REVISITING THE TOURISM-ECONOMIC GROWTH NEXUS: THE CASE OF ECONOMIC COMMUNITY OF WEST AFRICAN STATES

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Abstract

This article investigates the relationship between the level of tourism expenditures and economic growth using a short time panel dataset covering 15 West African Countries from 2007 to 2015. The fixed effects results show that tourism expenditures and tourism receipts are insignificant to explain ECOWAS per capita Gross Domestic Product (GDP) growth. The paper finds that gross capital formation (physical capital) and labour force are positive and significant mechanisms for growth in the per capita income of ECOWAS economy. The paper recommends that ECOWAS should sell all the unused buildings, equipment, machineries and other viable governments’ assets to raise capital for investment which may boost gross domestic product if the proceeds from the sales of the assets are well utilised.

Introduction

Following the global importance of the tourism sector, countries that gave substantial attention to this sector have gained immensely from the income received via expenses incurred by the tourists during the period of tourism activities (for example, lodging in the hotel, travelling within the cities, buying of foods and drinks, etc.). In turn, the multiplier effects cover increases in the expansion of employment activities, improvement in the foreign exchange, and in overall, improvement in the gross domestic product (GDP) of the economy. To buttress the importance of the tourism sector, the recent statistics available from the World Travel and Tourism Council, 2016 (WTTC) show that the tourism sector has contributed about 10.2 percent (US$ 7.6 trillion) to the world gross domestic product (GDP) in 2016. The WTTC report also indicates that travel and tourism supports 292 million people in employment globally. In 2016, the WTTC report shows that people that travel globally for tourism spend 77 percent on leisure while 23 percent are for business purpose respectively.
The Economic growth has not been impressive to cater for the growing rate of epidemic poverty affecting people in the region. For instance, the average growth rate in ECOWAS was about 2.5% and 2.1% in 2015 and 2016 respectively which was considered very low. With this low growth rate, intensive research is currently ongoing on the growth determinants that would be recommended in improving the economic status of the countries in this region. Though, tourism has been partially neglected in the regions part of the viable sector that could generate a substantial income for the government. But other countries like Malaysia, Singapore, and Luxembourg have taken the advantage of tourism business and also one of their major sources of generating revenue.

However, very scanty research on this area, particularly for ECOWAS has been documented in the literature. Although, the work done by Narayan (2004) in the economic literature explicitly covered tourists’ expenses incurred by individuals that travel for tourism purposes and not on government spending on tourism and its effect on GDP. A similar empirical research that was done by Ige and Odulari (2007) on the relationship between tourism and economic growth of West Africa Economy also emphasised majorly on the tourist arrivals impact on the macroeconomic variables. But the effect of government tourism expenditure on economic growth was not covered. A recent study by Zuo and Huang (2017) on the relationship of tourism and economic growth in China also measured tourism by two widely used variables in the literature, that is, tourist arrivals and tourism receipts to see the effects of tourism on economic growth. Though, the result from paper was good, it failed to measure tourism using government expenditures on the tourism sector.

However, this gap that was created by the previous scholars in the literature allowed this paper to receive an inspiration and innovations, in particular for West African countries. Therefore, this current paper model tourism expenditure and economic growth in the framework of short time panel data for the fifteen West Africa countries. Due to non-availability of long time series panel data, the short time panel data technique is adopted.

The balance of the paper is structured as follows: Section 2 provides a theoretical framework and brief summary of the literature review. In section 3, the model specification and the data of the study is set out. Section 4 presents the methodology and discussion of the empirical results, and in the last section, section 5, a brief conclusion of the study is specified.
The theoretical framework and the review of literature

The theories of growth are centred on both classical and neo-classical theories, and both have been widely used in the economic literature as theoretical background that explains growth determinants (see, Rivera-Batiz and Romer, 1991; Perera-Tallo, 2003). Following the Solow-Swan (1956), the model posits that raising a new capital is more important than already acquired capital, that capital is produced based on technology, and technology improves with time. Therefore, new capital will be more productive than old capital. The theoretical framework of Solow-Swan model can be represented in a Cobb-Douglas production as follows:

\[ Y_t = A_t * (K_t)^\alpha (L_t)^{1-\alpha} \]  \hspace{1cm} (1)

Where \( Y_t \) is the output (GDP), \( A_t \) is level of technology, \( K_t \) is the capital and \( L_t \) is labour. The model assumes that before the output (GDP) can change, the inputs must be changed as well. For instance, a change in the capital stock by a proportional amount is expressed as \( \Delta K/K_t \). Since in the production function, \( K_t \) is raised to a power \( \alpha \), therefore, the proportional changes (increase) in the output \( Y \) as a result of changes in the capital stock \( (K_t) \) is written as:

\[ \frac{\Delta Y}{Y_t} = \frac{c \Delta K}{K_t} \]  \hspace{1cm} (2)

Also, changes in the output as a result of changes in labour can be written as:

\[ \frac{\Delta Y}{Y_t} = \frac{1-\alpha \Delta L}{L_t} \]  \hspace{1cm} (3)

Several studies in the economic literature have examined the relationship between tourism and economic growth in different dimensions; some researchers applied time series data, while some cross-sectional, and panel data set. Therefore, it is pertinent to review the previous work across all these studies in order to gain a wider knowledge about the subject matter.

Following the work of Naranya (2004) in the long-run impact of tourist expenditure on Fiji's economy using a computable general equilibrium, the paper finds that a 10 percent increase in tourist expenditure will increase the GDP by 0.5 percent, and hence improve the balance of payment. The paper also finds that improvement in the
tourist expenditure will lead to an increase in the wage rates, domestic prices, appreciation in the exchange rates, the increase in real consumption and national welfare by 0.72 percent and 0.67 percent respectively. Similarly, Chiu and Yeh (2016) examines the threshold effects of the tourism-led growth hypothesis using a cross sectional data for 84 countries in the framework of nonlinear model. A threshold regression model is applied for tourism growth, economic growth, and other macroeconomic variables. The study draws conclusions that the nonlinear relationship between tourism growth and economic growth is non-constant. The authors argued against the work by Naranya (2004) and other authors in the literature that conclusion cannot be made that tourism always promote growth and development. They concluded that different country conditions determine the impact of tourism-growth nexus.

In revisiting the tourism-led economic growth hypothesis for China, Zuo and Huang (2017) investigates a panel data set of 31 provinces spanning from 1995 to 2013 within the framework of a quadratic function, and system generalized method of moments estimation technique. The authors find that, the previous GDP has a significant negative impact on the Chinese economic growth, while investment, tourism specialization, and innovation have a significant positive effect on the growth of the Chinese economy. Adamou and Clerides (2009) also supported the result by Zuo and Huang (2017) that tourism specialization promotes economic growth in their study on the relationship between tourism and economic growth using both linear and nonlinear models. The descriptive statistics, fixed effects and random effects models were adopted in the analyses.

As emphasized by many authors that tourism sector boost the growth and development of many countries within both linear and nonlinear models (see, Brida et al. 2015; Cárdenas-García et. al 215; Ertugrul and Mangir, 2015), the question that is often asked is; would reliance on the tourism development not affect the economic development of other sectors such as manufacturing and agriculture? Bojanic and Lo (2016) provides answer to this question in the empirical research that investigates the moderating effect of tourism reliance on the relationship between tourism development and economic development for some island developing states using a panel data set, 1995 to 2014. In the findings of the study, it was concluded that reliance on tourism sector does have a moderating effect on the relationship between tourism development and economic development particularly for all the countries in the analysis.

As noted by Narayan et al (2010) in the relationship between tourism and economic growth for Pacific Island countries using both Pedroni and Granger Causality estimation techniques for the period 2008 to 2014. They find a panel co-integration between tourism and economic growth, and in the short-run, the real GDP Granger
causes tourism exports and no evidence of tourism exports Granger cause real GDP. They also find that in the long-run, tourism exports Granger cause tourism exports through lagged error correction term and not vice versa.

Ekanayake et al (2012), examine the impact of tourism development and economic growth in developing countries using annual data for the period spanning through 1995-2009. The fully modified ordinary least square estimation technique was used. The paper finds that tourism does not significantly support growth of the countries examined.

Similarly, Stauvermann et al. (2018) addressed the issue of long –run association between tourism receipts, exchange rate, capital per worker and output per worker in Sri Lanka. An autoregressive distributed lag (ARDL) model was used as an estimation technique. Also the causality between the variables was examined as well. Findings from the results showed that a long-run association exists between tourism receipts, exchange rate, capital per worker and output per worker. A unidirectional causality is revealed from tourism to output per worker; from exchange rate to output per worker and capital per worker; and from output to capital, in per worker terms.

As noted by Sharma and Sharma (2014) in the empirically study of causal links between Gross Domestic Product (GDP) and tourism and a comparative study between India and Pakistan using Johansen and Granger causality tests using data over the period of 1991-2012, the presence of unidirectional causality exists from tourism earnings to economic growth in both India and Pakistan. Gupta and Dutta (2018) theoretically examined tourism development, environmental pollution and economic growth. A comparative steady-state effect was analysed between tourism sector and non-tourism sector. A dynamic model was developed for this purpose. Findings show that improvement in the tourism sector leads to a relative contraction of the labour intensive in the tourism sector and fairly in the non-tourism sector, an expansion of the capital intensive was revealed. Hatemi-J et. al. (2018) examined whether tourism receipt causes growth in a panel of G-7 countries spanning from the period of 1995-2014. Findings show that out of the G-7 countries examined; France, Germany, and the US revealed a tourism-led hypothesis. However, a negative tourism shocks was revealed for Germany, Italy, and Japan while a positive tourism shock was revealed more for US and UK.

In the study by Kumar et. al (2018), the effect of information and communication technology (ICT) on tourism per worker was examined in Israel. A time series data using Autoregressive distributed lags (ARDL) within the Solow growth model was applied in the study. Results from the co-integration test revealed that, a mobile cellular subscriptions and visitor arrivals as a percent of workers have a long-run
relationship and positively significant. A unidirectional causality effect runs from ICT to output per worker, from tourism to output per worker, from capital per worker to tourism, and from ICT to tourism.

According to Boskovet. al. (2018) the relationship between the real effective exchange rate and tourism-led economic growth for selected countries in Europe were examined. The countries examined are: Macedonia, Malta, Ireland, Spain, Italy and Greece. The Ordinary Least Regression was used as the estimation technique for the study. Findings from the paper show that a statistical significant and positive relationship exists between tourism receipts and economic growth. However, a negative and statistical significant result was shown between real exchange rate and tourism receipts. This result implies that there is a great effect of real exchange rate on tourism receipts. Shahbazet. al. (2018) explored the relationship between tourism development and economic growth in 10 countries, namely China, France, Germany, Italy, Mexico, the Russian Federation, Spain, Turkey, the UK and the United States of America, over the period 1990–2015. A bootstrap rolling window Granger causality approach was used in the analysis. Findings of the bootstrap rolling window causality tests show that there are causal relations between tourism and economic growth.

**Methodology and data**

This paper estimates growth as a function of tourism expenditure, tourism receipts, labour force, and gross capital formation. Due to the insufficient data availability for tourism expenditure and receipt variables, the study adopts a relatively short time panel data framework to examine the relationship between tourism expenditures and economic growth. Hence, the estimated model is written as:

\[
\ln PCG_{it} = \beta_0 + \beta_1 \ln TE_{it} + \beta_2 \ln TR_{it} + \beta_3 \ln LF_{it} + \beta_4 \ln GCF_{it} + \varepsilon_{it}
\]

where, \(i\) represents individual country and \(t\) represents each time period. \(\ln PCG_{it}\) is the logarithm of economic growth proxy by real GDP per capita growth for country \(i\) during period \(t\) as widely used in the economic literature (see, Greenway et al., 2002; Makki and Somwaru, 2004; Eric 2015). \(\ln TE_{it}, \ln TR_{it}, \ln LF_{it}, \text{and} \ln GCF_{it}\) are, respectively, logarithms of tourism expenditures, tourism receipts, labour force, and gross capital formation for country \(i\) during period \(t\); \(\varepsilon_{it}\) represents the error term which decomposed into \(\lambda_i + \mu_{it}\), where \(\lambda_i\) equals the constant across individual country, and \(\mu_{it}\) shows the remainder error term.
The paper uses annual data spanning through 2007 to 2015 for the 15 ECOWAS countries, namely; Benin, Burkina Faso, Cabo Verde, Cote Di-Voire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo. All the data for the following variables; real GDP per capita growth, tourism expenditures, tourism receipts, labour force, and gross capital formation are collected from the World Development Indicators (WDI) database of the World Bank.

In estimating a panel data model, a different estimators can be used, but to ensure an appropriate and optimal techniques is adopted, certain conditions must be considered; (1) the nature of the data-short or longitudinal, (2) the country-specific effect, and (3) the likely endogeneity of other explanatory variables. Therefore, the standard methods of panel estimation suitable for this paper are pooled ordinary least squares, fixed effects or random effects.

**Discussion of the results**

In estimating a short time panel dataset, pooled ordinary least square, random effect or fixed effect technique are most suitable for this purpose. Thus, the Breusch and Pagan Lagrangian Multiplier test is a standard test used to determine if pooled ordinary least square/random effect is suitable, while the Hausman test specification is used to evaluate the best estimator between fixed effect and random effect.

The Breusch and Pagan Lagrangian multiplier test result (p<0.05) in Table 1 shows that the random effect model is preferred over the pooled ordinary least squares. Similarly, the Hausman specification test result (p<0.05) rejects the random effects in favour of the fixed effect model. Hence, the paper discusses the result from the fixed effect. The result from Table 1 finds that at 5 percent significant levels, the physical capital proxy by gross capital formation has a positive and significant effect on the per capita GDP growth of ECOWAS countries, that is; a 1 percent increase in the physical capital of ECOWAS countries would result in a 0.25 percent increase in the per capita GDP growth. The implication of this is that, the ECOWAS government can improve the growth of the countries by promoting investment via capital formation. Similarly, a 1 percent increase in the labour force of ECOWAS countries would increase per capita GDP by 0.78 percent. This result indicates that strengthening the labour force in the ECOWAS countries through training, workshop, and improvement in the quality of available education in the countries will enhance the economic growth of the region.

However, the result finds that tourism expenditures and tourism receipts are insignificant to explain the growth of per capita GDP in ECOWAS countries; this result is in contrary to the findings in the previous studies of the country, and cross-country...
data that proved a positive and significant relationship of both tourism expenditures and tourism receipts on economic growth (see, Sanchez Carrera et. al., 2007; Katircioğlu, 2010).

Table 1: Regression results

<table>
<thead>
<tr>
<th>Dependent Variable: Economic Growth</th>
<th>Estimation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explanatory Variables</td>
<td>Fixed Effects</td>
</tr>
<tr>
<td>Tourism expenditure</td>
<td>0.03 (0.23)</td>
</tr>
<tr>
<td>Tourism receipts</td>
<td>0.01 (0.93)</td>
</tr>
<tr>
<td>Labour force</td>
<td>0.78 (0.01)*</td>
</tr>
<tr>
<td>Gross capital formation</td>
<td>0.25 (0.01)*</td>
</tr>
<tr>
<td>R²</td>
<td>0.65</td>
</tr>
<tr>
<td>Countries</td>
<td>15</td>
</tr>
<tr>
<td>Observations</td>
<td>105</td>
</tr>
<tr>
<td>Breusch and Pagan Lagrangian Multiplier test</td>
<td>Chi²(1) = 149.75(0.01)*</td>
</tr>
<tr>
<td>Hausman</td>
<td>18.12 (0.01)*</td>
</tr>
</tbody>
</table>

**Conclusion and Recommendations**

This paper has focused to empirically examine whether tourism expenditure, tourism receipts, labour force and gross capital formation has an impact on the economic growth of the fifteen ECOWAS countries, namely: Benin, Burkina Faso, Cabo Verde, Cote DI-Voire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo. The study period of the analysis is 2007 to 2015. A short panel model is used for the estimation of the equation within the framework of fixed effects.

As expected, the study finds that, labour force and gross capital formation are the major factors that are positive and significant to determine the long-run growth of ECOWAS countries. However, tourism expenditures and receipts are insignificant to explain economic growth in ECOWAS countries. Therefore, the impact of the tour-
ism sector is yet to be felt in the economic growth of ECOWAS despite the enormous importance and contributions of the tourism sector to the world. The paper recommends that ECOWAS governments and policy makers should take into consideration the sales of unused building, equipment, and other unused assets so that proceeds from the sales can be used as capital formation. Optimal utilisation of the available labour force in the region should be encouraged.

References


