

Macroeconomic Variables (Gross Domestic Product Per Capita, Imports, Private Consumption And General Government Consumption) And Tourism: The Cases Of Albania And Croatia

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Summary:

The Present Study Is Based On The Comparative Analysis Of Macroeconomic Variables And Tourism Revenues, Of Two Countries That Stretch Along The Adriatic Sea. From The Analysis Of The Results, It Appears That Between The Countries There Are No Significant Differences Between Most Macroeconomic Variables And Tourism Revenues. Thus, The Changes In Gross Domestic Product Per Capita, Imports, General Government Consumption And Tourism Revenue (Interpretive Variable), Show The Same Behaviour For Both Countries. The Only Difference Is Found In Albania's Private Consumption, Which Appears Much Higher Than Croatia's. A Difference, Which May Be Found In The Different Degree Of Investments In Time And Quantity, Between The Two Countries Or Even In The Form In Which These Investments Took Place And Were Utilized In The Tourism Sector Of Each Country.

Keywords: *Macroeconomic Variables, Tourism Revenue, Dependency Theory*

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I. INTRODUCTION

Dependency theory was developed in Latin America in the 1960s - 1970s, as a reaction to the theory of modernization in order to create a theoretical framework, which will be sufficient, so as to interpret the conditions of development of the states in the transactions between them or/and what context are created the underdevelopment conditions. (Kufakurani U, pp 11) The main characteristics of dependency theory are summarized in the perspective of the creation of sovereign and dependent states, through the activation of external forces that influence and direct economic, political and social activity.

In international articles and literature, the strong positive effect of tourist flows on macroeconomic variables is found; to such an extent that tourism is considered an activity that brings about economic development. (Govdeli T, et al, 104-113)

The purpose of this study is not to highlight the same finding, but within the theoretical framework of the theory of dependency, to capture the existence of a different degree of impact of tourist flows in two countries that stretch along the Adriatic Sea, as a result of tourism development while simultaneously investigating the presence of conditions of possible dependence.

II. DEFINITION OF ALBANIA-CROATIA VARIABLES

The statistical data of the variables to be analyzed have as their source in the World Bank¹ and concern the time period from 1995 to 2019, while they are common to both countries for analysis, Albania and Croatia. The variables are summarized in gross domestic product per capita, tourist income, and imports, expressed in millions of dollars² and shown in Tables I & II.

In particular, the gross domestic product per capita is the gross domestic product divided by the population of the average year for each country, while according to the view of the World Bank, the gross domestic

¹ <https://data.worldbank.org/indicator/>

² In order to have comparative homogeneity between the variables under consideration, a common currency was used, expressed in United States dollars.

product is the sum of the gross added value from all the production units of the country's residents, plus taxes on products, minus subsidies not included in the value of products³. Final consumption expenditure (total consumption) is the sum of the final consumption expenditure of households (private consumption) and the final consumption expenditure of the general government (general government consumption). In order to draw safer conclusions, it was preferred to divide final consumption into private consumption and general government consumption. Private consumption includes spending by households, while government consumption includes all government spending on goods and services. Imports of goods and services represent the value of all goods and other services received from the rest of the world.

Table of variables I - ALBANIA

VARIABLE NAME	ABBREVIATION VARIABLE
GROSS DOMESTIC PRODUCT PER CAPITA	GDPPCAPAL
TOURIST INCOME	TURREVAL
IMPORTS	IMPORTAL
TOTAL PRIVATE CONSUMPTION	FPCONSUAL
TOTAL GENERAL GOVERNMENT CONSUMPTION	FGCONSUAL

Table of variables II - CROATIA

VARIABLE NAME	ABBREVIATION VARIABLE
GROSS DOMESTIC PRODUCT PER CAPITA	GDPPCAPCR
TOURIST INCOME	TURREVCR
IMPORTS	IMPORTCR
TOTAL PRIVATE CONSUMPTION	FPCONSUCR
TOTAL GENERAL GOVERNMENT CONSUMPTION	FGCONSUCR

III. DETERMINATION OF ECONOMETRIC MODELS – ALBANIA

The construction of the econometric model is carried out in order to determine how the dependent variable changes in changes in the independent variables. In this particular case the dependent and independent variables will be analyzed in pairs, as shown in table III & IV.

Table III - ALBANIA

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	ECONOMETRIC MODEL	NUMBERING
GDPPCAPAL	TURREVAL	$GDPPCAPAL_{it} = \beta_0 TURREVAL_{it} + \beta_1 + \varepsilon_0$	AA
IMPORTAL	TURREVAL	$IMPORTAL_{it} = \beta_0 TURREVAL_{it} + \beta_1 + \varepsilon_0$	BA
FPCONSUAL	TURREVAL	$FPCONSUAL_{it} = \beta_0 TURREVAL_{it} + \beta_1 + \varepsilon_0$	GA
FGCONSUAL	TURREVAL	$FGCONSUAL_{it} = \beta_0 TURREVAL_{it} + \beta_1 + \varepsilon_0$	DA

Table IV – CROATIA

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	ECONOMETRIC MODEL	NUMBERING
GDPPCAPCR	TURREVCR	$GDPPCAPCR_{it} = \beta_0 TURREVCR_{it} + \beta_1 + \varepsilon_0$	AA'
IMPORTCR	TURREVCR	$IMPORTCR_{it} = \beta_0 TURREVCR_{it} + \beta_1 + \varepsilon_0$	BA'
FPCONSUCR	TURREVCR	$FPCONSUCR_{it} = \beta_0 TURREVCR_{it} + \beta_1 + \varepsilon_0$	GA'
FGCONSUCR	TURREVCR	$FGCONSUCR_{it} = \beta_0 TURREVCR_{it} + \beta_1 + \varepsilon_0$	DA'

IV. METHODOLOGY

In the present study, the construction of the econometric models is carried out through the least squares methodology. The reasoning is based on the analysis of a group consisting of two variables that acquire different properties. The first variable is called the independent or (interpretive) variable, while the second variable is called

³ <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD>

the dependent or (response) variable. It is noted that the reliability of the specific methodology depends on the satisfaction of specific conditions⁴. In particular, these are the tests of the normality of the residuals, Jarque Bera and Shapiro Wilk, while the heteroscedasticity is checked with the Breusch-Pagan test. At the same time, the correlation test of the variables was carried out when using the models as well as the variance inflation factor, "vif". (Lynch A.D, pp 1-56). In all cases the variables did not need to be transformed, based on logarithms and were used in their original form, since no asymmetry problems were identified.

V. RESULTS – ALBANIA

Table V shows the results after processing the variables of table I, for the country of Albania.

Table V

ECONOMETRIC MODEL	COEFFICIENT R ²	NUMBERING
$GDPPCAPAL_{it} = 1.98TURREVAL_{it} + 671,18$	98,00%	AA
$IMPORTAL_{it} = 2.80TURREVAL_{it} + 852.26$	95.85%	BA
$FPCONSUAL_{it} = 4.37TURREVAL_{it} + 1972.24$	97.78%	ΓA
$FGCONSUAL_{it} = 0.63TURREVAL_{it} + 233.52$	97.84%	ΔA

The first econometric model presents the variable of gross domestic product per capita and tourism revenue. The coefficient R² captures the amount of change in the gross domestic product per capita, which is interpreted by tourism revenues and which amounts to 98%. This rate expresses the amount of change in the variable "GDPPCAPAL" which is interpreted by the variable "TURREVAL" In this case 98% of the change in the gross domestic product per capita is explained by tourism income. An important relationship between the two variables, and based on the form taken by the linear model AA, is reflected by the view that a unit change in the explanatory variable, i.e. tourism revenue, increases the gross domestic product per capita by 1.98 units.⁵ Next, the econometric model of imports and tourism revenues is presented, with a coefficient of R², equal to 95.85%, while a change in tourism revenues by one unit causes an increase in imports by 2.80 units. Following this assumption, either tourism in Albania causes the import of products from the countries where the foreign visitors come from, or the increase in the per capita gross domestic product causes additional needs for foreign consumer goods. In any case, the creation of additional demand for foreign consumer goods as a cause of tourist flows requires further analysis, which is outside the scope of this study.

Knowing, from economic theory, that private consumption is a function of income⁶, the assumption that an increase of one unit in tourism revenue causes an increase in consumption by 4.37 units, translates into the thought that a part of tourism revenue in Albania is converted into individual income, at least to a higher degree than that of Croatia, as we will see in the analysis of the specific country. This is an interesting finding and this is because we identify a mechanism of tourism organization in Albania, where it allows, at least for the period under consideration, to convert part of the tourism revenue into individual income.

The final variable to be examined is general government consumption relative to tourism revenue. The R² coefficient takes a value equal to 97.74%, capturing the amount of change in general government consumption that is explained by tourism revenue. At the same time, based on the econometric model, it is also reflected the theory that for a unit change in the explanatory variable, i.e. tourism revenue, the consumption of the general government increases by 0.63 units, a very small amount in relation to the amount of private consumption.

⁴ Adequacy conditions of the models were checked based on the appropriate statistical tests and not based on graphic representation. In one case, an econometric model presented a value just below the heteroskedasticity threshold value. For this reason, the quantile linear regression methodology was performed with the same results, therefore it was considered that the threshold value does not affect the linear model.

⁵ This is the slope of the linear model

⁶ $C = C(Y_d)$, (Blancard O, pp 198-234)

VI. RESULTS – CROATIA

Table VI shows the results after processing the variables of table II, for the country of Croatia.

Table VI

ECONOMETRIC MODEL	COEFFICIENT R ²	NUMBERING
$GDPPCAPCR_{it} = 1.18TURREVCR_{it} + 2.208$	95.32%	AA
$IMPORTCR_{it} = 2.37TURREVCR_{it} + 2.903$	97.74%	BA
$FPCONSCRL_{it} = 2.67TURREVCR_{it} + 8.380$	91.10%	ΓA
$FGCONSUCR_{it} = 0.94TURREVCR_{it} + 2.867$	87.33%	ΔA

The first econometric model for Croatia presents the variables of gross domestic product per capita and tourism revenue. The R² coefficient captures the amount of change in gross domestic product per capita explained by tourism revenue, which amounts to 95.32%, while a unit change in the explanatory variable, i.e. tourism revenue, increases gross per capita domestic product by 1.18 units. In relation to Albania, there is a small change in the degree of absorption of tourism revenue in per capita gross domestic product, by 0.80 units of increase per one unit of increase in tourism revenue.

Next, the econometric model of imports and tourism revenues is presented, with a coefficient of R², equal to 97.74%, while a change in tourism revenues by one unit causes an increase in imports by 2.37 units. This assumption translates that a unit change in tourism revenue in Croatia causes import by 2.37 units.

The third econometric model of Croatia constitutes an interesting case in relation to the corresponding econometric model of Albania. According to the results for Croatia, a one-unit increase in tourism revenue causes a 2.67-unit increase in private consumption. In other words, we observe that the private consumption in Croatia, as a result of tourism revenue, is 1.70 units lower, per unit of tourism revenue, than the private consumption in Albania. Given the view of economic theory, that consumption is a direct function of disposable income, we conclude that individual disposable income in Croatia, as a result of tourism income, is lower.

The final variable to be examined is general government consumption relative to tourism revenue. The coefficient R² takes a value equal to 87.33%, reflecting the amount of change in the consumption of the general government, which is interpreted by the tourism revenues and at the same time it also reflects the view that a unit change in the explanatory variable, i.e. tourism revenues, increases general government consumption by 0.94 points

VII. CONCLUSIONS OF ECONOMETRIC ANALYSIS

According to the results of the econometric models, small differences are found in the changes in the gross domestic product per capita, imports and consumption of the general government, per unit of change in tourism revenues. The only main difference between the two countries is found, among the variables of final consumption per unit of tourism revenue, a difference in favor of Albania, for the period under consideration 1995-2019. It has the potential to convert tourism revenue into a higher private consumption and therefore in higher disposable income, compared to Croatia.

Possible causes according to the economic theory are sought in the preferences of the citizens for consumption, in the disposition to save, in determining the price of the products. That being so, only through a multidimensional economic analysis, it might be possible to identify such considerations and a different degree of their impact, between Albania and Croatia. However, it is noted that such an analysis, on the one hand, goes beyond the limits of the present work and, on the other hand, it is subject to the limitation that it refers only to one of the productive sectors of the countries we are examining, the tourism sector, and not to the entire production process.

Based on this perspective, we will try, given the assumption that all the above versions remain stable for the two countries, to look for a possible cause⁷, based on the available empirical data on the course of tourism investments and the way in which they were carried out in tourism sector of the countries under consideration.

⁷It is noted that the least squares analysis, as has already been said, captures the amount of change in the dependent variable, in this case private consumption, which is interpreted by the variable of tourist flows. Because the econometric model presents a very high degree of interpretation, around 98%, we tried to search and record empirically the cause or causes of the specific result. An alternative to the least squares methodology

VIII. EMPIRICAL ANALYSIS OF ALBANIA

In particular, Albania, in the year 1993, had only 27 hotel units, while their capacity reached 3,000 beds. After 2000, Albania begins to gradually invest in the tourism sector, with the construction of small capacity hotel units, one to twenty rooms. Thus, the number of hotel units also increases, reaching 260 in 2003, and to triple by 2005. A percentage of the order of 80% of these hotel units had a low capacity, one to twenty rooms. (Vodenska Maria, pp 17)

The privatization of medium and large state-owned enterprises using the mass method did not have results as positive as the privatization of small ones did. Of the 800 companies that were initially announced to be privatized, only 97 were privatized (3 belonged to the tourism sector). (Antzela Kapourani , Miltiadis Botsis, Albania Under Transition; The Tourism Sector From 1991 To 2001)

A characteristic feature of the hotel investments is that only the 30 hotel units had been categorized and only three of them had a five-star classification, while only two hotels were managed by international companies in the tourism sector. At the same time, too many accommodations, especially in coastal areas, had the form of family businesses, even small hotel units, only managed by families, without wanting the involvement of other persons. (Vodenska Maria pp 19-20)

An impressive upward trend in hotel tourism investments and constructions has been detected in recent years. The tourist structures for the year 2021 appear to have increased by a percentage that reaches 70%, in relation to the year 2010. The impressive growth rate of the increase in hotel infrastructure is identified with the parallel increase in rooms and beds, while for year 2019, a record investment in the construction hotel industry, worth 110 million euros, distributed in 67 hotel units, with a total area of 419 thousand square meters. In addition, the entry of international hotel chains has been felt since 2018, doubling the hotel infrastructure within a year. It seems that hotel investments are mainly found in recent years, since the number of beds for the year 2020 amounts to 82,434 compared to the year 2017, which reached 42,630 beds. (Odetta 1, pp 27).

IX. CONCLUSIONS OF THE EMPIRICAL ANALYSIS OF ALBANIA

In the greater part of the time period under review, 1995-2019, there is no corresponding doubling of hotel beds for the country, a feature that advocates the sharp entry of tourist investment product in the area in recent years. The identification of the strong presence of investors in the tourism industry in recent years is also verified by the introduction of tax reliefs from 01/2018, related to the taxation of the construction of five-star hotels, provided that their owners will possess a recognized trademark.

The above data prove that the tourism industry and investments in tourism constructions in Albania were slow to start and for most of the time period under review (1995-2019), tourism could be characterized as more of a local geographical affair than a matter of large multinationals tourist companies. Essentially, it is a gradual and rather slow transition of small local hotel units or family businesses to large multinational chains in the tourism product sector.

X. EMPIRICAL ANALYSIS – CROATIA

Croatia recorded 576,000 hotel beds in 1992, while in 2002 this number reached 804,000 hotel beds. It is characteristic that for the time period 1993-2001, while the annual increase of the country's gross domestic product amounts to 8.17%, the corresponding increase in the hotel sector and restaurants amounts to 10.60%. (Grzinic J, pp 130) In addition, it should be noted that the investment level of hotel units for 2006 shows an increase of 85% compared to the year 2005. A parallel finding is found in the investments in the hotel industry between 2000-2006. For the year 2000, hotel investments amount to 1.3 billion⁸kunas, while for the year 2006, this amount jumps to 8 billion. Realizing the exchange rate in euros, we notice that for the year 2000, tourist investments in Croatia amount to 169 million euros, while for the year 2006, they amount to 1,040 billion. Euro. It is characteristic that between the years 2005-2006, investments in Croatia increased by 18.9%, while in the tourism sector they increased by 73.80%. (Grzinic J, pp 131).

In conclusion, the comparative empirical analysis between the two countries reflects the different approach to tourism investments, with Albania following more of an approach of small-sized hotel units in the

is the mathematical determination of the existence of probable cause, which is beyond the scope of the present study, requires other methodological tools, such as Granger causality analysis.

⁸ It is the national currency of Croatia, after its accession to the Euro in 2023. The exchange rate in relation to one unit of the euro is 7.6 kunas

form of family businesses, while Croatia seems to receive a significant inflow of funds for investment projects in the tourism industry, with the creation of large hotel units.

XI. CONCLUSIONS – DISCUSSION

From the empirical evidence, it is evident that the entry of investors into the Croatian tourism industry comes much faster in time and to a greater extent than in Albania. Also, a different degree of tourist development, more organized in terms of investment and targeted at the needs of tourist demand in Croatia compared to Albania, is found, which for the most part of the time period under investigation, seems to follow a structure, with elements of internal tourist investment limited to contexts of small hotel units and family businesses.

Therefore, with the admission of the different change of private consumption in the change of tourism revenues, between the two countries, and given the differentiated picture between the investment level in the tourism sector, the strengthened opinion is that, the tourism investments for the specific time period and the way they were carried out in the specific geographical areas, they can shape the individual consumption and therefore the available individual income differently.

The specific consideration lies in the way the tourist product is exploited and the extent to which investments in this production sector are made, from the perspective of labor relations, the number of local workers, the degree of consumption of local products, the control of tourist flows from large multinationals active on this specific production sector.

This consideration, which can be approached in the context of dependence, since the intensity of investments and the form in which they are carried out, seem to differentiate the final consumption and disposable income between the two countries.

XII. LIMITATIONS – EPILOGUE

The econometric models, as we have already mentioned, are based on the least squares methodology and based on the results, they are highly accurate, meeting the conditions of their application. A limitation of the present study could be characterized as the degree of strength of the empirical justification of the relationship between the type of investments or the degree to which they are used in the tourism sector, in combination with the results of the construction of the econometric models. From the point of view of the econometric models, a significant differentiation is found in the absorption of tourism revenues and their conversion into disposable income, through consumption. On the other hand, we observe an empirical justification which tries to answer "why" this differentiation occurs. Given that the tourism sector constitutes one of the production sectors of a country's economy, similar economic sectors are involved and negotiated. The specific finding combined with the identification of asymmetric information in the tourism activity requires the application of general equilibrium models, which take micro-economic parameters, as a whole, recommending the most correct methodology for determining economic variables and their interactions.

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