus, and as shown in Table (1), where we note From the table that tourism expenditures in 2011, for example, only represented (25%) of the tourism revenues in the same year, and the outbound tourism statistics indicate that (1,850) million Moroccans exited abroad compared to the entry of (10.283) million tourists to Morocco in the same year. In 2015, which means that the volume of inbound tourism represents more than four times the value of outbound tourism, as well as the revenue value exceeding the value of tourism expenditures (Table 1) with the variation in the level of foreign tourists' spending in Morocco, which far exceeds the spending of Moroccan tourists abroad due to the high incomes of the first category. On the other hand, it is noticed that the balance of the tourism balance is gradually declining due to the decline in the tourism revenues achieved annually, as the table numbers show. However, this balance is considered the first contributor to bringing in foreign currency.

Table (1) Indicators of the tourism industry in Morocco for the period 2001-2018

Percentage of tourism investment out of total fixed capital formation %*	The total fixed capital formation is one million dollars	Tourism Investment / million dollars	Tourism expenditures as a percentage of total imports *	Annual percentage change *	The balance of international tourism / million dollars *	Tourism expenditures are one million dollars	Annual percentage change *	Tourism revenues of one million dollars	Annual percentage change *	The arrivals are in the thousands	Years
4.9	10202	500	5.5	34.5	2377	589	30.1	2966	2.38	4380	2001
6.3	11120	700	5.7	4.7	2488	669	6.4	3157	1.67	4453	2002
6.7	13498	900	6.0	7.4	2673	548	21.5	3221	6.92	4761	2003
7.4	16273	1200	5.1	25.5	3348	574	21.7	3922	15.04	5477	2004
7.9	17760	1400	4.9	19.4	3998	612	17.6	4610	6.68	5843	2005
8.5	20022	1700	4.7	32.3	5291	693	29.7	5984	12.24	6558	2006
8.3	25416	2100	4.5	30.2	6889	1418	39.0	8307	12.96	7408	2007
7.9	31838	2500	4.4	1.3	6975	1910	7.0	8885	6.36	7879	2008
10.2	29413	3000	4.9	10.2-	6267	1713	10.2-	7980	5.86	8341	2009
11.2	28576	3200	5.1	0.5	6297	1879	2.5	8176	11.35	9288	2010
11.3	31927	3600	4.9	8.6	6841	2260	11.2	9101	0.58	9342	2011
11.6	32032	3700	4.6	6.5-	6396	2095	6.7-	8491	0.35	9375	2012
12.2	32894	4000	4.2	3.1-	6199	2002	3.4-	8201	7.16	10046	2013
12.6	32597	4100	4.6	5.3	6529	2218	6.6	8747	2.36	10283	2014
13.5	28829	3900	5.2	17.6-	5381	2153	13.9-	7534	1.03	10177	2015
13.4	31293	4200	5.2	4.3	5610	2155	3.1	7765	1.04	10283	2016
13.8	33290	4600	5.1	0.04	5612	2309	2.0	7921	0.48	10332	2017
14.2	33874	4800	5.4	15.9	6505	3018	20.2	9523	18.9	12289	2018

Sources:

- Organization of Islamic Cooperation, International Tourism in the Member States of the Organization of Islamic Cooperation, Prospects and Challenges, 2008, pp. 80-89.
- Organization of Islamic Cooperation, International Tourism in the Member States of the Organization of Islamic Cooperation, Prospects and Challenges, 2013, p. 45.
- Organization of Islamic Cooperation, International Tourism in the Member States of the Organization of Islamic Cooperation, Prospects and Challenges, 2017, pg. 80.
- The World Bank, http: // data.albank.aldawli.org
- World Data - Atlas en.knoema.com/atlas
- * Calculated by the researcher

Fifth: tourism investment in Morocco:

The tourism investment movement in Morocco witnessed stable growth during the period 2001-2018, as statistics indicate an increase in the volume of tourism investments from (500) million dollars in 2001 to (4800) million dollars in 2018, with a compound annual growth rate of (13.3%) during the period Mentioned. As for the percentage of tourism investment out of the total fixed capital formation (domestic investment), this percentage increased from (4.9%) in 2001 to (14.2%) in 2018, and when comparing this percentage with its counterparts in some Arab countries for the year 2018, we notice that Morocco occupied The first place was followed by Saudi Arabia in second place, as shown in Table (2). With regard to foreign direct investment in Morocco, Morocco was able to bring in (3.7) billion dollars in foreign direct investment in the tourism sector and this value represents a percentage of (16%) of the total investments The foreign incoming to the various economic sectors in Morocco comes in second place after the real estate sector (42%) in terms of attracting investments (Moroccan Agency for Investment, 2014).

This means that this sector is still enjoying dynamism and profitability in the eyes of foreign investors. It also explains that tourism investments in Morocco are financed by foreign financing channels, and France is at the forefront of countries investing in this vital sector in the Moroccan economy.

Table (2) The percentage of tourism investment contribution to the total fixed capital formation for the year 2018 for some Arab countries

Percentage of tourism investment to total fixed capital formation % *	Total fixed capital formation / billion dollars	The size of tourism investment / billion dollars	Country
15.8	33.5	5.3	Morocco
15.0	165.0	24.8	Saudia
11.5	7.8	0.9	Jordan
11.3	40.7	4.6	Egypt
10.8	7.4	0.8	Tunisia
9.8	73.2	7.2	UAE
6.6	28.8	1.9	Iraq
4.3	18.5	0.8	Oman
2.4	70.3	1.7	Algeria

Source:
World Bank data
* Calculated by the researcher

Sixth: Tourism's contribution to employment:

Tourism's contribution to employment is an important indicator of the economic role of the tourism sector (OIC, 2013: Given the diversity of employment opportunities provided by the tourism sector. Jobs in the tourism sector represent the number of jobs in tourism activities that require direct contact with tourism (e.g. hotel workers, restaurants, tourism agencies). Jobs in the tourism economy include previous jobs in addition to those in sectors complementary to the tourism sector.

Table (3) Total contribution of the tourism sector to employment in Morocco for the period 2005-2018

%The contribution of the tourism sector to the total labor force	Year
16.4	2005
17.5	2010
17.6	2011
17.2	2012
16.4	2013
16.8	1014
16.2	2015
16.5	2016
17.0	2017
16.7	2018

Source / Atlas database on the site:http://en.knoema.com/atlas/topics

Table 3 shows how tourism contributes to job creation in the economy, reducing unemployment. The contribution of tourism to employment has been estimated. (Direct and indirect contribution) (16.4%) in 2005, increased to (16.7%) in 2018, with a composite annual growth rate of (0.14%) during the duration of the study resulting in a decrease in the unemployment rate from (13.6%) in 2000 to (9.3%) in 2018 as shown in table 5. In comparing the contribution of tourism to employment in Morocco with a number ofArab States, we note that Morocco ranks second to Jordan in this contribution for 2018,as shown in the following table:

Table (4) Total contribution of the tourism sector to employment for a number of Arab countries for the year 2018

%Tourism sector contribution to employment	Country
19.2	Jordan
16.7	Morocco
14.6	Tunisia
9.6	Oman
8.5	Saudia
9.5	Egypt
9.6	UAE
6.8	Iraq
5.8	Algeria

Source / Atlas database on the site:http://en.knoema.com/atlas/topics

The third topic

Measuring and analyzing the impact of tourism activity on economic growth in Morocco

First: Description of the model variables:

1. Dependent variables:

Y 1: Tourism revenues as a percentage of merchandise exports - a percentage

Y 2: unemployment rate - percentage

Y3: the percentage of tourism investment out of the total fixed capital formation - a percentage

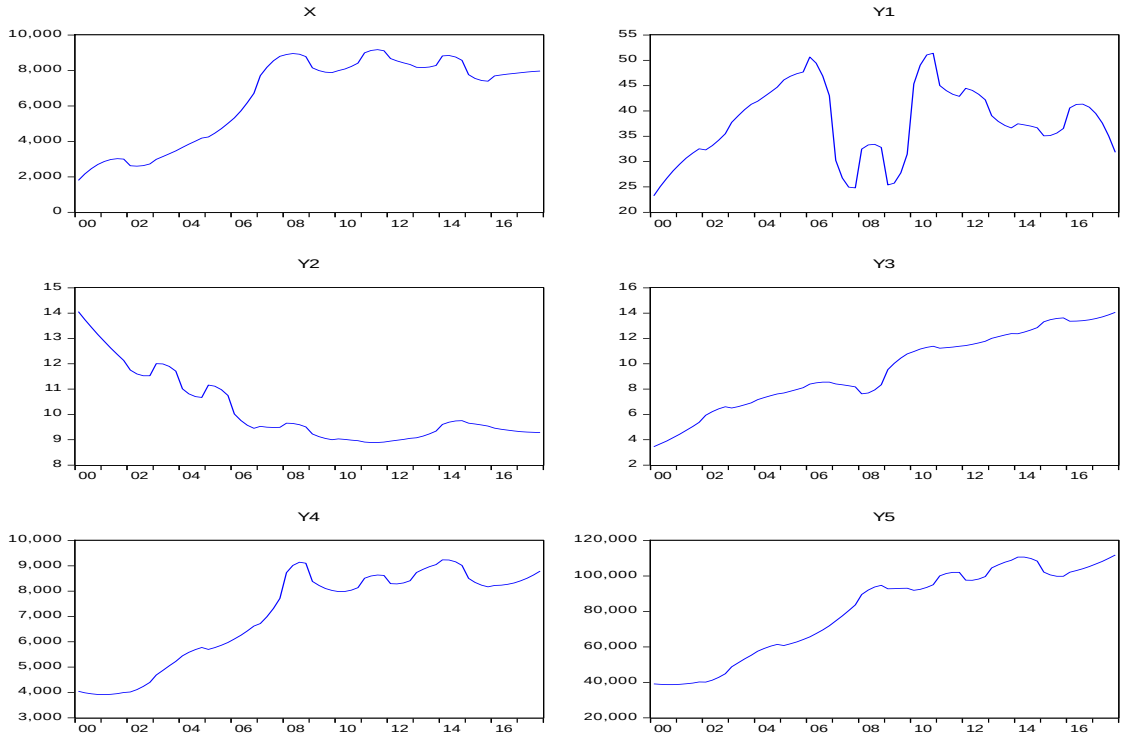
Y 4: GDP per capita - dollars
Y 5: GDP expressing economic growth - million dollars
2. Independent variable (X): Tourism revenue - million US dollars

Table (5) variables of the study

GDP / million dollars Y5	Per capita GDP / dollar Y4 *	Percentage of tourism investment out of total fixed capital %formation * Y 3	% Unemployment rate Y 2	Tourism revenues as a proportion of merchandise exports Y1 *	Tourism revenues of one million dollars X	Year
39459	3946	4.9	12.5	31.1	2966	2001
42236	4190	6.3	11.6	40.3	3157	2002
52064	4958	6.7	11.9	39.6	3221	2003
59626	5625	7.4	10.8	43.3	3922	2004
62343	5826	7.9	11.0	47.0	4610	2005
68640	6355	8.5	9.7	47.5	5984	2006
79041	7185	8.3	9.5	26.7	8307	2007
92507	8996	7.9	9.6	33.0	8885	2008
92897	8185	10.2	9.1	27.6	7980	2009
93216	8036	11.2	9.0	49.2	8176	2010
101370	8591	11.3	8.9	43.8	9101	2011
98266	8328	11.6	9.0	43.5	8491	2012
106826	8902	12.2	9.2	37.7	8201	2013
109881	9157	12.6	9.7	37.1	8747	2014
100593	8313	13.5	9.6	35.6	7534	2015
103606	8261	13.4	9.4	41.0	7765	2016
109139	8584	13.8	9.3	36.0	7921	2017
117921	9909	14.2	9.1	33.3	9523	2018

Source /

- Organization of Islamic Cooperation, International Tourism in the Member States of the Organization of Islamic Cooperation, Prospects and Challenges, 2008, pp. 80-89.
- Organization of Islamic Cooperation, International Tourism in the Member States of the Organization of Islamic Cooperation, Prospects and Challenges, 2013, p. 45.
- Organization of Islamic Cooperation, International Tourism in the Member States of the Organization of Islamic Cooperation, Prospects and Challenges, 2017, pg. 80.
- The World Bank, http: // data.albank.aldawli.org
- World Data - Atlas en.knoema.com/atlas
- * Calculated by the researcher



Source: Prepared by the researcher based on Eviews.9 program output

From figure (1) we note that the diagrams of the spread of time series of variables fluctuate over time, that is, there is a general trend of time series, and in order to ascertain the microscopy and the silence of these data and their absence from the roots of the unit, the Philips-Perón test was used (PP).

(Y1) and (X) Relation								
Variable	Coefficient	Std. Error	t-Statistic	Prob.t	R^2	Adj.R^2	F.stst	Prob(F)
X	8.96E-05	0.001709	0.052397	0.9584	0.85	0.84	53	0.0000
X(-1)	5.09E-05	0.003023	0.016843	0.9866				
X(-2)	-0.001289	0.003008	-0.428481	0.6698				
X(-3)	0.001094	0.001624	0.673521	0.5032				
C	6.929695	2.100401	3.299225	0.0016				
(Y2) and (X) Relation								
Variable	Coefficient	Std. Error	t-Statistic	Prob.t	R^2	Adj.R^2	F.stat	Prob(F)
X	-3.61E-05	2.27E-05	-1.592988	0.1159	0.98	0.98	1457	0.0000
C	1.252019	0.546608	2.290526	0.0252				
(Y3) and (X) Relaltion								
Variable	Coefficient	Std. Error	t-Statistic	Prob.t	R^2	AdjR^2	F.stat	Prob(F)
X	-0.000500	7.92E-05	-6.313380	0.0000	0.99	0.99	3104	0.0000
X(-1)	0.000722	0.000152	4.747107	0.0000				
X(-2)	-0.000119	0.000173	-0.688582	0.4940				
X(-3)	-3.61E-05	0.000174	-0.207466	0.8364				
X(-4)	-0.000486	0.000173	-2.805428	0.0069				
X(-5)	0.000435	9.87E-05	4.405420	0.0000				
C	0.448034	0.087027	5.148199	0.0000				
(Y4) and (X) Relation								
X	0.459289	0.083655	5.490302	0.0000	0.99	0.99	2262	0.0000
X(-1)	-0.661613	0.157182	-4.209226	0.0001				
X(-2)	0.298946	0.099351	3.008977	0.0037				
C	331.0390	111.9599	2.956763	0.0044				
(Y5) and (X) Relation								
X	5.026859	0.666740	7.539457	0.0000	0.99	0.99	6734	0.0000
X(-1)	-8.063365	1.277846	-6.310123	0.0000				
X(-2)	3.330888	0.812523	4.099440	0.0001				
C	775.0856	528.4768	1.466641	0.1474				

2- Data stability testing using Phillips-Peron (PP)

Table (6) Time Series Microscopy Test using Phillips-Perron Test

	UNIT ROOT TEST TABLE (PP)						
	At Level						
Y5	Y4	Y3	Y2	Y1	X		
-1.1230	-1.3844	-1.5062	-3.6933	-2.8388	-1.8984	t-Statistic	Categorical
0.7025	*0.5852*	*0.5248*	*0.0062*	*0.0580*	*0.3313*	*Prob.*	
n0	n0	n0	***	*	n0		
-1.2652	-1.3119	-2.6594	-2.2851	-2.6484	-1.0433	t-Statistic	Categorical and general trend
0.8883	*0.8770*	*0.2564*	*0.4362*	*0.2610*	*0.9307*	*Prob.*	
n0	n0	n0	n0	n0	n0		
2.3593	1.3117	2.8397	-2.6612	-0.2902	0.7965	t-Statistic	Without Categorical

							and general trend
0.9953	*0.9510*	*0.9987*	*0.0084*	*0.5779*	*0.8825*	*Prob.*	
n0	n0	n0	***	n0	n0		
	At First Difference						
d(Y5)	d(Y4)	d(Y3)	d(Y2)	d(Y1)	d(X)		
-4.3553	-4.4516	-4.3930	-4.7867	-4.9557	-4.0156	t-Statistic	Categorical
0.0008	*0.0006*	*0.0007*	*0.0002*	*0.0001*	*0.0023*	*Prob.*	
***	***	***	***	***	***		
-4.3827	-4.4918	-4.4383	-5.4672	-5.0080	-4.1703	t-Statistic	Categorical and general trend
0.0043	*0.0031*	*0.0037*	*0.0001*	*0.0006*	*0.0081*	*Prob.*	
***	***	***	***	***	***		
-3.5912	-4.1822	-3.3858	-4.5315	-4.9989	-3.8425	t-Statistic	Without Categorical and general trend
0.0005	*0.0001*	*0.0010*	*0.0000*	*0.0000*	*0.0002*	*Prob.*	
***	***	***	***	***	***		

Notes: a: (*)Significant at the 10%; (**)Significant at the 5%; (***) Significant at the 1%. and (no) Not Significant
b: Lag Length based on SIC

From table (6), the time series of variables (Y1 and Y2) were shown to have stabilized at the level by having a cutoff at the moral level (10% and 1%), the other variables were not at the level, and after taking the first difference of these variables, they settled either with a cutoff or a general direction or without a cutoff and a general direction at the moral level (1%).

Third: The initial test of the ARDL model

Table (7) Results of the initial test of the Autoregressive Distributed Deceleration Model (ARDL) for the relationship between study variables

From table (7) above, it is clear that all the estimated models are significant according to the (F) test, that is, they can be relied upon in the future for planning and prediction purposes. As for the explanatory ability, which is reflected by the corrected determination coefficient (Adj.R2), the test results showed that all the models have explanatory strength.

Fourth: Examining the long-term joint complementarity relationship using the Bound Test

After testing the short-term autoregressive distributed slowdown (ARDL) model, we test the boundaries to show the existence of a co-integration relationship between these variables, and to test the extent of achieving the covariance, which represents the long-term equilibrium relationship between the studied variables, the Bounds Test method was used, which It is considered one of the modern and good tests in explaining the relationship of co-integration by Pesaran et al.), And this method is characterized by the possibility of its application whether the explanatory variables are integrated at the level, i.e. degree zero (0) I or integrated at the first difference, i.e. from the first degree (1) I or a combination of both, and can be applied in the case of small samples. This method is based on a statistical (F) test and comparing it with the tabular values of the maximum (I1 Bound) and the minimum (I0 Bound) at a significant level (1%, 2.5%, 5% and 10%) If the calculated statistical value of (F) is greater than the maximum tabular value, then this means that there is a long-term equilibrium relationship between the variables, and then we reject the null hypothesis and accept the alternative hypothesis, but if the statistic (F)

value is less than the minimum tabular value then this It means that there is no long-term equilibrium relationship between the variables, but if the statistical F value falls between the minimum value and the maximum value, it means that it occurred in the non-judgmental region, and then a decisive decision cannot be made whether or not there is a long-term equilibrium relationship between the variables.

Table (8) Results of the long-term covariance relationship test using the Bound Test

(Y1) and (X) Relation		
Test Statistic	Value	K
F-statistic	5.50	1
Significance Level	I0 Bound	I1 Bound
%10	4.04	4.78
%5	4.94	5.73
%2.5	5.77	6.68
%1	6.84	7.84
(Y2) and (X) Relation		
Test Statistic	Value	K
F-statistic	6.02	1
Significance Level	I0 Bound	I1 Bound
%10	4.04	4.78
%5	4.94	5.73
%2.5	5.77	6.68
%1	6.84	7.84
(Y3) and (X) Relation		
Test Statistic	Value	K
F-statistic	8.93	1
Significance Level	I0 Bound	I1 Bound
%10	4.04	4.78
%5	4.94	5.73
%2.5	5.77	6.68
%1	6.84	7.84
(Y4) and (X) Relation		
Test Statistic	Value	K
F-statistic	5.49	1
Significance Level	I0 Bound	I1 Bound
%10	4.04	4.78
%5	4.94	5.73
%2.5	5.77	6.68
%1	6.84	7.84

From table (8) above, it was found that there is a co-integration relationship (long-term equilibrium relationship) between the two variables (X and Y1) at a significant level (10%), and there is a joint integration relationship between the two variables (X and Y2) at the level (5%). , There is also a relationship between (X and Y3) at the level (1%), and there is a joint integration

relationship between the two variables (X and Y4) at the level (10%), and there is a joint integration relationship between (X and Y5) at the level (1). %).

Fifth: Estimating the error correction model and the short and long-term relationship according to the ARDL model))

After it has been confirmed that there is a long-term equilibrium relationship (a co-integration relationship) between the study variables, the next step comes to define the short and long-term relationship between these variables, and this will be done by estimating the error correction model, which represents an important step in the ARDL tests. The test on the error correction parameter (CointEq (-1)) in the statement of correcting the relationship between the short term and the long term. The short term corrects the long-term trend or imbalances in the equilibrium value during the same year or the same quarter.

Table (9) the results of error correction and the short and long-term relationship between the study variables according to the (ARDL) model

(Y1) and (X) Relation				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	.Prob
D(X)	0.000090	0.001709	0.052397	0.9584
D(X(-1))	0.001289	0.003008	0.428481	0.6698
D(X(-2))	-0.001094	0.001624	-0.673521	0.5032
CointEq(-1)	-0.170369	0.054463	-3.128182	0.0027
Cointeq = Y1 - (0.0003*X + 40.6747)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	.Prob
X	0.000322	0.000933	-0.344664	0.7315
C	40.674683	6.816306	5.967262	0.0000
(Y2) and (X) Relation				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	.Prob
D(X)	-0.000036	0.000023	-1.592988	0.1159
CointEq(-1)	-0.103298	0.039781	-2.596667	0.0116
Cointeq = Y2 - (-0.0003*X + 12.1205)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	.Prob
X	-0.000349	0.000108	-3.240453	0.0019
C	12.120480	0.847985	14.293265	0.0000
(Y3) and (X) Relation				
(نموذج الاجل القصير)Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	.Prob
D(X)	-0.000500	0.000079	-6.313380	0.0000
D(X(-1))	0.000119	0.000173	0.688582	0.4940

D(X(-2))	0.000036	0.000174	0.207466	0.8364
D(X(-3))	0.000486	0.000173	2.805428	0.0069
D(X(-4))	-0.000435	0.000099	-4.405420	0.0000
CointEq(-1)	-0.038430	0.010815	-3.553338	0.0008
Cointeq = Y3 - (0.0004*X + 11.6585)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	.Prob
X	0.000379	0.000226	1.679545	0.0987
C	11.658531	2.437937	4.782129	0.0000
(Y4) and (X) Relation				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	.Prob
D(X)	0.459289	0.083655	5.490302	0.0000
D(X(-1))	-0.298946	0.099351	-3.008977	0.0037
CointEq(-1)	-0.132479	0.040075	-3.305753	0.0016
Cointeq = Y4 - (0.7293*X + 2498.8079)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	.Prob
X	0.729344	0.054823	13.303535	0.0000
C	2498.807882	390.090264	6.405717	0.0000
(Y5) and (X) Relation				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	.Prob
D(X)	0.192806	0.052193	3.694100	0.0005
CointEq(-1)	-0.080601	0.020278	-3.974773	0.0002
Cointeq = Y5 - (2.3921*X + 11157.2843)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	.Prob
X	2.392089	0.173016	13.825812	0.0000
C	11157.284	1252.9236	8.904999	0.0000

From Table (9) and from the results of the short-term model, it was found that:
- The variable, tourism revenues (X), has a direct relationship with the variable. Tourism revenues as a percentage of exports of goods (Y1), meaning that increasing the independent variable by one unit will increase the dependent variable by (0.000090)
- The variable tourism revenues (X) is inversely related to the variable unemployment rate (Y2), meaning that increasing the independent variable by one unit will lead to a decrease in the dependent variable by (-0.000036)
- The variable tourism revenues (X) has a direct relationship with the variable, the proportion of tourism investment out of the total fixed capital formation (Y3), meaning that increasing the independent variable by one unit will increase the dependent variable by (0.000119)

- The variable tourism revenues (X) has a direct relationship with the variable per capita worker share of GDP (Y4), meaning that increasing the independent variable by one unit will increase the dependent variable by (0.459289)
- The variable tourism revenues (X) has a positive and significant relationship with the variable gross domestic product (Y5), meaning that increasing the independent variable by one unit will increase the dependent variable by (0.192806)

As for the CointEq (-1) error correction equation, it was negative and significant for all the estimated models, and this indicates the existence of a long-term equilibrium relationship between the study variables, meaning that the deviations in the short term correct towards the long-term equilibrium value during the same semester, or in other words that the imbalance in The shock of the final chapter has been corrected in the current chapter.
As for the long-term relationship between the study variables, the results indicated that:
- The variable, tourism revenues (X), has a direct relationship with the variable, tourism revenues as a percentage of commodity exports (Y1), meaning that increasing the independent variable by one unit will increase the dependent variable by (0.000322)
- The variable tourism revenues (X) has an inverse relationship with the variable unemployment rate (Y2), meaning that increasing the independent variable by one unit will lead to a decrease in the dependent variable by (-0.000349)
- The variable tourism revenues (X) is directly related to the variable, tourism investment as a percentage of the total fixed capital formation (Y3), meaning that increasing the independent variable by one unit will increase the dependent variable by (0.000379)
- The variable tourism revenues (X) has a direct relationship with the variable per capita worker share of GDP (Y4), meaning that increasing the independent variable by one unit will increase the dependent variable by (0.729344)
- The variable tourism revenues (X) has a positive and significant relationship with the variable gross domestic product (Y5), meaning that increasing the independent variable by one unit will lead to an increase of the dependent variable by (2.392089)

Table (10) results of autocorrelation and heterogeneity of variance in the ARDL model

(Y1) and (X) Relation			
Breusch-Godfrey Serial Correlation LM Test			
F- statistic	0.109434	Prop . F	0.7419
Obs*R-squared	0.125620	Prob. Chi-Square	0.7230
Heteroskedasticity Test: ARCH			
F-statistic	1.713415	Prob. F	0.0985
Obs*R-squared	21.38011	Prob. Chi-Square	0.1251
(Y2) and (X) Relation			
Breusch-Godfrey Serial Correlation LM Test			
F- statistic	0.505184	Prop . F	0.4798
Obs*R-	0.539848	Prob. Chi-Square	0.4625

squared			
Heteroskedasticity Test: ARCH			
F-statistic	0.058510	Prob. F	0.8096
Obs*R-squared	0.060204	Prob. Chi-Square	0.8062
(Y3) and (X) Relation			
Breusch-Godfrey Serial Correlation LM Test			
F- statistic	22.41468	Prop . F	0.0001
Obs*R-squared	70.63236	Prob. Chi-Square	0.1639
Heteroskedasticity Test: ARCH			
F-statistic	0.163875	Prob. F	0.6869
Obs*R-squared	0.168290	Prob. Chi-Square	0.6816
(Y4) and (X) Relation			
Breusch-Godfrey Serial Correlation LM Test			
F- statistic	2.114360	Prop . F	0.1509
Obs*R-squared	2.273004	Prob. Chi-Square	0.1316
Heteroskedasticity Test: ARCH			
Obs*R-squared	0.424968	Prob. Chi-Square	0.5145
(Y5) and (X) Relation			
Breusch-Godfrey Serial Correlation LM Test			
F- statistic	0.923707	Prop . F	0.3402
Obs*R-squared	1.011511	Prob. Chi-Square	0.3145
Heteroskedasticity Test: ARCH			
F-statistic	0.219464	Prob. F	0.6410
Obs*R-squared	0.225277	Prob. Chi-Square	0.6350

We note from the tables (10) above that all ARDL models estimated for the relationship between study variables are free from the self-correlation problem according to the Breusch-Godfrey Serial Correlation LM Test, i.e. we accept the null hypothesis that states that there is no self-correlation problem, because the value of (Prop F) and Prob. Chi-Square)) is not significant at a significant level (5%) for all models and we reject the alternative hypothesis, as well as the absence of (ARDL) models estimated from the problem of heterogeneity of variance where the values of each of the Prob were. Chi-Square)) and ((Prop.F) are not significant at (5%) according to (Heteroskedasticity Test: ARCH).

Seventh: The Granger Causality Test for the relationship between the study variables in the short term

The Cranger test is used in order to determine the direction of causation between the variables of the study if this test shows the direction of causation whether it is in one direction or two directions alternating or that both variables are independent of each other, as Kranger assumes the null hypothesis (X does not Granger Cause Y) i.e. That the variable (X) does not cause the variable (Y)), and through the statistical probability (Prob) of the value of F), we can determine the direction of causation whether the variable (X) causes the variable (Y) or not, and if the value of (Prob.F)Greater than (10%) we accept the null hypothesis of (Cranger) and we reject the alternative hypothesis that there is no causal relationship. If the value of (Prob.F) is less than (10%) we reject the null hypothesis of Cranger and accept the alternative hypothesis that states that there is a causal relationship between the two variables.

Table (11): Results of the Kranger causality test among the study variables

	Null Hypothesis	Direction	*F-Statistic*	*Prob.*
	Y1 does not Granger Cause X	→	4.26907	0.0426
	X does not Granger Cause Y1		1.46747	0.2299
	Y2 does not Granger Cause X	→	4.88510	0.0305
	X does not Granger Cause Y2		0.51264	0.51264
	Y3 does not Granger Cause X	→	0.28006	0.02806
	X does not Granger Cause Y3		0.14224	0.14224
	Y4 does not Granger Cause X		5.07019	5.07019
	X does not Granger Cause Y4	→	10.7296	0.0017
	Y5 does not Granger Cause X		2.51980	0.1171
	X does not Granger Cause Y5	→	3.42312	0.0686

The arrow mark indicates a causal relationship between the two variables

Conclusions

1. The tourism experience has proven its success in achieving the planned goals, which is what made that country a destination for foreign tourists, and made tourism an important economic resource in it through the quality of the tourism services provided and hospitality.
2. Achieving a surplus in the tourism trade balance during the study period, as the balances of the tourism balance were positive, and it achieved significant foreign exchange surpluses.
3. Morocco ranked fourth in the Arab world in the Travel and Tourism Competitiveness Index for 2015.
4. The promotion of international tourism, and policies to facilitate obtaining visas, contributed to the increase in the number of international tourists to Morocco for the year 2018.
5. Tourism investment accounted for 15.8% of the total fixed capital formation in Morocco, and it ranks first, followed by Saudi Arabia with 15.0% in this field for the year 2018.

6. The tourism sector contributed 16.7% of the total Moroccan workforce in 2018, which helped reduce unemployment in Morocco.
7. The contribution of the tourism sector was 8.1% of GDP, and 33% of merchandise exports for the year 2018.

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