

The Nexus Between Tourism and Economic Growth: Case of Commonwealth of Independent States

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ABSTRACT

In this study the relationship between tourism and economic growth examined with panel data analysis for the Commonwealth Independent States (Azerbaijan, Russian Federation, Ukraine, Armenia, Kazakhstan and Kyrgyzstan except Uzbekistan and Tajikistan – due to lack of data) for the period between 1995 and 2015. The data has been downloaded from World Bank Development Indicators with their natural logarithmic forms. At the empirical part of the study GDP per capita (%) represents economic growth and international tourism receipts (of % total export) have been chosen as an indicator of tourism sector. The model has been tested with dynamic panel data analysis. Firstly preliminary tests have been applied to be sure about the the homogeneity of series (Delta test) and the cross-section dependence (test) of each individuals. After that second generation unit root test (Hadri Kurozomi-2012) used to find out the level of stationary. Durbin-H, co-integration test showed that there is co-integration between variables and finally Hurlin-Dumetriscu causality test (2012) does not support tourism-led growth hypothesis. So there is one-way causality from economic growth to tourism for selected countries.

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1. Introduction

Since beginning of the ancient times, the desire to learn and discover new places and cultures fostered mankind to move (travel) from one place to another. Tourism is just the commercial version of organizing and operating holidays and vacations. Because of its commercial role, this directly links it to the economic business. According to “tourism-led growth hypothesis”, tourism is the engine of the economy and it is not only in a relation with economic growth but also with the macroeconomic indicators of a country. The study of Gwenhure and Odhiambo (2017) shows that tourism is linked with foreign exchange, sustainability, income, employment, cultural values, infrastructural development, poverty-reduction and environmental and social impacts.

First in national-macro level later in micro level tourism promotes economic growth with currency earnings (Furmolly ve Kırkulak Uludağ, 2018). Rising income and employment will help to balance regional development. Tourism is one of the world’s largest industries and tourism has seen also as a regional policy tool. Mazumder, Sultana and Al-Mamun (2013) state that Southeast Asian nations have political boundaries but strong links in geographical, cultural, historical, archaeological and social (regional) similarities such as; blue water beaches, sunny and warm (tropic) weather, wildlife and exotic cultures.

Many researchers claim such as; Bryden (1973), De Kadt (1979), Blackman (1991), and Bull (1995), that tourism will affect economic growth

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positively because of the following reasons:

- Fostering import of consumer's, intermediate goods and capital thanks to foreign earnings.
- Positive linkages with agriculture, manufacture sectors and other service industries.
- Infrastructure improvements to promote tourists.
- Factor endowment, utilization of resources.
- Contributing balance of payments.
- A particular type of export (tourism spending) causes trade-driven growth. So tourism spending and economic growth have a relationship.

The strong correlation between tourism and growth does not mean always a causality between them (Neutrality hypothesis claims that there is no linkage between tourism and economic growth) or just a positive feedback. High demand for tourism can cause negative effects as well (rising costs may lower the employment and the welfare) if the tourism industry does not well-managed. For example; Holzner (2011), found out Dutch Disease effect (re-industrialisation) in tourism dependent countries because of real exchange rate distortion.

In this study the causality (vice versa) between tourism and economic growth re-investigated for Commonwealth of Independent States (CIS) during the period 1995-2015. The purpose here does not only to examine the relationship between chosen variables but also to update empirical methods and fill the gap in literature. Because the studies about the CIS countries especially in this topic are not more than fingers of a hand. Another reason of working with CIS countries that they have common linguistics and culture, cold climate (not certain forecasts even for summer) and similar cuisines, cheap charters and tours to warm destinations with all included concepts and modest prices. So it is expected to have one way causality from economic growth to tourism but not the opposite. Due to being a sender of tourists not being attractive side.

The rest of the paper is divided into three sections. The following one gives information

about CIS countries and their transition in time structurally and economically. Section 3 is about written quantitative literature on tourism and economic growth. Section 4 explains empirical model and methodology (panel data analysis) with gained results. Last section gives the interpretations of findings and policy suggestions.

2. Transition in Commonwealth of Independent States

The fall of Berlin Wall brought a new era to the world economy. Especially two years later (in 1991), while the Soviet Union collapsed, a group of countries were formed by structural changes and this process is called as transition and those countries called as transition economies. In literature there 25 of them; some Central and Eastern European countries, Baltic countries and former Soviet Union members outside of the Baltic countries in otherly word Commonwealth of Independent States (CIS) (Bal, 2011: 88). The current CIS countries are; Azerbaijan, Armenia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Uzbekistan and Ukraine. Turkmenistan has left in 2005 and contributes to the Community as an observer country.

The main characteristics of transition economies are adopting market economy instead of centralised one. Liberalization of trade and financial markets. Privatization as a policy tool to attract foreign direct investments or to get short-run portfolio investments and low GDP (gross domestic products) rates in the beginning of transition process. Legal framework does not work properly and is not completed yet all along the line. Saving habits (low investment rates of households) of communistic times continued a while. Trying to be independent as a country but still want to be a part of a community such as WTO (World Trade Organization) or EU (European Union) to integrate with market economy. Changings in exchange rate regimes and using export-led growth strategy as a trade policy and as an engine of the economy.

According to the report of Interstate Statistical Committee of CIS, in September 1993, an agreement has signed by CIS states for the

creation of Economic Union to form common economic space. Thus, free movement of goods, services, labour force, capital has grounded. Monetary, tax, price, customs, external economic policy were coordinated to bring together methods of regulating economic activity and create favourable conditions for the development of direct production relations. Firstly, in 2000 and later in 2005 Eurasian Economic Community agreement has signed and enlarged with Uzbekistan. In 2008 for strengthening of an organizational component of the Commonwealth, the Belarusian member introduced an initiative about implementation of chairmanship for one state during one year in all charter bodies of the CIS. In 2011 the Treaty "On free-trade area" was signed. The provisions of articles of a new treaty are based on the norms and rules of the WTO. During 2013 chairmanship in the Commonwealth of Independent States was implemented by the Republic of Belarus. In 2015 chairmanship in the CIS is granted to the Republic of Kazakhstan.

CIS is behind of its true potential for tourism but still the industry plays an important role and fosters economic growth and creates friendly environment with Europe. This is why CIS member states are interested in establishing a single (common) tourism space with the same visas to interconnected with EU. Geographical distance, weather conditions, visa process, the income level of local tourists and many more reasons can be written to explain why CIS countries fall behind of their potential in tourism industry. In a nutshell domestic tourism spending, travel expenses increase economic growth and being dependent on domestic tourism is the reason of negative travel shocks (Chou, 2013: 230). So travel conservation policies may have negative effect on economic growth in CIS countries because of those countries are mostly not receiving too much travel expenses and foreign currency. The tourist from those countries mostly prefers Europe or close geography such as European countries or Turkey to travel.

3. Literature

The tourism literature has mainly focused on the relationship between tourism and economic growth, such as the determining factors that affect tourism demand (inbound-outbound) – supply or the convergence hypothesis the factors that affect productivity improvement. In general the relationship between variables are tested with panel co-integration or causality tests and some other methods. So the very few empirical studies collected in this section related to their techniques and summed up with their results.

Skerritt and Huybers (2007), point that international tourism may has positive effect on economic development in selected 37 developing countries. Econometric model based on an aggregate production function. GDP per capita represents economic development and capital stock per worker has been chosen as dependent variable in each country for different periods. Bahar and Bozkurt (2010), in the long-run there is a relationship between tourism activities and economic growth for selected 21 countries. The data has been tested with GMM (generalize method of movements) during 1998-2005. According to findings TLG hypothesis is valid for developing countries.

Ekanayake and Long (2012), heterogeneous panel co-integration test has been used to analyze the relationship between tourism development and economic growth in developing countries for the period between 1995-2009. There is no support for TLG hypothesis, so it is rejected for selected countries. Tourism is just a potential source which can promote economic growth. Seghir et al. (2015), find out co-integration and bidirectional causality between tourism spendings and economic growth for 49 countries with Granger Causality test. Tourism-led growth (TLG) hypothesis is valid for selected period 1988-2012. Buthaina and Hussam-Eldin (2017), tested the co-integration and the relationship between tourism (real international tourism receipts) and economic growth (GDP) with linear and non-linear methods for Jordan. 1998Q1-2015Q4, quarterly data downloaded from Central Bank of Jordan and World Travel

and Tourism Council. According to findings there is unidirectional relationship from tourism to growth and TLG hypothesis is accepted.

Chou (2013), 10 transition countries (Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Poland, Romania, Slovakia and Slovenia) are analyzed for the selected period between 1988 and 2011. According to the results of bootstrap Granger causality test for Bulgaria, Romania and Slovenia neutrality hypothesis is valid. So there is no causality between tourism spendings and economic growth. In Cyprus, Latvia and Slovakia growth hypothesis is valid but in Estinoa and Hungary reverse relationship is existed. Gwenhure and Nicholas (2017), state that causality relationship between tourism and economic growth differs from country to country and articulated through different channels. In literature studies examin relationship with time series, panel data analysis, input-output analysis. Majority of them supports tourism-led growth hypothesis.

Fawaz et al. (2014), the period between 1975 and 2010 has been tested with panel data analysis for 144 countries to find out the relationship between tourism and economic growth. Static and dynamic effects taken into account seperately in emprical part of the study. It is evident that international tourism is an indepenedent factor enhancing growth. International tourism has positive effects on growth except in low-income countries. In the short-run investing in tourism industry should be the strategical policy of countries to accelarate development. Kamaci and Oğan (2014), study with Azerbaijan, Kazakhstan, Kyrgyzstan, Uzbekistan, Macedonia and Turkey for the period between 1995 and 2011 to find out the effect of tourism revenues on economic growth with panel data analysis. In the long-run there is two-way causality between tourism revenues and economic growth for selected countries.

4. Empirical Model and Findings

According to Baltagi (2005), panel data analysis is the modeling of economic behavior and relationships by combining cross sections of time

series observations of economic units. The definiton of unit root has been clearly made by John Taylor in 1989. Shocks and structural fractures have long-lasting effects on series with unit root and this approach is contrary to the traditional view. Because the traditional view assumes that time series return to the same mean and variance level after shock and they do not have a lasting effect on time series. According to Utkulu and Kahyaoğlu (2005), coefficient estimations, which gained from time series including unit root, are biased and incoherent and it causes wrong policy recommendations. Nelson and Plosser (1982) have shown that trends of macroeconomic time series are not exempt from fluctuations. Thus, except for temporary shocks, the existence of long-lasting permanent shocks has been understood. The trend of permanent shocks prevents the series from approaching a certain average. The trend means non-stationary and this trend is sthocastic because trend is also shifting.

In comparative analyzes across countries, dynamic panel data techniques are frequently used. Because, according to Cameron and Trivedi (2005), it allows for the analysis of changes in cross-sectional units over time. For this reason, the nexus between tourism and economic growth has been tested with non-stationary, dynamic panel data techniques. Firstly, preliminary tests (Delta and) are applied to consider homogeneity and cross-section dependence. After that, stationary of the series has been checked with second generation, Hadri-Kurozomi (2012) unit root test just before proving the co-integration between variables with Durbin-Hausman (DH) test. Finally, causality has been tested with Dumetriscu-Hurlin (2012) test.

Chosen data (GDP per capita % and international tourism receipts of total export %) has been downloaded from World Bank (WB) Development Indicators with their natural logarithmic forms for Azerbaijan, Russian Federation, Ukraine, Armenia, Kazakhstan and Kyrgyzstan for the period between 1995 and 2015. The previous years and other countries of the CIS could not include due to lack of data.

Mathematical function and econometrical regression in the long-run can be written as follow;

$$Y = f(T) \text{ or } T = f(Y) \tag{1}$$

$$\ln Y_t = \alpha + \beta_1 \ln T_t + u_t \tag{2}$$

Y represents GDP per capita % and T represents tourism receipts of total export %. α is a constant number and β gives the slope of the function. u_t shows error term. In the long-run GDP per capita is a function of tourism receipts of total export vice versa.

Delta test has been developed by Pesaran and Yamagata in 2008, the null-hypothesis claims that “series are homogeneous”, ($H_0: \beta_i = \beta$ and $H_1: \beta_i \neq \beta_j$).

Table 1: Homogeneity Test Results

Delta Test	Test Stat.	Prob.
$\hat{\Delta}$	-0.680	0.752
$\hat{\Delta}_{adj}$	-0.732	0.768

Source: Authors Calculations with Gauss 10.0 program.

According to table 1, probability values for small ($=0.752$) or big (samples are bigger than 0.05 and statistically significant. Null hypothesis is accepted. Series are homogeneous.

Table 2: Test Results of Cross-Section Dependence

Constant Model	$\ln Y$		$\ln T$	
	T-stat.	Prob.	T-stat.	Prob.
CD_{LM1} (BP,1980)	28.149	0.021*	131.967	0.003*
CD_{LM2} (Pesaran, 2004)	27.578	0.024*	2.296	0.011*

Source: Authors Calculations with Gauss 10.0 program.

(*) represents the significance at 5 %. CD_{LM} test, developed by Pesaran (2004), is ran for each variables separately. According to table 2, null-hypothesis “ $H_0: \rho_i = \rho_{ji} = cor(\varepsilon_{2,it}, \varepsilon_{2,jt}) = 0$ ” is rejected. Because CD_{LM1} and CD_{LM2} probability values are smaller than 0.05 and statistically significant. So there is cross-section dependence between units.

Hadri and Kurozumi (2012) has developed the study of Hadri’s under the light of Pesaran (2007) and proposed a new unit root test which is just the adjusted form of KPSS (Kwiatkowski–Phillips–Schmidt–Shin) unit root test for panels. This test gives unbiased and coherent results even there is a trend and the CDAF test is weak. Also considers cross-section dependence. Two types of test statistics are calculated such as ZA_{-spc} and ZA_{-la} . It is assumed that statistics both have infinite, normal distribution.

Table 3: H-K Unit Root Test Results

Level	Constant		Constant and Trend	
	T-stats.	p-value	T-stats.	p-value
$\ln Y$				
ZA_{-spc}	0.9832	0.1628	4.8520	0.0000*
ZA_{-la}	1.9813	0.0238*	7.3436	0.0000*
$\ln T$				
ZA_{-spc}	0.8402	0.2004	7.0253	0.0000*
ZA_{-la}	0.6279	0.2650	4.7756	0.0000*
<i>First difference</i>				
$\ln Y$				
ZA_{-spc}	2.0409	0.0206*	6.9213	0.0000*
ZA_{-la}	3.8631	0.0001*	10.5748	0.0000*
$\ln T$				
ZA_{-spc}	8.6919	0.0000*	21.5677	0.0000*
ZA_{-la}	10.0837	0.0000*	37.1091	0.0000*

Source: Authors Calculations with Gauss 10.0 program.

(*) represents the significance at 5 %. Table 3 reports the results for model with constant, constant and trend in both level and first difference. According to findings variables are not stationary in the level but their first difference is stationary. The null hypothesis which is claimed the opposite of the first generation unit root tests, “the series are not stationary” has been accepted.

Durbin-Hausman co-integration test has been preferred because if series are homogeneous but have cross-sectional dependency. There are two test statistics are calculated, DH_g when series are heterogeneous and DH_p when series are homogeneous. The null-hypothesis claims that “there is no co-integration for all i ” $H_0: \phi_i = 1$ (Westerlund, 2008).

Table 4: Co-integration Test Results

	Test Statistics	Bootstrap Prob.
DH_p	2.267	0.012*
DH_g	13.362	0.000*

Source: Authors Calculations with Gauss 10.0 program.

(*) represents significance level at 5 %. According to table 4, DH_p probability value is smaller than 0.05 then null-hypothesis rejected. There is co-integration between tourism and economic growth.

Dumetriscu and Hurlin developed a new Granger Causality test which considers cross-section dependence and works in existence or not co-integration. Also series can be homogeneous or heterogeneous. Three different test statistics are estimated such as; $Whnc, Zhnc, Ztild$ ((Dumetriscu and Hurlin 2012:1-5).

Table 5: Causality Test Results

Null Hypothesis	Test	Statistics	Prob.
InY does not Granger cause InT.	$Whnc$	2.058	0.047983*
	$Zhnc$	1.832	0.074390**
	$Ztild$	1.273	0.177202
InT does not Granger cause InY.	$Whnc$	0.838	0.280666
	$Zhnc$	-0.279	0.383660
	$Ztild$	-0.405	0.367385

Source: Authors Calculations with Gauss 10.0 program.

(*) represents significance level at 5 % and (**) represents significance level at 10 %). Table 5 shows that TLG hypothesis is rejected for CIS during 1995-2015. There is only one-way causality from economic growth to tourism.

5. Conclusion

Nexus between tourism and economic growth has been discussed many times and researchers could not agree in one common decision. In this study the causality has been questioned one more time with new methodology and new group of countries. According to empirical findings, there

is one-way causality from economic growth to tourism and TLG hypothesis is rejected for selected CIS countries.

The results are supporting the study of Ekanayake and Long (2012) and Chou (2013). As it is mentioned in this paper, tourism potential of the CIS countries is lower than it is expected not only because of geographical (distance, climate, nature) reasons but also political issues that especially are going on between Russia and Ukraine. Neutrality hypothesis also has rejected according to empirical results. For sure there is a relationship between GDP per capita and tourism receipts of total export in the long-run. Because tourism is linked with trade especially via export. But the direction of the relationship is opposite, compare to majority of the studies. The reason of this can be insufficient integration of the CIS region with European Union or other instutional organizations. For example; even the membership of Russia to the WTO was quite late (in 2008) compare to other European countries.

While the direction of the relationship is from economic growth to tourism than sustainability of growth (the stability of macroeconomic indicators) is becoming crucial because of the role of tpurism for being a potential policy tool. Naturally, tourism planning, development of tourism and investments on tourism industry (human and and physical capital) have potential support by governments. Export-led growth strategy can be converted to the tourism-led growth one by trade (via rising tourism receipts of total export).

For further researches to examine the determinants of tourism demand or supply in the CIS countries; the relationship between number of tourist arrivals and economic growth or tourism receipts and economic growth can be tested with co-integration or causality tests as well. Also coefficient estimation (with CCE Model) will give more information about the contribution of determinants to the tourism sector and the direction of the correlation between variables can be seen better.

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