

## ESTIMATING THE EFFECTS OF FISCAL POLICY ON THE PRIVATE

### CONSUMPTION: EVIDENCE FROM ALBANIA

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#### ABSTRACT

In this paper we investigate the relationship between fiscal policy and consumption in Albania during the period 2000-2016. An increase in the budget deficit will cause an increase in the aggregate demand and domestic real interest rates according to Keynes (1936). Keynesian economists argue that deficits do not need to crowd out private investment. Therefore, a substitution of debt for taxes has a positive influence on private consumption and aggregate demand. Furthermore, according to the Neo-Classical point of view, a country experiencing a financial crisis resulting from chronic, excessive current account deficits may face a situation in which large injections of public funds are required to restore troubled financial sectors, and to attenuate a recession. These different views yield very different policy implications.

In this paper, we use for the static multiple regression models and Granger causality. The data have been derived from World Bank, Eurostat and INSTAT. Our empirical approach is based on two different equations; the one measuring the current account balance (CA) and the other measuring the private consumption (C). In the models we use control variables such as; fiscal deficit, government consumption, public debt, income growth, and population growth.

**Keywords:** *private consumption, fiscal policy, current account, Granger causality*

**JEL Classification:** *E21, E32, C31*

#### 1. Introduction

Fiscal policy is an important determinant of economic developments and often government decisions on spending and taxes are assigned a crucial role in speeding up or slowing down economic growth.

Macroeconomic implications of fiscal shocks are subject to debate. Neoclassical models predict a positive fiscal multiplier due to a wealth effect on labor supply but an always contractionary impact on private demand, such that the multiplier tends to be less than unity. In contrast, models built around Keynesian theories allow for output to be partly determined by demand, and under certain conditions, this can lead to a multiplier greater than one. A crucial component of the conclusions derived from those theories is how consumers respond to government spending increases. The fall in private consumption crowds out the expansionary effects of fiscal policy, resulting in only a modest increase in the aggregate demand.

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These opposing views regarding the effectiveness of fiscal policy are explained by very different assumptions that support different theories; for example, assumptions about the rigidity of markets, the existence of financial constraints in the economy, economic agents' degree of myopia and so forth. Therefore, the question about consumers' response to fiscal policy is, in the end, an empirical one.

### 1.1. Literature review

Effects of fiscal policy on private consumption: evidence from structural-balance fiscal rule deviations, is studied by Juan A. Correa, Christian Ferrada, Pablo Gutiérrez and Francisco Parro (2014), using a narrative approach in the spirit of Ramey and Shapiro (1998) to test the existence of Ricardian effects of fiscal shocks. They study the effect of three fiscal announcements of expansionary deviations from a structural-balance fiscal rule on private consumption in a small and open economy. Controlling for the macroeconomic conditions, they find a negative response of private consumption. When the government announces expansions of fiscal spending, rational individuals expect higher taxes in the near future and thus decrease their current level of consumption in response to the negative wealth effect.

Ramey and Shapiro (1998) have found that works based on narrative methods find a decline in private consumption following a fiscal expansion, supporting the existence of Ricardian agents. But the Blanchard and Perotti (2002), Galí et al. (2007), Perotti (2008), Mountford and Uhlig (2009), Auerbach and Gorodnichenko (2010), Gordon and Krenn (2010), Céspedes et al. (2011) and Caldara and Kamps (2012), using techniques based on vector autoregressive (VAR) methods, found that some works derive positive effects of fiscal spending expansions on private consumption.

Using data from the European countries for the period 1970-2010 Magazzino (2012) investigated the effects of fiscal deficit on trade balance and private consumption. He found that a one per cent increase in the fiscal deficit/GDP ratio tends to deteriorate the current account/GDP ratio of 0.21 per cent, although it promotes private consumption of 0.21 per cent. Yet, the dynamic estimates reach contrasting results, so that his conclusions largely depend on which estimator he chooses.

Mañcellari (2011) studied the effects of Fiscal Policy in Albania based on a model with four macroeconomics variables, namely Fiscal Policy, Gross Domestic Product (GDP), interest rates and the prices level, through a SVAR and impulse responses approach. The analysis was based on the methodology developed by (Blanchard & Perotti, 2002). The main findings of her study was that Fiscal Policy does affect economic activity, cuts in tax burden have the highest cumulative GDP multiplier and the GDP multiplier of capital expenditure is greater than current expenditure multiplier.

Also, Gjokuta (2013), differently from Mañcellari (2011), studied the Fiscal Policy and economic growth in various ways. He considered Fiscal Policy as endogenous and was based on a different endogenous economic growth model. On this approach this paper incorporated the public sector, Fiscal Policy, into the Solow Growth Model.

According to a study made by (Nakagawa, 1999) that analyze the importance of the different types of uncertainty on the household saving rate in the Japan according to the age and incomes, income risk is important for the low to middle income. Also it suggest that stagnation of household disposable income and the decline in household wealth have been the main causes of the stagnation of household consumption during the 1990s and early 2000s in Japan and

increased uncertainty about the future does not affect a major cause of the stagnation of household consumption.

The lack of the previous research focused on the interaction between fiscal policy and the private consumption in Albania, served us as a motivator for further investigation on this relationship. We examine how fiscal policy affects the consumption relying on previous international empirical studies.

## 1.2. Some fiscal data for the Europe, EU countries, and Adriatic and Ionian Region, compare with Albanian fiscal data

The fiscal policies' architecture of the European Union aims to build a robust and effective framework for the coordination and surveillance of the fiscal policies of the Member States. The 2011-2013 reforms of the structure are a direct response to the sovereign debt crisis, which showed the need for stricter rules, considering the spill over effects from unsustainable public finances within the euro area. The revised framework therefore draws on the experiences of the initial design failures of the European Monetary Union and attempts to reinforce the guiding principle of sound public finances.

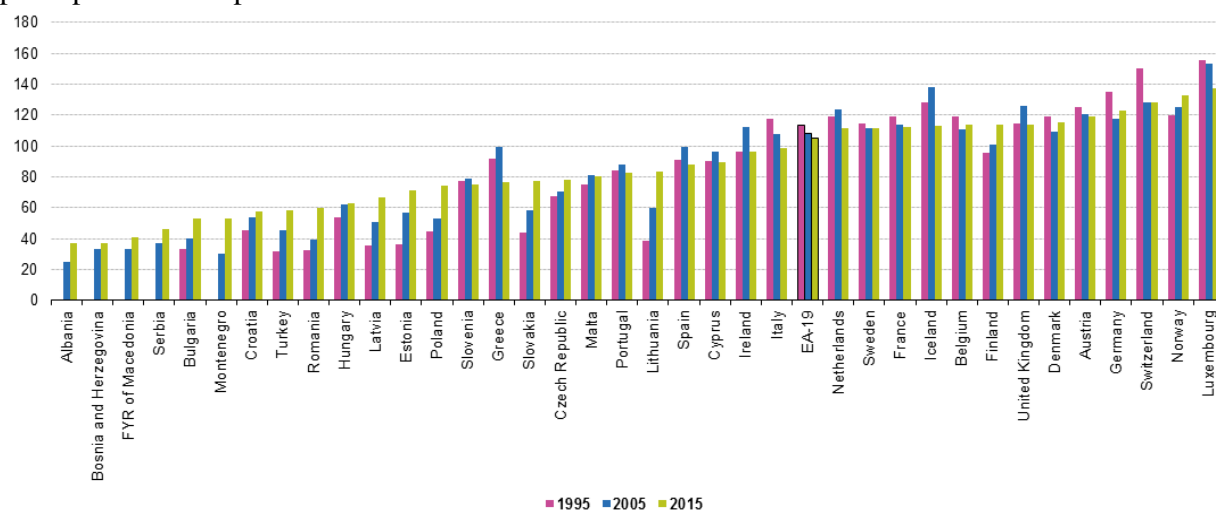


Fig. 1. AIC (Actual Individual Consumption) per capita in the long run, in Europe.

Source: Eurostat

Figure shows the volume indices of AIC per capita for the years 1995, 2005 and 2015 (with EU-28=100) and demonstrates the "catching-up" of the countries that became EU Member States in 2004 and 2007, as well as of the candidate and potential candidate countries, with the "old" Member States during this time period. The former countries nearly all demonstrate significant increases in the level of AIC per capita relative to the EU28. The exceptions are the countries that already had a relatively high AIC per capita in 1995, such as Malta and Cyprus. Furthermore, the effects of the economic crisis are visible, for example in the data for Greece, Ireland and Iceland, that show a healthy increase between 1995 and 2005, but a significant decrease between 2005 and 2015.

The evolution of Gross Domestic Product (GDP) in the AIR (Adriatic and Ionian Region) in recent years has resulted in general in an increasing divergence of the AIR from EU-28 average GDP per capita, despite the decreasing population. GDP data in Fig. 2 demonstrates the decline of GDP versus minimal GDP growth in the EU. In 2013 only Albania, Bosnia and Herzegovina,

Montenegro and Serbia were closer to the EU-28 average than in 2005. These countries have very small economies and low GDP per capita. The Progress made by these countries is much less in absolute terms than the decrease of economic activity in the larger economies of Italy, Greece and Slovenia. Italy has fallen from above to below the EU-28 average, while the gap between Greece and the EU-28 average increased from only 10 % in 2005 to almost 30 % in 2013.

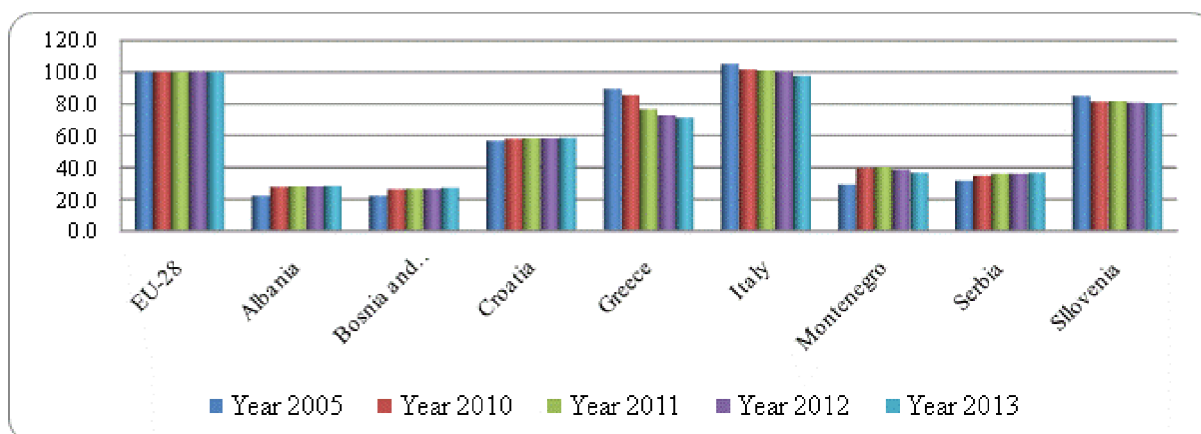


Fig. 2. Gross Domestic Product per capita at PPP (Purchasing Power Parity) in AIR relative to EU-28-100

Source: European Parliament

In 2013 Italian GDP and population density in Italy are many times larger than in the other AIR countries: Italy's GDP density is for example almost seven times that of Croatia and 12 times that of Serbia. Slovenia is the only country that demonstrates a positive foreign trade balance due to its exceptionally good terms of trade with other former Yugoslavia economies. Montenegro outperforms the entire AIR in terms of relative volume of foreign direct investment (FDI). Albania has achieved a steady rise in FDI inflow, from 3 % of GDP in 2005 to almost 10 % in 2013, and its economic performance exhibits growth in GDP, foreign direct investment, stock gross debt and gross external debt, as well as high gross value added in construction and agriculture, but it is still a very poor economy by European standards. Albania is largely excluded from international markets, a fact that has mitigated the impact of the 2008 financial crisis on its economy. It has continued its own economic development path, outperforming Bosnia and Herzegovina and Montenegro in terms of density of economic activity as well as in relative GDP per capita, even though their position in 2005 was almost identical.

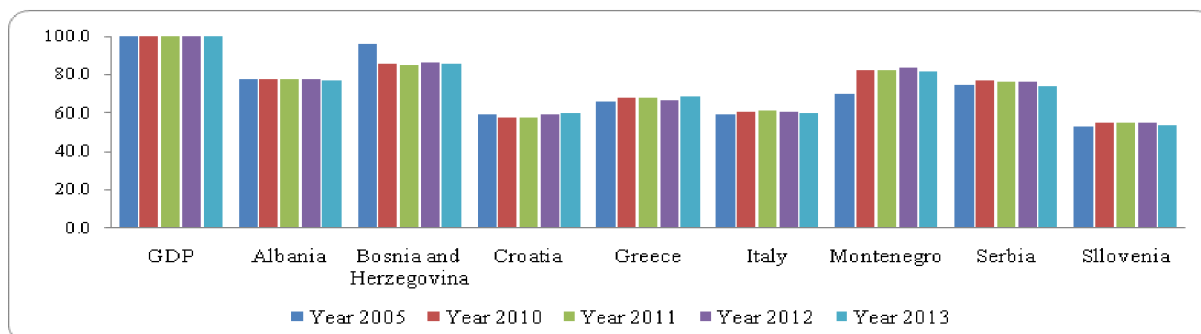


Fig. 3. Final consumption expenditures of households (shares in % of GDP), AIR

Source: Eurostat

The economic performance of Bosnia and Herzegovina in contrast to its complex political situation. The country is improving in terms of GDP, FDI stock and employment; it has reduced imports in order to improve the foreign trade balance and achieve a decrease in domestic spending. Croatia continues to leverage its GDP formation by increasing its debt and improving its trade balance: it now has a positive trade balance and its tourism performance is improving thanks to investment inflow and lower energy prices.

**Table 1.** Current account, % of GDP, Adriatic and Ionian Region

COUNTRY	2005	2010	2011	2012	2013
Albania	-9.0	-11.3	-13.2	-10.2	-10.6
Bosnia and Herzegovina	n.a	-6.2	-9.6	-9.2	-5.9
Croatia	-5.2	-1.1	-0.8	-0.1	0.9
Greece	n.a	-9.9	-9.9	-2.4	-0.6
Italy	-0.9	-3.5	-3.1	-0.5	1.0
Montenegro	-16.6	-22.9	-17.7	-18.7	-14.6
Serbia	-8.4	-6.3	-8.6	-11.5	-6.1
Slovenia	n.a	-0.1	0.2	2.6	5.6

**Source:** Eurostat

Despite the economic crisis, Serbia has improved its GDP per capita (at PPP) in relation to the EU-28, from 31.5 % in 2005 to 36.7 % in 2013. Gross capital formation has declined as a share in GDP while foreign trade has increased. Serbia also now has a higher foreign debt to GDP ratio. In Greece, GDP per capita (at PPP) relative to the EU-28 average has fallen from 89.5 % to only 71.5 %.

**Table 2.** GDP per capita at PPP (EUR at current PPP), Adriatic and Ionian Region

COUNTRY	2005	2010	2011	2012	2013
Albania	5 200	7 100	7 400	7 500	7 600
Bosnia and Herzegovina	5 200	6 700	7 000	7 100	7 300
Croatia	13 400	14 900	15 400	15 700	15 800
Greece	21 000	22 000	20 300	19 600	19 300
Italy	24 700	26 200	26 700	26 900	26 400
Montenegro	6 900	10 200	10 600	10 400	10 700
Serbia	7 400	9 000	9 500	9 700	9 900
Slovenia	20 000	21 000	21 600	21 800	21 800

**Source:** Eurostat

### 1.3. Fiscal Policy in Albania, recent economic developments

After Albania emerged from 50 years of communist rule, the transition from a centrally planned to a market-oriented economy, together with abundant international aid and other strategic assistance helped Albania to make progress. On account of strong growth performance, Albania grew from the poorest nation in Europe in the early 1990s to middle-income status in 2008, with poverty declining by half during that period. By the end of the 1990s and during the last decade, Albanian economic policies aimed at maintaining macroeconomic stability, enabling poverty-

reducing and non-inflationary economic growth policies and achieving fiscal consolidation through budget deficit and public debt reduction. Public finance was subject to major reformation aiming at government expenditure cuts and boosting revenues.

Recognizing these challenges, the Government of Albania in 2014 embarked on a broad-based reform program focused on macroeconomic and fiscal sustainability, financial sector stabilization, energy concerns, pensions, and territorial administration. This program is based on fundamental reform of tax system, and tax administration, as a supplementary supporting package. The last system has been in force since 2008, which mostly was attributed the flat tax rate and some other fiscal facilities for different sectors of goods and services. The new regulatory fiscal reform is based on progressive taxation rate for direct taxes (corporate and personal income taxation), maintaining the same Value Added Tax. Significant progress propelled by the on-going reforms has created the conditions for rebounding business confidence and domestic demand, including early signs of increased investment and an export-led recovery. Maintaining the reform momentum and implementation is critical for Albania's continued economic growth and its aspirations for European Union (EU) integration.

Albania's economy continued to expand in 2016, supported by robust private investment and a recovery in consumption. Economic growth is reflected in the higher labor force participation as jobs have opened up. Net external trade continues to undermine growth, however, because of falling commodity prices hitting exports and an uptick in investment-related imports.

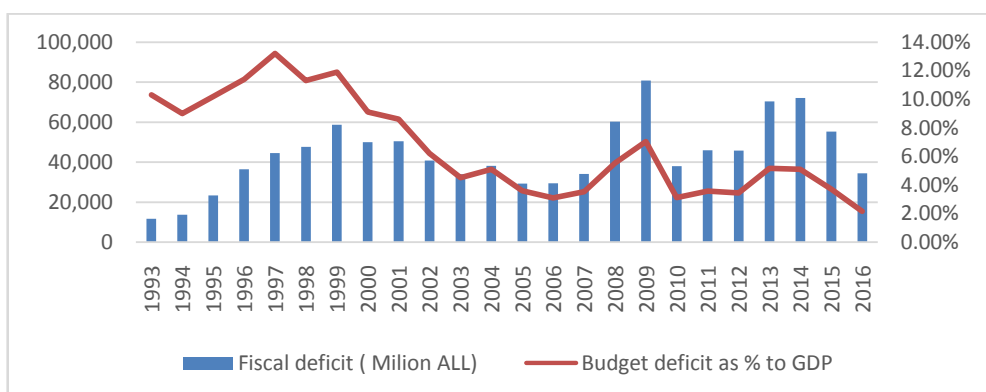


Fig. 4. Budget deficit (in Million All) as % to GDP (1993-2016)

Source: Bank of Albania and Ministry of Finance

Fiscal consolidation has continued in 2016, leading to a decline in the public debt-to-GDP ratio for the first time since the global crisis. The fiscal balance improved as more revenue was collected and capital spending declined. The budget deficit reached 2.16% of GDP in 2016, down from 5.1% in 2014 and 3.71 in 2015, helped by a strong revenue performance, controlled current spending, and lower capital spending. The public debt-to-GDP ratio in 2015 was 72.7% and the aim for 2016 was to decline to 72.5% of GDP. The current fiscal deficit is projected to expand in 2016, but it will continue to be financed primarily by foreign direct investment (FDI) inflows and external public borrowing. After narrowing to 11.7% of GDP in 2015, the current account deficit is expected to reach 13% in 2016, led by a worsening balance of trade in goods and services. Economic growth, combined with labor market trends and patterns, is estimated to have reduced poverty and promoted inclusion. Albania has benefited from positive job creation. Labor markets have continued to improve steadily, with employment growing by 6.7% in annual

terms in the second quarter of 2016. Better employment outcomes are the result of a reduction in unemployment as well as higher labor force participation rates.

During the period of January 2015- December 2015, INSTAT conducted the Household Budget Survey (HBS) on a sample size of 7,335 private households, which ensures the description of consumption expenditures of the households that were usual residents in Albania during that year. In the reference period, the monthly expenditures are estimated to be about 70,766 ALL taking into account that a household is composed by 4 persons on average.

In 2015, the total amount of monthly consumption expenditures of households from the survey is estimated at about 54 billion ALL. The number of Albanian households in the same year is estimated at about 764,115. Considering the per capita monthly consumption expenditures in the one year period of the survey, an individual in Albania spends on average about 18,600 ALL, of which 9,100 ALL are spend for food and 9,500 for non-food consumption.

The group “Food and non-alcoholic beverages” remains an important element in the household’s budget, estimated at 48.7 percent of the total consumption expenditure. Three subgroups also in 2015 like in previous years can be distinguished within this group, with the largest share: “milk and milk products/derives eggs” (18.8 percent of the budget within this group), “meat and its products” (17.4 percent of the budget within this group) and “bread and cereals” (17.0 percent of the budget within this group). The following subgroups are “vegetables” with 13.3 percent and “fruits” with 7.9 percent within the group.

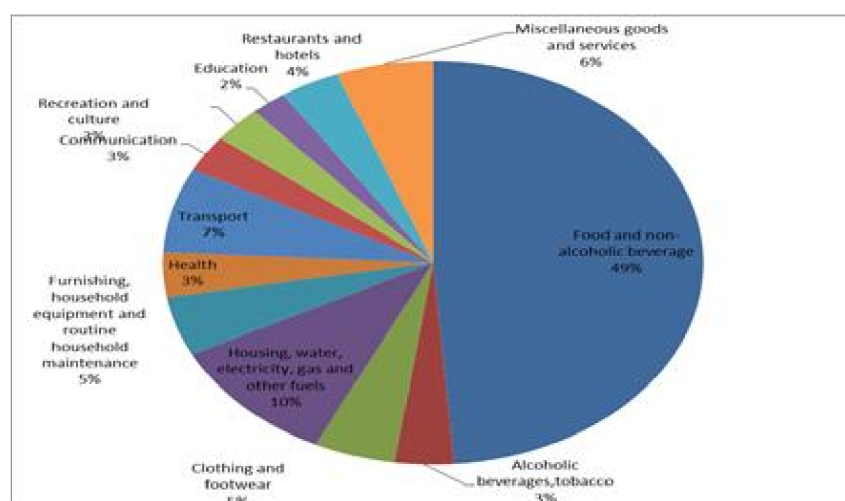


Fig. 5. The structure of consumption expenditures, 2015

Source: Household Budget Survey, 2015

## 2. Methodology and Data

To check to what extent the relationship between fiscal policy and private consumption in Albania is observed we statistically test the following equations (Magazzino, 2012):

$$CA_t = \beta_0 + \beta_1 Def_t + \beta_2 GC_t + \beta_3 Debt_t + \beta_4 YG_t + \beta_5 PG_t \quad (1)$$

$$C_t = \alpha_0 + \alpha_1 Def_t + \alpha_2 GC_t + \alpha_3 Debt_t + \alpha_4 YG_t + \alpha_5 PG_t \quad (2)$$

**Table 3.** Definition and construction of variables

<b>Variables</b>	<b>Definition and construction</b>
<i>Dependent variable</i>	
CA	Current account balance, % of GDP
C	Private consumption, % of GDP
<i>Explanatory variables</i>	
Def	Fiscal deficit, % of GDP
GC	Government consumption, % of GDP
Debt	Public debt, % of GDP
YG	GDP growth, annual %
PG	Population growth, annual %

In Table 3 we give definitions of the variables. The data are obtained from World Development Indicators (WDI) database of the World Bank for the period 2000 to 2016.

The analysis of the correlation between the variables identified has been achieved through the Pearson correlation coefficient (R) that shows the intensity and direction of the correlation as shown in Table 4.

**Table 4.** Correlation Matrix

	CA	C	Def	GC	Debt	YG	PG
CA	1.00						
C	0.45	1.00					
Def	0.83	-0.03	1.00				
GC	-0.24	-0.31	-0.25	1.00			
Debt	0.62	0.26	0.11	-0.23	1.00		
YG	0.03	0.05	0.04	-0.12	0.04	1.00	
PG	0.73	0.21	0.34	-0.11	0.07	0.22	1.00

### 3. Empirical results

Table 5 presents the estimated results of the model of equation (1) and (2) by using a static multiple regression. The two separate columns indicate the fact that we conducted two separate regressions separately for the current account and private consumption in order to capture the eventual differences.



**Table 5.** Estimation Results

<b>Explanatory variables</b>	<b>CA</b>	<b>C</b>
<b>Def</b>	-0.002* (0.073)	0.003*** (0.000)
<b>GC</b>	-0.235*** (0.000)	0.310*** (0.002)
<b>Debt</b>	-0.036** (0.072)	0.025*** (0.003)
<b>YG</b>	0.010 (0.523)	0.023** (0.021)
<b>PG</b>	0.081 (0.751)	0.073 (0.834)
<b>Constant</b>	0.032** (0.004)	0.041** (0.007)
<b>F</b>	4.65 (0.0032)	4.87 (0.0024)
<b>R square</b>	0.326	0.410
<b>Wald test</b>	1.000	1.000

Note: For the diagnostic test P-values are reported. Significance levels \*, \*\*, and \*\*\* respectively 10%, 5%, and 1%.

Table suggests that, where the dependent variable is CA, the coefficient of fiscal deficit is negative and statistically significant, supporting the conventional hypothesis. Thus, a one percent increase in the fiscal deficit tends to decrease the current account by around 0.2 percent. While for the private consumption the direction of the relationship is inverse and statistically significant.

Moreover, from the list of the explanatory variables Government consumption and Debt negatively affect the current account. These results are in line with the empirical results obtained in other economic contexts. On the other hand, Income and Population growth are not statistically significant.

On the other hand we can notice the positive and statistically significant relationship of private consumption with deficit, government consumption, and debt. In line with the theory is the positive relationship between GDP growth and private consumption.

To further investigate on the robustness of our results we examined the causal link between Deficit and Private Consumption based on Granger causality test. According to Granger a time series  $X_t$  causes another time series  $Y_t$ . If current  $Y_t$  can be predicted better using past values of  $X_t$ , than by not doing so then all other relevant information like past  $Y_t$  is taken into consideration in both case. Appropriate lag lengths of relevant variables for tests of causality were determined by Akaike's Final Prediction Error.

**Table 6.** Granger Test Estimations

<b>Causality test</b>	<b>Number of lags</b>	<b>F-statistics</b>	<b>Probability</b>	<b>Chi-square</b>	<b>Probability</b>
<i>C does not Granger cause Deficit</i>	4	1.32	0.41	4.23	0.22
<i>Deficit does not Granger cause C</i>	4	1.86	0.11	5.57*	0.08

Note: \*\*\*, \*\*, and \* indicate statistical significance respectively at 1,5, and 10 percent level or better.

While the F-statistics as well as the associated probabilities does not allow us to reject the null hypothesis of no bi-directional causality between Private consumption and Deficit, the chi-square shows a rejection of the null hypothesis. This means that while Private consumption granger causes the Deficit growth, the inverse is not statistically significant.

#### 4. Concluding Remarks

In this article we empirically investigate the relationship between the private consumption and fiscal policy in Albania by using the static multiple regressions for data over the period 2000-2016. In our study we conduct separate estimations for dependent variable Current account and Private consumption. Among the main results obtained, in the first model we have found evidence of a negative effect of the deficit on the current account which is in line with the traditional theory. Moreover, we find evidence that, current account is negatively affected by government consumption, and the debt.

In addition, this study also offers several useful insights for policy-makers and researchers. First, our findings have an important implication in terms of policy recommendations. Private consumption is positively affected by the government spending, income growth, and deficit. Second, policy-makers also need to anticipate the country's demographic structure and income level. However, further research of the issue of how private consumption promotes economic growth in Albania should be on the focus of researchers.

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