THE IMPACT OF FISCAL POLICIES ON ALBANIAN ECONOMIC GROWTH: THE CASE OF VALUE-ADDED TAX

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Abstract

This paper aims to give an overview and examine the effects of value-added tax (VAT) income as one of the main elements of fiscal policies on Albanian economic growth GDP (Demi, Hysa, & Nanaj, 2018), for the period 1999–2019, considering also the implementation of VAT legislation rules. The quantitative analysis methods are used in this study based on the wide range of theoretical and practical cases obtained from the literature to figure out the existing link between VAT as the explanatory variable and GDP as the explained variable. Based on empirical testing hypotheses on the importance of econometric models, the statistical information was selected by public institutions in Albania and the data is in the form of time series, often self-correlated from period to period. This feature was considered to avoid the consequences caused by autocorrelation and following the detection, the corrective measures were taken, in order for the statistical inference to be as objective as possible. Finally, this paper argues that VAT rules are considered a very important element for the Albanian economy, and the relevance of this study is to serve policymakers in drafting fiscal policies in the function of economic growth (GDP) in the future.

Keywords: Fiscal Policy, Economic Development, Government Policies and Regulation, Public, Economics, Business Taxes and Subsidies, Dynamic Model

1. INTRODUCTION

Economic and fiscal reforms directly affect the financial performance of firms, bring less income to families, reduce welfare, and as well as to emerge the socio-economic problems, etc. In this point of view, there are analyzed the possible effects of VAT that refer to the economic growth in Albania, and the impact that brings through the transformation that VAT tax into the whole Albanian economy using

information from the public institutions (Ministry of Finance and Economy[1], General Tax Directorate in Albania[2], Institute of Statistics[3]).

This paper brings insights for other researchers in this field, preparing basic information for comparative studies with countries in the region and as well as the EU countries. Several previous studies considered that VAT directly contributes to public revenues by increasing or decreasing them correspondingly. According to Sufaj (2015), in a study for Albania, the same positive and significant relationship is found between public revenues and VAT through econometric analysis.

According to Cikalleshi (2013), if VAT is not administered properly, it might be transformed into a tax that deforms the tax system and impedes economic growth.

The way that VAT affects nominal GDP is the indirect way. Firstly, VAT contributes to public revenues transforming into productive expenditures increases the nominal GDP, and affects economic growth positively (Shijaku & Gjokuta, 2013).

Public expenditures in Albania are positively related to the economic growth of this country. Trebicka (2015), in her article, concluded that profit tax, government expenditure, and external debt have a positive impact on economic growth in Albania, so growth is positively affected by productive expenditure. In Albania, VAT is one of the main sources of income for the state budget with around 120 billion ALL (the currency of Albania — Albanian Lek) during 2016–2017. Demi, Hysa, and Nanaj (2018) analyze the importance of VAT as one of the main sources of Albanian state budget revenue and the factors influencing its efficiency.

Another author, Chiricu (2019), in a study for southern European countries, has found a significant positive impact of VAT on economic growth.

A study for OECD countries has found a negative relationship between total public debt and economic growth that sometimes is used to justify policies that assume that debt has a negative causal effect on economic growth (Panizza & Presbitero, 2014).

A related study has found significant negative long-run effects of public debt and inflation on growth, but they emphasize that there does not exist a threshold that might be considered as the limit to bring higher or lower economic growth (Chudik, Mohaddes, Pesaran, & Raissi, 2013).

According to Desai, Foley, and Hines (2004), taxes definitely influence the investors' behavior, meaning that higher taxes bring lower foreign direct investment.

Fiscal policy can be considered as one of the most significant mechanisms, to support the governments to the economic growth optimization and to the necessity to respond to the dynamic developments of the country. The purpose of this paper is to explore the dynamics of VAT as part of fiscal policies that occupies the main part of tax revenues, as it affects the final consumer every day is considered a fundamental pillar of Albania's economy.

Analyzing VAT decisions, it is noticed that changing one variable can bring other changes and take the wrong direction, so the fiscal policy is characterized as a delicate area of the economy that needs to be reviewed in detail. VAT revenues are converted into dollars, using the exchange rate 1$ = 100 lek (Albanian currency).

Also, this study brings the legislative changes for VAT, introducing the first moment of the implementation of financial instruments in the Republic of Albania, as a necessity of the time when the communist regime had just changed.

Through this study, we cared about the performance of VAT revenues, the performance of the tax administration in the collection of liabilities.

In the end, this research study aimed to offer suggestions and to be an orientation about the implementation of VAT for the tax administration and the tax system.

This paper contributes to encouraging the authors to further extend their research by making a comparative analysis of Albanian fiscal policies and economic growth with European and regional countries.

This paper — "The impact of fiscal policies on Albanian economic growth: The case of value-added tax" — also studies if VAT affects or is influenced by other fiscal components.

The purpose of this paper is to identify the factors that affect the total VAT revenues in Albania to find out the relation of dependence that exists in the country's economy.

The result of the paper provides an overview of the operation and impact of value-added tax on the economy and can serve the policymakers for a better administration of VAT and serves the managers of taxpayers, to plan the progress of financial performance in cases of VAT transformations.

The objectives of this study include reviewing the literature on the impact of VAT on GDP as well as the impact of fiscal policies on VAT revenues.

As argued by the authors, the impact of taxes plays an important role in a country's economy. The structure of this paper includes an introduction that presents the findings of the empirical literature. The literature review in Section 2 provides an explanation of the sources of data used. Section 3 presents the statistical data and the methodology applied. Then, the test results are presented in Section 4, continuing with discussion by objectively interpreted the achieved results. The findings and basic notes for further research are summarized in Section 5.

The sections used in this paper to propose corrected patterns of behavior by decision-making authorities in the service of the social good are as follows.

The literature review includes a theoretical conception that addresses the principles traditionally applied regarding the effectiveness of taxation, the principles of the OECD, and some debates for and against VAT revenues. Also, this part of the study contains the VAT policy literature considering research articles and studies, countries with features similar to the Republic of Albania, such as Southern European countries, also related studies of EU member states, where Albania aspires to be a member.

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[1] https://www.financa.gov.al/strategjia-permenaxhimin-e-financave-publike-2019-2022/
[2] https://www.tatime.gov.al/c/6/legjislacioni
[3] http://www.instat.gov.al/en/themes/economy-and-finance/national-accounts-gdp/#tab3

The authors designed the performance of VAT in the Republic of Albania, considering some indices based on the public budget, reviewed literature, that highlights the ratios of VAT to total tax revenues, expenditures, GDP, etc.

Results and discussion are provided in this research with time series, trying to explain the trends not only in the short term but also in long term. The model is derived using the OLS estimation method, showing special care regarding autocorrelation, measurement of variation, statistical significance, etc.

2. LITERATURE REVIEW

Considering the previous articles on the Albanian economic growth (Demi et al., 2018; Sufaj, 2015; Cikalleshi, 2013; Shijaku & Gjokuta, 2013; Trebicka, 2015), the authors decided to analyze the relation between GDP and VAT for 1999–2019 as a period with completed and uninterrupted data. For the research study, Albania has been selected because there is a lack of studies in this field and also to contribute to further research in this field. Firstly, the changes in the tax legislation in Albania after the communist regime, starting from 1991, were analyzed.

As we know after almost 50 years, at the end of 1990, Albania began to move from the system of the communist regime, so it was necessary to review public legislation to adapt to the new system. The first step to develop a decentralized economy in Albania was the development of private enterprises (Decision No. 7476 of March 12, 1991, "On licensing and protection of private property and activities") and, as a necessity of time, the decision of the Council of Ministers No. 138 (April 3, 1991) "On the Development of Private Activities" was implemented.

Considering that Albania was a developing country, this gave priority to the financial system in order to realize revenues for the state budget. From this point of view, the laws of the time changed rapidly, so Law No. 7543 (December 24, 1991) "On turnover tax" was replaced by Law No. 7928 (April 27, 1995) "On value added tax".

According to this decision, VAT started to be applied for the first time in the Republic of Albania in the 4th quarter of 1995, for taxpayers who realized an annual income of 2 million ALL/per year or any other amount determined by the Albanian Council of Ministers (Law No. 7928, of April 27, 1995, "For VAT tax", article 3).

Entering into force the new law, was necessary to update the Albanian IT tax system, to inform and assist the taxpayers about the new rules and regulations, that is why it was decided to start with VAT's declaration and payment in July 1996 for the invoices of the month of June 1996. So, this was the first moment of applying VAT in Albania.

During this period, the tax rate of VAT was 12.5% but considering the revenues in the budget (Law No. 8240, of September 16, 1997, For an amendment to Law No. 7928, of April 27, 1995, "On value-added tax" article 1), it was decided that VAT is to be applied to a tax rate of 20% unless otherwise provided by law. This amendment entered into force on October 1, 1997, and continues to be applied. The VAT rate remained at 20%, but a number of indirect measures were taken to increase VAT revenues to the Albanian budget.

By Law No. 92/2014 (July 24, 2014) "For the Value Added Tax in Albania", VAT is a tax on the consumption of goods and services, in proportion to their price (General Tax Directorate in Albania, 1995–2019).

The specifications of this system related to specific factors create dynamics of comprehensive developments. Key research question:

RQ: How does VAT affect GDP?

To answer the research question, the authors have analyzed the hypotheses related to the following.

VAT revenues have an impact on GDP per capita growth and VAT revenues have no impact on GDP per capita growth.

The dynamic model was used to analyze the following hypotheses:

H_0 (null hypothesis): VAT directly contributes to GDP by increasing or decreasing public revenues.

H1 (alternative hypothesis): VAT does not contribute to GDP by increasing or decreasing public revenues.

To address the relationship between VAT and GDP, this study is considering some authors and can mention a wide-ranging debate, diametrically opposed between them, such as Chiricu (2019), Panizza and Presbitero (2014), Chudik et al. (2013), and Desai et al. (2004).

In the early 20th century, VAT was independently projected by two people: Georg Wilhelm von Siemens, a German telecommunications businessman from the Siemens family (1879–1919) (Siemens, n.d.) and Thomas Sewall Adams (Thomas Sewall Adams Papers (MS 31), n.d.), an American economist, lecturer of Political Economy at Yale University, United States, and also advisor at the U.S. Treasury Department who served as tax commissioner drafted many tax laws between 1911 and 1915.

According to Georg Wilhelm von Siemens, the VAT was the way to solve the problems that arose with the implementation of gross turnover taxes and sales taxes, but, on the other side, for Thomas Sewall Adams, as an economist, the VAT was a better version of corporate income tax (Tax Policy Center, 2020).

Also, in this debate where turn out to be Robert M. Solow (Solow, 1956), winner of the Nobel Prize in 1987 for his contribution to the theory of economic growth, and Paul Romer (Romer, 1986). According to Solow (1956), sustainable growth is not affected by tax policy, and practically fiscal policy doesn't affect the long-run rates of economic growth. On the other hand, we have the researcher Paul Romer who thinks that fiscal policies have significant effects on economic growth, in the long run.

The article by Chiricu (2019) concludes that Government spending leads to a statistically significant decrease, which indicates the inefficient and unproductive use of public expenditure. imports, measured as a percentage of the gross domestic product, has a positive impact (economic growth by 0.02%) on the economic growth, also the VAT

revenues lead to the economic downturn Chiricu (2019), which reveals a high level of VAT rates in the countries analyzed, which also has negative effects on the aggregate consumption and a diminishing effect of the disposable income of the consumers (Chiricu et al., 2019). Gross fixed capital formation has a positive impact on economic growth and underlines a high degree of economic development (Chiricu, 2019). Corruption is considered a strong impediment to economic growth and development, moreover, the corruption perception index is a useful tool in quantifying the level of corruption in a country.

The results of this study confirm a negative link between corruption and economic growth.

Ormaechea and Morozumi (2019), in the IMF Working Paper, showed that an increase in VAT revenue, financed by a fall in income taxes, promotes growth only when this happens through a rise in C-efficiency but not when this occurs through a rise in the standard rate. An increase in C-efficiency, offset by a decrease in the standard rate, also boosts growth, indicating that the former is significantly more growth-friendly than the latter. Ueda (2017), in the IMF Working Paper, concludes that both gaps have independent impacts on the movements of C-efficiency ratios through business cycles.

Institute for Advanced Studies and CPB Netherlands Bureau for Economic Policy Analysis Consortium Leader's Final Report (2013) concluded that zero and reduced rates overall achieve their goal of lowering the VAT burden of low-income households when we look at VAT payments as a proportion of expenditures (Institute for Advanced Studies & CPB Netherlands Bureau for Economic Policy Analysis, 2013).

According to the paper by Daniel and Shiamptanis (2008), the authors with extensive use of zero and reduced ratios, substantially increased VAT incomes could be raised by abolishing VAT reductions, and most of these additions would be paid by high-income households (Daniel & Shiamptanis, 2008). This illustrates that the potential of zero and reduced VAT as a tool for redistribution is limited. More targeted policy instruments could accomplish the task of compensating low-income houses for their additional VAT payments at comparably low costs. The introduction of a budget-neutral uniform VAT replacing all zero, reduced and standard rates, benefit non-household bodies while households suffer a loss in most countries. To be specific, in this study the authors find that low-income households suffer more in proportion to their expenditures. When transfers are paid to compensate the family cycle, the cross-sectional revenue-neutrality of the reform depends on a higher VAT rate.

Related to the medium-run macroeconomic consequences of reforms for the VAT structure, Alain and Owens (2010) in their paper find that harmonizing VAT within each Member State does not necessarily have a significant effect, as both VAT exemptions and large differences in between continue to exist. However, if we allow for possible efficiency gains generated by simpler VAT rates systems, it is found larger positive effects on Member States' economies (Alain & Owens, 2010).

Chudik, Mohaddes, Pesaran, and Raissi (2013) in their study, have found significant negative long-run effects of public debt and inflation on growth, but they emphasize that there does not exist a threshold that might be considered as the limit to bring higher or lower economic growth.

Hassan (2015) in his study, by applying the empirical model, found a strong and positive relationship between the increase of VAT income and the economic growth (GDP) using time series macro data for the period from 1991–1992 to 2011–2012. This suggests increasing VAT returns is unlikely to distort consumption and investment decisions of the economic agents (Hassan, 2015).

The study recommends measures to enhance VAT revenue to balance the government budgets and to reduce deficits. Revenue performance of VAT has not been satisfactory, so the absolute positions of benchmarks such as VAT efficiency and C-efficiency ratios are low, but also these levels are declining in the trend. This is mainly due to the defects in the existing VAT legislation, such as a wide range of exemptions, zero and reduced rates.

In Albania, there are other factors such as tax evasion and underreporting because of weak enforcement of VAT, the low level of taxpayer compliance failure to inform taxpayers in a timely manner.

In order to improve VAT revenue performance policy, the change is needed to refine the existing VAT system and, at the same time, it is crucial to strengthen the current enforcement mechanism by enhancing administrative efficiency and capability as well as improving taxpayer's compliance through taxpayer services and tax educations (Demi, Uku, & Agolli, 2017).

According to the paper by Hysa, Kruja, Rehman, and Laurenti (2020), economic growth should be supported by the quadruple helix model of innovation — academia, government, business, and civil society.

To outline the main research issues in this study, we encompass some aspects of the nexus between VAT and economic growth. The following section describes the model used to determine the relationships between variables.

Below is the table with all the papers reference in this manuscript.

Table 1. Sources analysed in the study (Part 1)

Source	*Research objective*	*Sample and main findings and conclusions*
Demi et al. (2018)	Provide information on the importance of VAT as one of the main sources of revenue for the Albanian state budgets and the factors influencing its efficiency.	Value-added tax is the most important item on the income of the state budget in Albania.
Sufaj (2015)	The study will provide the main developments that occurred in Albania during the crisis; how it was affected; how the government interfered to prevent it; how serious was the damage caused by neighbor countries, especially Greece, since Greece was one of the countries that suffered the most from the crisis and there are many Albanian emigrants living in Greece.	The same positive and significant relationship is found between public revenues and VAT through econometric analysis.
Cikalleshi (2013)	Assess the effects of fiscal policy on GDP in Albania and how successful the tax system is in relation to the implementation of the VAT law.	If VAT is not administered properly, it might be transformed into a tax that deforms the tax system and impedes economic growth.
Shijaku and Gjokuta (2013)	Analyzes the effects of fiscal policy on economic growth development of a small open developing country — Albania — by using an endogenous model of economic growth, according to the method of general moments (GMM).	VAT contributes to public revenues transformed into productive expenditures increase the nominal GDP and affect economic growth positively.
Trebicka (2015)	Examines the effect of fiscal policy on the economic growth in the case of a small and open developing country as Albania. The study covered the period between 1994 and 2014.	Public expenditures in Albania are positively related to the economic growth of this country.
Chiricu (2019)	The impact of the VAT on the rate of economic growth for years between 1996 and 2017.	A significant positive impact of VAT on economic growth.
Panizza and Presbitero (2014)	Whether public debt has a causal effect on economic growth in a sample of OECD countries.	Have found a negative relationship between total public debt and economic growth.
Chudik et al. (2013)	Investigates the long-run effects of public debt and inflation on economic growth.	Have found significant negative long-run effects of public debt and inflation on growth, but they emphasize that there does not exist a threshold that might be considered as the limit to bring higher or lower economic growth.
Desai et al. (2004)	The purpose of this paper is to investigate the effect of the multiple tax instruments that comprise a host country tax system on the magnitude and characteristics of foreign investment activity by American multinational firms. In particular, the empirical work focuses on the differential impacts of corporate income taxes and other taxes, such as personal income taxes, property taxes, and value-added taxes.	Taxes definitely influence the investors' behavior, meaning that higher taxes bring lower foreign direct investment.
Siemens (n.d.)	—	VAT was the way to solve the problems that arose with the implementation of gross turnover taxes and sales taxes.
Thomas Sewall Adams Papers (MS 31) (n.d.)	Determine the tax burdens upon other classes of public utilities and upon industrial and commercial corporations.	VAT was a better version of corporate income tax.
Tax Policy Center (2020)	VAT was the way to solve the problems that arose with the implementation of gross turnover taxes and sales taxes.	VAT was a better version of corporate income tax.
Solow (1956)	A constant return to scale seems the natural assumption to make in a theory of growth.	Sustainable growth is not affected by tax policy, and practically fiscal policy does not affect the long-run rates of economic growth.
Romer (1986)	Long-run growth in which knowledge is assumed to be an input in production that has increasing marginal productivity.	Fiscal policies have significant effects on economic growth, in the long run.
Ormaechea and Morozumi (2019)	Assembling a novel dataset for 30 OECD countries over the 1970–2016 period examines whether the (VAT) may have different effects on long-run growth depending on whether it is raised through the standard rate or through C-efficiency (a measure of the departure of the VAT from a perfectly enforced tax levied at a single rate on all consumption).	An increase in VAT revenue, financed by a fall in income taxes, promotes growth only when this happens through a rise in C-efficiency.
Ueda, J. (2017)	Presenting and analyzing detailed decompositions of VAT revenues, thereby providing a better understanding of the responsiveness of VAT revenues with respect to output gap cycles.	Both gaps have independent impacts on the movements of C-efficiency ratios through business cycles.
Institute for Advanced Studies and CPB Netherlands Bureau for Economic Policy Analysis (2013)	Calculate VAT revenues for each Member State (EU-27) and the EU-27 and includes a simulation of the general equilibrium effects on main macroeconomic indicators (GDP, consumption, employment, foreign trade) following changes in the VAT regime.	Concluded that zero and reduced rates overall achieve their goal of lowering the VAT burden of low-income households when we look at VAT payments as a proportion of expenditures.

Table 1. Sources analysed in the study (Part 2)

Source	Research objective	Sample and main findings and conclusions
Daniel and Shiamptanis (2008)	Specify a simple model of fiscal policy in which the fiscal authority faces an upper bound on the size of its primary surplus. The monetary authority to have the freedom to control the price, the primary surplus must respond strongly enough to lagged debt. For the period 1970–2006.	More targeted policy instruments could accomplish the task of compensating low-income houses for their additional VAT payments at comparably low costs. The authors find that low-income households suffer more in proportion to their expenditures.
Alain and Owens (2010)	VAT has come to a turning point in its life as countries reflect on the need to raise revenue to deal with the significant increases in public debt caused by recent economic and financial crises.	The authors find that harmonizing VAT within each Member State does not necessarily have a significant effect, as both VAT exemptions and large differences in between continue to exist.
Hassan (2015)	Examines the extensive literature, concentrating on theory and empirical studies, on the relationship between VAT revenue and economic growth. It also evaluates critically the revenue performance of VAT in Pakistan during the period 1991–1992 to 2011–2012 with a larger focus on empirically estimating the role of VAT revenue in the economic growth (GDP) of Pakistan.	Is a strong and positive relationship between the increase of VAT income and the economic growth (GDP) using time series macro data for the period from 1991–1992 to 2011–2012, increasing VAT returns is unlikely to distort consumption and investment decisions of the economic agents.
Demi et al. (2017)	Compare the compliance gap of business taxpayers depending on the tax rate in Albania. The study tries to identify the degree to which tax rate has been influencing tax non-compliance in transition economies and explore the possibility of using tax rate as a mean of fiscal consolidation.	The tax reform in Albania in the recent year has been focusing the tax compliance urging for conformity by applying field audits with risk factor in the selection of those entering in the audit scheme. Fiscal policy is affected by the establishment of the desired reports in the Economic power of citizens.
Hysa et al. (2020)	Examines the link between selected indicators of a circular economy, including essential components of environmental and economic growth.	The circular economy should be supported by the main actors of sustainable economy supports — the quadruple helix model of innovation — academia, government, business, and civil society.
The Albanian Center for Competitiveness and International Trade [ACIT] (2010)	Analyze the level of negative impact on the activity and performance of export-oriented companies caused by the non-refunded value-added tax (VAT) and the assessment of the economic impact: costs and benefits of VAT reimbursement.	VAT reimbursement is an important problem for the business community in Albania. Almost all the interviewed companies (99.8%) have VAT reimbursement to claim from the tax administration.
Ministry of Finance and Economy in Albania (2014)	Gives clear information of the economic policies and medium-term priorities of the country in the context of the structural reforms that are expected to be implemented during 2014–2016, which aimed at ensuring macroeconomic stability and relatively high and stable economic growth, and the establishment of a regulatory framework and the sectoral policies in accordance with the European standards.	The set of measures in the Fiscal Package 2014 brought significant changes to the tax system, applied both on indirect and direct taxation. The net impact of these changes is estimated to be around 21 billion ALL revenues surplus in the Budget of 2014.
OECD (2006)	There are many differences in the way value-added taxes are implemented around the world and across OECD countries.	Member countries should consider appropriate control and enforcement measures to ensure compliance, and recognize, in this context, the need for enhanced international administrative cooperation.

3. METHODS AND DATA CHARACTERISTICS

This research study is focused on monitoring the performance of fiscal policies in Albania, with the primary focus, monitoring the impacts of VAT revenues on economic growth. The authors collected data for the period of 20 years from 1999 to 2019. The authors studied Albania as a post-communist country with a very young economy in order to add new research in the fiscal policies considering the fact that taxation itself is a transfer of resources from families, businesses, to government revenue, so taxes are one of the main tools used by the government in all social and economic directions, as well as for maintaining welfare. This study presents the data starting from 1999 because in Albania from July 1996 (the period that VAT has been applied for the first time in Albania) to 1999

the tax legislation was almost consolidated[4,5,6,7], so considering this fact the authors extend the study until 2019 (the period before COVID-19 pandemic situation).

To handle the hypothesis, the authors used the dynamic model and listed the following specific objectives for this research study, such as the effects of fiscal policies related to the economic growth, analyses and concrete recommendations to improve the current situation, VAT and public revenues have the same trend throughout the period.

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[4] Law No. 7928, date 27.4.1995, "For VAT tax" (www.ligjet.org).
[5] Law No. 8070, date 15.2.1996 for the change in the law No. 7928, date 27.4.1995, "For VAT tax" (www.ligjet.org).
[6] Law No. 8240, date 16.9.1997, for the change in the law No. 7928, date 27.4.1995, "For VAT tax" (www.ligjet.org).
[7] Law No. 8445, date 21.1.1999, for the change in the law No. 7928, date 27.4.1995, "For VAT tax", changed with the Law No. 8070, date 15.2.1996; No. 8126, date 9.7.1996; No. 8130, date 22.7.1996; No. 8149, date 11.9.1996; No. 8160, date 7.11.1996; No. 8186, date 23.1.1997; No. 8201, date 20.3.1997; No. 8140, date 16.9.1997 (www.ligjet.org).

3.1. Model specifications

In this research study, based on the current results, the following specification was used, regarding the control of the relationship between, GDP growth and VAT revenues.

$$GDP_{Growth} = f(VAT_{Revenues)} \qquad (1)$$

The model constitutes a reduced mass of the model of Hassan (2015), that is conceived according to the following equation form:

$$GDP_{Growth} = \beta_0 + \beta_1 VAT_{Revenues} + \varepsilon \qquad (2)$$

where, β_0 is the intercept, β_1 coefficient of the linear relationship between the explanatory and explained variables, ε is the error term.

$$\tilde{Y}_t = \beta_0 + \beta_1 X_t + U_t \ (model) \qquad (3)$$

$$\tilde{y}_t = b_0 + b_1 x_t \ (evaluation) \qquad (4)$$

Estimates related to the model were gained by using the method of smaller squares; this is a method that assumes that the sum of the square deviations between the observed data and the modeled ones is minimal.

Assumptions regarding the term error:

- The error U is a case size with an average of 0, that is to say, $E(U = 0)$.
- Therefore, since β_0 and β_1 are constant, then for a given value of X.
- $E(y) = b_0 + b_1 x$ (equation of regression).
- The variance of mistake $(U)\sigma^2$ is the same for all values of X, therefore, the variance of Y is the same for all values of X and is equal to σ^2.
- The values of u are independent, i.e., the value of U for a given value X is not related with the value of u for another value X, so, the value of y for a given value X is not related with the value of Y for another value X.
- The term of error is a random variable normally distributed, consequently since Y is a linear function of (U), even Y is normally distributed.

$$S = \sum_{k=1}^{n} (y_t - \tilde{y}_t)^2 (min) \qquad (5)$$

$$S = \sum_{k=1}^{n} (y_t - b_0 + b_t)^2 (min) \qquad (6)$$

To optimize the function S, we derive in a partial way related with the target parameters, to be evaluated, as the steps that follow in equations (7) and (8).

Following the solution of the system, the results in equations (9), (10), and (11) are obtained.

$$\begin{cases} \dfrac{\partial S}{\partial b_0} = 2nb_0 - 2\left(\sum_{i=1}^{n} y_t\right) + 2\left(\sum_{i=1}^{n} x_t\right) b_1 = 0 \\ \dfrac{\partial S}{\partial b_1} = 2\left(\sum_{i=1}^{n} X_t{}^2\right) b_1 - 2\left(\sum_{i=1}^{n} y_t x_t\right) + 2\left(\sum_{i=1}^{n} X_i\right) b_0 = 0 \end{cases} \qquad (7)$$

$$\begin{cases} nb_0 + \left(\sum_{i=1}^{n} x_t\right) b_1 = \left(\sum_{i=1}^{n} y_t\right) \\ \left(\sum_{i=1}^{n} x_t\right) b_0 + \left(\sum_{i=1}^{n} x_t{}^2\right) b_1 = \left(\sum_{i=1}^{n} y_t x_t\right) \end{cases} \qquad (8)$$

$$b_1 = \frac{\bar{x}\bar{y} - \dfrac{(\sum_{i=1}^{n} y_t x_t)}{n}}{\bar{x}^2 - \dfrac{(\sum_{i=1}^{n} x_t{}^2)}{n}} = \frac{3.27}{10^4} \qquad (9)$$

$$b_0 = \bar{y} - \bar{X}b_1 = -\frac{5.15}{10^2} \qquad (10)$$

$$\tilde{y}_t = -\frac{5.15}{10^2} + \frac{3.27}{10^4} x_t \qquad (11)$$

At this stage, we are interested in the extent to which the model explains the variation of the phenomenon, studied, if the result obtained is statistically significant and whether the assumptions regarding the term error are met.

The coefficient of determinability R^2 is the indicator that shows the measure of variation that is explained by the regression model. This coefficient is calculated:

$$R^2 = \frac{\sum(y - \bar{y})^2 - \sum(y - \tilde{Y})^2}{\sum(y - \bar{Y})^2} = 1 - \frac{\sum(y - \tilde{Y})^2}{\sum(y - \bar{Y})^2} = 0.697 \tag{12}$$

The statistical importance of the regression is verified through the testing of the statistical significance of the determinability coefficient, which

if it turns out to be significant, proves that there is a modeled relationship X and Y:

$$\begin{cases} H_0 : R^2 = 0 \\ H_a : R^2 \neq 0 \end{cases} \tag{13}$$

The H_0 (null hypothesis) is rejected if the statistic value of $F > F_{critique\ (\alpha,\ p,\ n-p-1)}$.

The test of hypotheses through criterion F is realised in building two independent valuations for the variance.

$$\frac{\sum(Y - \tilde{Y})^2}{n - p - 1} \tag{14}$$

$$\frac{\sum(Y - \bar{Y})^2 - \sum(Y - \tilde{Y})^2}{p} \tag{15}$$

where, p is the number of parameters included in the model, in our research study it is 1.

$$F = \frac{\dfrac{\sum(Y - \bar{Y})^2 - \sum(Y - \tilde{Y})^2}{p}}{\dfrac{\sum(Y - \tilde{Y})^2}{n - p - 1}} = \frac{\left[\sum(Y - \bar{Y})^2 - \sum(Y - \tilde{Y})^2\right](n - p - 1)}{[\sum(Y - \tilde{Y})^2]p} = 16.5 \tag{16}$$

The critical value on Table 3, for importance level 2.5% and free escalation (1,5), is 10 referring to F, consequently, the H_0 is rejected in favor of $H1$. Practically, we proved that the relationship between variables is statistically significant.

In this situation, it is very interesting to explain the distribution of the error term and its independence.

To realize the assumptions underlying this research study, the distribution of the error term in order should be normal, the hypotheses regarding the distribution will be practically tested.

The more effective test for this study is the Shapiro-Wilk test. The statistical formula is:

$$W = \frac{(\sum a_i(y_{n+1-i} - y_i))^2}{\sum_{k=1}^{n}(y_i - \bar{Y})^2} = 0.963441 \tag{17}$$

and the corresponding probability 0.940255, evidently larger than the value 2.5% a disturbing fact about time series, is the autocorrelation, or serial correlation of the error term, the presence of which violates the assumptions of the model.

3.2. Autocorrelation control

The assumption of the independence of the error term is one of the most important assumptions of the smallest squares method, because if this

condition is violated, the evaluators may appear, more important than they really are, or vice versa.

Therefore, this investigation is of particular importance when working with time series.

The autocorrelation function (NCSS, n.d.) was used to control the presence of autocorrelation, testing it until the autocorrelation level dropped below 5%, so to verify it we calculated the generalized Pearson correlation, according to the following formula:

$$r_k = \frac{\sum_{t=1}^{n-k}(x_t - \bar{x})(x_{t+k} - \bar{x})}{\sum_{t=1}^{n}(x_t - \bar{x})} \tag{18}$$

With k we have marked the order of the serial correlation, therefore, from the calculations, it resulted that for $k = 1$, the corresponding correlation is in the absolute value of 0.44, fact which confirms the presence of first-order autocorrelation.

In the same way, we verify it for the second-order and the corresponding value in absolute value, resulted in 0.0718 value which is very close to 0, therefore we ignore it, assuming that we are dealing only with first-order correlation, in order to obtain an estimate and the intensity of the relationship. For first-order correlations we use the Durbin-Watson statistic, according to which, the correlation is calculated with the formula:

$$r = 1 - \frac{DW}{2}, DW = \frac{\sum_{t=2}^{n}(u_t - u_{t-1})^2}{\sum_{t=1}^{n}(u_t)^2} = 2.88, and\ r = -0.41, approximate\ value \tag{19}$$

From this, we conclude that due to the presence of autocorrelation:

1. Estimated slope coefficients are irregular and stable.

2. In the case of positive autocorrelation, the standard errors are shifted and very small.

3. In the case of negative autocorrelation, the standard errors are shifted and very large.

Therefore, the variance of the slope coefficient would be:

- when we generalize expressions between two error terms towards an arbitrary distance, it is possible to show that it is equal to:

$$Cov\left(U_t, U_{t-j}\right) = \rho^j \sigma^2 \tag{20}$$

$$V(b_1) = \frac{1}{\sum_{t=1}^{n}(x_t-\overline{x})^2} \cdot V(\sum_{i=1}^{n}(x_t-\overline{x})U_i) =$$

$$\frac{\sigma^2}{\sum_{t=1}^{n}(x_i-\overline{x})^2}\left(1 + 2r\frac{\sum_{t=1}^{n}(x_t-\overline{x})(x_{t-1}-\overline{x})}{\sum_{t=1}^{n}(x_t-\overline{x})^2} + 2r^2\frac{\sum_{t=1}^{n}(x_t-\overline{x})(x_{t-2}-\overline{x})}{\sum_{t=1}^{n}(x_t-\overline{x})^2} + \cdots\right) \tag{21}$$

- when we have a negative autocorrelation, which means that the ratings will be too large, and appear less significant than they are actually believed to be.

With a fixed value of r and the auto regression coefficient increasing in absolute value, the adjustment factor will be smaller, increasing the displacement.

Table 2. Correlation analyses

No.	X_i	X_{av}	n	k	n – k	i + k	$(X_i – X_{av})$	$(X_i + k$-$X_{av})$	$(X_i – X_{av})^2$	$(X_i – X_{av})^*(X_i + k – X_{av})$	r_k
1	1,2	1,27	7	2	5,00	3	-0,1095	0,00	0,011990	-	4,1%
2	1,1	1,27	7	2	5,00	4	-0,15543	0,00	0,024158		4,1%
3	1,2	1,27	7	2	5,00	5	-0,03753	-0,04	0,001409	0,001409	4,1%
4	1,3	1,27	7	2	5,00	6	-0,017	-0,02	0,000289	0,000289	4,1%
5	1,3	1,27	7	2	5,00	7	0,03907	0,04	0,001526	0,001526	4,1%
6	1,4	1,27	7	2	5,00	8	0	0,00	0,014540	-	4,1%
7	1,4	1,27	7	2	5,00	9	0	0,00	0,025539	-	4,1%
Total	8,92								0,079451	0,003224	

Source: Authors' calculations.

3.3. C-efficiency

In the following equation, V is the current VAT revenue and the denominator PV^T is theoretical VAT revenue calculated as the product of τ^s, the standard rate of VAT, and FC (final consumption), at prices exclusive of collected VAT.

This indicator was observed, at extreme levels between 56.38% and 65.25% and an average of 61.24% with variation to the average at the level of 4.96%.

$$E^C = \frac{V}{PV^T} \tag{22}$$

$$PV^T = \tau^S(FC - V) \tag{23}$$

Source: Ueda (2017).

4. RESULTS AND DISCUSSION

This study diagnoses the impact of fiscal policies on Albanian economic growth and identifies the problems that affect one of the government's priority objectives, such as sustainable economic development, the effects of which imply an increase in the quality of governance, consequently, also social welfare.

In this part of the study, statistical analysis and data obtained after the implementation of the model will be presented to see the relationship that exists between VAT and economic growth in Albania.

4.1. Performance of VAT revenues in the Albanian economy

The growing budget deficit and public debt are worrying issues for all the economies, as well as for the Albanian economy (ACIT, 2010). The IMF's expectations for Albania's debt have been updated in the global public debt data annex to governments worldwide.

According to the IMF report, 2019 the public debt at the end of 2018, were 69.9% of GDP (including arrears). For 2019 the debt ratio remains above 60% of GDP IMF report, 2020. The fund asked to increase revenue and a more transparent fiscal system, as well as for maintaining financial stability, as non-performing loans are expected to increase. Further, progress is needed in the area of recreating room for maneuver with budget policy by reducing the fiscal deficit.

The report of the Ministry of Finance and Economy in Albania (2014) provides information for the period 2014–2016. Overall, this study plans to analyze the effect of VAT revenues on economic growth. If this impact is positive, then the government should look at priority, alternative ways in order to stimulate the consumption of goods and services, which will cause the growth of VAT in absolute terms and, consequently, the positive contribution to economic growth, as the most rational way to cover the budget deficit and reduce public debt (Ministry of Finance and Economy in Albania, 2014).

4.2. Revenues of VAT and nominal GDP, theoretical data and qualitative methods, 1999–2019

We considered the results of a study for Southern European countries. The study for Southern European countries (Chiricu, 2019) has found a significant positive impact of VAT on economic growth.

Following Figure 1, we analyzed the GDP per capita and VAT in Albania during the period of 1999-2019.

Figure 1. GDP per capita PPP and VAT
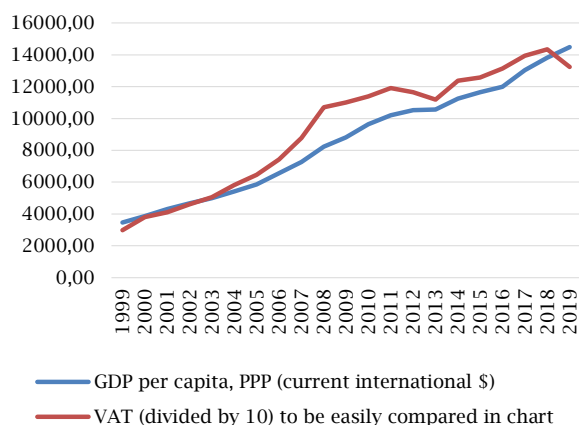
Source: Authors' elaboration.

The results obtained from Figure 1, discuss a general idea that refers to the tax on consumption. So, according to this result, the authors can provide that a consumption tax is a positive tax that might stimulate competition and then growth. Related to the literature reviewed, several studies evaluated the relation between GDP and VAT.

Some other authors and researchers have found the same result for Albania or transition economies. According to the article of Sufaj (2015), in a study for Albania, the same positive and significant relationship is found between public revenues and VAT through econometric analysis.

The results of the article of Trebicka (2015) express that the public expenditures in Albania are positively related to the economic growth of this country, based on this, in the following figures we analyzed how the VAT affects the total revenues and the nominal GDP for the period 1999-2019 in Albania.

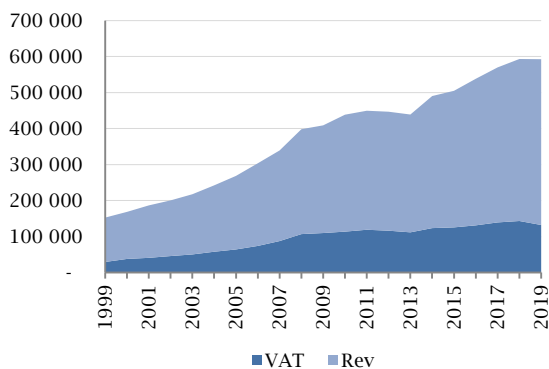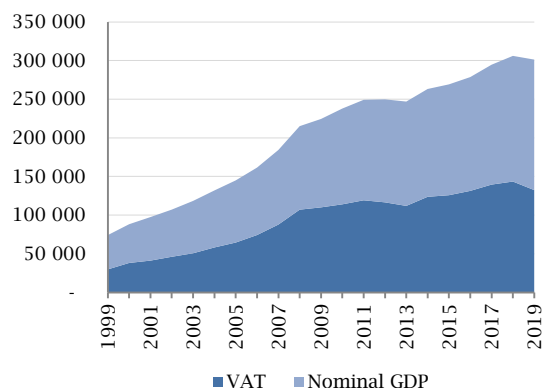**Figure 2.** Revenues and VAT

Figure 3. Nominal GDP and VAT

Source: Authors' elaboration.

Figure 2 shows that revenues and VAT had the same trend throughout the period 1999–2019. This result means that the VAT is a tax that contributes directly to the public revenues by increasing or decreasing them correspondingly.

Figure 3 shows the same relationship between nominal GDP and VAT, so, VAT affects nominal GDP in an indirect way and affects economic growth positively.

This research study tends to analyze the inflation rate, GDP growth, and total public debt trends in Albania for the same period, considering that the relationship between these three variables starts with total public debt.

The higher the trend of public debts is, the less is the investment in capital goods. So, this would reduce output and high marginal taxes would discourage working and saving. All of these situations could increase prices and consequently cause inflation.
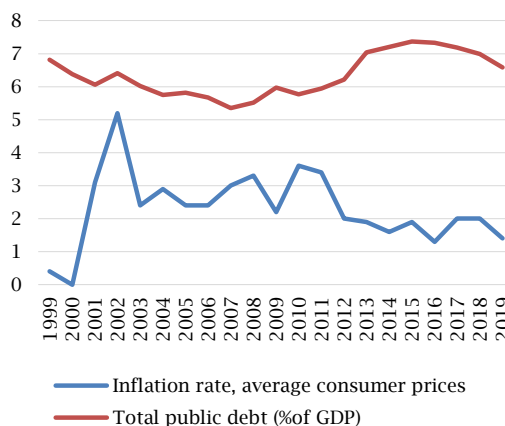
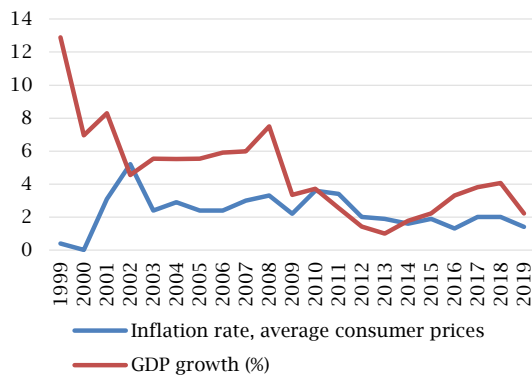**Figure 4.** Inflation and total public debt

Figure 5. Inflation and GDP growth

Source: Authors' elaboration.

Figure 4 shows the same trend between inflation and total public debt in most of the period.

Then, in Figure 5, inflation is considered as an important indirectly indicator of GDP growth. The higher it is, the less economic growth is supposed to be.

4.3. Dynamic model to analyze VAT revenues related to total tax revenues and GDP ratio

The ratio of VAT revenues to the total fiscal revenues was observed in the extreme ratios between 48.68% and 55.47%, with an average indicator of 53.03% and a coefficient of variation of 3.57%.

Considering the data in Table 3 and Figure 6, we can conclude that practically the VAT revenues exceed half of the total tax revenues in Albania for the period 1999–2019.

Analyzing the above data in Table 4, this indicator is obtained from the ratio of VAT revenues to GDP in the corresponding periods. The observed extremes correspond to the norms of 8.9% in 2019 and 9.98% which correspond to the upper extreme in 2017.

In average terms for the observed period, the ratio of VAT revenues to GDP is at level 9.55% and coefficient of variation 4.09%.

Extreme values do not exceed the level of 1.08%, far from each other.

Table 3. VAT and economic growth in Albania

Year	Tot. revenue	VAT, ALL	GDP, ALL	VAT growth, %	GDP growth, %
1999	123 162	29 794	443 594		
2000	130 642	38 121	501 199	28	13
2001	145 639	41 149	563 449	8	12
2002	154 595	46 113	610 494	12	8
2003	167 224	50 625	677 738	10	11
2004	184 355	58 161	737 656	15	9
2005	204 163	64 534	804 163	11	9
2006	229 444	74 268	872 735	15	9
2007	251 555	87 771	965 528	18	11
2008	291 238	107 094	1 080 676	22	12
2009	298 981	110 062	1 143 936	3	6
2010	324 721	113 998	1 239 645	4	8
2011	330 469	119 189	1 300 624	5	5
2012	330 384	116 533	1 332 811	-2	2
2013	327 178	111 940	1 350 053	-4	1
2014	366 721	123 730	1 395 305	11	3
2015	379 206	125 783	1 434 307	2	3
2016	407 021	131 390	1 472 479	4	3
2017	430 397	139 541	1 551 281	6	5
2018	449 909	143 464	1 626 196	3	5
2019	460 349	132 412	1 688 894	-8	4

Source: Authors' calculations of data collected from https://www.financa.gov.al/.

Figure 6. VAT and economic growth
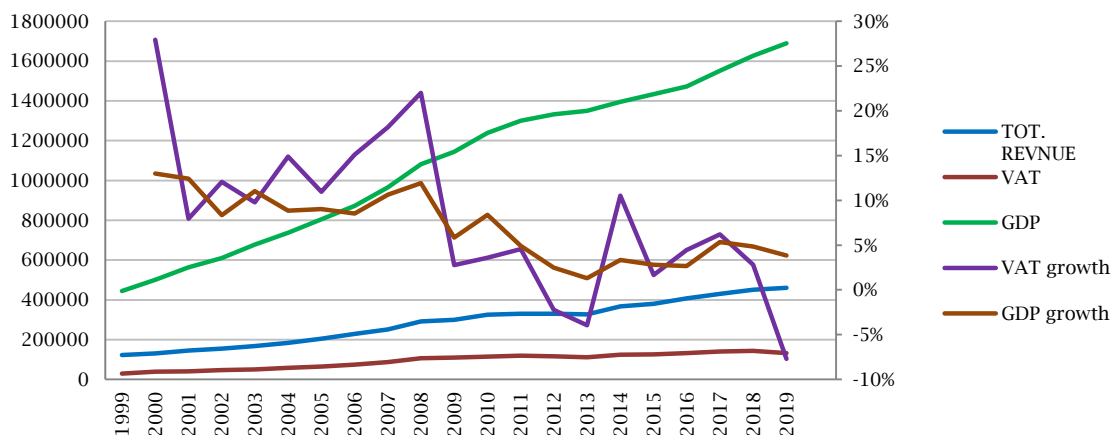
Source: Authors' elaboration.

Table 4. Some Albania indicators (million USD)

No.	Year	Total tax revenues	Total consumption	VAT revenues	GDP	VAT standard rate	VAT/GDP	VAT revenue/ total tax revenues	Total tax revenue/ total consumption	C -efficiency	Vat growth	Consumption growth	GDP growth
1	2011	2 204	10 820	1 192	12 231	20%	9,75%	54,07%	20,37%	61,89%	-	-	-
2	2012	2 169	10 834	1 165	12 404	20%	9,39%	53,74%	20,02%	60,26%	-2,23%	0,13%	1,42%
3	2013	2 068	11 047	1 119	12 528	20%	8,94%	54,14%	18,72%	56,38%	-3,94%	1,97%	1,00%
4	2014	2 334	11 406	1 237	12 750	20%	9,70%	53,02%	20,46%	60,84%	10,53%	3,25%	1,77%
5	2015	2 413	11 508	1 258	13 033	20%	9,65%	52,12%	20,97%	61,35%	1,66%	0,90%	2,22%
6	2016	2 369	11 789	1 314	13 465	20%	9,76%	55,47%	20,09%	62,72%	4,46%	2,44%	3,31%
7	2017	2 640	12 087	1 395	13 977	20%	9,98%	52,86%	21,84%	65,25%	6,20%	2,53%	3,80%
8	2018	2 699	12 450	1 435	14 546	20%	9,86%	53,15%	21,68%	65,12%	2,81%	3,00%	4,07%
9	2019	2 720	12 870	1 324	14 872	20%	8,90%	48,68%	21,14%	57,34%	-7,70%	3,38%	2,24%
Average		2 402	11 646	1 271	13 312	20,0%	9,55%	53,03%	20,59%	61,24%	1,31%	1,95%	2,20%
Std. Dev.		239	719	105	963	0	0,39%	1,89%	0,96%	3,04%	5,88%	1,15%	1,13%
CV		9,96%	6,17%	8,28%	7,24%	0,00%	4,09%	3,57%	4,66%	4,96%	4,49	59,10%	51,19%
Max		2 720	12 870	1 435	14 872	20%	9,98%	55,47%	21,84%	65,25%	10,53%	3,38%	4,07%
Min		2 068	10 820	1 119	12 231	20%	8,90%	48,68%	18,72%	56,38%	-7,70%	0,13%	1,00%

Source: Authors' calculations of data collected from https://www.financa.gov.al/.

4.4. VAT trend in Albania

In the table presented below the authors consider the VAT revenues according to the years for the period 1999–2019, analyzing these revenues considering the gross domestic product (GDP) in Albania for the same period.

In order to specify the model, graphical projections of the variables are also observed for the period 2012–2018.

Table 5. VAT revenues 2012–2018

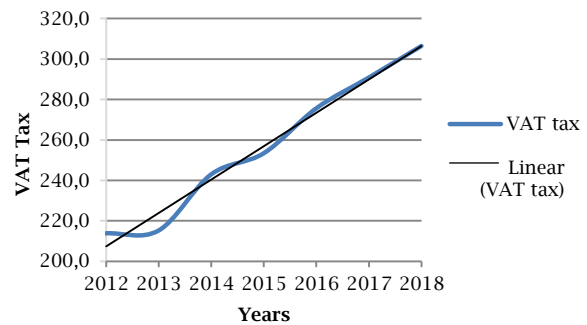| Year	Growth of GDP	Year	VAT tax
2012	0,0247474	2012	213,9
2013	0,0129366	2013	215,2
2014	0,0335187	2014	243,0
2015	0,0279523	2015	253,4
2016	0,0266135	2016	275,6
2017	0,0535166	2017	290,9
2018	0,0482923	2018	306,4

Source: Authors' calculations.

Figure 7a. VAT revenues
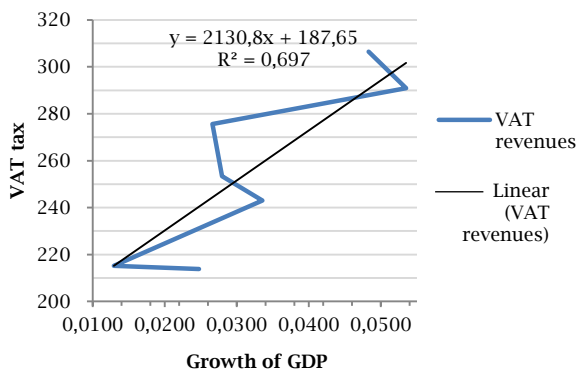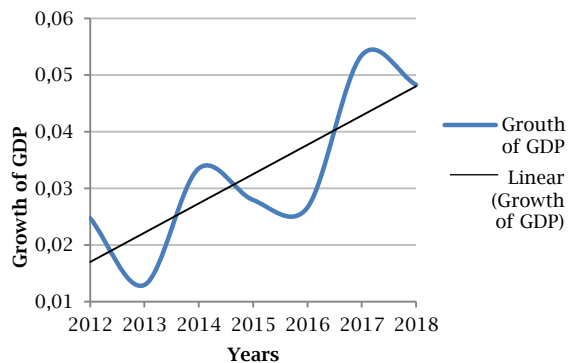

Source: Authors' calculations.

Figure 7b. VAT revenues

Source: Authors' calculations.

As shown in Figures 7a and 7b, the long-term GDP growth rate follows a linear trend, with strong fluctuations, declining in the period 2014–2016, while the VAT volume follows a smooth upward trend and almost linear compatibilities.

Figure 8. GDP growth

Source: Authors' calculations.

Referring to the preliminary observation, we believed that the most appropriate connection between them is linear.

4.4. OLS results

In this research study, once we have discovered that the error term is correlated in the series, we need to correct it, before doing any statistical inference, we take corrective measures:

$\tilde{Y}_t = \beta_0 + \beta_1 X_t + U_t$
$U_t = \rho U_{t-1} + V_i$, (V_i is the term of uncorrelated error)
$\tilde{Y}_{t-1} = \beta_0 + \beta_1 X_{t-1} + U_{t-1}$

So, in these conditions, $\rho U_{t-1} = \rho(\tilde{Y}_{t-1} - \beta_0 + \beta_1 X_{t-1})$ and $\tilde{Y}_t = \beta_0 + \beta_1 X_t + \rho U_{t-1} + V_i$,

From the combination of the two equations, as above, the results are as following:

$\tilde{Y}_t = \beta_0 + \beta_1 X_t + \rho(\tilde{Y}_{t-1} - \beta_0 - \beta_1 X_{t-1}) + V_t$
$\tilde{Y}_t - \rho\tilde{Y}_{t-1} = (1 - \rho)\beta_0 + \beta_1(X_t - \beta_1 \rho X_{t-1}) + V_t$
$\tilde{Y}_t + 0.41\tilde{Y}_{t-1} = (1.41)\beta_0 + \beta_1(X_t + 0.41 X_{t-1}) + V_t$

The final form represents the desired outcome equation for the regression, without the serial correlation.

Before correction:
$GDP_{Rate_t} = 0.103 Vat_{Reve_t} - 0.1067$

After correction:
$GDP_{Rate_t} - 0.006 GDP_{Rate_{t-1}} = 0.103 VAT_{Reve_t} - 0.000618 VAT_{Reve_{t-1}} - 0.10$

Practically, in this study, it turns out that the long-term pace of GDP growth follows a linear trend, with the presence of strong fluctuations, declining in the period 2014-2016, while the volume of VAT follows a smooth upward trend and almost linear compatibility.

From the analysis of statistical significance, after fulfilling the conditions and assumptions regarding the quality of appraisers, the authors conclude that there is a statistically significant positive relationship between VAT and the growth rate of the GPD.

Table 6. OLS results

No.	Description	Results
1	Degrees of freedom	Df = n–k–1 = 7–1–1 = 5
2	Estimate of slope	b = 0.1034
3	Standard error slope	SEb = 0.0089
4	Regression standard error	S = 0.0025
5	T-statistic	T = 11.6334
6	95% confidence interval for β	(0.0806, 0.1263)
7	P-value	P = 0.0001
8	Regression line	$GDP_{Rate_t} = 0.103 VAT_{Reve_t} - 0.1067$
9	R-squared	0.9644
10	F-statistic	139.87
11	DW-statistic	2.12
12	$\rho = 1 - \dfrac{DW}{2}$	-0.06
13	Regression line after correction	$GDP_{Rate_t} - 0.006 GDP_{Rate_{t-1}} = 0.103 VAT_{Reve_t} - 0.000618 VAT_{Reve_{t-1}} - 0.10$

Source: Authors' calculations.

5. CONCLUSION

From this research study, we empirically proved that there is a strong link between VAT revenues and GDP growth rate, practically a 10% change in VAT revenues causes an increase of at least 1.03% in the GDP growth rate.

Artificially ignoring the reduced rates, approximately 40% of the consumption is not taxed with VAT, according to the standard rate. In absolute value, this gap reaches an average of $931.68 million missing VAT revenues per year, at an approximate level, with annual net remittances or 10% of the public debt of Albania.

This paper outlines that the objective of the Albanian government is to increase tax revenues which, of course, are not easily achieved, because any change in a tax will have effects on Albanian households, businesses, as well as national macroeconomic indicators.

In Albania, VAT has been applied for many years, so the economy, market, and consumers are familiar with this tax, if there are taxpayers that cannot pay the tax due to an inability, then this tax can be considered unfair and ineffective and should be reviewed.

So, the practical taxation rules are considered very important for the policy makers, because of their influences to collect and administer tax system.

The fiscal systems should be very flexible and dynamic to ensure that the public revenues adapting not only to taxpayers' requests but also to the individuals' needs. This means that the system should allow governments to be responding as required in accordance with technological and commercial trends, considering that future developments will be very difficult to predict.

This research analyzed the legislative development, the performance of VAT revenues, and the performance of the tax administration in the collection of liabilities and will be an orientation for the administration of the tax system in Albania.

A consumption tax is a positive tax that might stimulate competition and then growth.

Related to the literature reviewed, several studies valuated the relation between GDP and VAT.

The public expenditures in Albania are positively related to the economic growth of this country.

VAT affects nominal GDP in an indirect way and affects economic growth positively.

Inflation is considered an important indirect indicator of GDP growth and the higher inflation is, the less economic growth is supposed to be.

This paper encourages the authors to further extend their study by making a comparative analysis of fiscal policies and economic growth with countries in the region and the EU.

Due to this research paper, the VAT tax rate in Albania is characterized as very high and the VAT refund procedure does not respect their right and does not facilitate business.

A consumption tax is a positive tax that might stimulate competition and then growth. Related to the literature reviewed, several studies evaluated the relation between GDP and VAT.

VAT is a tax that contributes directly to the public revenues by increasing or decreasing them correspondingly, so, affects nominal GDP indirectly and also, economic growth positively.

Gross fixed capital formation has a positive impact on economic growth and underlines a high degree of economic development.

Low-income households suffer more in proportion to their expenditures.

The study recommends measures to enhance VAT revenue to balance the government budget and to reduced deficits.

The public expenditures in Albania are positively related to the economic growth of the country.

The higher is the trend of public debts, the less is the investment in capital goods. So, this would reduce output and high marginal taxes would discourage working and saving. All of these situations could increase prices and consequently cause inflation.

The study recommends the undertaking of sustainable policies in order to increase the government revenues, to stabilize the effects of public debt, budget deficit, and more space for the implementation of some public projects, with long-term effects.

Taxation treatment should be neutral between forms of business activities and contribute to efficiency by ensuring that the optimal allocation of means of production is achieved.

Taxation should be simple to apply so that taxpayers know very well because a simple taxation system means efficiency in understanding the rights and obligations of individuals.

VAT should be easily applied by taxpayers, so the authors recommend the policymakers review the procedures and documentation.

Taxpayers' trends to take optimal decisions in accordance with the tax policy addition, the potential for evasion avoidance should be minimized.

Taxpayers and citizens need to be informed in real-time about all the changes that occur in fiscal policies, mainly VAT, as they pay VAT on each purchase or service.

In Albania, VAT is a tax on the circulation of goods and services (consumption). It is collected by persons who are registered for this type of tax through the sale of services and the performance of various supplies that make the consumer first. As such, in the circulation of goods or services from the source of supply and up to the last consumer, an added value is placed, which is collected by the seller on behalf of the state.

The last consumer is the one who performs the final circulation with the amounts of value-added supply he has bought at every step of the supply. The value-added in itself is the amount of all payments, interest paid for the capital put into operation, various rents paid for the used property, and the profit resulting from the activity.

For the serial data collected for the period 1999–2019, the authors conclude that there is a statistically significant positive relationship between VAT and the growth rate of the GPD.

Through this study, the authors aim to precede in the future with concrete research were to consider the countries of the region compared to EU countries, to analyze main characteristics of fiscal policies, legal framework, and total tax revenues versus economic growth. Specifically, how is the VAT trend comparing the total VAT revenues versus GDP? Related to the previous question, another study regarding the pandemic period is intended to be realized.

The result of this paper argues that VAT and GDP have a positive relation affecting the state budget, the household economy, as the final consumer, taxpayers, and for the policymakers, as better governance, helps in absorbing investment as well as limiting the risks of crises.

According to the results obtained in this research study, it can be considered that, in addition to the findings, there are also limitations. Given that VAT is treated in terms of economic well-being as well as its impact on GDP, a larger number of factors affecting GDP could have been considered. At the same time, it is worth mentioning that the study leaves open fields to address the impact that VAT has on the consumer, by analyzing income and expenses, the financial elements of the household as a whole.

This study will help researchers to see the performance of VAT on GDP taking into account changes in the tax legislation. The authors will also work in the near future to assess the impact of VAT on GDP for Albania, during and after the pandemic period.

REFERENCES

1. Alain, C., & Owens, J. (2010). An international perspective on VAT. *Tax Notes International, 59*(12), 943–954. Retrieved from https://www.oecd.org/ctp/consumption/46073502.pdf
2. Chiricu, C.-Ş. (2019). The analysis of the economic impact of VAT on the economic growth in Southern Europe. *Review of Economic and Business Studies, 12*(2), 47–56. Retrieved from https://www.researchgate.net/publication/338297031_The_Analysis_of_the_Economic_Impact_of_VAT_on_the_Economic_Growth_in_Southern_Europe

3. Chudik, A., Mohaddes, K., Pesaran, M. H., & Raissi, M. (2013). *Debt, inflation and growth: Robust estimation of long-run effects in dynamic panel data models* (Federal Reserve Bank of Dallas Globalization and Monetary Policy Institute Working Paper No. 162). https://doi.org/10.24149/gwp162
4. Cikalleshi, V. (2013). *TVSH, suksesi i administrimit te saj dhe ndikimi ne te ardhurat publike* (Master's thesis, University Aleksander Moisiu, Albania). Retrieved from https://www.uamd.edu.al/new/wp-content/uploads/2013/01/TVSH-SUKSESI-I-ADMINISTRIMIT-T%C3%8B-SAJ-DHE-NDIKIMI-N%C3%8B-T%C3%8B-ARDHURAT-PUBLIKE.pdf
5. Daniel, B. C., & Shiamptanis, C. (2008). *Fiscal policy in the European monetary union* (International Finance Discussion Papers No. 961). https://doi.org/10.17016/IFDP.2008.961
6. Demi, A. M., Uku, S., & Agolli, M. (2017). Tax policy induced non compliance — Empirical investigation using tax gap for Albania. *Revue du CIT Review, 11,* 3–5. Retrieved from https://vdocument.in/reader/full/revue-du-cit-january-march-2017-towards-a-new-dimension-refugee-crisis
7. Demi, A., Hysa, E., & Nanaj, F. (2018). Fiscal rules of VAT in Albania, the analytical methodology of the factors influencing its efficiency in state budget. *Journal of European Social Research, 2*(1), 13–28. Retrieved from http://epoka.edu.al/mat/ces/Volume_2_Issue_1-JESR.pdf
8. Desai, M. A., Foley, C. F., & Hines, J. R., Jr. (2004). Foreign direct investment in a world of multiple taxes. *Journal of Public Economics, 88*(12), 2727–2744. https://doi.org/10.1016/j.jpubeco.2003.08.004
9. Hassan, B. (2015). The role of value added tax (VAT) in the economic growth of Pakistan. *Journal of Economics and Sustainable Development, 6*(13), 174–183. Retrieved from https://core.ac.uk/download/pdf/234647134.pdf
10. Hysa, E., Kruja, A., Rehman, N. U., & Laurenti, R. (2020). Circular economy innovation and environmental sustainability impact on economic growth: An integrated model for sustainable development. *Sustainability, 12*(12), 4831. https://doi.org/10.3390/su12124831
11. Institute for Advanced Studies, & CPB Netherlands Bureau for Economic Policy Analysis. (2013). *A study on the economic effects of the current VAT rates structure* (Final Report). Retrieved from https://ec.europa.eu/taxation_customs/system/files/2016-09/vat_rates_structure_final_report.pdf
12. Ministry of Finance and Economy in Albania. (2014). *Economic and fiscal program 2014–2016*. Retrieved from https://financa.gov.al/wp-content/uploads/2017/12/EFP_2014_english_FINAL.pdf
13. NCSS. (n.d.). *The Box-Jenkins method* (Chapter 470). Retrieved from https://ru.scribd.com/document/311618967/Box-Jenkins-Method
14. OECD. (2006). *International VAT/GST guidelines*. Retrieved from https://www.oecd.org/tax/consumption/36177871.pdf
15. Ormaechea, A. S., & Morozumi, A. (2019). *The value added tax and growth: Design matters* (IMF Working Paper No. 19/96). https://doi.org/10.5089/9781498312233.001
16. Panizza, U., & Presbitero, A. F. (2014). Public debt and economic growth: Is there a causal effect? *Journal of Macroeconomics, 41,* 21–41. https://doi.org/10.1016/j.jmacro.2014.03.009
17. Romer, P. M. (1986). Increasing returns and long-run growth. *The Journal of Political Economy, 94*(5), 1002–1037. https://doi.org/10.1086/261420
18. Shijaku, G., & Gjokuta, A. (2013). *Politika fiskale dhe rritja ekonomike: Rasti i Shqiperise*. Retrieved from https://www.bankofalbania.org/Botime/Botime_Kerkimore/Materialet_studimore/Politika_fiskale_dhe_rritja_ekonomike_Rasti_i_Shqiperise.html
19. Siemens. (n.d.). *Supervisory board chairman of Siemens up to 1966*. Retrieved from https://new.siemens.com https://new.siemens.com/global/en/company/about/history/people/supervisory-board-chairmen-up-to-1966.html
20. Solow, R. M. (1956). A contribution to the theory of economic growth. *The Quarterly Journal of Economics, 70*(1), 65–94. https://doi.org/10.2307/1884513
21. Sufaj, D. (2015). Global financial crisis of 2007: The case of Albania. *Mediterranean Journal of Social Sciences, 6*(4), 130–137. https://doi.org/10.5901/mjss.2015.v6n4p130
22. Tax Policy Center. (2020). *Tax Policy Center briefing book: How could we improve the federal tax system?* Retrieved from https://www.taxpolicycenter.org/briefing-book/what-history-vat
23. The Albanian Center for Competitiveness and International Trade (ACIT). (2010). *A study on the value added tax (VAT) reimbursement for exporters* (Final Report). Retrieved from https://acit.al/wp-content/uploads/2021/04/A-study-on-the-value-added-tax-VAT-reimbursement-for-exporters_1D.pdf
24. Thomas Sewall Adams Papers (MS 31). (n.d.). *Manuscripts and archives, Yale University Library*. Retrieved from https://archives.yale.edu/repositories/12/resources/4894
25. Trebicka, B. (2015). Does fiscal policy matters for economic growth? Empirical study of Albanian situation. *Interdisciplinary Journal of Research and Development, 2*(2), 9–12. Retrieved from https://www.uamd.edu.al/new/wp-content/uploads/2016/02/2.1.-Brunela-Trebicka.pdf
26. Ueda, J. (2017). *The evolution of potential VAT revenues & C-efficiency in advanced economies* (IMF Working Paper No. 17/158). https://doi.org/10.5089/9781484305874.001