A Cultural Tourism and Economic Growth in Cameroon: a Time Series Analysis

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Abstract:

This study examines the long-run effect of cultural tourism on economic growth in Cameroon over the period 1990–2016. It is motivated by the growing importance of tourism as a source of foreign exchange, employment, and investment, as well as by the need to understand whether cultural tourism contributes significantly to national economic performance. Using annual data collected from the World Bank, Cameroon's General Delegation for National Security, and the Ministry of Tourism and Leisure, the study applies time-series econometric techniques, including the Augmented Dickey-Fuller unit root test, Johansen cointegration test, Granger causality test, and a Vector Error Correction Model. The analysis is grounded in the augmented Solow growth model developed by Mankiw, Romer, and Weil, in which cultural tourism variables are incorporated into the growth framework. The findings reveal the existence of a long-term equilibrium relationship between cultural tourism and economic growth in Cameroon. In particular, tourist arrival flows and investment expenditure in tourism exhibit bidirectional causality with economic growth, while economic growth is found to drive tourism revenues rather than the reverse. However, among the tourism proxy variables, only tourist arrivals significantly explain economic growth in the error-correction model. These results suggest that cultural tourism, especially through tourist inflows, contributes meaningfully to Cameroon's economic growth.

Keywords: Cultural Tourism, Economic Growth, Tourist Arrivals, Tourism Revenues

INTRODUCTION

Previous works that study the relationship between tourism and economic growth can be explored in a number of literary works. They can be grouped in terms of classical works based on the Keynesian multiplier of tourism spending (Aslan, 2013; Suresh and Senthinathan, 2014; Tugcu, 2014), and those based on new theories of international trade, demonstrating that the practice of economics business and the need to visit other countries or regions are at the heart of tourism development (Touhami, 2014; Wong et al., 2009; UNCTAD, 2013, 2017). Based on these new theories, a number of empirical time-series studies have focused on long-term analyses of the relationship between tourism and economic growth (Martin, 2014, 2017). Works that have carried out this type of analysis can be grouped into three types of approach: 1-The "Tourism-Led Economic Growth" unidirectional causality approach from cultural tourism to economic growth (Archer, 1995; Bryden, 1973; Balaguer and Catavella-Jorda, 2002; Brau et al., 2003; Vanegas and Croes, 2003; Kim et al., 2006), 2- the "Economic-Driven Tourism Growth" unidirectional approach from economic growth to cultural tourism (Lanza et al., 2003; Narayan, 2004; Balaguer and Catavella-Jorda, 2002; Oh, 2005; Lee and Chang, 2008; Brida and Risso, 2009), and 3- the "bidirectional" approach (Chen & Chiou-Wei, 2009; Katircioglou, 2009; Kim & al, 2006; Seetanah, 2011); demonstrating that tourism has an

impact on economic growth and vice versa. These different approaches are based on the idea of a relationship, mutually reciprocal or not, between tourism and economic development.

Moreover, the UNCTAD special event organized in collaboration with the SCTD in April 2012 in Doha, Qatar, reinforced the hypothesis of a significantly positive relationship between tourism and economic growth. This was subsequently confirmed by empirical country studies (Thouhami, 2014; Tambaktis, 2016). According to an UNWTO report (2018), international tourist movement flows (visitors arriving in countries) were up 4.6% in 2015, reaching 1 billion 186 million arrivals worldwide, 52 million more than in 2014. At least 1235 million tourists travelled around the world in 2016. Similarly, according to the report, international tourism revenues also rose by 4.4% in real terms. Total receipts from international destinations were estimated at 1260 billion US dollars in 2015, compared with 1332 billion dollars in 2016, an increase of around 94 billion dollars. However, Africa's share of international tourist movement flows remains low. This UNWTO report shows that Africa received just 5% of international tourist numbers in 2017, compared with 50% received in Europe for the same year.

The studies just cited address the link between tourism and economic growth without specifying which type of tourism has the greatest impact on economic growth. Indeed, they do not take into account the relationship between culture, tourism and growth, or better still, between cultural tourism and economic growth.

Although, numerous empirical studies (Juanchich, 2007; Ernst and Young, 2015; WTTC, 2016) attribute a significant share of these different performances in the global tourism sector to cultural tourism, they seem uninterested in analyzing statiscally the long-term relationship between the two factors. Cultural tourism is presented by UNESCO (1966:11), quoted by Saskia (2008) "as a means of relieving overcrowded tourist sites, by diversifying the offer and providing an alternative to mass tourism". According to this source, the aim is to "transform cultural assets into economic assets". In other words, preserving heritage sites is a catalyst for cultural tourism, which in turn promotes economic growth. On the other hand, there are works (Scitovsky, 1972; Werquin, 2006) that cautiously conclude that there is a lasting relationship between cultural tourism and the economic development of a locality. For these authors, if citizens' needs in terms of cultural infrastructure are not properly identified, this can have a negative impact on cultural tourism and consequently on the locality's economic growth. For example, according to Werquin (2006), while the arrival of new consumers linked to the creation of a cultural infrastructure (a museum or a developed heritage site) in a locality, constitutes a positive externality for shopkeepers (Farchy and Sagot-Duvauroux, 1994; Magnol, 2017), traffic jams and other inconveniences caused by the influx of tourists can constitute negative externalities for local residents and even for some tourists. In the long term, this may discourage some of them from choosing other tourist destinations or living environments, thereby reducing demand for cultural goods and consequently slowing down growth (Werquin, 2006).

However, even if Africa's share of tourist movement flows is low compared to other continents, Cameroon has seen a growing dynamic in tourist arrivals between 1990 and 2016, with a doubling in numbers between 1999 and 2000 (MINTOUL, 2017; UNWTO, 2022). This number more than tripled between 2001 and 2006, from 117,113 to 451,441 visitors (MINTOUL, 2017; UNWTO, 2022). According to these sources, between 1990 and 2016, revenues generated by tourism grew relatively. In fact, between 1994 and 2003, they rose from nearly 20 million US dollars to nearly 266 million. This dropped to almost 171 million in 2010, then reached 992 million in 2016 (Hamadama, 2021). In its 2018 report, Cameroon Destination, MINTOUL essentially attributed this performance to cultural tourism, explaining that, more than 837 tourist sites identified across the country had

been developed by the public authorities. Cultural operators in the fields of arts and crafts, visual arts and many others, supported by the public authorities, have massively established themselves near these sites. The report also estimates the number of international visitors to heritage and cultural sites at 812,000, or 14.5% of all visitors . Cultural tourism is a major component of tourism in Cameroon.

In view of these statistics, the Cameroonian government has always considered it essential to include the tourism sector in its various development strategy documents, drawn up between 2003 and 2020. Meanwhile, according to the WEF's 2014 report, Cameroon's ranking as a destination is tending to fall towards the bottom of the table. From 5th place between 2012 and 2014, Cameroon dropped out of the top five African destinations to 25th place in 2015. It should be noted, however, that during 2014, tourism contributed 1.70% to the country's real Gross Domestic Product (UNWTO, 2022). On the other hand, over the 1990-2016 period, per capita GDP growth in Cameroon tends to be positive, ranging from -6.10% to 5.6% (World Bank Development Indicators, 2019). These various observations lead us to assume that cultural tourism variables can be very easily and quickly sensitive to socio-economic and environmental shocks. This raises the question of their long-term impact on the economic growth of this developing country, whose tourists' choice of destination tends to be unstable. This raises the question of the long-term impact of cultural tourism on economic growth in Cameroon.

The aim of this article is to determine the effect of cultural tourism on Cameroon's gross domestic product per capita over the period from 1990 to 2016 . For this purpose, statistical data from the World Bank, supplemented by those obtained from the GDNS and the MINTOUL are used. Due to difficulties in obtaining accurate statistics on cultural tourism in this country, tourism indicators approximate cultural tourism indicators, as according to the MINTOUL (2018) report, the bulk of this sector's revenue is due to cultural tourism. The rest of the paper is organized as follows: The first section highlights a literature review on the relationship between cultural tourism and economic growth. The second section outlines the methodology followed and the final section presents the results obtained from the study.

METHODS

First and foremost, the aim of this article is to analyze the links between the development of cultural tourism and economic growth in Cameroon. In other words, the aim is to investigate the existence of a long-term relationship between these two factors. To do this, we used the tools of time-series econometrics, deployed in three stages. These are: -Johansen's cointegration test and Granger's causality test, followed by estimation of a vector error-correction model. These tools will be presented each time alongside the analysis results they provide. Here, we present the data sources and the extended Solow Model (1936) by Mankiw, Romer and Weil (1992) as an analycal tool used for the implementation of this vector model. The Solow's augmented model takes human capital into account. We also present the model variables.

Data used the data used in this study come from three sources. Data relating to cultural tourism variables were extracted from the databases of Cameroon's, Délégation Générale à la Sureté Nationale (DGSN) and supplemented by those obtained from the Ministry of Tourism and Leisure (MINTOUL). Data for other variables were taken from the World Bank Development Indicators (WDI) database.

Analytical tool: the augmented Solow model (1956) by human capital (Hazari and Sgro, 2004; Mankiw et al. 1992). The reason for using this model is that, for any country, tourism represents

relational capital, a dimension of human capital. Explicitly, according to Mankiw, Romer and Weil (1992), to better explain a country's economic growth, it makes sense to integrate changes in the quality of the workforce into Solow's model. This is because it depends on levels of investment in education, health and human relations systems, etc. The postulates of this model and its empirical specification are presented here.

Model assumptions: The economy's production function is a Cobb-Douglas function:

$$Y = K^a H^b (AL)^{1-a-b}$$; with: $a > 0, b > 0, a+b < 1$

where H represents the stock of human capital, L the number of workers, K the stock of physical capital and A technical progress.

In steady state, the reduced equation of the Solow model takes the following log-linear form:

$$\log Y_t = \left(\frac{a}{1-a}\right)\log S_k - \left(\frac{a}{1-a}\right)\log(g+n+\delta)$$

Where according to Mankiw-Romer-Weil: $Y_t =$ real GDP per capita, $\delta =$ depreciation rate of capital stock, $g =$ growth rate of technical progress, $n =$ population growth rate and $S_k =$ fraction of capital accumulation.

Thus, the extended Solow model by Mankiw - Romer - Weil takes the following form:

$$\log Y_i = a_0 + a_1 \left(\log S_{ki} - \log(g+\delta+n_i)\right) + a_2 \left(\log S_{Hi} - \log(g+\delta+n_i)\right) + \varepsilon_i$$

Where i is the country index and ε_i the error term.

Empirical Model Specification: From the Solow model we have developed, we can deduce our empirical model (VAR model):

$$Y_t = \omega \log Y_{t-1} + \alpha_1 \log(n_t + g + \delta) + \alpha_2 \log(S_{Kt}) + \alpha_3 \log(S_{Ht}) + \alpha_4 \log(KH_t) + \varepsilon_t$$

Were $KH =$ human capital, in which we include cultural tourism variables.

Consequently, our specified model will be expressed as follows:

$$Log(GDP_t) = Log(EXB_t) + Log(RTR_t) + Log(ARV_t) + Log(DEP_t) + Log(POP_t) + Log(CONS_t)$$
$$+ Log(GFCF_t) + Log(EXDB_t) + Log(IMFC_t) + \varepsilon_t$$

The variables. The specified model is made up of traditional economic growth variables and those relating to cultural tourism. These variables are presented in Table 1.

Table 1. Overview of study variables

Variables	Descriptions
GDP_t	Real Gross Domestic Product (GDP) per inhabitant
EXB_t	External balance: shows the difference between the outflow and inflow of goods and services from Cameroon.
RTR_t	Revenue from Tourism considered as proxy for revenue from cultural tourism for reasons mentioned in the introduction, from MINTOUL (2017, 2018).
ARV_t	The number of tourist arrivals is considered a proxy for the number of cultural tourism arrivals, for the same reasons as above.

DEP_t	Expenditure in the tourism sector is considered a proxy for the level of expenditure on cultural tourism, for the same reasons.
POP_t	Population teated as labor force: this is the labor factor and its contribution to the production of goods and services in the economy.
$CONS_t$	Consumer expenditure
$GFCF_t$	Gross Fixed Capital Formation (GFCF): a proxy for physical capital investment.
$EXDB_t$	External debt balance (EXDB): this indicator refers to the outstanding debt contracted by Cameroon with its partners to finance public investment.
$IMFC_t$	IMF credit (IMFC): this is outstanding credit granted by the International Monetary Fund to finance projects in Cameroon.

Source: Authors based on data from DGSN and MINTOUL (Cameroon), supplemented by World Bank Development Indicators

RESULT AND DISCUSSION

These results and discussions are presented as that of the Unit Root Test, the Cointegration test, the causality test and the vector-autoregressive error-correction model estimation of the link between cultural tourism and economic growth.

The Unit Root Test applied to study variables. Unit root tests can be used to determine whether a time series is stationary or not. According to Granger (1988), a time series is stationary when there is no trend or seasonality. We use the augmented Dickey-Fuller (1979) test. This test is based on the least-squares estimation of the following three models (Gourieroux and Monfort, 1995):

$$\Delta x_t = (\rho - 1)x_{t-1} + \sum_{j=1}^{p} \varphi_j \Delta x_{t-j+1} + \varepsilon_t \qquad \text{(Without constant)}$$

$$\Delta x_t = (\rho - 1)x_{t-1} + \sum_{j=1}^{p} \varphi_j \Delta x_{t-j+1} + \gamma + \varepsilon_t \qquad \text{(With Constant)}$$

$$\Delta x_t = (\rho - 1)x_{t-1} + \sum_{j=1}^{p} \varphi_j \Delta x_{t-j+1} + \gamma + \beta t + \varepsilon_t \qquad \text{(With Trend Stochastic)}$$

Where: is the variable of interest is the time index, is an autocorariance function of for a lag of, is an intercept constant also called a drift, is the coefficient on a time trend, is the coefficient presenting process root, i.e. the focus of testing, is the lag order of the first-differences autoregressive process, is an independent identically distributes residual term.

The difference between the three equations concerns the presence of the deterministic elements (a drift term) and (a linear time trend). To estimate the significance of these coefficients in focus, the modified T (Student)-statistic, known as Dickey-Fuller statistic, is used (see Gourieroux and Monfort, 1995; Bourbonnais et Terraza, 2016). The null hypothesis of the augmented Dickey Fuller (1979) test is H0: The calculated T* > T tabulated at the 5% threshold (Presence of unit root) and; the alternative hypothesis is H1: The calculated T* < T tabulated at the 5% threshold (Absence of unit root).

Table 2 shows below the results of this test in the case of our study. These results show that eight of our variables (RTR_t, ARV_t, DEP_t, POP_t, $CONS_t$, $GFCF_t$, $EXDB_t$, $IMFC_t$) have statistical values (test statistic T*) below the critical values at the 5% threshold. In addition, we note that the probabilities associated with each of these variables (Approximate P-value for z(t)) are all below the

critical threshold value (0.05). However, the variables Gross Domestic Product (GDP_t) and Exports (EXB_t) show statistical values (T* statistic test) above the critical values at the 5% threshold. But these are below the critical values at the 10% threshold.

Table 2. Unit Root Testing (UTR)

Variables	Test Statistic (T*)	Critical Value (5%)	Critical Value (10%)	Approximate P-value for z(t)
$Log(GDP_t)$	-3.552	-3.596	-3.238	0.0341
$Log(EXB_t)$	-3.363	-3.600	-3.240	0.0565
$Log(RTR_t)$	-4.466	-3.359	-3.238	0.0017
$Log(ARV_t)$	-4.683	-3.596	-3.238	0.0007
$Log(DEP_t)$	-4.854	-3.596	-3.238	0.0004
$Log(POP_t)$	-4.667	-3.596	-3.238	0.0008
$Log(CONS_t)$	-4.127	-3.596	-3.238	0.0058
$Log(GFCF_t)$	-3.718	-3.600	-3.240	0.0212
$Log(EXDB_t)$	-5.215	-3.596	-3.238	0.0001
$Log(IMFC_t)$	-3.825	-3.600	-3.240	0.0153

Source: Authors' construction based on data from DGSN and MINTOUL (Cameroon), supplemented by World Bank Development Indicators

Furthermore, the probabilities associated with these variables (Approximate P-value for z(t)) are below the critical threshold value (0.05); and so they are accepted as stationary. In view of these results, we will accept the alternative hypothesis (H1) that our series are stationary.

The Study of cointegration between study variables: Johansen test. The study of cointegration allows us to test the existence of a stable long-term relationship between stationary variables, including lag variables. The Johansen cointegration test uses two statistics: the trace statistic and the maximum eigenvalue statistic. The asymptotic distributions of these statistics are non-standard.

To test the causal relationship between cultural tourism and economic growth in Cameroon, we specify a vector autoregression (VAR) model. The advantage of this VAR model is that it treats each variable in the system as a potential endogenous variable. The null hypothesis (H0) assumes that there is no cointegration between the series, and the alternative hypothesis (H1) assumes cointegration between the series. Table 3 presents the results of this test.

Table 3. Johansen Cointegration Test

Trend: Constant	Number of observations: 26	Maximum Parms:	110
Sample: 1991-2016	Lags: 1	Maximum Likelihood:	134.438
Maximum Rank	Eigenvalue	Trace statistic	5% critical value
0	.	394.5384	233.13
1	0.98870	277.9929	192.89
2	0.92950	209.0373	156.00
3	0.92605	141.3231	124.24
4	0.87747	86.7393*	94.15
5	0.64122	60.0883	68.52
6	0.61638	35.1778	47.21
7	0.45424	19.4326	29.68
8	0.38165	6.9345	15.41
9	0.22570	0.2839	3.76
10	0.01086		

Source: Authors' construction based on data from DGSN and MINTOUL (Cameroon), supplemented by World Bank Development Indicators

The existence of cointégration means the long-term equilibrium relationship between variables. The result of the cointegration test (trace and maximum eigenvalue test) allows us to reject the hypothesis that there is no cointegration between the series. In other words, there is cointegration between our variables leading the long-term equilibrium relationship between them. This result is consistent with those of Farchy and Sagot-Duvauroux (1994) and Magnol (2017), but contrary to those of Scitovsky (1972) and Werquin (2006) that cautiously conclude that there is a lasting relationship between cultural tourism and the economic development of a locality. Indeed, Table 3 shows that, using the 10 series (the variables) and adopting a 1-lag model, there are at least 4 cointegrating relationships (*). And so, analysis of the trace and maximum eigenvalue reveals a cointegrating relationship within the 5% confidence interval of the likelihood test.

The Analysis of the direction of causality between study variables: Granger test. The presence of a cointegrating relationship between two variables implies the existence of a causal relationship between them, in at least one direction. To determine the direction of causality between our variables in the Granger sense, we will study the following regression model:

$$\Delta Log(GDP_t) = \alpha_0 + \sum_{j=1}^{m} \alpha_{1j} \Delta Log(GDP_{t-j}) + \sum_{j=1}^{n} \alpha_{2j} \Delta Log(EXP_{t-j}) + \sum_{j=1}^{o} \alpha_{3j} \Delta Log(RTR_{t-j})$$

$$+ \sum_{j=1}^{p} \alpha_{4j} \Delta Log(ARV_{t-j}) + \sum_{j=1}^{q} \alpha_{5j} \Delta Log(DEP_{t-j}) + \sum_{j=1}^{r} \alpha_{6j} \Delta Log(POP_{t-j})$$

$$+ \sum_{j=1}^{s} \alpha_{7j} \Delta Log(CONS_{t-j}) + \sum_{j=1}^{t} \alpha_{8j} \Delta Log(GFCF_{t-j}) + \sum_{j=1}^{u} \alpha_{9j} \Delta Log(EXDB_t)$$

$$+ \sum_{j=1}^{v} \alpha_{10j} \Delta Log(IMF_{t-j}) + \varepsilon_t$$

In this test, we check whether our tourism proxy variables cause the economic growth variable, or whether there is a reverse cause or even a feed-back relationship between these variables.

According to this Table 4 below, six (06) hypotheses were tested simultaneously, namely causality between the Gross Domestic Product (GDP) variable and each of the other three (03) tourism proxies taken in two directions. We find that, at the 5% threshold, the Granger test suggests a bidirectional causal link between economic growth and two of the cultural tourism variables, namely investment expenditure in the sector and tourist arrival flows. This would mean that tourist arrivals to Cameroon and investment in the tourism sector have an impact on the level of economic growth. Conversely, the level of economic growth has a significant influence on tourist arrivals and investments. This tends to corroborate the work of Cortés-Jiménez (2006), Dubarry (2004), Shan and Wilson (2001), Chen and Chiou-Wei (2009). Moreover, this link would be unidirectional between growth and cultural tourism revenues

Table 4. Granger causality test

Causality Meaning	Wald Test	Probability values
$Log(GDP_t) \rightarrow All$	160,23	0,000***
$Log(GDP_t) \rightarrow Log(ARV_t)$	6,3276	0,042**
$Log(GDP_t) \rightarrow Log(RTR_t)$	12,443	0,002**
$Log(GDP_t) \rightarrow Log(DEP_t)$	26,272	0,000**
$Log(ARV_t) \rightarrow Log(GDP_t)$	54,457	0,000**
$Log(RTR_t) \rightarrow Log(GDP_t)$	1,5884	0,452
$Log(DEP_t) \rightarrow Log(GDP_t)$	8,6144	0,013**

Source: Authors' compilation based on data from DGSN and MINTOUL (Cameroon), supplemented by data from World Bank Development Indicators

In other words, economic growth causes an increase in tourism revenues, not the other way around. Indeed, the value of the critical probability for the Wald test is well above 10%, equal to 45.2%. This result is in line with the work of Lanza et al (2003), Narayan (2004) and Balaguer and Catavella-Jorda (2002). The latter support the thesis that economic expansion determines tourism

development. In other words, a minimum level of development is required in Cameroon before we can see the beneficial effects in terms of cultural tourism revenues.

The estimation results for the vector-autoregressive error-correction model of the link between cultural tourism and economic growth. Table 4 shows that there is indeed a significant linear relationship, at the 5% level, between tourist arrivals in Cameroon and economic growth. This significance is justified by the value of the critical probability associated with the "arrival flows" variable, which is 0.005.

We can therefore state that tourist arrivals in Cameroon for the purpose of consuming works of art (arts and crafts, visual and graphic arts), visiting heritage, and cultural sites significantly and sustainably explain economic growth; no doubt, insofar as they contribute to the consumption of other goods and services on the national territory.

With regard to the traditional growth variables in our model, the table shows that, with the exception of population and exports, the other variables significantly explain economic growth in Cameroon, in terms of the probability values associated with them respectively. These include gross fixed capital formation, consumption, and external debt and IMF credit.

Table 5. Granger causality test

Causality Meaning	Wald Test	Probability values
$Log(GDP_t) \rightarrow All$	160,23	0,000***
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$Log(DEP_t) \rightarrow Log(GDP_t)$	8,6144	0,013**

$\rightarrow$ means cause   ** Significant at 5% threshold   *** Significant at 1% threshold

Source: Authors' compilation based on data from DGSN and MINTOUL (Cameroon), supplemented by data from World Bank Development Indicators.

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Table 6. Estimation results for the Vector Autoregressive Model with error correction

Variables	Coefficients	Standard Error	P-value : P >|Z|
$Log(GDP_t)$ (L1)	- 0.1238	0.1426	0.385
	0.7596	0.1308	0.000
$Log(GDP_t)$ (L2)	0.2073	0.1274	0.174
	1.6517	1.0872	0.129
$Log(EXP_t)$	0.9040	0.3202	0.005
	0.1733	0.2810	0.461
$Log(RTR_t)$	0.0993	0.2176	0.648
	-0.3627	0.1379	0.009
$Log(ARV_t)$	-1.2975	0.4671	0.005
	-0.8321	0.1971	0.000
$Log(DEP_t)$	0.2503	0.0765	0.001
	-1.2072	3.4558	0.727
$Log(POP_t)$			
$Log(CONS_t)$			
$Log(GFCF_t)$			

$$Log(EXDB_t)$$

$$Log(IMFC_t)$$

constante

Log Likelihood:	**-1.9052**
R² :	**0.8340**
AIC :	**1.1124**
HQIC	**1.2746**
SBIC	**1.6974**

Source: Authors' calculations based on data from DGSN and MINTOUL (Cameroon), supplemented by World Bank Development Indicators

CONCLUSION

For many countries, cultural tourism represents a significant export industry and an essential source of foreign currency, investment and job creation. Just look at the colossal investments that some countries are making to promote this sector (Greffe, 2005; 2006). This article looks at the impact of cultural tourism on the economy through an empirical analysis of the case of Cameroon. The aim is to verify whether cultural tourism has a significant long-term impact on economic growth in Cameroon. To achieve this objective, a theoretical framework relevant to the subject was first mobilized; based on three approaches in particular: - the economic growth approach to tourism with Narayan (2004), the unilateral causality approach from tourism to long-term economic growth with Archer (1995); Bryden, (1973) and; the bidirectional causality approach of Seetanah (2011), Kim et al. (2006), Katircioglou (2009). From this theoretical framework, it emerges that tourism is a high value-added industrial sector, and its impact on the economy is substantial and should not be neglected.

Secondly, the type of relationship between cultural tourism and economic growth in Cameroon was empirically analyzed using Extended Robert Solow's (1956) growth model by Mankiw, Romer and Weil (1992) and data covering the period 1991-2016 obtained from the DGSN and MINTOUL; supplemented by data extracted from the World Bank's Development Indicators database. The implementation of this model based on the data used led to the Autoregressive Variance or Autoregressive Vector (VAR) approach. In other words, after testing stationarity (ADF test), estimating the long-term equilibrium relationship between variables (Johansen cointegration

test) and performing the Granger causality test, we estimated the Vector Autoregressive error-correction model for the link between cultural tourism and economic growth.

The results show, on the one hand, a bidirectional causality between tourist arrivals in Cameroon for consumption of cultural goods and services and economic growth. On the other hand, the same bidirectional causality is established between investment expenditure in cultural tourism and economic growth. Furthermore, it has been shown that economic growth generates an increase in cultural tourism revenues in Cameroon, and not vice versa. Estimation of the Vector Autoregressive error-correction model shows that, at the 5% level, there is a linear relationship between our proxy variables for cultural tourism and the variable economic growth in Cameroon, although only the variable designating tourist arrival flows is significant. This leads to the conclusion that tourism flows in Cameroon contribute significantly to gross domestic product growth. It can therefore be asserted that tourist arrivals in Cameroon for cultural consumption purposes significantly explain economic growth, undoubtedly insofar as they also contribute to the consumption of other non-cultural goods and services on the national territory. Furthermore, the estimation results show that revenues and investment expenditure in cultural tourism do not significantly explain this economic growth. It is possible that this non-significant explanation is due to the management mechanism of these revenues, or else to the low level of investment expenditure in question.

Finally, there are a number of measures that we feel need to be implemented to ensure that the country's performance in cultural tourism improves. Indeed, it would be worthwhile to step up investment in the sector, and the digitization of the offer (using ICT to enhance tourism potential) is necessary. We also insist on the continued promotion of domestic tourism and support for entrepreneurship in the tourism sector. The development of domestic tourism in particular requires planning and strategies set by the public authorities, which is likely to increase domestic demand, which in turn will lead to an increase in external demand. In this case, domestic tourism is undoubtedly a strategy contributing to the diversification of sources of economic growth.

REFERENCES

Archer, B. (1995). Importance of Tourism for the Economy of Bermuda. *Annals of Tourism*, 918-930.

Aslan, A. (2013). Tourism development and economic growth in the amaediterranean countries: Evidence from panel Grainger causality tests. *Current Issues in Tourism*, 363-372.

Balaguer, J. and Cantavella-Jorda, M. (2002) Tourism as a Long-Run Economic Growth Factor: The Spanish Case. *Applied Economics*, 34, 877-884. http://dx.doi.org/10.1080/00036840110058923.

BM (2018) Les plateformes numériques et l'avenir du tourisme, Rapport Banque Mondiale/BIRD-IDA, https://www.banquemondiale.org/fr/news/feature/2018/09/25/digital-platforms-and-the-future-of-tourism-a-world-tourism-celebration.

Bourbonnais, R. and Terraza, M., (2016). Analyse des séries temporelles., DUNOD, Paris.

Brau, R., Lanza, A. and Pigliaru, F. (2003). "How fast are tourism countries growing? The cross country evidence," Working Paper CRENoS 200309, *Centre for North South Economic Research*, University of Cagliari and Sassari, Sardinia.

Brida, J. G., Sanchez Carrera, E. J. and Risso, W. A. (2008). Tourism's Impact on Long-Run Mexican Economic Growth. *Economics Bulletin*, Vol. 23, No. 21, pp. 1-8.

Brida, J.G and Risso, W. A. (2009). Tourism as a factor of long-run economic growth: An empirical analysis for Chile. *European Journal of Tourism Research*. 2(2):178-185. DOI:10.54055/ejtr.v2i2.36.

Bryden, J. (1973). *Tourism and Development:* a case study of the Commonwealth Caribbean. Cambridge University Press, London.

Chen, C.-F. & Chiou-Wei, S.Z. (2009). Tourism Expansion, Tourism Uncertainty and Economic Growth: New Evidence from Taiwan and Korea. *Tourism Management,* 30(6), 812-818. http://dx.doi.org/10.1016/j.tourman.2008.12.013.

Commission européenne (2007). *Faits saillants sur le tourisme,* Publication UNWTO-OMT IOHBTO, 12 pages. https://www.e-unwto.org/doi/pdf/10.18111/9789284413546

Cortés-Jiménez I, P. (2006) A Further Step into the ELGH and TLGH for Spain and Italy. *FEEM Working Paper*, No. 118.06.

Dickey, D.A. and Fuller, W.A. (1979) Distribution of the Estimators for Autoregressive Time Series with a Unit Root. *Journal of the American Statistical Association*, 47, 427-431.

Durbarry, R. (2004). Tourism and economic growth: the case of Mauritius'. *Tourism Economics*, 389-401.

Eeckels, B., Filis, G. and Leon, C. (2012). Tourism income and economic growth in Greece: empirical evidence from their cyclical components. *Tourism Economics, 18*(4), 817–834.

Ernst and Young (2015) Un monde très culturel : Premier panorama mondial de l'économie de la culture et de la création. CISAC/France/BurkinaFaso/Chili/Chine/Hongrie, 120 pages. file:///C:/Users/User/Downloads/EYCulturalTimes2015_FR_Download-1.pdf

Farchy, J. et Sagot-Duvauroux, D. (1994), "*Economie des politiques culturelles'',* PUF, Paris.

Gourieroux, C. et Monfort, A., (1995), Séries temporelles et modèles dynamiques. ECONOMICA.

Granger, C.W.J. (1988), "Causality, Cointegration, and control", *Journal of Economic Dynamics and Control,* Vol 12(2-3), pp. 551-559.

Greffe, X. (2005), "*La valorisation économique du patrimoine''*, Paris : La documentation française.

Greffe, X. (2006), '' La mobilisation des actifs culturels de la France : De l'attractivité culturelle du Territoire…a la Nation culturellement Créative'', Document de Travail du DEPS, N° 1270.

Hamadama N. (2021), ''Le Tourisme Et La Création D'emplois Dans l'Economie Camerounaise: Analyse De La Contribution'', *Global Journals,* 21(1), pp. 36-44.

Hazari, B. R. & Sgro, P. M. (1995). Tourism and Growth in a Dynamic Model of Trade. *Journal of International Trade and Economic Development*, 4(2):185-195.

Juanchich, Laure. 2007. *Culture, tourisme, territoire : Les apports du tourisme culturel au développement local.* Master présenté en l'année universitaire 2006-2007, Institut d'Etudes Politiques de Lyon/Université de Lyon 2.

Katircioglu, S. T. (2009). Revisiting The Tourism-Led-Growth Hypothesis for Turkey Using the Bounds Test and Johansen Approach for Cointegration. *Tourism Management,* 30 (1), 17-20

Kim, H.J., Chen, M. & Jang, S.S. (2006). Tourism Expansion and Economic Development The Case of Taiwan. *Tourism* Management, 27, 925-933.

Lanza, A., Temple, P. & Urga, G. (2003). The Implications of Tourism Specialisation in the Long Run: An Econometric Analysis for 13 OECD Economies. *Tourism Management*, 24(3):315-321. DOI:10.1016/S0261-5177(02)00065-1.

Lee, C.C. & Chang, C.P. (2008). Tourism Development and Economic Growth: A Closer Look at Panels. *Tourism Management*, 29, 180-192. http://dx.doi.org/10.1016/j.tourman .2007.02.013.

Magnol, J. (2017). Le tourisme culturel est l'un des secteurs dominants pour la croissance économique future, GeneveActive/Magazine culturel de la métropole lémanique, www.geneveactive.ch/article/le-tourisme-culturel-est-lun-des-secteurs

Mankiw, G. Romer, D. & Weil, D. (1992). A Contribution to the Empirics of Economic Growth. *The Quarterly Journal of Economics, 107*(2), 407-437.

Martin E. (2014). Les villes moyennes face à la présence touristique. De l'engagement des élus aux représentations des habitants, *Métropolitiques*, https://metropolitiques.eu/IMG/pdf/met-martin.pdf.

Martin, E. (2017) « L'action publique et ses limites en matière de flux de population : analyse d'un centre ancien patrimonialisé », *Géocarrefour*, 91(3), https://doi.org/10.4000/geocarrefour.10154.

Mata J. E. (2007). 'Causalité entre exportations, croissance économique et emploi : cas du Congo Brazzaville.' *Annales de l'université Marien Nguabi*, 8(2), pp. 31-44.

MINTOUL (2018). rapport du « Cameroon Destination», Lebledparle.com, CWT, https://www.lebledparle.com/tourisme-812-000-touristes-accueillis-au-cameroun-en-2018-rapport/.

Narayan, P.K. (2004). Economic impact of tourism on Fiji's economy: Empirical evidence from a CGE model. *Tourism Economics, 10*(4): 419-433.

OECD (2009) *The Impact of Culture on Tourism,* Paris : OECD, traduction française, p. 3-75. http://www.oecd.org/dataoecd/35/5/42040218.pdf.

Oh, C.O. (2005). The Contribution of Tourism Development to Economic Growth in the economic growth in the Korean economy. *Tourism Management*, 26(1): 39-44.

Scitovsky, T. (1972), "Arts in the Affluent Society: What's Wrong with the Arts is What's Wrong with Society", *American Economic Review*, 62(2), 58-69.

Seetanah, B. (2011). Assessing the dynamic economic impact of tourism for island economies, *Annals of tourism Research*, 38(1), 291-308.

Saskia C. (2008). L'Unesco et la doctrine du tourisme culturel Généalogie d'un « bon » tourisme, *Revue Internationale d'Anthropologie et de Sciences Humaines*, N° 57, p. 41-56.

Shan, J. & Wilson, K. (2001). Causality between trade and tourism: empirical evidence from China. *Applied Economics Letters, 8*, 239-409.

Sinclair, M. T., & Gómez, B. (1996). Tourism, the Spanish economy and the balance of payments. *Tourism in Spain: Critical Perspectives, CAB International, Wallingford*, 89–117.

Solow, R. (1956). A Contribution to the Theory of Economic Growth. *The Quarterly Journal of Economics, 70*(1), 65-94.

Suresh, J. & Senthilnathan, S. (2014). Relationship Between Tourism and Economic Growth in Sri Lanka. *SSRN Electronic Journal. DOI:*10.2139/ssrn.2373931.

Tchindjang, M., Éwolo Onana, Z., Mahend, E. & Mbohou S. (2011). Tourisme et création d'emplois au Cameroun : mythe, utopie, panacée ou réalité ?, in Kamdem P. et Tchindjang M. (dir), Repenser la promotion du tourisme au Cameroun : Approches pour une redynamisation stratégique, chap.14, pp. 315-358.

Thouhami, L. (2014). L´importance économique et sociale du tourisme mondial et développement durable, *Revista de Estudios Fronterizos del Estrecho de Gibraltar*, N°1, pp. 1-18.

Tugcu, C.T. (2014). Tourism and economic growth nexus revisited: A panel causality analysis for the case of the mediterranean region. *Tourism Management*, 42: 207-212.

UNCTAD (2012). Les contributions du tourisme à la croissance et au développement inclusifs et durables, Événement spécial de la CNUCED XIII / Comité Directeur pour le Tourisme Durable (CDTC), Doha-Qatar, 21-26 avril 2012. https://unctad.org/system/files/official-document/uxiiicn 2012d5_fr.pdf.

UNCTAD (2013). Tourisme durable : contribution à la croissance économique et au développement durable, Rapport de la Réunion d'experts sur la contribution du tourisme à un développement durable, Genève, 14 et 15 mars 2013, 25 pages.

UNCTAD (2017). Rapport 2017 sur le développement économique en Afrique 2017 : Le tourisme au service d'une croissance transformatrice et inclusive en Afrique. Publication des Nations Unies. Numéro de vente F.17.II.D.2, New York et Genève, 207 pages.

UNWTO (2018). Faits saillants OMT du tourisme, Version Révisée et mise à jour le 13 septembre 2018, 20 pages.

UNWTO (2022). Le tourisme au Cameroun, DonnéesMondiales.com, https://www.donneesmondiales.com/afrique/cameroun/tourisme.php.

Vanegas Sr, M., Croes, R. (2003). Growth, Development and Tourism in a Small Economy: Evidence from Aruba, *International Journal of Tourism Research*, 5, 315-330.

Werquin, T. (2006), '' *Impact de l'infrastructure culturelle sur le développement économique local, Elaboration d'une méthode d'évaluation ex-post et application à Lille 2004 Capitale Européenne de la Culture*'', Thèse pour le Doctorat en Sciences Economiques présentée et soutenue le 21 juin 2006, sous la direction de M.Frank Moulaert.

Wong, M., Christie, I. and Al Rowais, S. (2009). Tourism in South Asia, "Benefits and Opportunities,", The World Bank, Washington, D.C.

WTTC (2016). *World Travel & Tourism Economic Impact*, 2016 report, 20 pages. https://www.arab-tourismorg.org/images/pdf/World2016.pdf