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Bouzahzah, Mohamed and El Menyari, Younesse

University Mohammed V - Souissi, FSJES Salé, University  
Mohammed V - Agdal, FSJES Rabat

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# The Relationship between International Tourism and Economic Growth: the case of Morocco and Tunisia

Mohamed Bouzahzah

*Mohammed V University - Souissi, FSJES de Salé  
E-mail: mobouzahzah@gmail.com*

Younesse EL MENYARI

*Mohammed V University - Agdal, FSJES de Rabat - Agdal  
E-mail: youness.elmenyari@gmail.com*

## **Abstract**

*This study proposes to examine the impact of tourism activity on the economic growth of Morocco and Tunisia. We contribute here to the empirical literature on the tourism-led growth (TLG) hypothesis, by adopting the error correction model framework, the cointegration and Granger Causality tests between real tourism receipts, real effective exchange rate and economic growth in Morocco and Tunisia, for the annual period 1980-2010; two main results emerge from this analysis. First, contrary to the predictions of the TLG hypothesis, the Granger test results show that this hypothesis is only valid for short-term in the two countries of Maghreb. Second, the results show that in the long term, there is a strong unidirectional causality from economic growth to international tourism receipts.*

**Keywords:** TLG hypothesis; tourism receipts; economic growth; cointegration; Granger causality; Morocco and Tunisia.

**JEL Classification:** C32, E01, F43, L83, O57.

## 1. Introduction

Tourism today, is one of the fastest growing industries and an important economic activity for many developing countries as well as several developed countries.

The Mediterranean region, the first worldwide tourism region, represents 27% of global tourism receipts and 30% of international arrivals in 2011<sup>1</sup>. As a part of this area, the Maghreb countries (especially Morocco and Tunisia) constitute a non-negligible tourist destination. Thus, tourism is considered one of the vital sectors in both countries. In 2011, it directly contributes to some 8,9% of GDP in Morocco and 6,6% in Tunisia. Similarly, during the same period, the contribution of direct tourism employment to total employment in these countries was 7,8% in Morocco and 6% in Tunisia<sup>2</sup>.

The Moroccan and Tunisian governments have noticed the crucial role of tourism in economic growth and are eager to promote tourism internationally. These two countries, succeeded in entering the world tourist market in the mid to late 1960s, as the first waves of mass tourism hit the southern Mediterranean coastline.

Since 2001, the government of Morocco and the General Confederation of Moroccan Enterprises (CGEM) inaugurated the "2010 vision" which aims to promote tourism in Morocco. As a continuation of vision 2010, the Moroccan government has undertaken a major step to co-ordinate the efforts of public and private partners with a view to drawing up a new strategic vision for tourism industry (2020 Vision). This strategy is based on three axes: (1) A policy planning of territorial development of tourism; (2) A new governance framework; (3) An integrated approach to sustainable development. Thus, the objective of this new vision is to double the number of tourist arrivals and augment tourism receipts to about 140 billion in 2020 against 56 billion dirhams in 2010.

On the other hand, the government of Tunisia in 2007 has drawn up a new strategy for the tourism sector. This new strategy continues to expand, promote and diversify tourism products (tourism in the desert, cultural and heritage tourism, golf and health tourism). The purpose of this strategy is to come within reach of 10 million tourists starting from 2014 (against 6.9 million in 2010) and generate revenues of 5.36 billion dinars (against 3.80 billion in 2010).

Despite the importance of tourism sector, there are so far very few empirical studies on the effects of tourism on economy, particularly in the southern Mediterranean countries. In the specific case of Morocco, to our knowledge, there are no econometric studies of the impact of tourism on economic growth.

Based on various empirical econometric modeling of the tourism-led growth hypothesis (TLGH)<sup>3</sup>, we examine the cointegration and focus on the potential causality links between real tourism receipts, real effective exchange rate and economic growth measured by real GDP, using time series data from 1980 to 2010. We try here to provide an answer to the

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<sup>1</sup> UNWTO Tourism Highlights, 2011, Edition.

<sup>2</sup> WTTTC, 2012.

<sup>3</sup> See Balaguer and Cantavella-Jorda, 2002.

crucial question of whether tourism is a cause or a consequence of economic growth. Thus, this analysis is conducted for the case of the two countries in the Mediterranean south, mainly Morocco and Tunisia<sup>4</sup>.

The rest of the paper is organized as follows. Section 2 provides a concise literature review; Section 3 describes data, focuses on specification of econometric methods, and discusses the results. Finally, Section 4 provides concluding remarks.

## **2. Literature Review**

Because of its importance in creating an added value, prosperity and improved living standards, the economic growth continue to be one of the major preoccupations of the economic research. Since the early 80's, the analysis of the determinants of economic growth constitutes one of the most important research domains in economy. The fact that tourism has an important share of services exports, analysis of the relationship between tourism and economic growth has brought about since the 90's increasing attention in the theoretical literature.

The relationship between tourism development and economic growth has generally been addressed by two different components in analytic literature. The first emanates from The Keynesian Theory of Multiplier. Under this approach, international tourism can be considered as an exogenous component of aggregate demand that has a positive effect on incomes, employment and so on, through the multiplier. However this approach is just statics and doesn't permit a deduction of the long-term impact of tourism development. A different approach, which is the most extensively considered in the literature, explores the potential of endogenous growth theory and the new trade theory applied to tourism sector. Thus, as in the hypothesis of export-led growth, a hypothesis on the tourism-led growth postulate the existence of several theoretical arguments for which the tourism would become a main determinant of long-term economic growth.

In a traditional sense, it was discussed that tourism brings in foreign currency, which can be used to import and produce goods and services, while contributing to the economic growth (McKinnon, 1964). Tourism can play a funding role for economic development. The non-tourist areas will also benefit from it through the distribution of the country's wealth. But this approach is essentially rooted in the Post-Keynesian (Harrod-Domar) growth theory whose basic assumptions (fixed prices, constant average and marginal productivity of capital, factor complementarity, etc.) are not relevant to studying long-term dynamics (Bender and Löwenstein, 2005). In a dynamic growth model, Hazari and Sgro (1995) showed that an increase in tourism demand has a positive effect on long-term growth of a small open economy.

Within the same framework, the international tourism would contribute to an income increase in at least two supplementary ways as indicated by the export-led growth hypothesis. In a first hand, it increases efficiency by fostering competition between companies and international tourist destinations (Bhagwati and Srinivasan, 1979; Krueger, 1980), and in a second hand, by facilitating the exploitation of economies of scale in the local enterprises (Helpman and Krugman, 1985).

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<sup>4</sup> There have been very few empirical studies that investigated of questions concerning the tourism industry in these two countries (see for Morocco: Bouzahzah and El Menyari, 2012; and for Tunisia: Choyakh, 2008; Belloumi, 2010; Jiminez and al., 2011).

Following the endogenous growth models by Lucas (1988), Lanza and Pigliaru (1995) presented a model of an economy composed of two sectors, manufacturing sector and tourism sector. They define the conditions under which the maximization of growth rate is associated with specialization in tourism. The results of Lanza and Pigliaru (1995) suggest that tourism specialization can improve economic growth, if and only if, variations of trade terms between manufactured and tourism goods are as such that they compensate the disadvantage of technological progress in tourism sector. This condition is valid if substitution elasticity between the two goods is inferior to one, that is to say, when both goods are not a substitute for one another.

However, the real impacts of tourism may remain controversial. Thus, Chen and Devereux (1999) affirm that tourism can reduce welfare in countries subject to restrictive trade measures (export taxes and import subsidies). Using a theoretical framework of trade, they show that direct investment in tourism leads, for the most important social benefits, but may also lead to situations of "immiserizing growth".

Moreover, the empirical evidences of the relationship between tourism and economic growth produce divergent results. The first empirical studies of the relationship between economic growth and tourism have been conducted by Balaguer and Cantavella-Jorda (2002). Using the method of Johansen cointegration on quarterly data from Spain between 1975 and 1997, these authors found a stable relationship between long-term tourism revenues and economic growth. Besides, they showed that external competitiveness (measured by the real effective exchange rate) is a fundamental variable of the Spanish economic growth in the long run.

For the same problematic, Dritsakis (2004) analyzed the relationship between GDP, tourism receipts and the real effective exchange rate of Greece on the quarterly period from 1960 to 2000. He noted the existence of cointegration and a bi-directional relationship between tourism revenues and economic growth. Like Dritsakis for Greece, Kim and al. (2006) also observed a long-run equilibrium relationship and bidirectional causality between tourism and growth for Taiwan.

For the case of Mauritius, Durbarry (2004) used a production function relating economic growth to physical and human capital and the main components of exports including international tourism. He concluded that tourism has a positive and statistically significant impact on economic development of Mauritius.

Despite these series of studies finding a positive link between tourism and economic growth, other studies have failed to decide on the relationship between these two variables. Thus, Sequeira and Campos (2005) examined the relationship between tourism specialization and economic growth for a very large sample i.e. 509 observations, covering the period 1980 to 1999. This sample includes the islands, small countries, rich countries, poor countries, African countries, Asian countries, Latin American countries and European countries. They concluded that tourism alone cannot explain the higher growth rates in countries specialized in tourism. The results were the same for all samples; the tourism-related variables do not have a significant impact on economic growth.

Similarly, Oh (2005) was in disagreement with the existence of a long-term relationship between tourism revenues and economic growth using an approach of Engle and Granger based on South Korean data that cover the period 1975 to 2001. From this study, the hypothesis of tourism-led growth is not verifiable for the Korean economy.

Through a multivariate model, Lee and Chien (2008) studied the stability of long-term relationships between the development of tourism, real GDP and real exchange rate in Taiwan for the period 1959-2003. They found that this relationship is not stable over time and that there are points of structural breaks in response to exogenous shocks. In the same way, Lee and Chang (2008) have applied the techniques of panel co-integration for a broad sample of developed and developing countries between 1990 and 2002. They showed that the development of tourism has a greater impact on GDP in the non-OECD countries than in OECD countries. Furthermore, the authors have resulted in unidirectional relationships tourism development to economic growth in OECD countries, bidirectional relationships in non-OECD countries with only weak relationships in Asia. In light of these results, they concluded that all countries can benefit from tourism development and economic growth, but it will not be the case of Asian countries.

In another study, Katircioglu (2009a) did not confirm the TLG hypothesis for Turkey by employing both the bounds test approach developed by Pesaran and al. (2001) and Johansen approach for co-integration. According to the findings of Katircioglu (2009a), neither suggested any long-run equilibrium relationship between international tourism and economic growth for Turkey.

In a very recent work, He and Zheng (2011) used the VAR model, by studying the link between tourism development and economic growth in the case of Sichuan over the period (1990-2009). They showed that the role of tourism development in economic growth is not obvious, while the role of economic growth in promoting the development of tourism is great.

In general, many studies have found no empirical evidence for the existence of a causal relationship between international tourism and economic growth. Empirical results then, seem to be inconclusive.

### 3. Econometric analysis

This section includes the following steps: model specification, identification of variables and their sources, methodology, unit root tests, cointegration tests and tests of the causal relationship.

#### The model, data and methodology

There are huge amount of studies on the determinants of economics growth particularly within the growth accounting framework. Recent studies have modeled TLG equations, where international tourism was assumed to be an important determinant of economic growth (such as Balaguer and Cantavella-Jordá, 2002; Gunduz and Hatemi-J, 2005; Katircioglu , 2009 a, b, c). Moreover, exchange rates are considered as a very important variable affecting international tourism and its relationship with real income. In econometric terms the equation as follow:

$$LGDP_t = \phi_0 + \phi_1 LRTR_t + \phi_2 LER_t + \varepsilon_t$$

Where:

**LGDP:** represents real gross domestic product in local currency (Base 1998 for Morocco and 2005 Tunisia). Source: High Commission of Planning of Morocco and the National Institute of Statistics of Tunisia.

**LRTR:** represents real tourism receipts in local currency (base 1998 for Morocco and 2005 Tunisia). Source: Office des Changes of Morocco and the National Institute of Statistics of Tunisia.

**LER:** is the real effective exchange rate as a measure of external competitiveness (Base 1998 for Morocco and 2005 for Tunisia). Source: International Financial statistics.

$\varepsilon$  is the error term.

The annual data cover the period from 1980 to 2010. The series are expressed in natural logarithms in order to measure the impact of the change of one variable on another through elasticities.

The analysis proceeds first by studying the stationarity of the series studied. Determining the order of integration series using the Dickey-Fuller (ADF) (1979) and Phillips-Perron (PP) (1988) will allow us to measure levels of variables stationarity. This first step allows the estimation of cointegrating relations on variables of the same order. It enables, indeed, to examine the cointegration and causal relationship between variables. Therefore, if the variables are of the same order of integration and cointegrated, we can estimate the vector error correction model (VECM) as follows:

$$\Delta LGDP_t = \alpha_1 + \sum_{i=1}^k \beta_{i1} \Delta LGDP_{t-i} + \sum_{i=1}^k \gamma_{i1} \Delta LRTR_{t-i} + \sum_{i=1}^k \delta_{i1} \Delta LER_{t-i} + \theta_1 ECT_{t-1} + \theta_{1t} \quad (5)$$

$$\Delta LRTR_t = \alpha_2 + \sum_{i=1}^k \beta_{i2} \Delta LGDP_{t-i} + \sum_{i=1}^k \gamma_{i2} \Delta LRTR_{t-i} + \sum_{i=1}^k \delta_{i2} \Delta LER_{t-i} + \theta_2 ECT_{t-1} + \theta_{2t} \quad (6)$$

$$\Delta LER_t = \alpha_3 + \sum_{i=1}^k \beta_{i3} \Delta LGDP_{t-i} + \sum_{i=1}^k \gamma_{i3} \Delta LRTR_{t-i} + \sum_{i=1}^k \delta_{i3} \Delta LER_{t-i} + \theta_3 ECT_{t-1} + \theta_{3t} \quad (7)$$

Where  $\alpha$  is the constant term,  $\Delta$  is the lag operator and  $\beta$ ,  $\gamma$  and  $\delta$  are the coefficients of lagged independent variables. These coefficients capture the short-term dynamics effects of the independent variables on the dependent one. Besides, the Fischer test (F-test) of joint significance of these lagged terms constitutes the short-run Granger causality. The parameter  $\theta$  represents the speed of adjustment towards the long-run equilibrium. Similarly, the t-test associated with this parameter specifies the Granger causality of the long term.

### Stationarity analysis

The graphs (Figure 1 and 2) below put in evidence the non-stationarity of the series studied in both countries.

Figure 1: Tunisia

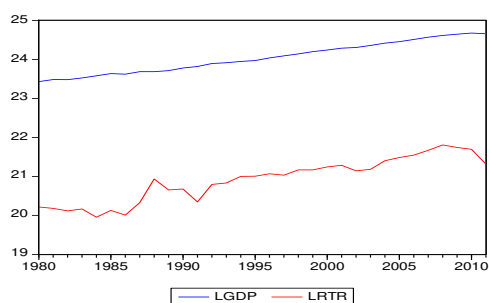
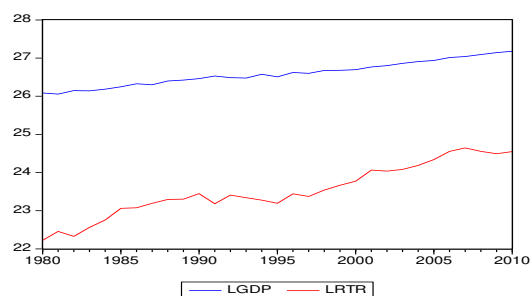


Figure 2: Morocco



However, the results of unit root tests of different series are presented in Tables 1 and 2. Stationarity tests (Dickey and Fuller as Phillips and Perron) find the presence of a unit root in the stochastic process generating the three series studied (GDP, RTR and ER) for both countries. In addition, the first differences of these series are all stationary. We assume then that all these variables are integrated of order 1, which guides us to see if there is a cointegrating relation between these variables.

Table 1: Dickey &amp; Fuller tests

Country	Variable	ADF test Levels			ADF test First differences			Results
		with constant and trend	with constant	Without Constant and Trend	with constant and trend	with constant	Without Constant and Trend	
Morocco	LGDP	-1.107948	0.499533	7.480758	-11.36354***	-11.49071***	-0.597528	I(1) +C
	LRTR	-2.318032	-1.244394	2.902750	-6.594548***	-6.680187***	-5.226674***	I(1)
	LER	-3.550301*	-2.580341	-2.03825**	-3.883224**	-1.935637	-3.895162***	I(1)
Tunisia	LGDP	-2.548879	0.698287	10.40464	-7.105050***	-6.800681***	0.341209	I(1) +C
	LRTR	-3.093339	-1.356602	1.074385	-3.588127*	-4.681367***	-4.905153	I(1)
	LER	-2.694892	-1.991185	-1.302399	-2.739155	-2.655925*	-2.351069	I(1)

Table 2 : Phillips &amp; Perron Test

Pays	Variables	PP Test in level			PP Test at first difference			Results
		with constant and trend	with constant	Without Constant and Trend	with constant and trend	with constant	Without Constant and Trend	
Morocco	LGDP	-3.438272*	0.711893	7.269108	-11.12614***	-11.14310***	-5.543245***	I(1) +C
	LRTR	-2.267974	-1.269886	3.287084	-6.594548***	-6.680187***	-5.297874***	I(1) + C
	LER	-3.211494	-3.786623	-1.316196	-4.019620**	-4.006820***	-3.884900***	I(1)
Tunisia	LGDP	-2.435914	1.851927	17.46095	-9.397840***	-6.970222***	-2.000700**	I(1) +C
	LRTR	-5.29666***	-0.990997	3.204368	-9.963213***	-10.24602***	-5.866535***	I(1)
	LER	-1.561388	-1.511354	-2.097114**	-2.508074	-2.603478	-2.370472**	I(1)

Notes: \*: Significant at 10% - \*\*: Significant at 5% - \*\*\*: Significant at 1%. LGDP is the natural logarithm of real GDP; LRTR is the natural logarithm of real tourism receipts; LER is the natural logarithm of real effective exchange rate. C is the constant. The optimal lag is determined from the Schwarz Information Criterion (SC).



## Cointegration test

Given the fact that series are all integrated of the same order, we test the number of cointegrating relationships using the tests proposed by Johansen and Juselius (1990). The results are presented in Tables 3 and 4. These tests analyze the possibility that one or more cointegrating relationships exist between real GDP, inbound tourism receipts and the real effective exchange rate. For Tunisia, the test of the trace and maximum eigenvalue indicate the existence of a cointegrating relationship with a threshold of 5%. While for the case of Morocco, it is only testing the maximum eigenvalue that shows the existence of a cointegrating relationship at the 5%. We conclude therefore naturally to the hypothesis of the existence of one cointegrating relationship for both countries.

*Table 3: Johansen Cointegration Test: case of Morocco*

Morocco. Sample periode: 1980-2010				
Null Hypothesis	Trace Tests	Critical values (Trace)	95% Maximum Eigenvalue (Max)	Critical Value 95%(Max)
$r = 0$	39.69357	29.79707	23.46097**	21.13162
$r \leq 1$	16.23260	15.49471	11.58930	14.26460
$r \leq 2$	4.643292	3.841466	4.643292	3.841466

Notes: r stands for the number of cointegrating vectors. Critical values are taken from Johansen & Juselius 1990. (\*\*) denote that a test statistics significance at 5% level. The values between brackets are t-statistics.

*Table 4: Johansen Cointegration Test: case of Tunisia*

Tunisia. Sample periode: 1980-2010				
Null Hypothesis	Trace Tests	Critical values (Trace)	95% Maximum Eigenvalue (Max)	Critical Value 95%(Max)
$r = 0$	33.403**	29.797	25.724**	21.131
$r \leq 1$	7.679	15.494	6.853	14.264
$r \leq 2$	0.825	3.841	0.825	3.841

Notes: r stands for the number of cointegrating vectors. Critical values are taken from Johansen & Juselius 1990. (\*\*) denote that a test statistics significance at 5% level. The values between brackets are t-statistics.

This result leads us to the next step of determining the causal relationships between variables studied and the analysis of short-term dynamics of the vector error correction model (VECM)<sup>5</sup>.

## Testing for Granger Causality

The survey of the relation between tourism development and economic growth constitutes the major preoccupation of our work. This relation knew today a remarkable development in the different studies; however, the sense of causality remains a controversial issue. The determination of the direction of this causality is important and has considerable implications concerning tourism policy.

<sup>5</sup> It should be noted that the number of optimal lag is determined from the Akaike information criterion (AIC) and Hannan-Quinn (HQ) taking into account the VAR specification. This number is 3 for Morocco et 2 for Tunisia. Thus, the VEC model is estimated for a lag order equal to 2 ( $p-1 = 2$ ) for Morocco and 1 ( $p-1 = 1$ ) for Tunisia.

In order to examine the relationship between tourism receipts, economic growth and real effective exchange rate for the case of Morocco and Tunisia, we conducted the Granger - causality test in the short and long term. The results are presented in Table 5 and 6 below.

Table 5: Causality between economic growth and tourism for the Moroccan case

Dependent variable	Short-Run Causality			Long-Run Causality
	F-Statistics			T-Statistics
	$\Delta LGDP$	$\Delta LRTR$	$\Delta LER$	ECT(-1)
$\Delta LGDP$	–	3.93888**	2.05364	[-1.69862]*
$\Delta LRTR$	0.69630	–	1.91421	[ 3.66760]***
$\Delta LER$	0.19579	0.49254	–	[-2.62106]**

Notes: \*, \*\*, \*\*\* denote significance at 10%, 5% and 1%, respectively.  $\Delta$ , corresponding variable in first differences. Statistics on lagged EC terms are t-ratio and measure long run causality, while statistics on lagged independent variables are F-statistics and evaluate short run causality.

Table 6: Causality between economic growth and tourism for the Tunisian case

Dependent variable	Short-Run Causality			Long-Run Causality
	F-Statistics			T-Statistics
	$\Delta LGDP$	$\Delta LRTR$	$\Delta LER$	ECT(-1)
$\Delta LGDP$	–	13.5266***	2.06100	[-0.49]
$\Delta LRTR$	0.20739	–	6.54008**	[ 3.74]***
$\Delta LER$	0.47078	0.95576	–	[-2.36]**

Notes: \*, \*\*, \*\*\* denote significance at 10%, 5% and 1%, respectively.  $\Delta$ , corresponding variable in first differences. Statistics on lagged EC terms are t-ratio and measure long run causality, while statistics on lagged independent variables are F-statistics and evaluate short run causality.

Granger Test indicates that on short term, there is a unidirectional causality effect with a significant value of (5%) starting from Tourism Receipts to GDP growth in the Moroccan and Tunisian economy. In other words, levels of tourism receipts reached in earlier years are not without effect on the current level of economic growth. Moreover, the test indicates a link of unidirectional causality of the real effective exchange rate to Tunisia tourism receipts and no causal relationship between the real effective exchange rate and real GDP growth for both Maghreb economies.

In contrast, long-term results show that the tourism led growth hypothesis is not significant for the case of Tunisia, whereas it is barely significant (at 10%) for the case of Morocco.

Indeed, the absence and the causal link found between low tourism receipts and economic growth can be explained in two ways:

First, Morocco has been able to diversify its export supply in areas that have a comparative advantage, including agriculture, fishing, mining, textile, clothing, electrical and electronic industries. It's the same for Tunisia, which could also diversify its export supply, particularly in the areas of textiles, clothing and leather industries, electric industries<sup>6</sup>. Another possible explanation may be related to the nature of the Moroccan and Tunisian tourism product. Thus, the development of the sector in Morocco is generally relying on a less diversified offer and is particularly focused on cultural products and characterized by strong seasonality of

<sup>6</sup> See Hachicha (2003).

traditional resort product (sun and beach), while the Tunisian tourism product is closely related to beach activities. This does not allow Morocco and Tunisia to be differentiated and create new products to position themselves in relation to its various competitors around the Mediterranean (Spain, Greece, Turkey, Egypt...).

Thus, it is important to note that this low-price strategy adopted by Tunisia and to a lesser degree by Morocco is largely dependent on intermediaries in the tourism industry who are mainly large international tour operators, applying their marketing powers on destinations where they operate, and as there's a limited product differentiation in a highly competitive environment, price becomes a major factor in tourists' decision making process, which implies a reduction in tourism revenues in host countries . This strategy could be responsible for the weak significance or the absence of causality of tourism exports toward the long-term economic growth. Nowak and al (2007), in a neoclassical framework of economic growth, show that the potential of tourism in promoting long-term growth of a country depends on the degree of differentiation of its tourism products and services. This can be achieved by developing activities and services that have a higher specified degree. In addition, differentiation also includes service quality and based on adequate infrastructure with a highly skilled workforce. Faced with an increased worldwide competition, it would be advisable to adopt a strategy of "niche" which seems better than a strategy of low prices of standard products. This strategy which is insensitive to price, requires close coordination among all policy makers in public and private sectors to carry out a sustainable economic development in both countries.

Finally, the results show that the assumption of long-term growth led tourism hypothesis (GLT)<sup>7</sup> is valid and significant for both countries, particularly because of the links of causality from growth to tourism. Thus, an increase of economic growth can lead to increased tourism revenue. This reverse causality can occur when economic growth leads to learning by doing and improving the skills and technologies that create a comparative advantage for the country and therefore more exports. Market failure, with a state intervention that followed, may also result in such a link. Note that similar results were obtained by Nowak and al, (2011), for the case of Tunisia and Oh (2005) for South Korea.

#### **4. Conclusion**

In this paper, we studied the relationship between tourism industry and economic growth in Morocco and Tunisia. The major objective of this study is to contribute to understanding the impact of tourism on economic growth in these two Maghreb countries.

We analyzed the tourism led growth hypothesis for the case of Morocco and Tunisia. For this purpose, the analytical techniques of cointegration and causality are used for the period from 1980 to 2010. The results of analysis allowed to show short-term existence of a unidirectional causality in the Granger sense of tourism receipts to GDP growth in the Moroccan and Tunisian context. However, it was found that long-term causality is not significant at 5%. Indeed, mass tourism should not be regarded as an effective engine for economic growth in the long run in these countries. We note that this result is not surprising for reasons including the nature of the Moroccan and Tunisian tourism product, increased competition in prices between destinations and the dependence of international tour operators.

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<sup>7</sup> This kind of inverse causality, running from economic growth to exports, has been suggested, for example, by Kaldor (1967), Bhagwati (1988) and Rodrik (1995).

In addition, our results showed that the hypothesis of tourism exports driven by economic growth is better suited for both studied economies, since there is a reverse causality from growth to tourism. This 'growth-led tourism hypothesis' was also observed by Nowak and al, (2011) for the case of Tunisia and Oh (2005) for South Korea, may be explained by several factors similar to those suggested by Kaldor (1967), Bhagwati (1988) and Rodrik (1995), among others.

In conclusion, it should be emphasized that the results do therefore suggest that the adoption of policies of dominant mass tourism may not always benefit from economic growth. This warning is extremely important because there's a risk when considering the increasing number of tourists and facilities (hotels, large resorts, etc...), which can lead, on long-term, to the deterioration of the quality of tourism product in the country and its tourism income per capita in real terms. It is therefore imperative that government institutions, tourism planners and investors recognize the implications of their actions in the interest of long-term economic viability of the tourism sector. A successful strategy for tourism development should not be measured only in terms of increasing tourist numbers or receipts. Tourism should also be evaluated in terms of its role in the overall development objectives of host countries. In this context, it is recommended that both Moroccan and Tunisian governments should not support the construction of the new superstructure, such as hotels and restaurants, for monetary and fiscal incentives. Instead, it should encourage private and public organizations to improve the existing infrastructure and the country's image in order to achieve a higher room occupancy. Reducing their dependence on the international tour operators could be achieved through an improvement policy and the upgrade of hotels, differentiation and the creation of highly innovative and original products, the diversification of distribution and information channels and developing new market segments. It would also be appropriate to use some of the gains generated by tourism in local development through the realization of new infrastructures, especially in the areas of transport, energy, communication, education, housing, sanitation, health and hygiene.

In this way, tourism can actually become a driving force to achieve economic development in many developing countries, including Morocco and Tunisia.

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