Tourism, Financial Development and Economic Growth: A Causal analysis for the Balkans

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Abstract

    Tourism accounts for approximately 8% of the world GDP in 2022. This research provides a causal analysis for the intersection between economic growth, financial development, and tourism receipts in the Balkans. Following the findings of Dhamo (2023), the study uses panel data in the time range 2000-2020 from Albania, North Macedonia, Montenegro, Serbia, Bosnia & Herzegovina. The data source is World Development Indicators from World Bank Group. We follow in part the methodology of Rasool et al. (2021). The research implements Johansen Cointegration tests to statistically test the long-term relationship between tourism, financial development, and economic growth. In the research, it is implemented the Granger Causality test for identifying causal relationships between the three variables. The results of the research identify a significant long-term relationship among financial development, economic growth, and tourism receipts. Moreover, based on Granger causality analysis, the study concludes that the causality between inbound tourism and economic growth is one directional, the same conclusion applies to the relationship between inbound tourism and financial development.

Keywords: tourism-led growth hypothesis, long-term cointegration, financial development, Granger Causality analysis, Economic Growth, Financial Development

INTRODUCTION

This research follows the work of Dhamo (2023), on the long-term connection between inbound tourism, economic growth, and financial development in the Balkans.

    Inbound tourism has increased the interest of researchers due to its impact on long-term economic growth. Moreover, as mentioned by Blake et al. (2006) and Lee & Chang (2008), it increases investment in infrastructure and human capital, enhances competitive environment & industrial development, increases employment and eventually disposable income.

    Tourism-Led Growth Hypothesis (TLGH), initially proposed by Balaguer and Cantavella-Joda (2002), claims that the expansion of international tourism activities enhances growth, establishing a connection between inbound tourism and economic growth.

    Balassa (2008) finds that export expansion stimulates economic expansion through increase in productivity, specialization, and more investments. Rasool et al. (2021) states that TLGH considers inbound tourism as a new form of export, instead of selling goods a country basically faces consumption on site. Moreover, TLGH claims there is a link both in the short run and long term between tourism and economic growth.

Expanding the study of Dhamo (2023) and following a similar methodology like Rasool et al. (2021), this research aims to identify whether there is a long-term connection between economic growth, international tourism and financial development for the Balkan countries, and the direction (causality) of the relationship. We include financial development as part of the study since financial markets play an important role in boosting growth. As the seminal work of Schumpeter (1911) followed by Shaw (1973) emphasize, financial development positively impacts economic efficiency, innovation, and productive investments.

To the best of the author's knowledge, this is the first attempt to study the relationship longevity and causality direction between inbound tourism, economic growth, and financial development in the Balkan countries.

LITERATURE REVIEW

This section is divided into two parts, Macroeconomic research, and econometric research.

Macroeconomic Research: There are a vast number of publications studying the determinants of growth and development. Most studies agree that tourism has an important role in driving economic growth. According to Oh (2005), it has an important impact on employment, forex, household income, government revenues and, consequently, drives the drafting of tourism-centric policies. Independently of the methodology used, there are mixed findings on the relationship between inbound tourism and economic development.

According to Schubert et al. (2011) TLEG finds that tourism drives economic growth through multiple channels. For instance, according to Balaguer and Canvatella (2002), tourism boosts investments and motivates local firms towards greater efficiency. According to Brida and Pulina (2010) it decreases unemployment because it relies more on human capital, and Croes (2006) finds that tourism leverages on economies of scale, which results in a reduction of production costs for local businesses.

Other studies, such as Oh (2005), identify findings that support Economic-Driven Tourism Growth Hypothesis (EDTG).

Some research identifies a bidirectional effect on the relationship between tourism and growth (Lee and Chang, 2008).

Another group of studies, lead by Po et al. (2008), finds an insignificant relationship between tourism and economic growth.

Econometric Research: The methods used to identify the relationship between growth and tourism are diverse in the literature. Banday and Ismail (2017) use ARDL cointegration model to identify the positive influence in growth for BRICS countries. Rasool et al. (2021, 6-8) use the same cointegration methods, and enhances the results through Dumitrescu Hurlin panel causality tests to prove the long/short-term relationship between financial development, economic growth & inbound tourism, and the bidirectional causality between the three variables. Savas et al. (2010) studies the directional relationship between tourism and real exchange rate in Turkey. The study finds there is a high impact from tourism on economic growth and the reduction of the current account deficit. Dhungel (2015), through Johansen co-integration tests and Error Correction Model, confirms the presence of long-term causality from tourism towards economic growth. Mallick et al. (2016) finds a positive long-term relationship

between tourism and economic growth in the Indian states. Belloumi (2010), through Granger causality and Johansen's cointegration methods, proves the tourism driven economic growth hypothesis.

Tang et al. (2016) investigates the relationship between tourism, energy consumption and growth in India, proving a long-term relationship between variables. Kadir and Karim (2012) find significant one directional contribution of tourism towards economic growth in Malaysia. Antonakakis et al. (2015) uses a spillover index approach to identify a time-dependent relationship between tourism and economic growth in Europe. Oh (2005), focusing his study on the Korean economy, finds that initially, economic expansion attracts tourists, but it cannot be proven the long-term relationship between the two variables.

This research uses Johansen Cointegration and Granger Causality tests to prove the long-term relationship and identify the direction of impact among financial development, inbound tourism and economic growth.

RESEARCH METHODOLOGY

Data: The research aims to identify the relationship and the direction of the relationship between growth, inbound tourism and financial development. We follow a similar methodology like Rasool et al. (2021) and represent part of the findings of Dhamo (2023). There has been conducted limited research on the Balkans so far regarding the relationship and its direction between economic growth, financial development, and inbound tourism. The data set considers the period 2000-2020. The data source is the World Development Indicators databased (WDI, 2023) provided by the World Bank Group.

We incorporate financial development into the model, following theoretical and empirical findings (Hur et al., 2006) where it shows an important contribution to growth. The reason why it is included, as Rasool et al. (2021) suggests, is for better refinement of model specifications.

Data used in this study is GDP per capita in constant (SUS2015), as an indicator for economic growth (EG), international tourism receipts (TR) in current US\$, which, according to Kumar (2014), is a fair proxy for inbound tourism, and financial development (FD). Hassan et al. (2011) uses as an indicator for financial development the ratio between broad money (M3) and real GDP. The ratio represents the liquid liabilities of the banking system (M3) relative to the economy's real GDP. It is a measure of financial depth, since, according to Khan and Senhadji (2003), it shows the capacity of the banking system's ability to channel funds and offer financial services. We use the same proxy for financial development. The author applies logarithmic transformations to all variables to ensure statistical robustness.

Before understanding statistically, the relationship between variables and the direction of the relationship, stationarity test is a prerequisite. The research uses the Augmented-Dickey Fuller test to check stationarity of Economic Growth, Financial Development, and Inbound Tourism.

We use the Johansen co-integration test for checking the interconnection between growth, financial development, and tourism receipts. The reasoning of choice is the ability of the test to explore relationships through multiple time series, detecting cointegration, which means a long-term association among the variables. The test evaluates the number of cointegration vectors, helping to define whether these factors move together in the long run or diverge over time. The Johansen cointegration test can

accommodate for multivariate systems and identify the presence of more than one cointegration relationship. The latter satisfies the need of this study because it is expected to be a complex relationship between inbound tourism, economic growth, and financial development in the Balkans. The study uses the built-in function of the Johansen cointegration test in EViews, a well-known econometric software.

The study uses Granger Causality tests to identify the directional relationship between the three variables considered in the research. The main advantage of the method is its predictive nature, using past values of one variable to predict future values of another variable. Other advantages include the fact that it is specialized for time series data, which is the case of financial and economic datasets; exploration of leading-lagging relationships, identifying which variable to consider as leading indicator, important for policy analysis; and multivariate extension, meaning that interdependencies can be explored for more than two variables, which is the case of this study.

EMPIRICAL ANALYSIS

The first three parts of the empirical analysis, namely Descriptive Statistics, Stationarity Results and Long-term relationship check, are based on the findings of Dhamo (2023, 6-9).

Descriptive Statistics: Kosovo is excluded from the sample due to non-available data on tourism receipts, GDP per capita and financial development either entirely or for part of the period. In Table 1, we present the descriptive statistics of the variables for each country. According to the data, Montenegro leads the GDP/Capita, both in terms of value and in terms of year-on-year fluctuation. Albania shows the highest values in terms of tourism receipts and financial development for the period 2000-2020. Assuming both FD and TR have positive impact on economic growth, the results are not consistent with the fact that Albania shows the lowest GDP/Capita in the region for the period under study. Probably, other drivers of growth may have influenced the low performance of Albania as compared with other countries considered in the study.

Table 1: Descriptive Statistics per Country

	lnEG		lnFD		lnTR	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
ALB	8.094	0.260	4.279	0.238	20.954	0.575
MNE	8.668	0.167	3.632	0.789	20.534	0.473
MKD	8.340	0.172	3.935	0.481	19.041	0.615
SRB	8.510	0.209	3.130	0.931	20.497	0.918
BIH	8.264	0.245	3.830	0.475	20.267	0.444

Stationarity Results: Table 2 shows the unit root test results. It indicates that growth and financial development exhibit stationarity at their levels (I (0)), meaning they do not have a unit root. International Tourism Receipt (TR) is an integrated variable of order 1 (I (1)) showing the presence of unit root. This means that TR is non-stationary at level but becomes stationary at first difference. The stationarity test results, level stationarity for FD and EG and first difference stationarity for TR, imply the use of the first difference for all the variables for the subsequent cointegration and causality tests. We apply the tests described below at first difference for all variables, to ensure

uniform integration properties across variables. Uniform integration properties across variables help the consistent assessment of the long-term relationships.

Table 2: ADF Unit Root Test Results

Variable	at level	at first difference	Decision
lnEG	-3.343**	-4.918***	I (0)
lnTR	-2.720*	-4.934***	I (1)
lnFD	-2.980**	-5.229***	I (0)

***Represents 1%, **Represents 5%, * Represents 10% level of significance and Panel unit root test includes intercept only

Long term relationship check: Table three shows the cointegration test results for lag 1 and 2. We choose the lag length using Schwarze criterion to determine the lag numbers, favoring lag 1 because of the lower criterion value.

The likelihood ratio exceeds critical values in all tests, independently of the number of lags applied. This means that the null hypothesis for a limited number of cointegrations is rejected for all tests. There are three cointegration relationships between the variables:

1) between economic growth and yoy changes in tourism receipts.
2) Between yoy changes in tourism receipts and you change in the financial development indicator
3) Between economic growth and yoy change in the financial development indicator

In summary, the Johansen cointegration test shows that there is a long-term relationship (i.e. variables move together) between economic growth, inbound tourism, and financial development.

Table 3: Johansen Cointegration Test Results

Lags	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized no. of Cointegration Relationships
1 lag	137.071	29.680	35.650	None **
	50.473	15.410	20.040	At most 1 **
	17.394	3.760	6.650	At most 2 **
2 lags	85.564	29.680	35.650	None **
	34.247	15.410	20.040	At most 1 **
	12.489	3.760	6.650	At most 2 **

*(**) denotes rejection of the hypothesis at 5%(1%) significance level

Directional Causality: Table 3 presents the Granger causality test results for lag 1, 2 and 5. The most important take away is there is no bidirectional relationship between the three variables in the study. Although we use different tests, the results are not in line with Rasool et al. (2021: 8), where the author finds there is bidirectional relationship between the three variables for BRICKs countries. Furthermore, the data show evidence that the change in inbound tourism receipts granger causes changes in financial development and economic growth. This is an important result for policy makers, when drafting policies targeting long term economic growth, financial integration & inclusion.

Table 4: Granger Causality test results

	1 Lag		2 Lags		5 Lags	
	F-Stat	p-value	F-Stat	p-value	F-Stat	p-value
FD does not Granger Cause TR	0.002	0.964	1.959	0.147	0.640	0.670
TR does not Granger Cause FD***	53.491	0.000	22.921	0.000	7.971	0.000
EG does not Granger Cause TR	1.169	0.283	0.080	0.923	0.124	0.987
TR does not Granger Cause EG***	41.102	0.000	33.636	0.000	14.075	0.000
EG does not Granger Cause FD	0.736	0.393	1.721	0.185	0.711	0.617
FD does not Granger Cause EG	2.624	0.109	0.678	0.510	0.378	0.862

***Represents 1%, **Represents 5%, * Represents 10% level of significance and Panel unit root test includes intercept only

CONCLUSIONS AND RECOMMENDATIONS

The research examines the longevity and direction of relationship between economic growth, financial development, and inbound tourism in the Balkans for the period 2000-2020. The data used in this study are GDP/Capita, international tourism receipts and an indicator for financial development.

While Montenegro seems to dominate the region in terms of economic growth, Albania has shown the average tourism receipts and financial development index for the period under consideration.

Considering the fact that one of the variables is non-stationary at level (I(1)), we apply cointegration and causality tests at first difference.

Johansen cointegration tests identify three long-term relationships among the variables: 1) between growth and inbound tourism, 2) between inbound tourism and financial development, 3) between financial development and growth. The Granger Causality test, however, identifies no bidirectional relationship between the three variables. The test shows that changes in inbound tourism grange cause changes in financial development and economic growth.

Future studies may integrate other variables, such as climate transition & energy consumption, to understand how these variables impact tourism receipts, economic growth, and financial development.

Moreover, policy makers should leverage these findings to better coordinate policies of long-term growth, tourism attraction and financial inclusion. Such policies may unlock new alternatives for sustainable development in the Balkan region.

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