Economic Growth, Governance, and Decision-Making in a Transforming Market Environment

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Contents

Editorial

By Assoc. Prof. Dr. Gerti Sqapi

The current issue of the *Journal of Economics and Technology* brings together a collection of five articles that, while differing in their focus and methodology, converge on a single theme: the multifaceted nature of decision-making in rapidly transforming economies. Over the past three decades, Albania's economy has undergone a profound transformation, evolving from a closed, centrally planned system to a market-oriented, liberalized system aligned with Europe. This economic transformation has been marked by extensive institutional reforms, market liberalisation, change in policies, major initiatives in infrastructure development, which have been oriented towards the goal of sustainable economic growth. The articles in this issue explore how institutions, markets, political actors and behavioural patterns shape the trajectory of economic growth - whether through fiscal policy, corporate governance, public-private partnerships, or the psychology of consumer choice. Together, these contributions provide a rich analytical mosaic of Albania's economic experience and its broader regional and theoretical implications.

Enkeleda Shehi and Aristea Shaqiri's article "*The Importance of Economic Growth for Labour Market Stability: A Review of Historical Data (1996–2023)*" analyses one of the most fundamental macroeconomic relationships: the link between GDP growth and unemployment, and applies it to the case Albania. Using official data spanning from 1996-2023 (time series data), the authors confirm the validity of Okun's Law in the Albanian context by finding a strong negative correlation (R= –0.93) between economic growth and unemployment. Their model indicates that a one-percentage-point rise in GDP decrease the unemployment rate by about one point, signalling that economic growth continues to be a cornerstone of labour-market stability.

Anisa Hoxhaj's article "*The Impact of Government Expenditures on Economic Growth: The Size of the Fiscal Multiplier*", examines the impact of public expenditure on GDP growth for the case of Albania (comparing it also to some

other developing countries), employing both a structural VAR model and the International Monetary Fund's "bucket" methodology. The study indicates that Albania's fiscal multiplier is relatively low—around 0.3 in the short term and 0.17 in the long term—implying that government spending fosters growth (*a 1 lek increase in government spending would lead to a 0.3 lekë rise in GDP in the short run and a 0.17 lekë increase in the long run*), but its efficacy is significantly influenced by spending efficiency and economic structure. These results highlight how vital it is for developing economies like Albania to have a well-targeted fiscal strategy for improving long-term economic performance and growth.

In their study *"Corporate Governance and Their Practice as an Important Part of Business Activity"*, Fabian Pjetri, Rezart Dibra and Eni Danaj present a theoretical investigation of corporate governance as a core component of business operations and institutional stability. This study highlights the importance of effective governance structures - especially those that include boards of directors, executive leadership, and stakeholders - for improving corporate performance, transparency, and their long-term strategy. By examining international frameworks and stressing the significance of models such as those of agency theory and stakeholder theory, the authors show how important it is to have flexible, morally sound governance practices in an increasingly complicated economic environment.

Infrastructure development has been another important aspect of Albania's market transformation, and here, too, effective decision-making and innovative financing methods have played an important role. With public finances restrained, different governments in Albania have increasingly leveraged public-private partnerships (PPPs) – especially concessions – to fund and manage major infrastructure projects. Kume & Bogdani's comparative study of airport concessions in Tirana and Pristina illustrates how engaging private partners can provide much-needed capital into public services. Their analysis concludes that well-structured concessions are an effective way to undertake projects the state cannot finance alone and in a very short time, by creating mutual benefits: the public sector attains modern infrastructure under agreed conditions while private investors earn a fair return. But at the same time, Albania's experience with PPPs and concessions stresses the need for more strong legal and institutional frameworks to supervise and implement these partnerships. In general, this study contributes to understanding how concessions can improve public service delivery in developing countries.

In the last article of this volume, *"Decoding Consumer Minds: Neuromarketing Insights into the Role of Colours"*, Aurela Braholli offers an interdisciplinary perspective on how colour perception influences consumer behaviour and purchasing decisions. Drawing on neuromarketing theory and empirical survey data, this study explores how colours such as red, white, black, and brown are associated with emotional qualities, and in general, it contributes to the growing

body of research on neuromarketing by emphasizing the psychological and cognitive impact of colour in consumer decision-making.

In a transforming market environment like the one in Albania, where digitalization, European integration, and structural reforms have reshaped both the opportunities and risks, in general, the studies in this volume of *"Journal of Economics and Technology"* reaffirm a crucial message: sustainable development depends on the quality of decisions made by governments, enterprises, and individuals alike. Good governance is not an abstract principle but a practical condition for translating policy, investment, and innovation into tangible public gains.

The Importance of Economic Growth for Labor Market Stability: A Review of Historical Data (1996–2023)

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Abstract

Following other studies within Albania and abroad dealing with relationship between economic growth and rate of unemployment, this paper aims to analyse the importance of economic growth in reducing unemployment. The time series consist of economic growth and the unemployment rate in Albania during the period 1996–2023. The main source of data used are official statistical data from INSTAT, the Bank of Albania, and international organizations such as the IMF and the World Bank. The study uses a linear regression model to evaluate the impact of GDP on the level of unemployment. The main objective is to test the validity of Okun's Law in the Albanian context and to understand whether economic growth has had a direct effect on improving the labour market. The results indicate a strong and negative

relationship between economic growth and unemployment, with a correlation coefficient R, of -0.93 and a determination coefficient, R^2, of 0.865, suggesting a good model fit. For every 1% increase in GDP, the unemployment rate decreases by an average of 1.05%. These findings support the approach that economic development is a key factor for employment stability and should serve as a foundation for effective public policy.

Key words: *economic growth, unemployment, linear regression, GDP, labor market, Albania, econometric analysis*

1. Introduction

1.1 Purpose and Importance of the Topic

This study aims to analyse the relationship between economic growth and the unemployment rate in Albania during the period 1996–2023. If one refers to the field literature, the relationship between these two indicators has been the subject of discussions and debate, mainly in the context of Okun's Law. This law, as it's known, emphasises a negative correlation between the growth of Gross Domestic Product (GDP) and unemployment. This relationship is essential for understanding the effects of macroeconomic policies on the labour market and for identifying the most effective ways to promote employment through sustainable economic growth.

The importance of this study lies in its analysis of a long time period—nearly three decades—encompassing key phases of transition, stabilization, and economic development in the country. During this time, Albania has faced numerous economic and social challenges, including the 1997 crisis, the global financial crisis of 2008, and the economic impact of the COVID-19 pandemic. In this context, analysing the impact of economic growth on unemployment helps to understand the elasticity of the labour market in response to changes in economic activity.

Additionally, this topic is of great use and importance for policymakers, public institutions, researcher and economic stakeholders who want to design policies that promote fair and inclusive economic growth. A thorough understanding of this relationship helps design and apply active labour market policies, develop long-term strategies for employment and economic development, as well as improve social support mechanisms aiming narrowing the gap between unemployed and employed, facilitating the transition and pushing the first category moving towards the second one.

1.2 Study Objectives

The aim of this paper is to address the following research objectives: (a) to find the empirical model explaining the nature and possibly showing the direction of the relationship between economic growth (GDP) and unemployment in Albania during the period 1996–2023; (b) to use advanced statistical methods and packages to construct and design the model of relationship between two variables, i.e. more specifically use Excel package and the linear regression model measuring the impact of economic growth on the unemployment rate, (d) to assess the model's goodness-of-fit using statistical indicators such as the correlation coefficient R and coefficient of determination R^2, in order to measure the strength of the relationship between the two variables, (e) to draw conclusions and offer practical recommendations for policymakers and public institutions based on the results of the statistical and econometric analysis (f) to confirm the application of the Okun's Law in the Albanian case.

1.3 Methodology

The study is based on time series analysis methodology and the use of simple linear regression, one of the most common techniques used in econometric analysis. Data were collected for a 27-year period (1996–2023), including annual values for the unemployment rate and real GDP growth, sourced from official institutions such as INSTAT, the Bank of Albania, the IMF, and the World Bank.

The data were cleaned and organized using statistical analysis software such as Excel and SPSS, to ensure consistency and reliability of results. The analysis involves building a linear model for the population (Population Regression Function PRF) where GDP represents the independent variable *(Xi)*, and the unemployment rate is the dependent variable *(Yi)*,

$$Y_i = \beta_1 + \beta_2 X_i + u_i \qquad (1)$$

where u_i is an unobserved random variable that takes positive or negative values, known as the stochastic disturbance, or stochastic error term. In other words, u_i is a representative of all variables that are excluded from the model but jointly affect *Y*. Since (1) is not observable, it is estimated using Sample Regression Function (SRF),

$$Y_i = \hat{\beta}_1 + \hat{\beta}_2 X_i + \hat{u}_i = \hat{Y}_i + \hat{u}_i \qquad (2)$$

where $\hat{u}_i$ are the actual differences between actual and estimated values of *Y*. The model's coefficients $\hat{\beta}_1$ and $\hat{\beta}_2$ are calculated based on the OLS Method

(Ordinary Least Squared Method) interpreted both statistically and economically, aiming to understand the real impact of economic growth on unemployment in the country.

In addition to the direct interpretation of the model, important indicators such as R^2 and p-value were calculated to test the statistical validity of the hypotheses. Finally, the relationship is showed through graphs and analysed in relation to the relevant economic theories, as mentioned above.

II. Literature Review

2.1 Description of the Main Source

In their paper *"Economic Growth and Unemployment in Albania"* published in the *Review of Economics and Finance* in 2023, the authors Ardi Bezo, Lorena Bezo, and Bardhyl Dauti, addresses the relationship between economic growth and unemployment in Albania analysing official data for the period 1996–2021 and construct regression models to test the validity of Okun's Law in the Albanian context. Their goal was to examine whether fluctuations in GDP growth have significantly affected the unemployment rate and to what extent this relationship is statistically significant. Their model also incorporates elements of long-term stability and short-term fluctuations, offering a balanced approach between theoretical and empirical analysis.

For extended analysis in this paper, the dataset has been supplemented with data for the years 2022 and 2023 by us, to enrich the model and update it in light of the post-pandemic context and recent global developments. Also, the model is designed to use only one independent variable, *Xi*, GDP Growth, as per the principle of parsimony, to keep the model simple and reduce the risk of data missing or wrong data, that might be an important issue in Albania.

2.2 Importance and Contribution to the Field

This paper represents an updated extend version in terms of prolongation of the time series, and confirmation of the previous studies in the field and serves one of the most comprehensive and focused analyses of the Albanian labour market, combining theoretical approaches with practical applications of econometric models. Also, as mentioned above, this paper approach is towards simplification of the model, using two variable model with one dependent and one independent variable. This paper contribution lies in providing clear statistical evidence on the impact of economic growth on employment, translating the analysis into concrete recommendations for policymakers.

Another valuable aspect is its contribution to the development of academic literature in Albanian, which remains limited in terms of advanced empirical economic analysis. It also serves as an example and base for future comparative studies with countries in the region, positioning Albania within the broader context of economic transition in the Balkans.

2.3 Critical Evaluation of the Publication

Some of the key *strengths and/or contribution* of this paper are as follows: (i) The use of reliable and fresh source of data, aiming enhancing the usage of the model for different researches or policy making purposes; (ii) The application of simple econometric time series methodologies easy to apply and easy to interpret even by the common reader; (iii) The construction of a clear argument regarding the impact of economic growth on unemployment in Albania, based on internationally supported economic theories; (iv) The contribution towards financial education of the population, an important issue which is taken very seriously in developed countries; (v) The contribute to increase awareness among policymakers and different stakeholders about the important relationship between GDP growth and employment.

Besides the positive contribution mention above, there are several *limitations* in this research paper: (i) The analysis focuses primarily on a single explanatory variable (GDP growth), omitting other important factors that may significantly influence unemployment, such as foreign direct investment, emigration, demographic and structural changes in the labour market, geographical location, remittances, wealth and other assets that influence the approach to the labour market, etc.; (ii) The models used do not thoroughly address lagged effects, which are often present in such macroeconomic relationships; (iii) There is no comparative analysis with similar countries in the region, which could help in assessing Albania's relative dynamics and position. However, these limitations might be considered as an ideal starting point for further research by other experts and more advanced modelling in this field.

III. Historical Context of the Study Object

The relationship between economic growth and unemployment in Albania cannot be fully understood without considering the historical context of economic and social developments during the post-communist period. After 1990, Albania transitioned from a centrally planned economy to a free market economy—a process accompanied by major structural, institutional, and social challenges. The transition period was marked by mass privatizations, a decline in industrial production, and an unprecedented rise in unemployment.

Between 1992 and 1997, the country faced a deep economic and social crisis, culminating in the collapse of pyramid schemes and the unrest of 1997. This period saw a sharp drop in GDP and a spike in unemployment, further deepening labour market uncertainty. After 2000, Albania experienced steady economic growth, supported by foreign investment, remittances, and structural reforms, but unemployment remained a persistent challenge, particularly for youth and women.

The 2008–2009 global financial crisis had a direct impact on slowing economic growth and unemployment trends. As per its financial market development, Albania was considered a "safe" zone, and it was not affected by this crisis in the same proportion as other developed economies. The following years marked efforts toward macroeconomic stability and fiscal consolidation. The period 2014–2019 was characterized by deep reforms, mainly in improvements in infrastructure and sectors like tourism and services. These improvements contributed positively to economic growth—though not necessarily to a proportional reduction in unemployment.

The COVID-19 pandemic in 2020 had negative impact to the economy, with a contraction in GDP and a temporary rise in unemployment. This period was characterized by a series of closing small and medium size business, leaving several employees permanently or temporary without job. However, the economic recovery during 2021–2023 has been relatively rapid, making the analysed period (1996–2023) particularly interesting for testing labour market elasticity in response to changes in economic activity.

Thus, the historical context of this study presents a complex and dynamic reality dominated by economic transition, internal and external shocks, and efforts toward European integration. The researchers which aim to analyse the relationship between GDP and unemployment within this historical framework, where there are present or are happening different important turning points, like certain phases or cycles of economy or other specific events like COVID-19, will find themselves very "lucky" because the information and data will provide them with deeper insight into analysing the functioning of Albania's labour market and the effectiveness of economic developments in fostering employment.

IV. Methodology / Analytical Model of the Study

4.1 Data Collection and limitation

The data were obtained from official sources such as INSTAT, the Bank of Albania, and international organizations including the IMF and the World Bank. The data were collected on an annual basis and include the unemployment rate and real GDP growth for each year from 1996 to 2023. Methods of archival documentation and summaries from online statistical sources were used.

A significant limitation is the lack of monthly or quarterly data, not for unemployment, which would allow for a more detailed and deep analysis. Additionally, changes in the methodology for measuring unemployment over the years may result in inconsistencies, not comparable results, making it difficult to draw accurate conclusion.

4.2 Data Grouping

As mentioned above this paper main objective is to evaluate the influence or relation of the GDP growth to unemployment rate. As per se the paper uses only two indicators/data, GDP growth and unemployment rate, leaving other indicators influencing unemployment rate out of the model, to make it simple and more comprehensive by the common reader. The data used are grouped into two main categories:

- *Unemployment Rate (%)* – Represents the unemployment rate in period t, as a percentage of the labour force. It is denoted by Y_t, where t, represents the period/time t and in this study the period is the year.
- *GDP Growth (%)* – Represents the annual growth of gross domestic product. It is assumed to have an effect on unemployment. It is denoted by X_t, where t, represents the period/time t and in this study the period is the year.

The time series data are presented in tabular form for each year in *Annex 1*. The table served as the basis for building models and graphs.

4.3 Data Processing and Statistical Method Used

The data were cleaned for errors and gaps and organized into a simplified structure for analysis in Excel package. Consistency in units and time periods was ensured. There were no data missing, or extreme and outliers to be considered.

To build the relation between variables and analyse model statistical significance the methods used are Simple Regressions Analysis, Hypotheses Testing and ANOVA analysis. To do that, (i) a simple linear regression function with two variables is constructed (one independent variable, and one dependent variable); (ii) the correlation coefficient (R) and the coefficient of determination (R^2), are calculated, to interpret the goodness of fit and the linear relation between variables; (iii) a scatter plot and the regression line to visualize the relationship is drawn, taking advantage of two variable model for which the graphic show/presentation is possible; (iv) economic interpretation of the model's coefficients, their statistical significance which is done through Hypotheses Testing method using t test and F test.

V. Empirical Analysis and Findings

5.1 Variables Used and Their Definition

As mentioned above the data used are grouped into two main categories, which will be called variables. This econometric analysis uses two main variables:

- *Dependent variable (Y_t): Unemployment Rate (%)* – The annual unemployment rate in Albania in the year *t*. This variable, called dependent or explained variable, represents the outcome being studied and is influenced by changes in economic growth. It is measurable as a percentage and indicates the share of the labour force that is active but unemployed.
- *Independent variable (X_t): GDP Growth (%)* – The annual real growth of Gross Domestic Product as a percentage, in the year *t*. This is the independent or differently called explanatory variable, assumed to have the main impact on the unemployment level. It is used to explain fluctuations in the labour market through the linear regression model.

The name, definition, symbol used, unit of measurement and the source of the data for each variable are given in the table below:

Variable	Symbol	Definition	Unit of Measurement	Data Source
Unemployment Rate	Y_t	The percentage of the labor force that is active but not employed in a given year *t*.	% (percentage)	INSTAT, Bank of Albania
GDP Growth Rate	X_t	The annual growth in the real value of GDP (year *t*) compared to the previous year, (year *t-1*).	% (percentage)	INSTAT, World Bank, IMF

- *Unemployment measurement*: conducted through labour force surveys (LFS), undertaken, processed and published by the INSTAT experts and updates from official registers.
- *GDP measurement*: calculated in real terms to eliminate the effect of inflation and based on national economic activity reports.

5.2 Relationship Between Variables, the Impact of GDP (X_t) on Unemployment (Y_t)

Economic theory suggests that higher economic growth ($GDP_t > 0$ or in terms of symbol used $X_t > 0$) leads to a reduction in the unemployment rate (Y_t). Following the principle of Okun's Law we expect the slope, or the coefficient of regression before variable X_t, to be negative, or $\beta_1 < 0$.

5.3 The Linear Regression Model

The Linear Regression Model (LRM) is as follows:

$$Y_t = \beta_0 + \beta_1 \cdot X_t + u_t$$

Where:

- Y_t: Unemployment rate in period t.
- X_t: Real GDP growth in period t.
- β_0: Model intercept (coefficient of regression known as intercept).
- β_1: Coefficient measuring the impact of the independent variable on the dependent variable (coefficient of regression known as slope).
- u_t: Error term reflecting factors not included in the model. This is a stochastic term with a certain probability distribution.
- t: period means the year.

After processing the data in Excel package, the resulting sample linear regression model is:

$$\hat{y}_t = 12.66 - 1.05 \cdot x_t \quad (3)$$

Or in words:

Unemployment Rate = 12.66 − 1.05 × GDP Growth (3')

The model (Equation (3)) shows a negative relationship between economic growth and unemployment, indicating that as GDP increases, the unemployment rate tends to decrease. In other words, the relationship between *GDP Growth (%) and Unemployment Rate (%)* is negative and linear. This means that for every 1% increase in GDP, the unemployment rate is expected to decrease by 1.05%.

The regression statistics and ANOVA are in the Annex 2.

The values of the coefficients of regression function in the Equation (3), β_0, the intercept and β_1, the slope, have the economic and econometric interpretation as below:

Coefficient	Value	Interpretation
Intercept, (β_0)	12.66	When GDP Growth is 0%, the expected unemployment rate is approximately 12.66%.
Slope, GDP Growth (β_1)	-1.05	An 1% increase in GDP reduces unemployment by 1.05% on average.

The negative value of GDP coefficient ($\beta_1 = -1.05$) supports the hypothesis of an inverse relationship between economic growth and unemployment, consistent with Okun's Law, which suggests that economic growth contributes to lowering unemployment. This effect is stable and direct, based on the linear model. Thus, once more, it aligns with economic theory, especially Okun's Law, which predicts that economic growth supports job creation and reduces unemployment.The intercept has limited practical meaning (as GDP growth is rarely exactly 0%), but it is essential for the mathematical structure of the model.

5.4 Statistical Significance and the model "Goodness of fit"

To analyse the "Goodness of Fit" of the model and linear association of the variables one can look at their respective values of Determination Coefficient and Coefficient of Correlation. The interpretation below is according to results of ANOVA analysis (see Annex 2). The regression coefficients, differently called parameters of the model, β_0, β_1, are tested using *t* test and *F* test (reciprocally using *t distribution and Fisher distribution*), as part of ANOVA analysis.

From the regression results, are obtained the following indicators:

- *Correlation Coefficient (R): R = - 0.930* → Indicates a very strong negative linear relationship between GDP and unemployment.
- *Determination Coefficient R² (R-Squared): R² = 0.865* → Indicates that 86.5% of the variation in the unemployment rate is explained by changes in economic growth. This is a high level of model goodness of fit, suggesting a reliable model.
- *Regression Coefficient for GDP Growth (β_1 = -1.05):* It is statistically significant, and it is far from zero and consistent with theoretical expectations. In the linear regression analysis, the *p-value* for the GDP coefficient is less than 0.05, indicating that the effect of economic growth on unemployment is *statistically significant*.

The relationship between economic growth (GDP Growth) and unemployment rate it is shown in the diagram below. A *scatter plot* was drawn to better see and analyse the relationship, where each point on the graph represents data from a specific year in the period *1996–2023*. The *X-axis* (horizontal) represents GDP Growth (%) and the *Y-axis* (vertical) represents the Unemployment Rate (%).
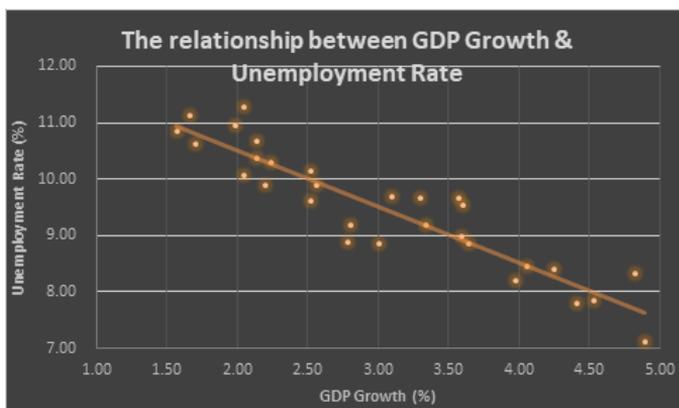
The Ordinary Least Square Method (OLS) is used to estimate regression parameters β₀, β₁, and the Regression Line is drawn based on the Equation (3) or equivalently Equation (3'):

$$\hat{y}_t = 12.66 - 1.05 \cdot x_t \ (3)$$

or in words

Unemployment Rate = 12.66 − 1.05 × GDP Growth (3')

This regression line represents the *predicted unemployment values* for each given level of GDP and has the following characteristics or features (i) it has a *negative slope*, indicating that when GDP increases, unemployment tends to decrease, confirming the economic theory; and (ii) it *minimizes the squared distance* between itself and each actual data point, as per the main idea under the OLS method mentioned above, meaning the that the parameters are the best linear unbiased estimators.

The scatter plot with the regression line incorporated in the graph provides a clear view of the relationship between economic growth and unemployment. Specifically, it confirms as follows: (i) The *overall trend is negative*: as GDP increases, the unemployment rate declines, which aligns with economic theory, which states that economic growth generates jobs and reduces unemployment. (ii) The *distribution of points* shows that most values are concentrated around the

regression line, implying a strong correlation and a well-fitted model. (iii) The points are relatively evenly distributed, with no drastic outliers that would suggest major deviations from a linear model. (iv) The regression line follows the trend of the data and gives a reliable representation of the relationship between the two variables. (v) The slope coefficient is *−1.05*, reinforcing the idea that a 1% increase in GDP results in an average 1.05% decrease in unemployment.

Referring to the time series, and also in the graph, there are certain points, to be considered as outliers. The outliers, the point/year, where they appear in the graph and an economic reason or interpretation for their presence, is as follows: (i) years with very high unemployment and low GDP growth, such as *1999, 2004, 2015, and 2023*, appear somewhat distant from the regression line; (ii) these deviations may be related to specific economic events, such as financial crises, political instability, or external economic shocks not captured by the model.

Even though the presence of some extreme values, or outliers, the graph *supports the hypothesis* of a strong, negative linear relationship between economic growth and unemployment rate.

The Coefficient of Determination R^2, which measures how well the data fit the linear model, is *0.865*, meaning that *86.5%* of the variation in unemployment is explained by changes in GDP growth. This indicates a *very good fit* of the model and shows that only 13.5% of the variation in unemployment rate is not explained by the GDP growth. Certainly, as mentioned, there are other variables that affect the unemployment rate, which are not taken into account in this study. As per the definition of Coefficient of Determination R^2, R^2 close to 1 means the model explains almost all the variation in the data, whereas a value near 0 would indicate a poor fit, and the regression line above stands in the first category (meaning very good fit).

The Correlation Coefficient, R, merasures the *strength and direction* of a linear relationship between two variables. R in this case is equal to *−0.930*, showing a very strong negative correlation between GDP and unemployment. Also, regression line is very useful tool for prediction of future values of dependent variable (unemployment rate), for different values of independent variable (GDP growth) in the future years.

5. 5 Summary of Statistical Findings

Based on Albania's data from *1996–2023* using a *simple linear regression* model with GDP Growth as the independent variable and Unemployment Rate as the dependent variable, we derive the following statistical conclusions:

- *Correlation coefficient (R = −0.93):* Indicates a very strong negative linear relationship between economic growth and unemployment.

- *R^2 = 0.865:* About *86.5%* of the variation in unemployment is explained by changes in GDP.
- *Regression model: Unemployment Rate = 12.66 − 1.05 × GDP Growth* → This model has a clearly negative slope and can be *interpreted confidently* as stable.
- The regression coefficient before the variable GDP growth, (β_1), i.e. the slope, is negative *(β_1=−1.05)* and *p-value < 0.05*, which shows that the model is statistically significant, i.e. the hypothesis that *((β_1=0)* is refused, though, suggesting a clear and meaningful effect of economic growth in reducing unemployment.

5.6 Economic Interpretation

From an economic perspective:

- *Economic growth plays a key role in reducing unemployment.* Every 1% increase in GDP is *associated, on average, with a 1.05% decrease* in the unemployment rate.
- This result aligns with Okun's Law and classical macroeconomic models that show increased economic activity helps create jobs.
- However, the fact that *13.5% of the variation is not explained by GDP* suggests that other factors - such as active labour market policies, emigration, or the structure of the labour market, etc. - also influence the unemployment level in Albania.

The statistical analysis *shows and emphasises the existence of a significant relationship* between economic growth and unemployment. From an *econometric point of view*, the model provides a *reliable and simple tool for analysis and forecasting*, while also indicating the need for more comprehensive, more complex future models that include additional explanatory variables, using multiple regression model or others. The room for more variables is also supported by the 13.5 % of variation of the unemployment rate, which is not explained with the GDP growth.

VI. Conclusions and Recommendations

6.1 Summary of Results

- The *statistical and econometric analysis* of data from Albania over the period *1996–2023* confirms a *strong and negative relationship* between economic growth and the level of unemployment.
- The constructed *linear regression model*, while simple, proves to be *effective*, explaining about *86.5% of the variation* in the unemployment rate as a function of GDP.

- The model supports the idea that *economic growth is a powerful instrument for reducing unemployment*, emphasizing the crucial importance of *economic stability and development-oriented policies* towards reducing unemployment in the country.

6.2 Testing of the Hypotheses

- The base hypothesis H_0 that *"There is a strong and negative relationship between GDP growth and unemployment"* — is *statistically confirmed*.
- This result is *consistent with classical macroeconomic theories* and relevant scholarly literature.
- However, the existence of some *outliers and the remaining unexplained percentage suggest that economic growth is not the only factor* influencing unemployment — *structural and demographic factors* must also be considered.

6.3 Recommendations

Some *suggestions for Policymakers and Institutions* might be: (i) *Promote sustainable economic growth* through domestic and foreign investments, support for small businesses, and innovation; (ii) *Employment-oriented policies*, particularly in sectors that show high growth potential (e.g., *technology, modern agriculture, tourism*, etc.); (iii) *Strengthen vocational education and training*, to better match labour market demand with the skills of the workforce; (iv) *Regularly monitor and analyse the labour market* to enable timely responses to economic shifts.

And some *Ideas for Future Research include* the need to**:** (i) *Expand the model* by including additional explanatory variables such as *inflation, public/private investments, emigration, productivity, etc.*; (ii) *Conduct regional or sectoral analyses*, to examine whether the effects vary by geographic areas or economic industries; (iii) *Apply more advanced and sophisticated econometric models (such as VAR, ARIMA)* to improve forecasting and better understand long-term dynamics, having in the model more *"actors"* that contribute and importantly influence to the unemployment rate development in the country.

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Annex 1 – Tabular structure

Year	GDP Growth (%) X	Unemployment_rate (%) Y
1996	4.06	8.45
1997	3.60	8.98
1998	2.05	10.06
1999	2.05	11.29
2000	1.70	10.63
2001	4.53	7.85
2002	3.60	9.53
2003	3.98	8.21
2004	1.57	10.85
2005	4.89	7.10
2006	4.41	7.81
2007	2.24	10.30
2008	2.14	10.66
2009	2.14	10.37
2010	2.56	9.89
2011	3.34	9.18
2012	3.01	8.85
2013	2.52	9.62
2014	3.64	8.86
2015	1.99	10.94
2016	2.52	10.15
2017	2.78	8.89
2018	3.10	9.69
2019	4.25	8.41
2020	2.20	9.90
2021	3.30	9.67
2022	3.57	9.66
2023	1.66	11.14

This annex presents a time-series dataset which is used to study the relationship between GDP Growth (%) and Unemployment Rate (%) in Albania over the period 1996–2023. The table is structured into three main columns:

- Year: Indicates the specific calendar year of the observation. In the model, it is represented by t, as an index for each specific value of the variables in the given year.
- GDP Growth (%) (X_t): Reflects the annual percentage change (in the year t) in the Gross Domestic Product, the most important indicator that measures the economic performance and growth of the country.
- Unemployment Rate (%) (Y_t): Shows the corresponding annual unemployment rate (in the year t), representing the percentage of the labour force that is without work but actively seeking employment, as per international standards and definition of the indicator.

This annex provides a valuable basis for analysing economic trends and assessing the correlation between economic growth and unemployment over time. It serves as the foundational data for statistical and econometric analyses, such as linear regression modelling, used to evaluate economic policies and labour market dynamics in Albania.

Annex 2 - Regression Output Summary

This annex gives the results of a linear regression analysis between GDP Growth (%) as the independent variable and the Unemployment Rate (%) as the dependent variable for the period 1996–2023. The objective is to evaluate the impact of economic growth on unemployment levels. The table is the output provided by the Excel package, after using the variables in table *"Tabular structure"* in the *Annex 1*, as the input.

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.930141658							
R Square	0.865163504							
Adjusted R Square	0.859977485							
Standard Error	0.406165904							
Observations	28							
ANOVA								
	df	*SS*	*MS*	*F*	*Significance F*			
Regression	1	27.52143066	27.52143066	166.8261319	8.06936E-13			
Residual	26	4.289239276	0.164970741					
Total	27	31.81066993						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	12.65990786	0.253965963	49.84883682	2.45038E-27	12.13787335	13.18194237	12.13787335	13.18194237
GDP Growth (%)	-1.049599972	0.081262798	-12.91611907	8.06936E-13	-1.216638045	-0.882561899	-1.216638045	-0.882561899

The results show a very strong and negative relationship between GDP growth and unemployment rate, with a correlation coefficient of 0.93 and an R^2 value of 0.865, indicating that about 86.5% of the variation in unemployment is explained by changes in GDP growth. The negative coefficient (-1.05), before the variable GDP Growth, suggests that for every 1% increase in GDP growth, the unemployment rate decreases on average by approximately 1.05%. The results are statistically significant (p-value < 0.001).

The Impact of Government Expenditures on Economic Growth: The Size of the Fiscal Multiplier. The Case of Albania

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Abstract

This study examines the impact of government expenditure on the level of Gross Domestic Product (GDP). It is widely recognized that an increase in public spending tends to translate into higher GDP levels. One of the key elements in assessing the effectiveness of expansionary fiscal policy is the calculation of the government spending multiplier. The paper presents a comparative analysis of government expenditure levels between Albania and other similar countries, including those in the Western Balkans. Additionally, it explores the evolution of government spending components over time in the case of Albania. The core contribution of this research lies in estimating the fiscal multiplier using two widely accepted methodologies in macroeconomic policy analysis. Through the Structural Vector Autoregression (SVAR) method—where both the methodology and model development process are detailed—the multiplier for Albania during the period 2008–2022 is found to be approximately 0.3 in the short term, stabilizing at 0.17 in the long term (after three years). This implies that a 1 lek increase in government spending would lead to a 0.3 lekë rise in GDP in the short run and a 0.17 lekë increase in the long run. These findings are corroborated by the second method employed in the study, the Bucket Approach. According to this approach, the estimated multiplier ranges between

0.12 and 0.36, reinforcing the results obtained via the SVAR method. Moreover, the estimated multiplier values align with findings from other studies conducted in the Western Balkans and other developing countries.

***Keywords:** Fiscal Policy, Government Expenditure, Economic Growth, Fiscal Multiplier, Structural VAR Model, Albania.*

I. Introduction

Fiscal policy plays a crucial role in driving the economic growth of a given country. One of its primary instruments is the adjustment of government expenditure levels. It is widely acknowledged that increased public spending tends to have a positive impact on a country's economic growth. However, as will be demonstrated through various cases in this study, the effects of increased government spending can also be negative.

The aim of this study is to analyze the extent to which government expenditures influence Gross Domestic Product (GDP). Specifically, the study aims to estimate the government spending multiplier—its magnitude—in the case of Albania. The primary period under review spans from the first quarter of 2008 to the first quarter of 2022. This timeframe is used to construct the core model for evaluating the multiplier's size. For other aspects covered in the paper, the analysis extends from 2000 to 2021, and in some cases includes data from the first quarter of 2022.

The paper begins by clarifying the terminology related to the key concepts used throughout the study. It then presents a literature review, which includes the foundational articles upon which this research is based, as well as studies employing similar methodologies for comparative purposes. Subsequently, a comparative approach is applied to assess government spending and taxation levels in Albania relative to similar other countries. The most critical part of the paper involves the methodology and estimation of the fiscal multiplier using the Structural Vector Autoregression (SVAR) model. The model developed in this study is based on the framework proposed by Olivier Blanchard and Roberto Perotti (2002). Due to some questionable results from the SVAR model, the multiplier is also estimated by using the IMF's Bucket Approach. The findings from both methods reinforce each other, allowing us to conclude that the multiplier estimates are consistent and reliable.

1.1. Definitions of key terms

Fiscal policy plays a key role in a country's economic development, primarily through decisions on government spending and taxation. While both mechanisms

are essential, this study focuses on government expenditures. Taxation is referenced only to provide context, as it is closely linked to public spending and helps assess its economic impact more accurately.

Government expenditures refer to non-recoverable payments made by the state for goods, services, transfers, and interest payments to fulfill its functions. These are typically divided into two main categories:

- **Current expenditure**: Cover consumables and services used within a year, including subsidies and interest payments.
- **Capital expenditure**: Involve long-term assets and infrastructure investments, such as fixed capital and replacement of damaged assets.

Additional components in Albania's 2022 budget include capital transfers, contingency reserves, expropriation funds, and reconstruction funds.

Government revenues consist of tax and non-tax income, as well as foreign aid, excluding privatization proceeds (which are treated as deficit financing). A budget deficit occurs when expenditure exceeds revenues (MFE, 2022).

The central concept of this study is the **government spending multiplier**, which measures the change in GDP resulting from a change in public spending. It can be calculated in several ways:

- **Impact multiplier**: $\frac{\Delta Y(t)}{\Delta G(t)}$, showing the immediate effect.

- **Peak multiplier**: $\max \frac{\Delta Y(t+h)}{\Delta G(t)}$, where h is the time to reach the maximum impact.

- **Cumulative multiplier**: $\frac{\sum_{j=0}^{n} \Delta Y(t+j)}{\sum_{j=0}^{n} \Delta G(t+j)}$, reflecting the total effect over

II. Literature Review

A wide range of studies have examined the effects of fiscal policy across different countries. In research frameworks aimed at assessing the impact of monetary policy, these publications have also placed emphasis on the government expenditure multiplier. Different papers have applied different methodologies to estimate multiplier values. In recent years, the VAR model and especially the SVAR model (the Structural VAR)—have been widely used.

Almost all subsequent empirical studies largely build on the model developed by Olivier Blanchard and Roberto Perotti (2002). This paper adopts the same model, following specifically the identification method used in that study as well as drawing on other later publications in the same literature stream. Blanchard

and Perotti (2002) find that government spending has a positive effect on GDP, while taxation produces a negative effect. In their study (2002), the government expenditure multiplier under deterministic trends is estimated at 0.45 after one year and 1.29 after four years, which represents the maximum effect. Under stochastic trends, the multiplier is lower in value, reaching 0.55 after one year and peaking at 0.9 at its maximum.

For the case of Albania, several studies have been conducted, with the most prominent contribution coming from the Bank of Albania. The Bank of Albania applies the Blanchard and Perotti (2002) framework, while extending the system by including the interest rate and inflation rate equations. The estimated values of the government spending multiplier, when expressed in the first difference of logarithmically transformed variables, are as follows: 0.4 immediately (meaning that a 1-lek increase in government spending raises GDP instantly by 0.4 lekë), peaking at 0.58, and stabilizing at 0.46 after three months (Bank of Albania, 2011).

Another study on fiscal policy effectiveness is provided by Patonov (2016), which reinforces the existing evidence suggesting that tax-cutting policies may generate stronger economic effects than increases in government spending. In that paper, no statistically significant relationship is found between government expenditure and GDP, with multiplier estimates remaining statistically insignificant. The study argues that government-spending-based fiscal policy is a relatively weak policy instrument, primarily due to two structural factors: Albania's economic fragility and the high level of public debt. Spending via this channel is therefore considered to have limited stimulating effect, owing to a weak economy and constrained fiscal space, both intensified by high public indebtedness.

This paper also draws on a study that estimates the fiscal policy multiplier for Turkey, using the same model as in Blanchard and Perotti (2002). In that study, the government expenditure multiplier is found at 1.0 instantly, peaking at 1.5, and reaching 0.9 after one year (Çebi, 2015).

Other academic publications report differing results, depending on the applied methodology. For example, using a linear regression model, Anja Baum and Gerrit B. Koester (2011) estimate a spending multiplier of 0.7. In the same paper, using a VAR approach, they find that when the output gap is positive and a government spending shock of 2% is applied, the multiplier falls to 0.36. A key finding from that study is that a 2% government spending shock yields multiplier effects ranging from 0.36 to 1.04 over a one-year period, while a 5% spending shock produces an even wider multiplier range. The study also finds that tax multipliers are generally more stable and fall within a narrower range than spending multipliers. The data used for this analysis cover Germany from 1976 to 2009.

Similarly, for Bulgaria, multiplier estimates also vary and show weak statistical significance depending on data frequency and time horizon. Specifically: 0.04 for

1999–2011, statistically insignificant (annual data); 0.31 for 1999–2011, statistically insignificant (monthly data); and 0.16 for 2003–2006, statistically significant at the 95% confidence level (Muir & Weber, 2013).

A global study by Sheremirov and Spirovska (2019), using data from over 100 countries—including military expenditures—estimates multipliers ranging from 0.75 to 0.85, while also reporting that multipliers in developing countries are higher than in advanced economies.

III. Comparative Aspects of Albania and Some Other Countries

This section presents comparative analyses between Albania and other countries regarding government expenditures and taxation levels. Specifically, comparisons are made with countries whose income per capita is within ±10% and ±20% of Albania's, as well as with other Western Balkan nations. A broader comparison is also provided across all countries in terms of total government spending.

3.1. Relationship Between Income Per Capita, Government Spending, and Taxation

This subsection explores the relationship between income per capita and government expenditure levels, as well as the link between income per capita and taxation. The analysis includes all countries for which the World Bank provides data, using figures from the year 2021.

The relationship between income per capita and government spending as a share of GDP is illustrated in Figure 1. The data show a positive correlation: as income per capita increases, so does the level of government spend relative to GDP. Outliers—countries with income per capita above $70,000 or government spending exceeding 60% of GDP—were excluded due to their limited relevance to the analysis. The red dashed trend line in the graph highlights this positive relationship. According to World Bank data, Albania lies close to the trend line—slightly below it—indicating that its government expenditure level is around the global average for countries with similar income levels[1].

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[1] GDP per capita is calculated by dividing total Gross Domestic Product by the population, expressed in current US dollars. The data refers to the year 2021. Government expenditure represents monetary payments for the operational activities of the state in delivering goods and services. These include employee compensation (such as salaries), interest payments, subsidies, grants, social benefits, and other expenses such as rent and dividends.

Source: World Bank (2021); author's calculations.

A similar pattern emerges when comparing income per capita adjusted for purchasing power parity (PPP). Albania again aligns closely with the trend line, indicating that its level of government spending is consistent with the global average when accounting for income levels.

Purchasing Power Parity (PPP) is a widely used metric among macroeconomic analysts that compares the currencies of different countries based on a "basket of goods" approach (Investopedia).

FIGURE 2. Relationship between income per capita (PPP, current US$)
and government expenditures as a share of GDP across all countries.
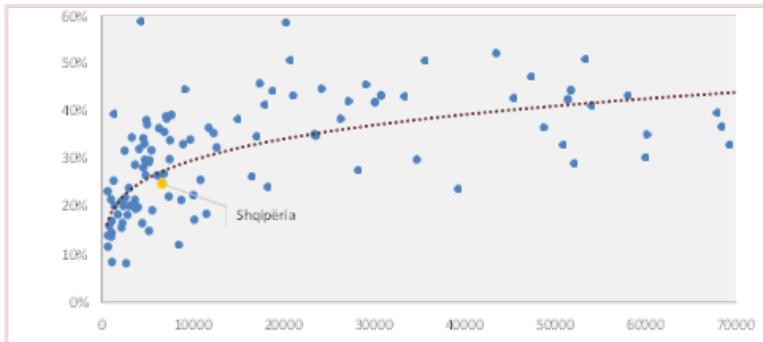
Source: World Bank (2021); author's calculations.

Figure 3 below illustrates the correlation between income per capita (in current US$) and taxation levels across all countries. Countries with income per capita above $70,000 and those with taxation levels exceeding 35% have been excluded, as they represent a small minority and are considered statistical outliers. Albania

appears slightly above the trend line in the taxation–income relationship, suggesting that its taxation level is relatively average compared to other countries[2].

FIGURE 3. Relationship between income per capita
and taxation levels across all countries.
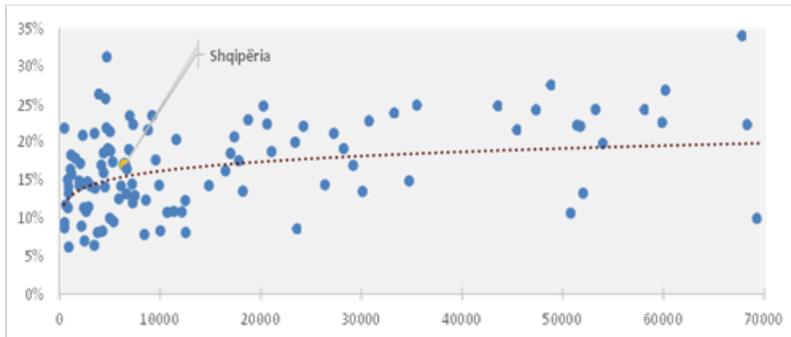
Source: World Bank (2020); author's calculations.

A similar pattern and trend are observed when income per capita adjusted for purchasing power parity (PPP) is used as the basis. Albania is positioned close to the global trend line in terms of taxation levels—perhaps slightly above it—indicating that its tax burden is broadly in line with international averages[3].

FIGURE 4. Relationship between income per capita
(PPP, current US$) and taxation levels across all countries.
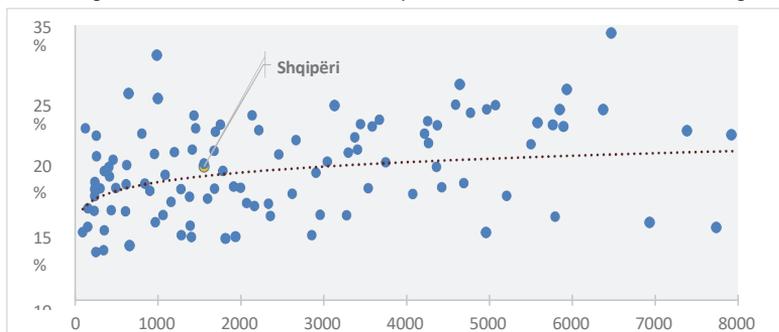
Source: World Bank (2020); author's calculations

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[2] Tax revenues refer to compulsory transfers to the central government for public purposes. Certain mandatory transfers—such as fines, penalties, and most social security contributions—are excluded. Refunds and corrections of erroneously collected tax revenues are treated as negative income. Tax data are from 2020, while GDP figures are from 2021.

[3] Tax data are from 2020. GDP per capita adjusted for purchasing power parity (PPP) is based on 2021 data.

The chart below compares government expenditure levels between Albania and countries that, over the five-year period from 2016 to 2021, had an average income per capita ranging from 90% to 110% of Albania's own average during that time. Income per capita data (in current US dollars) are sourced from the World Bank, while government expenditure figures are drawn from the International Monetary Fund database.

As shown in Figure 5, Albania's government spending level is higher than that of Guatemala and Paraguay, but lower than Namibia's. This suggests that Albania falls somewhere in the middle among countries with similar income levels in terms of government expenditure per capita. Guatemala and Paraguay in particular exhibit relatively low levels of public spending.

FIGURE 5. Comparison of Albania's government spending with countries whose income per capita averaged 90%–110% of Albania's, 2010–2020.
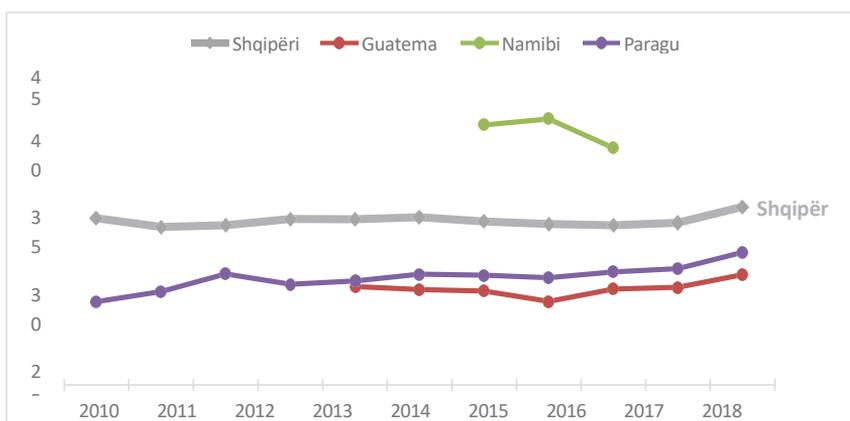
Source: World Bank (2021); IMF (2010–2020); author's calculations.

Figure 6 compares Albania's government spending as a share of GDP with countries whose 2016–2021 average income per capita fell in the 80%–90% and 110%–120% ranges of Albania's average, excluding the 90%–110% group analyzed earlier. For 2017–2019 Albania recorded higher government spending relative to GDP than Kosovo and Armenia. In 2020 Albania had the lowest government spending as a share of GDP among the countries in the 80%–90% and 110%–120% groups.

Source: World Bank (2021); IMF (2016–2020); author's calculations.

Albania and Kosovo have the lowest government spending among Western Balkan countries. Serbia recorded the highest spending over 2013–2020. Albania's government expenditure as a share of GDP remained nearly unchanged over the period. Spending rose in 2020 due to COVID-19 response and its economic consequences.

IV. Evolution of Government Expenditure in Albania

This section presents the evolution of government expenditure in Albania, with emphasis on quarterly data from Q1 2008 to Q1 2022 used in the VAR model to estimate the government spending multiplier. The section documents total government spending and its main components.

4.1 Level of government spending and income level of Albania during the years 2008-2022

This subsection presents the quarterly performance of government expenditures and revenues from the first quarter of 2008 to the first quarter of 2022. As shown in Figure No. 7, government expenditures vary across quarters. The second and fourth quarters, respectively, are seen to have higher expenditure levels. Throughout the period examined in this paper, it is clear that expenditures are

higher in the fourth quarter. If we go into more detail, we can see that the month with the highest expenditures is December. The situation of incomes differs, with less pronounced seasonality than the level of expenditures. Also, during the period under review, government expenditures exceeded revenues. Consequently, in most periods, there has been a budget deficit. There is an increasing trend in government spending, but to have a more accurate reflection, it will be viewed in the following subsections as a ratio to GDP.

FIGURE 7. Total government revenues and expenditures
during the first quarter of 2008 through the first quarter of 2022.
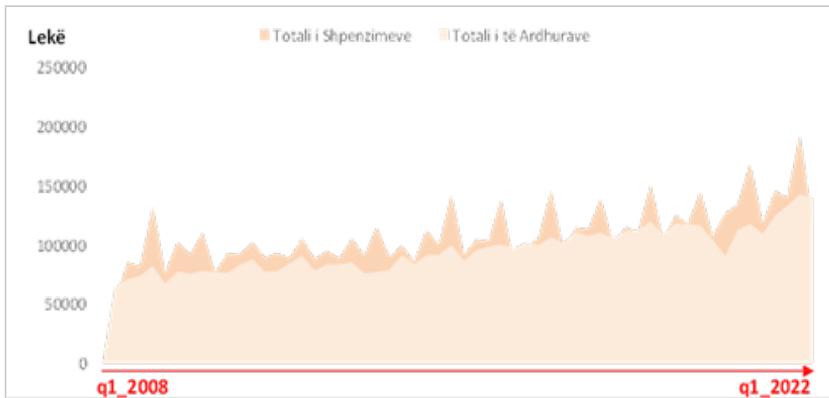
Source: (MoF, Fiscal Bulletin, 2008–2022), author's processing.

4.2 Trends in Government Expenditure Components Over the Years

This subsection presents the two main components of government expenditure: current expenditure and capital expenditure. Initially, they are shown in absolute value, in Albanian lekë, and then as a percentage of total government expenditures. The period under consideration spans from the first quarter of 2008 to the first quarter of 2022.

From Figure 8, it is observed that the level of capital expenditure has not experienced a significant increase in absolute terms throughout the reviewed period. In contrast, the growth in total expenditure during this time appears to be driven by the increase in current expenditures. The highest level of capital expenditure occurred in the last quarter of 2008. The second highest level was recorded in the fourth quarter of 2021, although it still did not reach the level of the fourth quarter of 2008.

The trend of current expenditures closely mirrors that of total government expenditures. A clear seasonality is evident in current expenditures, like total expenditures. The second and fourth quarters tend to account for most of the current expenditure. Meanwhile, capital expenditure remains low over the years and does not show a rising trend.

Source: (MoF, Fiscal Bulletin, 2008–2022), author's processing.

To accurately reflect the trends of current and capital expenditures, their share relative to total government expenditure has been analyzed. As observed, the ratio between these two components and total expenditure has varied over the reviewed period. Interestingly, there is a clear pattern: when the share of current expenditure decreases relative to total expenditure, capital expenditures tend to increase. In other words, in certain cases, a reduction in current expenditure has translated into an increase in capital expenditure.

It is worth emphasizing that capital expenditure tends to peak during the fourth quarter of the year, expressed as a percentage of total expenditure. Conversely, the lowest share of current expenditures relative to total expenditures also tends to occur in the fourth quarter. By examining both the chart below and the one above, we can conclude that although current expenditure appears to have a lower share in the fourth quarter compared to other quarters, this is not due to a decrease in current expenditure itself. Rather, it results from a more significant increase in capital expenditure during that period. This indicates that the rise in capital expenditure in the fourth quarter outweighs the increase in current expenditures, which in turn causes the share of current expenditures to decline and the share of capital expenditures to rise within total government spending.

V. Construction of the SVAR Model

This section briefly presents the methodology used to build the model aimed at estimating the government spending multiplier. Following the methodological explanation, the model results will be provided, along with several tests to validate the model.

This subsection outlines the methodology applied in this study. Specifically, to assess the impact of fiscal policy—in our case, the policy of increasing government spending—the VAR and SVAR models developed by Olivier Blanchard & Roberto Perotti (2002) are employed.

The base specification of the VAR model is:

$$Y_t = A(L, q)Y_{t-1} + U_t$$

Where:

- $Y_t \equiv [T_t, G_t, X_t]$ is a three-dimensional vector including government revenues, expenditures, and GDP, all expressed in real per capita terms.

- The data are quarterly, spanning from Q1 2008 to Q1 2022.

- $U_t \equiv [t_t, g_t, x_t]$ is the reduced-form residual vector for each equation, referred to as "shocks" in VAR terminology.

The VAR model assumes that errors are independently and identically distributed (i.i.d.).

Given the quarterly nature of the data, seasonality is present—a fact highlighted in previous subsections during data presentation and comparison. To address this, seasonal adjustment was performed using the STL Decomposition method in E-Views. This technique allows for seasonal adjustment across various data frequencies, including monthly and quarterly series[4].

The structural form of the model includes the following equations:

$$t_t = a_1 x_t + a_2 e_{gt} + e_{tt}$$
$$g_t = b_1 x_t + b_2 e_{tt} + e_{gt}$$
$$x_t = c_1 x_t + c_2 g_t + e_{xt}$$

Where e_{tt}, e_{gt}, e_{xt} are uncorrelated structural shocks required for this analysis.

The SVAR form used is adapted from Perotti and specifically from the article by Çebi (2015), excluding the interest rate component. The simplified matrix representation is:

$$u_t = A^{-1} \cdot B \cdot e_t$$

With the matrix structure:

$$\begin{bmatrix} u_{gt} \\ u_{tt} \\ u_{yt} \end{bmatrix} = \begin{bmatrix} 1 & 0 & -a_{gy} \\ \beta_{gt} & 0 & 0 \\ 0 & 1 & -a_{ty} \end{bmatrix} \cdot \begin{bmatrix} \beta_{tg} & 1 & 0 \\ -a_{yg} & -a_{yt} & 1 \\ 0 & 0 & 1 \end{bmatrix} \cdot \begin{bmatrix} e_{gt} \\ e_{tt} \\ e_{yt} \end{bmatrix}$$

---

[4] To explore further literature on the STL method for seasonal adjustment, refer to the study of Cleveland, Cleveland, McRae, and Terpenning (1990).

To construct the final SVAR model, it is necessary to establish a set of identifying assumptions. A review of literature examining the effects of fiscal policy reveals a consistent set of assumptions commonly employed across studies. Drawing on one such study, the following assumptions are adopted in this paper.

The first assumption is that the elasticity of government spending with respect to output (GDP) is zero (i.e., $a_{gy} = 0$). This implies that government expenditures do not respond automatically to changes in gross domestic product.

The second assumption concerns the elasticity of tax revenues with respect to GDP, which is set at 1.3 ($a_{ty} = 1.3$). According to the Bank of Albania (2011), this elasticity was estimated at 1.45 for the period from Q1 1998 to Q2 2009. However, given that this estimate does not align with the time frame relevant to this study, the elasticity value used here is based on the findings of Meri Papavangjeli (2018), which cover a more appropriate period—Q1 1998 to Q1 2018. In that study, the estimated elasticity is 1.3, and this value is therefore adopted for the purposes of this analysis.

Regarding the structure of matrix B, a key identifying restriction is imposed: $\beta_{gt} = 0$. This reflects the assumption that government expenditure decisions are made prior to tax policy decisions. This assumption serves as a central identifying restriction throughout the empirical analysis.

Considering the assumptions outlined above, the final structural model used in this study is represented as follows:

$$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & -1.3 \\ -a_{yg} & -a_{yt} & 1 \end{bmatrix}\begin{bmatrix} u_{gt} \\ u_{tt} \\ u_{yt} \end{bmatrix} = \begin{bmatrix} \beta_{tg} & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}\begin{bmatrix} e_{gt} \\ e_{tt} \\ e_{yt} \end{bmatrix}$$

With the final model now specified, we return to the initial VAR framework and incorporate the above restrictions to estimate the structural VAR:

$$Y_t = A(L,q)Y_{t-1} + U_t \text{ where } Y_t \equiv [T_t, G_t, X_t]$$

Before proceeding with the estimation, we define and explain the variables included in the model. Government expenditures are calculated as the sum of current expenditures and capital expenditures. Public revenues are defined as the sum of revenues from taxes and customs duties, combined with revenues from local government, net of subsidies, social fund expenditures/transfers, and other social fund and transfer-related expenditures.

TABLE 1. Construction of Government Revenues and Expenditures for Model Specification

Sh	= Current Expenditures	TR	= Revenues from Taxes and Customs
	+ Capital Expenditures		+ Revenues from Local Government
			- Subsidies
			- Social Fund/Transfer Expenditures
			- Other Social Fund/Transfer Expenditures

Specifically, all variables included in the model have been transformed into real values. The same procedure has been applied to GDP, which has also been converted into real terms. To achieve this, data were obtained from the IMF database, and the GDP deflator was calculated and used to adjust the nominal figures. Subsequently, the real data was seasonally adjusted, as previously explained. Finally, all variables were transformed into logarithmic form to ensure consistency and facilitate interpretation within the econometric framework.

5.1 Unit Root Test (Stationarity)

This section examines the stationarity of the three variables considered in this study. Stationarity is assessed using the Augmented Dickey-Fuller (ADF) test. As a preliminary step, all variables included in the analysis were transformed into logarithmic form. Following this transformation, the ADF test was applied.

The results presented in Table 3 indicate that all variables exhibit unit roots when considered at their levels. However, when their first differences are taken, none of the variables display unit roots. Therefore, it can be concluded that the variables are stationary in their first differences and are integrated into order one, I (1).

Given that all variables are stationary in their first differences, and the SVAR model requires stationarity of all included variables, the model will incorporate the differenced form of each variable. Since the analysis is based on the logarithmic differences, the variables used in the model represent the growth rates of gross domestic product, government expenditures, and public revenues.

	Augmented Dickey-Fuller Test	
p-value		
Data	Level	First difference
GDP	0.9044	0.000
Tr	0.1425	0.000
Shp	0.8462	0.000

Source: Author's calculations

5.2 Lag Selection Test

This subsection presents the criteria used to determine the optimal number of lags to be included in the constructed SVAR model. Table 4 reports the values of three commonly used selection criteria: the Akaike Information Criterion (AIC), the Schwarz Information Criterion (SC), and the Hannan-Quinn Criterion (HQ).

According to the SC, the optimal lag length is one; the HQ suggests two lags, while the AIC recommends including three lags. Given that the majority of empirical studies in literature rely on the AIC for lag selection, this study also adopts the AIC as the guiding criterion. Accordingly, the SVAR model developed in this study will incorporate three lags for each of the variables included in the system.

TABLE 3. Criteria for Selecting the Number of Lagged Variables

Lag	Log	LR	FPE	AIC	SC	HQ
0	199.5966	NA	1.14e-07	-7.474377	-7.133466	-7.344105
1	218.2911	32.99024	7.81e-08	-7.854552	-7.172731*	-7.594008
2	232.6838	23.70567*	6.37e-08	-8.066031	-7.043300	-7.675215*
3	243.2987	16.23453	6.08e-08*	-8.129360*	-6.765718	-7.608272
4	247.8502	6.425741	7.43e-08	-7.954912	-6.250360	-7.303552
5	253.7882	7.684350	8.74e-08	-7.834830	-5.789367	-7.053198

Source: Author's calculations

5.3 The SVAR Model

This section focuses exclusively on the response of gross domestic product (GDP) to a 1% increase in government expenditures. Although not the primary focus of this study, a separate subsection will also present the GDP response to a 1% reduction in tax revenues.

5.3.1 Government spending multiplier level

Figure 9 illustrates the accumulated responses of GDP following a 1% increase in government expenditure. In other words, the figure depicts the government spending multiplier across specific time horizons after the fiscal shock. The data from the figures show the increase that would result in gross domestic product when spending increases by 1%. Thus, it turns out that a 1% increase in government spending increases gross domestic product after three months by 0.085%. At the peak of growth, a 1% increase in government spending only affects a 0.092% increase in GDP. The accumulated response after one year is a 0.087% increase in GDP as a result of a 1% increase in government spending.

Accumulated GDP Responses to a 1% Increase in Government Expenditures

FIGURE 9: Accumulated GDP Responses
to a Government Spending Shock
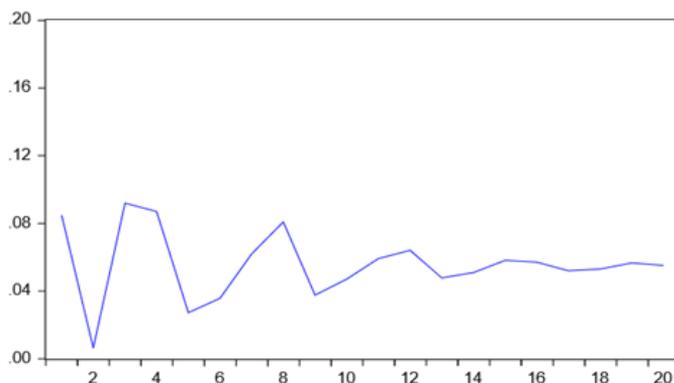
Source: Author's calculations

To obtain a clearer understanding of the fiscal multiplier, the accumulated GDP responses mentioned above must be converted into the impact of a one-lek increase in government expenditures on GDP. This requires calculating the share of government spending relative to GDP. Specifically, government expenditure accounted for 29.45% of GDP during the period from Q1 2008 to Q1 2022.

By dividing the accumulated GDP responses by the share of government spending in GDP, we derive the government spending multiplier. These values are presented in Table 5. The immediate response of GDP to a one-lek increase in government expenditures is estimated at 0.29 lekë. In other words, a one-lek increase in government spending leads to a 0.29-lekë increase in GDP. At its peak—three quarters after the shocking one-lek increase in government expenditures results in a 0.31-lekë increase in GDP. After one year, the estimated effect is a 0.30-lekë increase in GDP. Two years after the shock, the effect remains relatively

stable, with a one-lek increase in spending leading to a 0.28-lekë increase in GDP.

The long-run effect stabilizes at 0.17 lekë after three years. Thus, a one-lek increase in government expenditure is estimated to generate a 0.17-lekë increase in GDP in the long term. This effect remains constant in subsequent periods, indicating that the multiplier coefficient converges to 0.17.

TABLE 4. Government Spending Multiplier

Time Horizon	Immediate (Q1)	Maximum (Q3)	After 1 Year (Q4)	After 2 Years (Q8)	After 3+ Years (Q13 onward)
Multiplier Value	0.29	0.31	0.30	0.28	0.17

Source: Author's calculations

5.3.2 Tax Multiplier

Although this study primarily focuses on government expenditure rather than taxation, a brief overview of the fiscal multiplier derived from government revenue is provided. Specifically, the results indicate that a 1% increase in taxes would lead to a 0.7% decrease in GDP. This suggests that the immediate impact of fiscal policy through taxation is greater than that of government spending. After one and a half years (six quarters), the absolute value of the tax impact declines to -0.34. In other words, a 1% increase in tax revenues would result in a 0.34% reduction in GDP after six quarters. It is clear that the effect of taxes is higher than the effect of changes in government spending, but since their effect is not the purpose of the study, the discussion about taxes will stop there.

VI. Diagnostic Tests

This section presents several diagnostic tests used to assess the validity and robustness of the estimated model. First, the normality test, shown in Table 17 in the Appendix, indicates that the joint distribution of the variables is normal. This is confirmed by the joint probability value of 0.3824, which exceeds the conventional threshold of 0.05.

The serial correlation test is presented in Table 18 in the Appendix. It is clearly observable that the model does not suffer from serial correlation, as the probability values for all four lags are greater than 0.05. Additionally, correlograms included in the Appendix show no violations of the upper or lower confidence bounds.

The heteroskedasticity test confirms that the model does not exhibit heteroskedasticity. Specifically, the resulting probability value is 0.1409, which is greater than 0.05. This test is presented in Table 19 in the Appendix.

The Appendix also includes the variance decomposition analysis. Focusing on the variance of GDP, it is observed that a small portion of GDP variance is explained by government expenditures. As shown, after one quarter, 7% of GDP variance is explained by government spending, 40% by tax revenues, and 53% by GDP itself. After ten quarters, government expenditures account for nearly 20% of GDP variance. Although all diagnostic tests suggest that the model has been properly specified and can be used to draw reliable conclusions, two key concerns warrant caution.

The first issue relates to standard errors. In the initial VAR model, the first two lags of government expenditures are statistically insignificant, even at higher significance levels. The third lag becomes significant only at the 10% level. This concern is reinforced by the relatively high standard errors observed in the impulse response functions, particularly in the early periods, which gradually decline over time.

TABLE 5. Granger Causality Test Results

Null Hypothesis	Observations	F-Statistic	Probability
Government Spending (LSHP) does not Granger Cause GDP (LPBB)	55	1.57968	0.2162
GDP (LPBB) does not Granger Cause Government Spending (LSHP)	55	5.42408	0.0074
Tax Revenues (LTR) does not Granger Cause GDP (LPBB)	55	1.05507	0.3558
GDP (LPBB) does not Granger Cause Tax Revenues (LTR)	55	3.33427	0.0437
Tax Revenues (LTR) does not Granger Cause Government Spending (LSHP)	55	9.11378	0.0004
Government Spending (LSHP) does not Granger Cause Tax Revenues (LTR)	55	7.33670	0.0016

Source: Author's calculations

An additional reason to scrutinize the accuracy of the results lies in the discrepancies observed when compared to data from the Bank of Albania. According to the study conducted by the Bank of Albania (2011), the accumulated response (fiscal multiplier) of government expenditures reaches a peak of 0.58%, with an immediate effect of 0.4%, and stabilizes at 0.46% after one year.

It is important to note that the time analyzed in this study differs from that used by the Bank of Albania. Specifically, this study examines the period from Q1 2008 to Q1 2022, whereas the Bank of Albania's study covers Q1 1998 to Q4 2009. Therefore, differences in the estimated multipliers may be attributed to the distinct time frames considered.

Another potential source of variation stems from data adjustments. The Bank of Albania converted annual data into quarterly data, which may have introduced distortions in the real values and affected the accuracy of the results. Conflicting findings are also reported by Nikolay Patonov (2016) in his study on Albania. He uses annual data and includes the same variables analyzed in this study, applying a two-lag VAR model. His results indicate that the impact of government expenditure on GDP is very weak, and in the VAR specification, the coefficients are even negative. The reasons cited in his study include Albania's generally weak economic performance and its high level of public debt. His dataset covers the period from 1994 to 2013.

VII. Government Spending Multiplier According to the IMF's Bucket Approach Model

This section presents the methodology developed by the International Monetary Fund (IMF) for estimating the range of government spending multipliers across different countries. This methodology is known as the Bucket Approach. The development of this model involves several steps and requires specific calculations to arrive at the final multiplier range. The model is structured in two main phases, which are explained in the subsections below. The primary reference for this methodology is the article by Nicoletta Batini, Luc Eyraud, and Anke Weber (2014).

7.1. Phase One of Multiplier Identification (Bucket Approach)

The Bucket Approach analyzes a set of components that influence the size of the fiscal multiplier. These components have been empirically shown to affect the magnitude of the multiplier. Each component is described below:

- **Trade Openness** – According to IMF analyses, countries with low levels of imports (i.e., low trade openness) tend to have higher fiscal multipliers. This is because demand shocks from imports are smaller than the leakages in domestic demand.
- **Labor Market Rigidity** – Countries with highly regulated labor markets and/ or strong labor unions tend to exhibit higher government spending multipliers. This is due to reduced wage flexibility, which amplifies output responses to demand shocks.
- **Size of Automatic Stabilizers** – Large automatic stabilizers reduce the multiplier, as the mechanical response of transfers and taxes offsets part of the fiscal shock, thereby dampening its effect on GDP.

- **Exchange Rate Regime** – Countries with flexible exchange rate regimes tend to have lower government spending multipliers, as exchange rate movements can offset or reduce the impact of fiscal policy on the economy.
- **Level of Public Debt** – Countries with high public debt levels generally have lower government spending multipliers. Fiscal consolidation in such contexts tends to enhance private sector confidence and reduce interest rate risk premiums.
- **Efficiency of Public Spending and Revenue Administration** – The multiplier tends to be lower in countries with weak tax collection and inefficient public spending management. These inefficiencies constrain the effectiveness of fiscal policy in stimulating output.

An assessment of Albania's position with respect to these components will be conducted in the following subsection. This evaluation constitutes the first step in determining the fiscal policy multiplier range. Although the Bucket Approach can be used to estimate both spending and tax multipliers, this study focuses exclusively on the government spending multiplier.

7.2. Implementation of Phase One of the Bucket Approach

Each of the six components described above will be evaluated for Albania, assigning a score of either 0 or 1 to each. The scoring methodology is explained below.

1) Trade Openness: Trade openness is calculated over a six-year period (2016–2021), based on IMF recommendations to assess the trade volume over the last five years. Given that 2020 was marked by a significant decline in trade activity, six years were considered. Trade openness is defined as the sum of exports and imports as a percentage of GDP. To estimate the government spending multiplier, the relevant metric is the ratio of imports to GDP. If this ratio is below 30%, trade openness is considered low, and the component receives a score of 1. In Albania's case, for all years under review, the Import/GDP ratio exceeds 30% (see Table 7), and therefore this component is assigned a score of 0.

TABLE 6. Assessment of Trade Openness

Year	Trade Openness (% of GDP)	Imports/GDP (%)
2016	75%	46%
2017	78%	47%
2018	77%	45%
2019	76%	45%

Year	Trade Openness (% of GDP)	Imports/GDP (%)
2020	60%	37%
2021	75%	44%
Average (2017–2021)	73%	44%
Average (2016–2021)[5]	76%	45%

Source: World Bank (2016–2021), author's calculations

2) Labor Market Rigidity: Different reports have found that the Albanian labor market fails to generate job security, exhibits weak union structures, and is characterized by low employee productivity. Based on Musabelliu (2022), we can understand that unemployment remains a significant structural challenge for Albania (see also in Sqapi & Mile, 2022; Sqapi & Xhindi, 2024). Another major concern relates to long-term stagnation in the labor market, largely shaped by distortions in labor supply–demand mechanics resulting from the deformation of essential hiring and compensation criteria. The study further highlights a persistent mismatch between workers' qualifications and actual market needs. Additionally, wages in Albania are reported to be low, contributing to high levels of employee dissatisfaction. These factors contribute to low productivity outcomes, reinforcing negative labor market equilibrium effects. Population out-migration has created substantial strain on the country's workforce availability and is expected to deepen further over time.

On the other hand, the European Commission's Annual Report for 2021 indicates that Albania has a low level of development and has made limited progress in the areas of social policy and employment. Specifically, on a scale from 1 (the lowest level) to 5 (the highest level), Albania is rated 2 in terms of social and employment policies. Furthermore, the report highlights that trade unions in Albania are weak and that employees exhibit skepticism toward them. This suggests that trade unions in Albania had not functioned effectively up to 2021, the year in which the report was written (European Commission, 2021). Additional studies corroborate these findings, showing that Albania lacks a well-regulated and robust labor market, as well as strong trade unions. For these reasons, this component is assigned a score of 0 for Albania.

3) Small Automatic Stabilizers: This component relates to the size of government expenditures. To receive a score of 1, government spending must be below 40% of GDP. As previously discussed in earlier sections, the size of this component in Albania is clearly below the 40% threshold. Therefore, Albania is assigned a score of 1 for this component.

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[5] The average was calculated based on the years 2016–2019 and 2021, excluding 2020 due to the trade and mobility restrictions that affected the movement of goods and services during that period.

4) **Fixed Exchange Rate Regime**: As previously explained, if a country operates under a fixed exchange rate regime, it receives a score of 1, which implies a higher fiscal multiplier. The Bank of Albania implements a free-floating exchange rate regime. The value of the Albanian lekë against foreign currencies is determined freely in the foreign exchange market. Exchange rate fluctuations reflect the free movement of goods and capital in Albania's trade and financial exchanges with its trading partners (Bank of Albania). Due to the free-floating exchange rate regime, Albania is assigned a score of 0 for this component.

5) **Low/Safe Public Debt**: To receive a score of 1 in this component, Albania's public debt level should be below 40–45% of GDP. The average public debt-to-GDP ratio over the five years preceding the writing of this study (2017–2021) stands at 71% (Bank of Albania, 2011-2022). Even when excluding the year 2020 and considering only the period 2016–2019 and 2021, the average public debt remains at 70%[6].

As previously discussed, the level of public debt in all observed exceeds 45%. Therefore, Albania does not meet the criteria for a low and safe level of public debt. Consequently, for this component, Albania is assigned a score of 0.

6) **Effective Management of Revenues and Expenditures**: In this context, the effectiveness of tax collection can be easily considered. If the actual level of tax collection is relatively low compared to the potential tax revenue, it indicates that Albania does not have effective revenue management, and consequently, lacks effective expenditure management as well. A relatively significant issue across all sectors of the Albanian economy remains the high level of informality (Sqapi, 2021). According to the SELDI report, the rate of informal employment in 2016 was 39%, while in 2019, the rate of informal employment (undeclared or "black market" labor) reached 49%.

Therefore, due to the high level of informality in the Albanian economy, tax collection is relatively lower than its potential. For this reason, it is concluded that Albania does not demonstrate effective management of revenues and expenditures, and thus this component is assigned a score of 0. At this point, all six components required to complete the first phase of calculating the fiscal multiplier have been presented. The multiplier derived from this phase represents the one-year multiplier, i.e., the cumulative impact of government spending on GDP over the course of a single year. To begin, we explain the definitions of fiscal multipliers as provided by the International Monetary Fund (IMF), based on the analysis of articles reviewed by the IMF. According to Table 7, a low multiplier is defined as a value within the range of 0.1 to 0.3.

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[6] The average calculation of public debt as a % of GDP has been performed using a simple arithmetic means.

A medium multiplier is defined as a range from 0.4 to 0.6, while a high multiplier is defined as a range from 0.7 to 1.0 (see Table 7). Based on the analysis that will follow regarding Albania, one of these multiplier intervals will be determined, thereby classifying Albania as a country with a low, medium, or high fiscal multiplier.

TABLE 7: One-year multiplier ranges.

Category	Multiplier range
Low multiplier	0.1–0.3
Medium multiplier	0.4–0.6
High multiplier	0.7–1.0

To classify Albania as a country with a given multiplier level, we rely on Table 8. Specifically, if Albania attains only 0–3 points from the components evaluated above, the multiplier will be classified as low. If Albania attains 3–4 points, the multiplier will be classified as medium, and if Albania attains 4–6 points, the multiplier will be classified as high. If Albania attains exactly 3 points, the multiplier will fall on the boundary between ranges, and a further assessment will be required to determine whether it should be classified as low or medium. The same applies if Albania attains exactly 4 points, since that score lies on the boundary between medium and high and will therefore require a reassessment.

TABLE 8: Classification of multipliers by points.

Country points	Category
0–3	Low multiplier
3–4	Medium multiplier
4–6	High multiplier

Since the first phase has now been explained, an assessment of Albania for this phase can be carried out and the multiplier range for the oneyear period can be determined, i.e., the cumulative impact of an increase in government spending today on GDP after one year.

The assessment follows the six components evaluated above. The approach uses several variables/components, specifically binary variables whose values are either 1 or 0: 1 if the condition is satisfied and 0 otherwise. Each component was assigned a value of 1 or 0 in the evaluation summarized below in Table 9.

The economy is relatively open; therefore, the value of this component is 0. Labor markets are not rigid; therefore, the value of this component is 0. Automatic stabilizers are small; therefore, the value of this component is 1. The exchange rate

regime is flexible; therefore, the value of this component is 0. The public debt level is relatively high; therefore, the value of this component is 0. Albania does not demonstrate effective management of revenues and expenditures, therefore the value of this component is 0.

The sum of all component values equals 1. Based on Table 8 above, this total indicates that Albania has a low fiscal multiplier. The multiplier value corresponding to this classification is taken from Table 7, which indicates a oneyear multiplier range of 0.1–0.3.

TABLE 9: Classification of Albania.

Indicator	Albania / points
Relatively closed economy	0
Rigid labor markets	0
Small automatic stabilizers	1
Fixed exchange rate regime	0
Low/safe public debt	0
Effective management of revenues and expenditures	0
Total points	1

The results indicate that the one-year fiscal multiplier for Albania ranges from 0.1 to 0.3. Thus, an increase of 10 lekë in government spending translates into only a 1 to 3 lekë increase in Gross Domestic Product. This value also corroborates the outcomes produced by the SVAR model developed in this study. The SVAR-estimated one-year multiplier is approximately 0.3, which therefore falls within the interval suggested by the IMF-based framework.

This is not the end of the model's development, as the model includes a subsequent phase that yields the final estimated value of the multiplier.

7.3 Development of the second phase of the Bucket Approach

The second phase of the multiplier assessment under the IMF methodology requires two steps. The first step involves adjusting the multiplier according to the business cycle and the second step involves adjusting it according to the stance of monetary policy.

Furthermore, the business-cycle adjustment requires the following: if the economy is at the historical trough of the business cycle, both bounds of the multiplier should be increased by 60%. Conversely, if the economy is at the peak of the business cycle, both bounds should be reduced by 40%. When GDP lies at intermediate values, interpolation and adjustment should be performed. In the second step, if monetary policy is at its effective and binding stance, both bounds

of the multiplier are increased by 30%. If monetary policy is in other conditions, interpolation between 0 and 30% is applied.

Combining both steps yields: M = MNT * (1 + Cycle) * (1 + Mon) where M is the final estimated multiplier; MNT is the multiplier computed in the first phase of this method; Cycle is the business-cycle factor varying from -0.4 to 0.6; and Mon is the monetary-policy position varying from 0 to 0.3.

The first step in this process to determine the Cycle coefficient is to estimate the level of potential output. There are several methods to estimate potential output, and this study employs two principal and relatively simple approaches. The first approach concerns estimating the trend growth of GDP. The first method to be evaluated is the linear trend method: $Y^* = \alpha + \beta *$ trend Y^* denotes potential output, α and β are the estimated coefficients from the regression of potential output on the time trend, and the output gap is calculated as the difference between actual output and potential output measured by the equation above.

The results from the linear regression of potential output on the trend are presented in Table 10. This model serves as one estimate of potential output but is not recommended for sole use because it may exhibit large fluctuations. In addition, the Durbin–Watson statistic indicates a potential risk of serial correlation, so the model should be evaluated using an alternative method to achieve higher accuracy (the model appears to suffer from serial correlation)[7].

TABLE 10. Linear method for estimating potential output.

Dependent Variable: LOG(GDP) Sample: 1999 2021 Included observations: 23				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	13.20104	0.042924	307.5461	0.0000
@TREND	0.060892	0.003342	18.22245	0.0000
R-squared	0.940520	Mean dependent var		13.87086
Adjusted R-squared	0.937687	S.D. dependent var		0.425851
S.E. of regression	0.106303	Akaike info criterion		-1.562102
Sum squared resid	0.237308	Schwarz criterion		-1.463363
Log likelihood	19.96417	Hannan-Quinn criter.		-1.537270
F-statistic	332.0577	Durbin-Watson stat		0.145139
Prob(F-statistic)	0.000000			

To obtain a more accurate estimate of potential output, we evaluate it using an alternative method (Banka of Albania, 2007; 2014). The second method used for

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[7] The time considered for estimating potential output is 1999–2021. The data are annual, with n = 23 observations.

estimating potential output is the Hodrick–Prescott (HP) filter. The HP filter is widely used to measure potential output by decomposing a time series into two components: the trend component, which we interpret as potential output, and the cyclical component, which represents the output gap[8].

The HP results are presented in Figure 9[9]. The smoothing parameter used is $\lambda = 100$, chosen because the data are annual and the convention is to set $\lambda = 100$ for yearly data (commonly $\lambda = 1600$ for quarterly data and $\lambda = 100$ for annual data). The parameter λ is a weighting factor that can be selected by the analyst and helps minimize the variance between actual output and potential output. The core assumption of the HP filter is that the longrun average of deviations between actual and potential output is close to zero over the sample period.

FIGURE 9. Estimated potential output and actual GDP level.
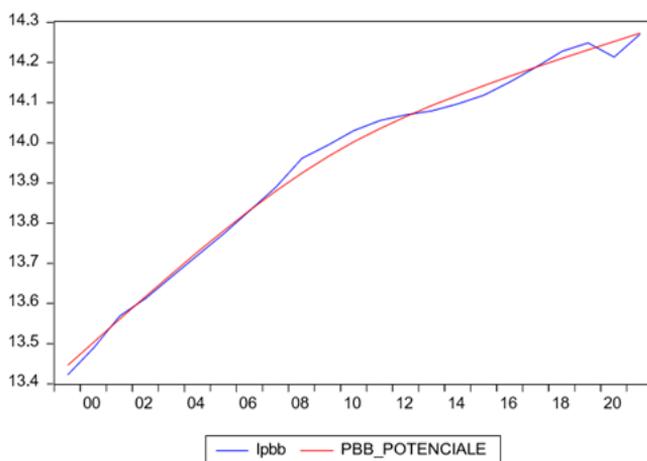
Based on the Hodrick–Prescott estimates, the output gap over the sample period (1999–2021) ranges from a minimum of -3.77% to a maximum of 3.79%. The output gap for 2021 is calculated at -0.18%. Adjusting this 2021 gap within the observed minimum and maximum bounds yields a businesscycle coefficient equal to 0.03, which will be used in place of "Cycle" in the formula above.

The second step of this phase concerns whether monetary policy in Albania is operating at an effective and binding stance. Evidence indicates that monetary policy in Albania is not at an effective level. Internal and external factors have weakened the transmission of Central Bank measures, reducing their intended effects. Contributing factors include a diminished impact on the inflation indicator, the economy's movement toward a liquidity trap, shifts in deposit usage toward

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[8] For a more in-depth review of the Hodrick–Prescott method, see in Bank of Albania 2007; 2014.
[9] The results that include the decomposition of gross domestic product into its two components, potential output and the output gap, are presented in the ANNEX of the study.

debt instruments, erosion of the purchasing power of deposits, a contraction in lending and an adverse change in the credit structure away from higherreturn productive investment. For these reasons, the effectiveness of monetary policy is judged to be low.

To illustrate this effect, Figure 10 was constructed based on the article by Alqi Naqellari and Sokol Paçukaj (2019). As shown, the inflation target, which is the Bank of Albania's primary objective, was not achieved during the period under review, January 2011–July 2022[10].

FIGURE 10. Changes in the REPO rate, Inflation and Target Inflation.

Source: (Bank of Albania, 2011–2022), author's calculations.

Furthermore, no clear link is observed between the REPO rate and the inflation level. When we calculate the correlation between REPO and the inflation rate, it turns out to be 0.51[11]. The correlation value of 0.62 was found in the article by Alqi Naqellari & Sokol Pa ukaj (2019) for the period 2008–2018. In all cases the correlation is positive and weak. Typically, the correlation should be negative, so we conclude that monetary policy is not effective in achieving the targeted inflation level.

In 2016, Erald Themeli, Director of the Monetary Policy Department, wrote in an article for the Albanian Banking Association: "As long as inflation and inflation expectations are not stably anchored to the target, the major challenge of monetary policy remains open". Thus, monetary policy faces a challenge in achieving its primary objective. On the other hand, the European Commission (2021), in its 2021 report, assesses Albania at a moderate level (3 on a scale of 1 to 5) regarding monetary and fiscal policies. The report notes that the Bank of

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[10] The data used to construct the Figure is monthly.

[11] For the correlation calculation in this case, only periods with changes in the REPO rate are considered. If the entire review period is used with a lag, the correlation is 0.154. If the correlation is calculated for the entire period without lags, it is 0.1.

Albania has managed to maintain price stability. The sustainability of monetary policy according to the BTI is rated 8 points out of a maximum of 10 (BTI, 2022).

For the reasons mentioned above, the effectiveness of monetary policy is set at a medium level. Therefore, the coefficient "Mon" used in this study is 0.15.

In conclusion we have: M = [0.1 – 0.3] * (1 + 0.03) * (1 + 0.15) = [0.12 – 0.36].

Thus, the final multiplier range is from 0.12 to 0.36. This means that an increase of 10 lekë in government spending would yield an increase of 1.2 lekë to 3.6 lekë in GDP. This range does not differ substantially from the initial multiplier.

Importantly, this multiplier range appears to confirm the SVAR results in this study.

VIII. Conclusions

This paper highlighted an important issue regarding the impact of fiscal policy on Albania's economic development. Specifically, it examined the impact of government expenditure and aimed to estimate the size of the government spending multiplier.

First, the paper analyzed the evolution of government spending, comparing Albania with similar countries. When comparing Albania's government spending to countries with GDP per capita about 10% above and below Albania's level, and to countries about 20% above and below Albania's level, Albania appeared slightly below the government spending level of those countries. When examining the relationship between GDPs per capita and government spending for all countries with World Bank data, the relationship was positive and Albania lay on the trend line, indicating that Albania's government spending was at the average level for countries with similar income. The same pattern held when GDP per capita was measured in current dollars and when adjusted for PPP. Compared with Western Balkan countries, Albania had the lowest government spending level in 2020.

To estimate the government spending multiplier, the SVAR methodology was used. Results from the firstdifference model showed an immediate multiplier of 0.29, indicating that a 10lekë increase in government spending translated into an immediate 2.9lekë increase in GDP. The multiplier peaked after three quarters at 0.31. After one year it was 0.30, after two years 0.28. After 13 quarters the multiplier stabilized at 0.17. Thus, a 10lekë increase in government spending in the short term (one year) raised GDP by 3 lekë, while in the long term (after three years) it raised GDP by about 1.7 lekë.

Because of concerns about the multiplier estimates and high standard errors, the multiplier was also calculated using another methodology. This methodology, from the IMF, is the Bucket Approach. The Bucket Approach has several phases and requires a development process. In the first phase six components were evaluated for Albania,

yielding a multiplier range of 0.1–0.3. This value was consistent with the SVAR findings. The second phase required estimating potential GDP and the effectiveness of monetary policy to refine the multiplier range by adjusting the firstphase range. The final multiplier range obtained from applying the Bucket Approach was 0.12–0.36. This range was consistent and again confirmed the SVAR results.

Compared with other studies for Albania, notably the Bank of Albania (2011), the multiplier estimated here was smaller than that reported by the Bank of Albania. The multiplier was consistent with the World Bank (2022) findings for Western Balkan countries. The immediateterm multiplier range was confirmed, while the threeyear horizon showed differences. The multiplier range was roughly similar to the study covering 102 developing countries by Aart Kraay (2014).

In conclusion, the government spending multiplier for Albania is relatively low, consistent with previous studies. Fiscal policy via government spending was not judged to be highly efficient, and, as in many other studies, tax cuts appeared more effective. Caution is needed, however, because although tax cuts may appear more effective, these results should be interpreted carefully since this paper focused solely on the impact of government spending.

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Annexes

TABLE 11: Estimated VAR model

Vector Autoregression Estimates
Date: 09/27/22   Time: 21:17
Sample (adjusted): 5 57
Included observations: 53 after adjustments
Standard errors in ( ) & t-statistics in [ ]

	D(LSHP)	D(LTR)	D(LPBB)
D(LSHP(-1))	-0.699446	-0.257920	-0.040230
	(0.14504)	(0.21293)	(0.04658)
	[-4.82230]	[-1.21130]	[-0.86373]
D(LSHP(-2))	-0.578860	0.443746	0.040356
	(0.15708)	(0.23059)	(0.05044)
	[-3.68521]	[1.92437]	[0.80006]
D(LSHP(-3))	-0.324467	0.348265	0.074298
	(0.13460)	(0.19759)	(0.04322)
	[-2.41067]	[1.76255]	[1.71896]
D(LTR(-1))	-0.153329	-0.300411	0.007609
	(0.13350)	(0.19598)	(0.04287)
	[-1.14855]	[-1.53287]	[0.17748]
D(LTR(-2))	0.159614	-0.135307	-0.006142
	(0.14714)	(0.21601)	(0.04725)
	[1.08478]	[-0.62641]	[-0.13000]
D(LTR(-3))	-0.005651	0.317186	0.055302
	(0.14612)	(0.21452)	(0.04692)
	[-0.03867]	[1.47862]	[1.17853]
D(LPBB(-1))	0.121939	-0.154323	-0.424123
	(0.59124)	(0.86796)	(0.18986)
	[0.20624]	[-0.17780]	[-2.23386]
D(LPBB(-2))	-0.304708	0.278117	-0.170923
	(0.63940)	(0.93866)	(0.20533)
	[-0.47655]	[0.29629]	[-0.83244]
D(LPBB(-3))	-0.240820	-1.439481	-0.353577
	(0.59805)	(0.87795)	(0.19205)
	[-0.40268]	[-1.63959]	[-1.84108]
C	0.014944	0.014510	0.013882
	(0.01451)	(0.02130)	(0.00466)
	[1.03010]	[0.68128]	[2.97986]
R-squared	0.544278	0.370709	0.316252
Adj. R-squared	0.448894	0.238997	0.173142
Sum sq. Resids	0.300020	0.646578	0.030939
S.E. equation	0.083530	0.122624	0.026824
F-statistic	5.706190	2.814539	2.209856
Log likelihood	61.91247	41.56461	122.1164
Akaike AIC	-1.958961	-1.191117	-4.230807
Schёarz SC	-1.587208	-0.819364	-3.859054
Mean dependent	-0.000315	0.006697	0.007714
S.D. dependent	0.112518	0.140567	0.029499

Determinant resid covariance (dof adj.)	3.87E-08
Determinant resid covariance	2.07E-08
Log likelihood	243.2878
Akaike information criterion	-8.048597
Schwarz criterion	-6.933337
Number of coefficients	30

TABLE 12: Variance Decomposition

Variance Decomposition of D(LSHP): Period	S.E.	D(LSHP)	D(LTR)	D(LPBB)
1	0.083530	100.0000	0.000000	0.000000
2	0.101033	97.29306	2.651570	0.055368
3	0.106877	88.68930	10.67967	0.631034
4	0.109170	85.10070	14.29143	0.607865
5	0.115859	85.72381	12.92257	1.353617
6	0.119445	85.80571	12.19842	1.995877
7	0.119869	85.44147	12.44771	2.110819
8	0.120294	85.26832	12.56507	2.166607
9	0.120723	85.20656	12.47706	2.316381
10	0.121111	85.17591	12.42187	2.402216

Variance Decomposition of D(LTR): Period	S.E.	D(LSHP)	D(LTR)	D(LPBB)
1	0.122624	2.915470	97.08453	0.000000
2	0.129722	4.193031	95.75318	0.053794
3	0.143959	21.83532	77.88530	0.279373
4	0.149384	23.66275	72.33299	4.004262
5	0.151892	24.61104	70.33132	5.057640
6	0.152174	24.71878	70.07302	5.208199
7	0.153228	25.41906	69.25899	5.321950
8	0.153358	25.40389	69.18794	5.408174
9	0.153990	26.01362	68.62250	5.363871
10	0.154130	26.14283	68.50218	5.354991

Variance Decomposition of D(LPBB): Period	S.E.	D(LSHP)	D(LTR)	D(LPBB)
1	0.026824	6.964104	40.20759	52.82830
2	0.029496	10.64821	37.80496	51.54683
3	0.030349	15.55873	35.75077	48.69050
4	0.030765	15.15926	34.80664	50.03411
5	0.031491	16.96319	33.30139	49.73542
6	0.031555	16.94372	33.33810	49.71819
7	0.031714	17.25055	33.47785	49.27159
8	0.031768	17.43637	33.44206	49.12156
9	0.031974	18.48000	33.01601	48.50399
10	0.031991	18.51859	33.01978	48.46163

Cholesky Ordering: D(LSHP) D(LTR) D(LPBB)

TABLE 13: Normality Test

VAR Residual Normality Tests
Orthogonalization: Cholesky (Lutkepohl)
Null Hypothesis: Residuals are multivariate normal
Date: 09/27/22   Time: 23:14
Sample: 1 57
Included observations: 53

Component	Skeëness	Chi-sq	df	Prob.*
1	0.059074	0.030826	1	0.8606
2	-0.582554	2.997759	1	0.0834
3	-0.059775	0.031562	1	0.8590
Joint		3.060147	3	0.3824

Component	Kurtosis	Chi-sq	df	Prob.
1	2.417514	0.749265	1	0.3867
2	4.299152	3.727218	1	0.0535
3	3.189180	0.079034	1	0.7786
Joint		4.555517	3	0.2074

Component	Jarque-Bera	df	Prob.
1	0.780091	2	0.6770
2	6.724977	2	0.0346
3	0.110596	2	0.9462
Joint	7.615665	6	0.2676

*Approximate p-values do not açount for coefficient estimation

TABLE 14: Test for serial correlation

VAR Residual Serial Correlation LM Tests
Date: 09/27/22   Time: 23:24
Sample: 1 57
Included observations: 53

Null hypothesis: No serial correlation at lag h

Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	12.54819	9	0.1841	1.435107	(9, 92.6)	0.1846
2	6.658335	9	0.6726	0.738148	(9, 92.6)	0.6730
3	5.100826	9	0.8254	0.560872	(9, 92.6)	0.8257
4	7.283629	9	0.6076	0.810130	(9, 92.6)	0.6081

Null hypothesis: No serial correlation at lags 1 to h

Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	12.54819	9	0.1841	1.435107	(9, 92.6)	0.1846
2	18.43044	18	0.4277	1.033807	(18, 99.5)	0.4303
3	23.48928	27	0.6585	0.859142	(27, 94.1)	0.6647
4	33.30080	36	0.5976	0.911918	(36, 86.4)	0.6128

TABLE 15: Heteroskedasticity Test

VAR Residual Heteroskedasticity Tests (Levels and Squares)
Date: 09/27/22   Time: 23:27
Sample: 1 57
Included observations: 53

Joint test:

Chi-sq	df	Prob.
123.8745	108	0.1409

Individual components:

Dependent	R-squared	F(18,34)	Prob.	Chi-sq(18)	Prob.
Res1*res1	0.477068	1.723223	0.0840	25.28461	0.1173
res2*res2	0.434965	1.454072	0.1694	23.05316	0.1886
res3*res3	0.403356	1.276967	0.2623	21.37787	0.2608
res2*res1	0.399919	1.258832	0.2738	21.19569	0.2697
res3*res1	0.530246	2.132126	0.0279	28.10303	0.0605
res3*res2	0.430269	1.426515	0.1816	22.80425	0.1982

Corporate Governance and Their Practice as an Important Part of Business Activity

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Abstract

The concept of corporate governance is, in the context of business language, the use of a synonym for the English term management (Daniel, 2015). Corporate Governance and Management can be seen as one essential function in relation to the administration of the corporate economic entity. In essence, corporate governance deals with the totality of activities offered by leaders in all areas of the economic entity as a whole, such as human resources, the sales that the corporation will carry out, management, financing and marketing. Corporate managers are based on the use of different managerial methods, which have been developed by researchers and specialized authors who deal with the continuous periodic training of the management staff (Kohli, 2015). Drafting and application of the appropriate

policies, their monitoring and implementation in the appropriate manner within the economic subject in question, by the leaders of the organization. This paper is a theoretical framework about corporate governance

Key words: *Corporate Governance, Board of Directors, Failed Corporate Governance, Management.*

1. Introduction

Corporate governance, especially during the last decade, has become a special notion that has received more and more attention from the drafters and implementers of government policies in various countries of the world. Especially in the last decade, it can be seen that corporate governance has grown beyond its primary focus in relation to the level of financial performance and the added value of shareholders. It is noted that another component such as Corporate Social Responsibility (CSR) is continuously increasing in the communities in which it develops its activities (Coelho, 2023) . *The financial scandals that affected the American economy during the years 2006 to 2012, such as the cases of Enron, WorldCom and Arthur Andersen, caused the public to reduce the level of trust towards the companies that operated in these sectors. Using the latter to make investments in the stock market and bonds. This skeptical behavior on the part of individuals and potential investors had an impact lowering the value of common shares and other debt securities by corporations bringing financial losses in the value of hundreds of millions of dollars, especially this was very tangible for investors of the individual spectrum.* (UNECE, 2020). Many international experts in the field in question state that the improper management of the corporate governance leaders was one of the fundamental causes of these scandals. To encourage different countries around the world to implement more efficient systems, the Organization for Economic Co-operation and Development (OECD) drafted, implemented, and summarized several basic principles regarding this issue.

Based on the Fundamental Principles applied in 2004 on which Corporate Governance in Organization for Economic Co-operation and Development Countries is based have become a strong point of reference in the international arena for policymakers in many different countries around the world (Naciri, 2008). These principles are summarized in these topics:

- Ensuring and applying a strong and well-defined basis for a more efficient and effective framework of Corporate Governance. The number of shareholders of the economic entity in question and the main functions related to the issue of ownership.

- The same and not one-sided treatment of the Shareholders regarding the transparency and the wholeness of the information.
- During these last years, it should be emphasized that the high level of progress in the governance reforms of the listed corporations was influenced by American awareness. e (Castrillón, 2021).

One of the primary objectives of this paper presented by the authors is to provide a broad overview that includes the various international practices related to corporate governance, their implications and the way in which the latter have evolved over time. Mainly, the paper presented by the authors aims to examine the implications of various national and international practices and theories that are applied today in relation to corporate governance (Hossain Z. , 2024), based on the literature review, and on different scientific works published by different authors in this field.

II. Literature Review

Today corporate governance is at the top of everyday business activity. All the companies have implemented the standards of governance and have a lot of success in their business. Companies with strong corporate governance have at the same time a lot of success.

The process of good corporate governance, especially during these last years, is showing more and more that they play an essential role in the management of economic entities of the corporate category. For the first time the notion: Corporate Governance was used as a concept in the early 1970s in USA (Cheffins, 2012). Primarily, the above notion began to be widely applied after the internationally known scandal such as the Watergate case and the discovery of the fact that some large American international corporations were involved in corrupt affairs after having made suspicious payments and transfers outside the territory of the United States of America during that period (Veasey, 1993). Various international researchers and national researchers in their papers give the term: Corporate Governance a wide variety of definitions. Based on the literature and various international works carried out by researchers in the field of Economics and in particular the Economics of the social spectrum, the latter tend to define Corporate Governance as Institutions that influence the way economic subjects and in particular Corporations are realized, use and distribute the resources and realized profits (O'Sullivan, 2000). Some of these widely used terms are based on principles, norms and rules, but also on formal practices and in some cases on informal practices that occur in the absence or weakness of the respective regulations (Dyck, 2004). Researchers in the field emphasize that the

leaders of Corporate Governance do not focus only on the inside construction of the corporation, but also its outdoor situations in which it operates, such as capital markets, labor markets, competition policies, etc. We must take into account that, within any corporation that operates publicly in European countries or in the United States of America, in principle there are at least 3 levels of power within the corporation:

1. The Board of Directors of the Corporation or, as it is said otherwise, the Supervisory Board of the Corporation.
2. The managerial level within the corporation, made up of the executive director, high-level managers, middle-level managers and operational managers.
3. The persons who own the common stock of the corporation, in other words, are the true owners of this economic entity.

III. Methodology

The methodology used by the authors in this paper is based on theoretical investigation and practice. In the current investigation, the methodology on which the phases proposed by the authors were developed, consists of conducting a preliminary exploratory research including several keywords of the field, a good part of the keywords used were: Corporate Governance, Governance Practices applied by corporations, Impact of Corporate Governance, Essential Characteristics related to the Corporation, Governance, evaluation and level of control in the Corporation, Various theories related to Corporate Governance etc. (Castrillón, 2021).

IV. Analysis of some Factors such as Transparency and Disclosure and Risk Management Practices

Especially during the last five years, the role of policy makers in the field of practice in the economic subjects of the corporate governance category is increasingly taking on an essential role in shaping the regulatory environment and in creating spaces and governance frameworks, promoting and improving the level of performance in corporations (Hart, 2017). Based on various international works and the findings made by the authors, it is suggested that policymakers and senior management should continuously and periodically improve corporate governance rules and regulations to adapt to global reality. Based on the best international practices in this field, maintaining the highest possible level of transparency for owners and third parties who are interested in these economic entities (Hermalin, 2012). In

order to have permits and increase performance in the field in which corporate governance is a part and to improve the responsible behavior of businesses, future studies and research that will be carried out by experts in the field should focus on some key indicators (Hossain M. , 2024). Potential investors during their activity, in many cases, may decide to invest their financial assets in economic entities of the international corporate category. Investors purchase common stock, and, in some cases, preferred stock issued by corporate entities, with the aim of receiving dividend income based on the number of common stocks they own. The board of executive directors plays an essential role in the management of economic entities of the corporate category, especially in the drafting of long-term strategies. The process of electing corporate leaders and in particular, the process of choosing an adequate executive director (CEO) to lead, manage with the highest level of performance, is one of the most important responsibilities of the executive board. These include a good team of middle-level managers and lower-level operational managers, who are led by the Company's CEO and are primarily responsible for managing and implementing the company's strategy in daily operations. The corporation, through the support of the middle-level management team and operational managers, is able not only to properly realize its set objectives but also to increase the level of performance in the sector where it is active.

Transparency and Disclosure Practices of CG

This indicator aims to provide reliable information to shareholders and external stakeholders. Transparent communication by corporations increases the level of trust among current and potential investors.

Risk Management Practices of CG

Risk management practice of Corporate Governance includes identifying potential risks, implementing mitigation strategies, and ensuring that the Board is regularly informed. Effective risk management is considered today essential for sustainable corporate performance because all the companies have their policy for this.

Dimensions of Corporate Governance,
Group of Stakeholders and Theoretical Framework

In discussing the dimensions of corporate Governance (CG), particularly within public governance institution Roe (Roe, 2024), in his very interesting contribution "The Institutions of Corporate Governance", identifies two fundamental definitional perspectives. Mechanism that has influence between shareholders, board of directors and managers. Roe argues that corporate governance has two dimensions: The vertical dimension and the horizontal dimension. In the vertical dimension we can

say that it is composed of: The corporate executive director (CEO) and other high-level managers positioned at the top of the organizational pyramid. The horizontal dimension, more characteristic of continental European governance systems, emphasizes the broader dispersion of power among different governance bodies. The horizontal dimension is the most commonly used dimension of corporate governance systems operating in Europe. The horizontal dimension allows for a wider distribution of power among the different members of the organization. A shareholder is a natural person or a legal person or company (including a corporation) that owns one or more shares issued by the company. At the same time understanding corporate governance also requires a conceptual framework that includes a variety of theories used to explain and assess governance practices:

- **Agency Theory:** This theory is important, and it has some common points with finance. This theory examines conflicts of interest between principals' shareholders and executive managers. It focuses on aligning management decisions with shareholder interests through monitoring mechanisms, incentives, and control structures.
- **Stewardship Theory:** Unlike agency theory, this assumes that managers act as stewards of the company, aiming to achieve corporate goals and organizational success, thereby minimizing the need for control systems.
- **Stakeholder Theory:** Is important in the field of corporate governance. Expands the scope beyond shareholders to include all parties affected by a corporation, such as employees, customers, suppliers, and the community. This theory promotes balanced governance that considers multiple interests. Stakeholder theory might be viewed as a conceptual cocktail of different studies that has yielded a blend of quite sociological and organizational flavors. One of the points of stakeholder theory is the idea that companies are so big, and their influence on the world is so extensive that they should be the ones to bear the obligation of not only giving an account to their shareholders but to a lot of other sectors of society as well.
- **Resource Dependency Theory:** Emphasizes the board's role in securing essential resources and maintaining the corporation's legitimacy within its environment. These theories offer complementary insights into the structures, functions, and effectiveness of corporate governance systems.

Stakeholder versus agency theory

Aligning with an agency theory framework, is the concept that companies can operate in a way to increase shareholder wealth and at the same time satisfy the requirements of a wide range of stakeholders? Or, to put it differently, does stakeholder theory interact in some way with agency theory? The importance of this question, besides a lot of other questions that can be considered its close relatives, is immeasurable because of

the impact that corporations have in society of a consumer-led, multinational-driven world. Nevertheless, the verdict remains somewhat ambiguous.

Emerging from the academic literature are new business frameworks that depict a "sustainable organizational" culture in a corporate community and at the same time recognize the interdependencies and synergies between the company, its stakeholders, value-based networks, and society. Such a business model is geared towards value creation to the maximum extent possible, through the simultaneous maximization of economic, social, and ecological welfare. Some academic work has provided empirical evidence that stakeholders management leads to improved shareholder value (Hillman, 2001). The authors have used an index to measure stakeholders' performance for companies, known as the Kinder, Lydenburg, Dominis Index (Mattingly, 2006). This index was compiled by an independent evaluation expert and consists of nine areas of social performance. Yes, in theory, there are significant differences between the two theoretical paradigms that make the two theories appear as if they cannot be combined even after the first glance. In fact, stakeholder theory is a natural extension of agency theory and thus represents a more comprehensive way of understanding firm theories. Agency theory, when applied and adapted to the appropriate level, is at best a non-comprehensive model of stakeholder theory.

V. Conclusions

Nowadays, it is observed that the models based on collective governance seem to be developing in a fast and stable way, forming more developed and complex systems. Encouraging the creation of a system that is more systematic and that in many cases opposes the universality of the British-Saxon model, but it should be noted that a good part of researchers and different international authors in the field highlight the influence of the American model that is applied in relation to corporate governance (Schechter, 2016). The fact that the two models mentioned differ should be emphasized using some important indicators. Two of the main Corporate Governance models are summarized with their main elements as below:

TABLE 1: Corporate Governance model

Nr.	American. The model applied by the United States of America (USA) and the United Kingdom (UK) in relation to Corporate Governance, and Britain Governance model.	The European model applied by the Corporate Governance side.
1	Dominance by the leaders of the high-level management in the company.	Dominated controlling stockholder.
2	More prominent focus on corporate owners, the shareholders.	Mainly focused with a primary background on stakeholders.
3	Consolidated public stock ownership.	More concentrated ownership of public shares.

4	Better detailed rights and obligations of the Shareholders in the corporation.	The minimum rights and obligations of shareholders.
5	Unitary and more efficient structure of the corporation's management board.	The high-level board of directors in corporations of the corporation is composed of two main levels according to importance.
6	Powerful single leader.	Consensus or divided leadership.

Source: Adapted from Pjetri, Dibra, & Danaj (2024).

Models, of course, are merely intellectual constructions. The board of Managements delegates to the General Executive Director the authority and responsibility to manage the economic subject in question. High-level management is the main responsibility of the corporation for the implementation of plans that emerge from strategic planning. They also manage and detail the potential risks that the corporation may face. Also, senior managers realize and report on the financial performance of the corporation by compiling financial reporting documents according to the relevant rules and standards. Ordinary shareholders, although they are the real owners of the corporation, are not directly involved in the management process at the operational level of the economic entity, the corporation. Also, ordinary shares are informed through periodic reports on the entirety of decision-making and investments that will be carried out by the corporation. The executive director of the corporation, together with the high-level managers, are responsible for the drafting of the long-term strategic plan and the medium-term plan of the corporation and its implementation in the market where the latter operates and develops its activity. Some of the main tasks of corporate managers are summarized as follows. The Executive Director and the managers run the corporation under the supervision of the board of directors, with the aim of increasing its long-term value. Mid-level managers and operatives mainly implement the plans approved by the board of directors. The executive director of the corporation and the high-level managers have as their essential duties the giving of recommendations to the board regarding the distribution of capital and the totality of the resources that the corporation owns. One of the most important tasks of high-level managers has to do with the process of directing and managing the risks faced by the corporation. The latter regularly informs the board of directors of the corporation about the possible potential risks that may affect the corporation. Senior managers, especially in corporate entities, are primarily responsible for the preparation and reporting of financial statements used by the Corporation. The latter draft, develop, and apply operational and budget plans for the company, also carry out checks for the quality of their implementation and present them to the board of directors in the form of periodic reports.

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Concessions as Financing Mechanisms for Public Services: A Comparative Analysis of Tirana's "Mother Teresa" and Pristina's "Adem Jashari" Airports

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Abstract

The development of the market economy has introduced a new source of financing for public and strategically important services. Concession is one of the most widespread forms of Public-Private Partnership. The need to finance and implement a wide range of projects and public services, which require substantial financial, technological, and professional resources, necessitates cooperation with private partners. The relevance of this topic remains current, while information existing in public or private circles is still shallow, despite the growing number of concession projects initiated either by the government or by businesses themselves. The main purpose of this article is to present the Albanian experience in concessions and provide a comparative

overview of "Mother Teresa" and "Adem Jashari" airports. This study compares the two airports before and after the concession, providing a detailed analysis and deriving key conclusions relevant to public infrastructure financing. Initially, a brief introduction is given on what concessions represent, followed by the history of their emergence. Next, the methodology used for the study is presented, which is a comparative analysis between Mother Teresa and Adem Jashari airports, concluding with findings and recommendations. Findings aim to inform policymakers on the strategic value of concessions in infrastructure development in transition economies. The study contributes to understanding how concessions can improve public service delivery in developing countries.

Key Words: *public-private partnership, concession, airport management, infrastructure financing, Albania, Kosovo.*

I. Introduction

The use of Public-Private Partnership has become widespread, especially after recent global crises, which highlighted the financial incapacity of governments in various countries to undertake the necessary investments to meet public needs, particularly in infrastructure, but also in other sectors. There are different forms of Public-Private Partnership, among which concession has been the most known and widely applied. In Albania, too, concession was the first PPP form implemented.

The state's role in entrepreneurship has been gradually diminishing, giving more space to private enterprise since the transition from a centrally planned economy to a market economy. The main challenge for any government dealing with concession contracts is how the interaction between the public and private sector will be realised. In countries like Albania, there was an immediate need to regulate both road and energy infrastructure. Such projects require significant financial resources, and governments are constantly faced with the challenge of finding funds. Public needs cannot be covered solely through taxes; therefore, building relationships through Public-Private Partnerships becomes an option to meet these needs.

The main factors influencing the establishment of relationships between public and private bodies include budget deficits, an ageing population, poor infrastructure, and growing demands for public services. Gradually, Albania began establishing the first legal and institutional frameworks for concessions. However, currently, concession projects are not applied as effectively and efficiently as intended.

Concessions are forms of Public-Private Partnership. A concession is a contract or agreement through which a non-state legal or physical person is granted the right by an authorised state body to acquire an asset to perform specified services, for a long period, in forms defined by law.

There are numerous concession contracts, but the most commonly used are three types:

1. Design-Build-Finance-Maintain (DBFM)
2. Design-Build-Finance-Operate (DBFO)
3. Build-Operate-Transfer (BOT)

Through these contracts, the private sector undertakes the design, construction, financing, maintenance, and operation of a specific asset. The advantage of concession contracts lies in the fact that while the public sector client retains project oversight responsibility, all risks are borne by the private sector concessionaire. The concessionaire is often labelled as a consortium formed for a specific project. Selection of the consortium is done through a competitive tender, and its role is mainly executive.

Risks faced by both parties during their collaboration are classified into two main groups:

- Elementary risk, borne by the private partner
- Global risk, transferred to the PPP participant most capable of controlling them

II. Methodology

This section presents the methodology used for the comparative analysis of the two airports. The literature review was conducted by studying various documents on concession financing, scientific journals, business books, and different online research materials.

Comparative Method

This study uses a comparative approach, analysing the periods before and after the concession of Mother Teresa and Adem Jashari airports. Through this analysis, the differences and similarities between these two periods will be identified, and a conclusion will be reached regarding which period was more effective for each airport.

Historical Method

Concessions cannot be treated without first understanding their history, causes, factors, and how they are addressed in Albanian legislation. All these elements will subsequently explain why there was a need for cooperation between the public and private sectors.

III. Literature Review

This chapter focuses on studies by various authors related to the research topic. Public services of an infrastructural nature are mandatory to be provided by the state. These consist of a wide range of facilities and services, which continue to expand over time along with the growing demands and needs of society. The public sector has engaged the private sector through agreements to finance and/or manage public works, generally of an infrastructural nature. PPPs can thus be considered a modern method of facilitating private enterprises to meet the increasing demands for public infrastructure (Estache & Iimi, 2009).

Public-Private Partnership (PPP) includes different types of contracts, with concession being one of these forms. Concession, or PPP more generally, was first used in the United States, initially linked to various educational programs jointly funded by the state and private sector. Later, concession was used to finance public services. Many scientific studies were also developed by non-public companies with co-financing from the public sector, particularly in technology.

On an international level, co-governance initiatives have driven economic growth by involving the private sector in improving agricultural technology. According to B. Berberi (2015) in his study *"Public-Private Partnership"*, the performance of concessions depends on several factors. The configuration of public-private arrangements is often the key to success. Bidders are selected late, private partners find it difficult to assess final product performance, there is a lack of a clear and well-structured methodology for choosing the right procurement strategy, risks may be spread across small projects, and finally, service users focus more on service details rather than technical issues.

There are cases where PPP contracts involve improving existing infrastructure rather than building new ones. A contract is not considered PPP if the private sector intervention does not constitute a capital investment, nor is it considered so if there is no formal contract. The contracting authority on behalf of the public sector, regardless of its name in various countries' legislation (e.g. Public Authority, Contracting Entity), can be a state structure, local authority, or government department controlled by the state (Blanc - Brude, F. H. (2007)).

Estache, A. and Immi, A (2008) concluded that all infrastructural public services should be returned to the state. These services and assets continue to expand over time as human needs increase. Contracts between public and private sectors are structured so that the private sector finances a public work, generally infrastructural in nature.

According to Peteri, G. (ed.) (2008) in *"Public-Private Partnership"*, infrastructural services can be classified into three main categories. Concessions are widespread globally in many sectors as a development tool where states lack sufficient resources, involving the private partner who also assumes relevant risks and benefits. Clearly defined contract rules ease conflict resolution.For example, the Netherlands is cautious regarding concession agreements, both in legislation and in ensuring minimal costs with maximal benefits. Another distinction is risk distribution; in some PPP schemes, risk remains entirely on the public granting entity, while in concessions, risk is shared but mainly lies with the private partner.

Despite the increasing popularity in the use of the public-private partnership concept as a procurement strategy, there have been reported cases of problems associated with the initial stages of the process in terms of unduly high bidding costs and pre-contract time overruns due mainly to the protracted nature of the negotiations (Ahadzi, M. &.Graeme B. (2003).

According to the EU Green Paper on PPP Vassileva, A. G. (2022) stresses that key characteristics of a PPP are:

1. A relatively long-term relationship involving cooperation between public and private partners across different aspects of the planned project.
2. Project financing methods, partially by the private sector, sometimes through complex agreements with other actors.

3.1 International Concession Standards

In the context of increasing competition and globalisation, concessions serve as instruments that attract both domestic and foreign actors. For implementing concession projects in a specific country, not only national economic entities compete, but also foreign private entities or joint ventures between the two categories. This diversity of bidders benefits all parties; the public benefits the most, as the increase in providers raises the chances of receiving better services at lower prices.

Additionally, small economic operators who may not independently meet financial and professional criteria to compete can achieve this by partnering with larger domestic or foreign entities. Foreign entities also benefit by gaining access to local commercial infrastructures, whether human resources, expertise in specific fields, or terrain knowledge.

All parties involved are interested in fair competition, as it best protects public interest and increases the likelihood of attracting the best projects.

R. Wettenhall's work on Public-Private Partnerships (PPPs) examines the gap between the rhetoric and the reality of these arrangements. He explores how PPPs are presented as a solution for attracting private financing for public projects, while also noting that many forms of public-private mixes exist, some with a long history. The article questions whether all such mixes truly qualify as partnerships and calls for a deeper understanding of their diverse forms and the conditions necessary for successful implementation, particularly in protecting the public interest.

3.2 Main Types of Concessions

There are many types of public infrastructure services undertaken by the private sector through a PPP. According to Peteri, G. (ed.), 2008, infrastructure services can be broadly grouped into three basic categories:

1. Economic infrastructure, which includes transport facilities and service systems such as drinking water supply, sewage systems, electricity provision, etc. This type of infrastructure is considered essential for daily economic activities.
2. Social infrastructure, which includes schools, hospitals, libraries, prisons, etc. This infrastructure is regarded as essential for the structure of society.

EU legislation defines a concession as: A contract similar to public contracts, except that the remuneration for the work performed or the service provided consists solely of the right to exploit the construction or service, or this right along with payment.

In general, a concession can be defined as an authorisation granted to the concessionaire to invest in an economic activity related to:

- Designing, constructing, developing, renovating, transforming, repairing, managing, using, and/or maintaining infrastructure facilities, or any of these activities
- Providing public services and/or managing state-owned assets

In this relationship, the concessionaire assumes the risk of financing and successfully completing the project. Remuneration consists of revenues from operating the project or revenues from its operation, plus any payments made by the public authority.

IV. A short history of the two airports

4.1 Mother Teresa (TIA) and Adem Jashari (ANP) Airports Before Concession

Before the concession, Pristina International Airport (ANP) faced management difficulties but maintained a stable financial situation, enabling efficient operations. In contrast, Tirana International Airport (TIA), as the airport of a country under communist dictatorship and isolation, had a poor financial condition and low standards of service provision.

In 1999, following the end of the war in Kosovo, ANP managed to establish basic operational infrastructure. Its capital investments included the construction, modification, and commissioning of the passenger terminal, resurfacing of the runway, installation of lighting systems, construction of the cargo terminal, vehicle parking, purchase of air navigation equipment, installation of radar at ANP and Golesh, acquisition of runway maintenance machinery, purchase of firefighting equipment, and construction of a fire station building. The total value of these investments amounted to €50 million, with €20 million allocated specifically to runway resurfacing and lighting installation. All these investments were financed from ANP's own resources.

TIA was built over two years, 1955–1957, while ANP was constructed in 1965. However, Tirana had commercial air services even earlier. In 1926, domestic aviation began with Adria-Aero-Lloyd, a German airline that, after air routes in Albania became monopolised, provided services to cities such as Tirana, Shkodër, Korçë, and Vlorë. Adria-airline later sold its rights to the Italian company Alitalia, which by 1935 operated regular flights between Tirana, Shkodër, Peshkopi, Kuçovë, Vlorë, and Gjirokastër.

In 1970, Tirana became one of the first destinations served by China's CAAC Airlines, with weekly flights to Beijing via Tehran and Bucharest. By the late 1980s, Tirana was served by six airlines, operating nine flights per week. In 1991, due to political changes and mass emigration, the number of airlines increased rapidly.

By 1999, compared to 1991, TIA recorded 8,249 flights and 356,823 passengers, while ANP handled up to 1.3 million passengers annually, demonstrating that ANP had a higher passenger volume before the concession.

4.2 ANP and TIA After Concession

4.2.1 International Airport

International Airport "Mother Teresa" is the first and only international airport in Albania. It was established as a result of a concession agreement between the

Albanian state and several foreign private companies. On 11 November 2004, Law No. 9312 was approved, ratifying the concession agreement between the Council of Ministers of the Republic of Albania and the concession company "Tirana Airport Partners," covering the construction, commissioning, operation, and maintenance of Mother Teresa International Airport, as well as granting certain incentives to the concessionaire company. The international tender was won by the German-American consortium "Tirana Airport Partners," which later became "Tirana International Airport."

Based on the shareholders' decision dated 25 May 2005, and by the financing agreement dated 5 February 2005, the subscribed capital as of 31 December 2020 and 2019 was 1,161,148,883 ALL (9,375,000 EUR).

In March 2007, TIA inaugurated its new passenger terminal, completed within the projected timeframe, marking the most significant phase in the airport's modernisation. TIA's mission is to provide Albania with a prestigious international aviation infrastructure. It aims to operate the airport in compliance with the highest standards of safety and service quality.

At the extraordinary General Assembly meeting held on 6 October 2016, all shareholders unanimously approved the sale and transfer of their shares to the new sole shareholder, Real Fortress Private Limited. Later, in December 2020, the sole shareholder decided to sell and transfer its shares to Kastrati Group JSC.

From December 2020, Kastrati Group JSC. has been the sole owner of the company, holding 100% of the share capital, equivalent to 1,161,148,883 ALL (9,375,000 EUR). During 2020, the company declared a dividend of 621,600 thousand ALL (equivalent to 5,000 thousand EUR) (2019: 999,680 thousand ALL, equivalent to 8,000 thousand EUR), based on the Assembly's decision dated 23 April 2020 (for 2019, the dividend was declared and paid within the same year). *(Source: Ministry of Infrastructure and Energy, Civil Aviation Authority, 2020).*

TABLE 1. TIA Shareholders

Shareholder	Share (%)	Comment
Avi Alliance (formerly HOCHTIEF Airport)	47%	One of the world's leading investors in the airport sector.
Deutsche Investments – und Entwicklungsgesellschaft	31.7%	Member of the KfW banking group, specialising in corporate and infrastructure financing in Europe.
Albanian-American Enterprise Fund	21.3%	Established by the US government to support private sector development in Albania.

Source: Mother Teresa Airport, Official Website, Company Profile

Reasons for TIA's Concession

- Requirements from international civil aviation organisations to ensure compliance with international standards, particularly passenger and baggage safety.
- The need to develop a strategic facility without burdening the national budget.
- The development of the national airport would provide a guarantee for the growth of other sectors and enhance Albania's positive image.

Debate on TIA Exclusivity

From the moment TIA's concession contract was signed, the most debated issue has been why the Albanian state granted the concession exclusive status. Published reasons for granting exclusivity include:

- High construction costs of the airport
- Lack of efficiency
- Impossibility of attracting strategic investors under Albania's air traffic conditions
- Lack of expressed interest in building another airport

Arguments for granting exclusivity:

- Exclusive rights make concessions more attractive to new entrants
- Exclusivity prevents second and third firms from entering an inefficient industry
- Although new entrants might benefit the government, they incur high costs

Arguments against granting exclusivity:

- Even in monopoly cases, potential new entrants force the monopolist to perform better
- Restricting the possibility of new entrants does not incentivise the concessionaire to expand services nationwide

4.2.2 Pristina International Airport (ANP)

On 1 June 2010, the Government of Kosovo awarded the concession for Pristina International Airport (ANP) to the Turkish company "Limak" and the French company "Aéroport de Lyon." The Turkish company Limak owns approximately 90% of ANP's shares, while the remaining 10% is held by Aéroport de Lyon. At the time of the concession, Limak had minimal experience in airport management, whereas the French company had greater expertise in this field.

TABLE 2. ANP Shareholders

Shareholder	Share (%)	Comment
Limak	90%	Turkish company with significant interests in construction, energy, and tourism.
Lyon	10%	French company with experience in airport management.

The ANP terminal was opened in October 2013, and this investment was considered by the government as a major success of the concession process. The declared investment was €130 million, whereas TIA's investment was €50 million, thus €80 million less. The signed agreement for TIA is of the BOOT type (Build-Own-Operate-Transfer), meaning the concessionaire assumes all fundamental risks, including physical, design, construction, operation, maintenance, technological, financial, and revenue generation risks.

In contrast, ANP's signed agreement is of the BOT type (Build-Operate-Transfer), where the private sector undertakes an activity previously performed by the state. This agreement emphasises the transfer of ownership to the public authority at the end of the operational period. The advantage it offers is the avoidance of public budget constraints. Both ANP and TIA concession agreements have been signed for 20 years.

Reasons for ANP's Concession

ANP was given under concession because the private partner would be more flexible in business environments and have a more commercial orientation compared to ANP's management under public ownership. According to Mr. Mustafa, the reason for ANP's concession was not financial but aimed at increasing its competitive capacity in the region, stating: *"...in the region, all airports are under concession and operated by private companies, which have greater commercial flexibility than public companies."*

ANP Concession Structure

In the case of ANP, concessioning was done by splitting the enterprise into two parts: the concessionaire was given the passenger service airport section, while the air navigation part (SHNA) continued to be operated by the public enterprise ANP "Adem Jashari" NPANP. Dividing ANP into two parts and concessioning only the profitable section increased the expected profits for the following years.

4.3 Air traffic for TIA and ANP

Like TIA, ANP also retains a monopolistic period. ANP must be regulated by state authorities regarding the tariffs it sets for users of its respective services.

Year	Passengers	Change	Aircraft Operations	Change
2005	785,000	▲20.77%	15,400	N.A.
2006	906,103	▲15.43%	15,856	▲ 2.96%
2007	1,105,770	▲22.04%	18,258	▲15.15%
2008	1,267,041	▲14.58%	19,194	▲ 5.13%
2009	1,394,688	▲10.07%	20,064	▲ 4.53%
2010	1,536,822	▲10.19%	20,768	▲ 3.51%
2011	1,817,073	▲18.24%	22,988	▲10.69%
2012	1,665,331	▼ 8.35%	20,528	▼10.70%
2013	1,757,342	▲ 5.53%	19,942	▼ 2.85%
2014	1,810,305	▲ 3.02%	17,928	▼ 3.02%
2015	1,997,044	▲ 10.3%	20,876	▲ 16.4%
2016	2,195,100	▲ 9.9%	22,352	▲ 7.1%
2017	2,630,338	▲ 19.8%	24,336	▲ 9%
2018	2,947,172	▲ 12%	25,462	▲ 3%
2019	3,338,147	▲ 13%	28,270	▲ 11%
2020	1,310,614	▼ 60,7%	15,280	▼ 46,8%
(01.01-30.04) 2021	342,804	▼ 34%	4,342	▼ 11,3%

Year	Passengers	Change	Flight Departures	Change
2004	910,797	9.1%	4,716	13.3%
2005	930,346	▲2.1%	4,983	▲5.7%
2006	882,731	▼5.1%	4,077	▼18.2%
2007	990,259	▲12.2%	4,316	▲5.9%
2008	1,130,639	▲14.2%	4,928	▲14.2%
2009	1,191,978	▲5.4%	5,709	▲15.9%
2010	1,305,532	▲9.5%	6,143	▲7.6%
2011	1,422,302	▲8.9%	6,738	▲9.7%
2012	1,527,134	▲7.4%	6,947	▲3.1%
2013	1,628,678	▲6.6%	7,305	▲5.2%
2014	1,404,775	▼13.7%	5,994	▼17.9%
2015	1,549,198	▲10.3%	6,773	▲13.0%
2016	1,744,202	▲12.6%	7,254	▲7.1%
2017	1,885,136	▲8.0%	7,508	▲3.5%
2018	2,165,749	▲14.7%	8,388	▲11.7%
2019	2,373,698	▲9.6%	18,226	▲8.6%
2020	1.102.091	▼53.4%		

Source: Adem Jashari Airport, Official Website, Company Profile

According to the ANP concession agreement, the objective was to double the number of passengers over the next 20 years, aiming to reach 3 million passengers

annually. The data presented shows that the number of passengers has increased year on year, reaching its highest figure in 2018 with 2,165,000 passengers. If this growth trend continues, ANP's target is expected to be achieved.

From passenger traffic, ANP collects approximately €5.2 million annually through various fees.

Based on the data mentioned above, we can conclude that Mother Teresa Airport (TIA), compared to Adem Jashari Airport (ANP), had a higher number of passengers, with a difference of approximately 782,000 more passengers for TIA in 2018. However, flights to Tirana International Airport tend to have relatively higher costs for the same destinations compared to Pristina International Airport.

4.4 Financial Indicator Analysis for Both Airports (ANP and TIA)

The financial situation is identified through the calculation of various financial ratios, which are classified into several groups:

- Liquidity ratios
- Leverage ratios
- Activity ratios
- Profitability ratios

1. Financial Analysis
An initial review of certain items in the Balance Sheet shows that cash assets decreased from 2019 to 2020, due to the impact of COVID-19. Additionally, by observing the Statement of Comprehensive Income (P&L) for both airports, 2020 was not a very profitable year, as it was heavily affected by the pandemic. However, current expectations indicate an increase in net profit, since movement restrictions are no longer in place.

2. Cash Flow Analysis and Its Indicators
Year 2019: The company's operating cash flows declined, as a result of the situation created by COVID-19.

3. Solvency Ratios
The companies recognise a provision for expected credit losses for all debt instruments not measured at fair value through profit or loss. Expected losses are calculated as the difference between contractual cash flows due under the contract and the cash flows the company expects to receive, discounted at the original effective interest rate. Expected cash flows include cash flows from the sale of any held collateral or from other credit enhancement methods that are integral to the contractual terms.

4. Previous Debt Obligations

The amount of previous debt refers to a loan previously granted by Kreditanstalt für Wiederaufbau (KfW) to the Government of Albania, which is to be repaid by the company over the concession period. The liability is payable according to a schedule provided by the Government of Albania; however, the interest and principal are not separately identified for each instalment. As a result, the fair value of the loan is considered to be the present value of the deferred payments, calculated by discounting all future payments using a 7.5% interest rate, representing the company's long-term borrowing rate.

After initial recognition, the previous debt is measured at amortised cost. The maturity date of this obligation is 15 December 2025, and the principal is payable in semi-annual instalments.

5. Liquidity Ratio

The liquidity ratio refers to a firm's ability to meet its short-term obligations. If an organisation is liquid, it will be able to pay its liabilities on time. In other words, the liquidity ratio provides a quick measure of a company's ability to pay its debts using its current assets.

For a firm to be able to settle its short-term obligations effectively, the current ratio should ideally be equal to or greater than 2, although it can also be acceptable if it is slightly below 2.

(ANP) 2020

= 20.646.941/ 18.806.165= 1.09 times

TIA 2020

= 492.321.168/42.857.329=11.4 times

In general, the average value for the current ratio is 2. The ANP ratio is considered satisfactory, as it falls within the 1.5–2 range, whereas TIA has a current ratio greater than 2, specifically 11.4 times as noted earlier. Such a high value indicates that TIA has excessive liquidity.

ANP 2017 $\quad$ Quick ratio = Current assets $- \dfrac{\text{Inventory}}{\text{current liabilities}}$

$$= 20.204.812/18.806.165= 1.07 \text{ times}$$

TIA 2017 $\quad$ Quick ratio = Current assets $- \dfrac{\text{Inventory}}{\text{current liabilities}}$

$$= 492.321.168/42.857.329=11,4 \text{ times}$$

This indicator is narrower and more precise in terms of the airports' ability to meet their current obligations with their current assets. Inventories are excluded from the numerator of this ratio because they are considered the least liquid component of current assets. TIA's ratio is again higher than that of ANP.

6. Average Collection Period

This ratio indicates the efficiency of debt collection.

Average Collection Period = Accounts Receivable / Average Daily Sales

ANP: 118.022 days - TIA:= 105.63 days

The average collection period should be equal to or less than the airport's credit terms. ANP takes 118.022 days to collect its accounts receivable, whereas TIA takes 105.63 days to collect its accounts receivable. A shorter average collection period indicates that the company collects payments from its customers more quickly, improving liquidity and reducing the risk of bad debts. In this case, TIA's shorter collection period of 105.63 days suggests more efficient credit and collection policies compared to ANP.

Conversely, a longer collection period, as seen with ANP's 118.022 days, may indicate inefficiencies in collection or more lenient credit terms, potentially increasing the risk of cash flow problems or bad debts if customers delay payments beyond agreed terms.

7. Profitability Ratios

Gross Profit Margin = Gross Profit / Net Sales × 100

ANP (2020) = 18.04%   TIA (2020): = 43%

The gross profit margin indicates the proportion of revenue that exceeds the cost of goods sold, reflecting the company's efficiency in managing production and pricing.

TIA's gross profit margin of 43% is significantly higher than ANP's 18.04%, suggesting that TIA is more efficient in controlling its production costs relative to its sales or has a stronger pricing strategy, leading to better profitability.

Net Profit Margin = Net Profit / Net Sales × 100

ANP (2020): = 2.62%   TIA (2020): = 35.50%

The net profit margin provides a valuable insight into the company's cost structure and overall profitability, as it measures the percentage of revenue remaining after all expenses, taxes, and interest have been deducted.

TIA's net profit margin of 35.50% is significantly higher than ANP's 2.62%, indicating that TIA is far more profitable, with a better ability to control total costs and generate returns from its revenues

8. Leverage Ratios

Financial leverage refers to the use of debt. Leverage ratios help evaluate the risk associated with the use of debt financing. Financial leverage is considered a source of financing for many firms.

Debt-to-Equity Ratio: This ratio indicates the percentage of funds borrowed by the company compared to the owner's investment in the business.

Debt-to-Equity Ratio = Total Debt / Equity

ANP (2020): = 72,661,364 / 33,189,396 = 2.19

TIA (2020): = 3,741,230,101 / 2,793,701,126 = 1.33

The data show that ANP has a debt-to-equity ratio of 2.19, meaning it uses more borrowed funds relative to its equity compared to TIA's ratio of 1.33.

Generally, this ratio should not exceed 2, but in some cases, such as in the airport industry, a higher value may occur due to the nature of capital-intensive operations

Interest Coverage Ratio: This ratio indicates whether a company has sufficient resources to cover the interest portion of its debt obligations.

Interest Coverage Ratio = Earnings Before Interest and Taxes (EBIT) / Interest Expenses

ANP (2020): = 1.86   TIA (2020): = 8.54

This ratio measures a firm's ability to meet its interest payment obligations. A higher ratio indicates better financial stability and a lower risk of default. TIA's ratio of 8.54 shows strong ability to cover its interest expenses, while ANP's ratio of 1.86 is relatively low, indicating that it has just enough earnings to cover its interest payments, suggesting higher financial risk.

V. Research Results

Before the concession, Pristina International Airport (ANP) faced management difficulties but maintained a stable financial condition, which enabled efficient operations. In contrast, Tirana International Airport (TIA), as the airport of a country under communist dictatorship and isolation, had a poor financial condition and low service standards.

In 1999, compared to 1991, TIA had 8,249 flights and 356,823 passengers, while ANP handled up to 1.3 million passengers annually, demonstrating that ANP had a higher passenger volume before concession. ANP also had sufficient financial strength, as evidenced by its capital investments between 2008 and 2010, amounting to €18,161,000.

TIA signed a BOOT (Build-Own-Operate-Transfer) contract, meaning the concessionaire assumed all fundamental risks. In contrast, ANP's agreement was BOT (Build-Operate-Transfer), meaning the private sector undertook activities previously performed by the state, with asset transfer to the public authority at the end of the operational period. The advantage of such agreements is the avoidance of public budget constraints. Both ANP and TIA concession agreements were signed for a 20-year period.

The opening of new passenger terminals by both concessionaires was considered by the governments of Albania and Kosovo as a key success factor of the concessions. Regarding passenger numbers, there has been a general increase

each year, with 2011 recording the highest movement in TIA due to the impact of visa liberalisation.

An analysis of financial indicators concludes that TIA has higher values across all indicators, meaning it has excess liquidity, higher net profit, and collects receivables more quickly.

VI. Conclusions and Recommendations

This study argues that the discussion on concessions as a method of financing public services, both in general and specific terms, is extensive and characterised by dynamism and specificity. Concessions are an effective way to develop projects that the state cannot implement alone. They bring benefits to both parties: the public partner, by enabling project development under specified conditions, and the private partner, by reaping associated profits.

During the discussion on the performance of concession projects, it became clear from the historical overview that many factors influence their success. These factors vary greatly from country to country, making generalisations difficult. Success does not depend on a single factor but on a combination of conditions. Findings suggest that the characteristics of the actors involved in the projects, their services or networks, and the specific characteristics of the project itself affect the functioning of PPPs in general.

This distinction shows significant similarity with the factors identified for concessions by Ahadzi and Bowles (2004), who distinguish between the characteristics of public sector and private sector parties in negotiations, the external environment, organisational structures, strategies, culture, and specific project characteristics.

In Albania, this public-private partnership model is growing, suggesting that while the country has natural resources and the ambition to develop further, its monetary means are limited.

This paper aimed to address a part of this broad topic, focusing on the general characteristics of concessions and the Albanian experience, through a comparative analysis of the Mother Teresa and Adem Jashari airports before and after concession. The comparative analysis concludes that the post-concession period has been more favourable for both airports, due to the investments made by concessionaires. The benefits of these two concession contracts include:

- Public budget relief, as they do not require public sector financing
- Additional funding sources through the utilisation of reserve capacities
- Risk transfer
- Greater efficiency in resource use

However, the shortcomings include:

- Increased service prices for consumers, as the private sector seeks to maximise its own profits
- Potentially low operational standards and insufficient maintenance

Based on years of concession implementation practice in Albania, there is room for improvement to ensure faster, more effective, and efficient development of concession contracts.

Firstly, it is suggested that concession be considered as a philosophy and taught as such. Its impact on public services and societal functioning should lead to a change in public mindset, fostering understanding and involvement. Educating society would be a key element in improving public concessions and their practical implementation.

Secondly, there is a need to establish a dedicated legal and institutional framework to monitor and control all concession contracts, as many abuses occur in concession projects. In general, the contracts analysed are too formal and do not regulate the practical aspects of implementation. Strengthening legal and executive frameworks with robust monitoring mechanisms is essential to prevent abuses.

Thirdly, the concept of privatisation should not be conflated with Public-Private Partnerships (PPPs). This was evident during the preparation of this paper. Cooperation between the public and private sectors should focus more on PPPs rather than privatisation, to ensure the protection of the country's key resources, which do not belong to a single generation but to all future generations.

These findings can guide policymakers in designing effective concession agreements for critical infrastructure projects and also serve as lessons learned for future concession initiatives in Albania's strategic sectors.

Limitations and Future Research

This study is limited to two airports; future research could explore concession outcomes in other sectors such as energy or urban infrastructure. Additionally, longitudinal studies are needed to evaluate the long-term impact of concessions on service quality and national economic growth. Furthermore, there is limited empirical research assessing the impact of concessions on regional competitiveness, which future studies should address.

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Decoding Consumer Minds: Neuromarketing Insights into the Role of Colours

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Abstract

Colours exert a crucial influence on consumer perceptions and decision-making. This study investigates the relationship between colour psychology and consumer behaviour, with particular emphasis on neuromarketing perspectives. Drawing on both theoretical and empirical literature, the paper investigates how advertising, packaging, and brand design influence consumer responses. A survey of 191 participants aged 15–65 was conducted using a structured questionnaire, followed by statistical analysis including correlation and regression tests. The results demonstrate that colours such as white, red, black, and brown are strongly associated with perceptions of sincerity, excitement, sophistication, and rudeness, respectively. These findings highlight the importance of strategic colour selection in enhancing brand perception and influencing purchase intentions. The study contributes to the growing body of research on neuromarketing by emphasizing the psychological and cognitive impact of colour in consumer decision-making.

Key words: Neuromarketing; Consumer Behaviour; Colour Psychology; Advertising; Packaging; Brand Perception.

I. Introduction

Research on "Colour Schemes" has been increasingly recognised and widely adopted by both scholars and marketers. This is primarily due to the fact that the human brain processes signal more rapidly through visual input than through auditory channels. Young (1802) supported it by showing the influence of the illuminated body and its coloured particles when they enter the eyes of a human being. The brilliance of the colours and their colouring levels have different effects depending on the level of application of their colouring. For example, light yellow indicates joy while dark yellow does not.

Consumer behaviour refers to the decision-making processes and actions undertaken by individuals during the purchase and use of products. To comprehend consumer behaviour, it is essential to explore the reasons behind consumer shopping, the factors that influence purchasing decisions, and the societal drivers of change. This behaviour is shaped by multiple elements, among which a key determinant is the psychological impact that a specific product exerts on the consumer's mind. Sewall (1978) stated that in the market segments many people observed had different intentions to buy a similar product. Colour is a fundamental element that exerts a psychological influence on consumers and, consequently, shapes their purchasing behaviour. The relationship between colour and buying decisions is profound, as both product packaging and colour have a direct and primary impact on the consumer's psyche. Hence, research in this field is crucial to identify which colours generate positive effects and under what circumstances they may negatively affect consumer choices and subsequent purchasing decisions. Brody's (1981) findings reveal that television advertising has a strong impact on children's consumption patterns. Children tend to ignore essential ingredients or product quality, focusing instead on the colours of products and their packaging. Effective advertising captures their attention and ultimately motivates parents to purchase the product.

In this regard, many companies worldwide employ colour specialists and consultants to determine the most suitable colour schemes that would appeal to their target customers. Studies indicate that between 62% and 90% of purchasing decisions are based on product colour, often made instantly upon first visual contact (Singh, 2006; pcimag.com, 2002). Wichmann (2002) further notes that colour is a salient attribute in the presentation of images, enhancing cognition, memory, and attention. This article explores the psychological influence of colour on consumer purchasing behaviour, highlighting its role as a crucial factor in attracting customers.

In the Albanian context, creative and innovative advertising is gaining increasing popularity, especially within the food industry, where advertisements are praised for their unique design and colour schemes. However, the existing

literature shows a lack of significant research in Albania regarding this subject. Therefore, further studies are essential, as they would provide opportunities to enhance competitive advantage, profitability, service value, professional image, and market positioning.

Objectives of the study

(a) Demonstrate the existence of a positive correlation between the use of colour and consumer behaviour.
(b) Examine the various dimensions of colour psychology and analyse how colour influences consumers' perceptions of a brand.

II. Literature Review

Consumer behaviour represents the process through which individuals seek, select, purchase, use, and dispose of goods and services in order to satisfy their needs, desires, and pleasures. Sewall (1978) argued that consumer behaviour is fundamentally shaped by how individuals perceive products. When introducing a new product, it is essential to consider the end users or customers, ensuring that its design aligns with their preferences and requirements.

Advertising constitutes one of the most significant tools for motivating consumers, not only to note products but also to repurchase them. As a key determinant in market evaluation, advertising requires careful management (Conchar et al., 2005). Designers of advertisements must take into account the nature and theme of the product. Numerous studies have highlighted the importance of advertising and its strong connection with consumer behaviour. Gorn's (1982) findings emphasize that advertising influences product choice and fosters positive attitudes towards advertised goods.

Advertising agencies, therefore, strive to create messages that are both persuasive and memorable for audiences (Martin, 2008). The effectiveness of advertising can be enhanced through the use of variables that strengthen memory retention, such as innovative designs, music, and striking colours—elements that form part of this research. While advertising may take various forms, its effectiveness depends on its ability to be visually and emotionally engaging.

Among the critical components in advertising are colours, which merchants and advertisers consistently integrate when developing campaigns. Colours can effectively communicate product value, encouraging not only initial purchases but also repeat buying behaviour. The selection of colours is guided by consumer preferences: for instance, bright tones may appeal to target groups that favour vibrancy, while muted tones are more appropriate for audiences with subdued aesthetic preferences. Furthermore, animations and visual imagery in

advertisements capture immediate attention, eliciting spontaneous responses during the initial stages of information processing (Diao & Sundar, 2004).

Different colours evoke distinct emotional states depending on their perception. Washburn (1899) noted that the mental representation of a colour reinforces traces already imprinted in the retinal field. Each colour—such as red, green, or yellow—carries unique properties based on its level of saturation. For example, yellow in lower saturation produces a cheerful effect, whereas oversaturated yellow may fail to evoke the same positive emotional response (Andrade & Egan, 1974).

Colour is one of the main factors that directly or indirectly affect the life of the product. Coad and Coad (2008) concluded their study by stating that the most admired colour preferences are colours between blue and green in children aged 11 and over, who favored darker shades of blue and warm yellow, orange, pink, silver and black. This shows the similarity of people in terms of colours and the things they represent. Red, for instance, is often linked with energy and enthusiasm, suggesting that a product packaged in red may be perceived by consumers as vibrant, original, and gratifying. According to Samuels and Samuels (1996), colour selection plays a critical role in product marketing strategies, explaining why companies invest heavily to associate their products with distinctive colours that strengthen brand recall in the consumer's mind.

Packaging represents another vital element when assessing the influence of colours on consumer purchasing behaviour. Mehren (1948) demonstrated that packaging strongly impacts marketing outcomes and consumer feedback, to the extent that many packaging firms failed because they could not meet the required standards. Similarly, Bottomley and Doyle (2006) observed that the colours used in association with products are often deemed more suitable for promoting brand image, as consumers tend to perceive brand identity through these colour choices.

An influential study conducted by Bone and Russo (2001) revealed that the graphic components of labels significantly shape consumer beliefs and purchase decisions, suggesting that visual elements may mislead and alter buying behaviour. Packaging itself plays an inducive role, as attractive designs capture customer attention and motivate purchase. As Nash (1937) argued, both the product and its packaging should be designed to enhance the visual impression conveyed to consumers. Effective use of colours in packaging communicates the intended product message and can determine its market success.

Kotler and Keller (2009) describe packaging as both a protective container and an information carrier for consumers, while Nickels and Jolson (1976) emphasize its role in conveying essential product details. Furthermore, packaging also serves a logistical function by enabling product handling and storage, as outlined by Bassin (1988), Nickels and Jolson (1976), and Prendergast and Pitt (1996).

Graphic design, material, colour, and shape are identified as the key components of packaging (Vladić, Milica, Kašiković, Magdolna & Mladen, 2015). Among these, colour is considered the most influential, particularly in

the context of online sales (Spence & Velasco, 2018). Kotler and Keller (2009) also outlined six essential packaging elements—size, shape, material, colour, text, and graphics—while giving greater emphasis to colour as a "critical aspect of packaging." Similarly, Kuvykaite (2009) groups packaging attributes into two main categories: visual and verbal elements. Visual elements include graphics, colour, size, shape, and material, whereas verbal elements encompass information related to the manufacturer, country of origin, and brand. Magnier and Schoormans (2017) further distinguish packaging elements into three categories: structural, graphical, and informational. Structural aspects consist of shape, weight, and materials; graphical elements include colours, images, photographs, and logos; while informational elements cover all textual details such as product descriptions, scientific claims, and packaging-related information.

Today advertising is the thing that draws the attention of the new generation to any new or existing product. Biehal et al. (1992) argued that advertising has the first and most direct impact on the brand as an image. White (2001) argued that the colours of clothes indicate a person's personality and appearance. The colours associated with a particular advertisement or brand will play important roles for the brand and thus increase the identification of the brand (Gorn 1997). The most affected by advertising are children. So this shows that children are more affected by advertising and that children are primarily colour motivated.

The appropriate use of colours is crucial in encouraging repeat purchasing behaviour. Giles (2002) argued that unattractive colours generate negative perceptions and are therefore rejected by consumers. Colours play a fundamental role in product selection, as evidenced by gender-based preferences: boys tend to favour blue, whereas girls generally prefer shades of pink. Since colours carry inherent meanings, the construction of a product's image is largely shaped by its associated colour. Bittinger (1936) highlighted that women are more inclined towards selecting attractive colours, a tendency that increases product visibility and captures customer attention. Moreover, colours directly influence product sales; for instance, when sellers themselves wear bright, striking colours while simultaneously presenting products in vivid tones, they are more likely to attract buyers (Spek, 2008). The human mind is naturally drawn to beauty, and exposure to bright colours serves as a motivational factor, stimulating consumer interest and engagement.

III. The Importance of Colours in Neuromarketing

3.1. (Short) History of Neuromarketing

Neuromarketing represents the integration of two distinct disciplines—neuroscience and marketing. The concept itself cannot be attributed to a single individual, as it began to emerge around 2002, when several American companies

such as Brighthouse and SalesBrain pioneered neuromarketing research and consultancy, drawing upon technological tools and insights from cognitive neuroscience. In essence, neuromarketing offers to consumer psychology what neuropsychology contributes to the study of human cognition and behaviour: a perspective that views consumer behaviour through the functioning of the brain.

One of the earliest empirical studies in this field was conducted by Read Montague, a neuroscience professor at Baylor College of Medicine, in 2003 and published in *Neuron* in 2004. The experiment involved participants drinking Pepsi and Coca-Cola while undergoing fMRI scans. The findings revealed that brand awareness significantly shaped neural activity: Coca-Cola, as a strong brand, appeared to activate regions of the frontal cortex associated with executive functions (EF)—attention control, short-term memory, and planning. Participants who were aware they were consuming Coke reported preferring it, whereas, in blind tests, many favoured Pepsi, with heightened activity in the limbic system, the brain region linked to emotional and instinctive responses.

Although Montague's study did not fully explain how the brain manages brand-related choices, it demonstrated that branding could influence distinct neural mechanisms. This experiment did not entirely convince marketing scholars that neuroscience could decode the neural basis of consumer decisions, but it did raise considerable concern about the potential of such techniques to operate below the threshold of consumer consciousness. Consequently, it sparked both enthusiasm for neuromarketing's promise and sharp criticism regarding its ethical implications.

3.2. Colours as an Integral Part of Neuromarketing

A branch of psychology called "colour psychology" is the study of colours and their effect on human behaviour. The psychology of colours appeared years ago, when the Egyptians studied the introduces the respective symbolism of each colour.

TABLE 1: Symbolism of colour

Colour	Symbolism of colour
Red	Symbolizes the increase of blood circulation in the body.
Yellow	Symbolizes the cleansing of the body.
Blue	Symbolizes relief from pain.
Purple	Symbolizes skin problems.
Orange	Symbolizes the increase of energy of the organism.
Black	Symbolizes life and rebirth.

Colour is a valuable tool and integral part of marketing communication that sends powerful messages to the consumer's brain. Recent studies conducted by the ACES University (Agriculture, Consumption, Environment, Science) have shown that 80% of the information that people remember has to do with colours. Understanding colours for people begins at birth and follows us throughout life. ACES research has shown that up to 60% of a purchase decision for a particular product is based on the right choice of colours. Colours create a strong impact and cause reactions in the brain. A well-chosen colour attracts attention, relaxes, while the other colour used in the same context can also irritate, anger, etc.

In addition to the colour choices, the packaging model is also important and should be attractive. Therefore, it is very important to differentiate the products. The consumer will always choose the most attractive product. Also, it takes a customer from 1/20 to half a second to notice a particular product. Research has shown that the buying decision is made within 90 seconds. For this reason, it is important to choose a colour that evokes comfort, serenity. In such a short period, the brain perceives only pleasant colours and neglects the others.

While perception theories describe the process through which colour is transmitted to the brain, psychological theories provide insights into why individuals respond in particular ways. Colour surrounds us constantly; there is no such thing as a colourless environment, as colour is always present, whether perceived positively or negatively. Certain colours can enhance feelings of happiness in some individuals, whereas others may evoke sensations of sadness or depression. Birren, in *Colour and Man Responds* (1978), discusses the emotional impact of colours, suggesting that warm tones stimulate muscular activity and tension, whereas cooler tones promote relaxation.

IV. Elements of Neuromarketing

4.1. The importance of sight

Advertisements that include people in them are much more effective than advertisements that don't belong people to them. Separately, images and videos involving children tend to attract even more attention over a longer period of time. Brands have long sought to increase sales of baby products by using adorable baby faces - with the help of eye tracking technology they have identified that this alone is not enough.

FIGURE 1: Advertising with the image of a baby, where it is shown that people's attention is focused more on the baby's face than on the content of the advertisement.

Researchers discovered that when a baby gazes directly forward, viewers tend to concentrate primarily on the infant's face, often at the expense of the advertisement's content. In contrast, when the child's gaze is directed toward the product or accompanying text, viewers are more likely to focus on the actual message of the advertisement.

4.2 Use of effective packaging

We all know the pull feeling of particularly attractive packaging. Advertisers have always known that it's not always what matters, but the neuro image has managed to take it to a whole new level. Brands like Cheetos and Frito-Lay have used the neuro image to reinvent their packaging. In the studies, customers were shown packs with their responses recorded as positive, negative, or neutral. In addition, they were interviewed extensively about colour, text, and images.

FIGURE 2: Brands like Cheetos and Frito-Lay have used neuroimaging to reinvent their packaging.

This research found that customers had a negative response to glossy packaging. So, Frito-Lay then removed the shiny packaging and moved on to the new look.

4.3 The colour is the key

When choosing colours, keep in mind that it could affect how potential customers feel. Colours can evoke a wide range of emotions, in studies that consistently show a relationship between certain colours and certain emotions.

FIGURE 3: Colours cause a wide range of emotions.

The strategic use of colour can serve as a powerful marketing tool, as demonstrated by Coca-Cola's iconic use of red, though numerous other companies have also employed this colour to create a similarly compelling effect. Neuromarketing specialists focusing on colour and advertising have classified colours into subgroups, providing guidance on their effective application.

4.4 Advertising Effectiveness

Neuromarketing has harnessed the enormous potential of MRI images to give us insights into human behaviour and shed light on consumer behaviour. Using colour effectively can be a powerful marketing tool, as can Coke's ubiquitous use of red, but there are far more companies that have also used red for such an attractive effect. Neuromarketing experts who specialize in colour and advertising have divided colours into subgroups as a guide on how they can be used effectively.

4.5 Setting the right price

How to evaluate products in a way that tempts consumers is a long-term and controversial question. We all know that when the price of a product ends at 9.99 euros instead of 10 euros it's a great advertising tactic, but does it work?

FIGURE 4: Setting prices on different products.

A lot of new studies have shed light on this phenomenon. This interesting information utilizes even neuro-markers that explain that rounded numbers are more likely to affect customers emotionally when shopping.

5. Methodology

A lot of new studies have shed light on this phenomenon. This interesting information utilizes even neuro-markers that explain that rounded numbers are more likely to affect customers emotionally when shopping.

5.1. Methodology

Research questions

Q.1: Is there a positive relationship between consumer behaviour and the implication of colours in terms of purchasing the product?

Q.2: Can we say that the colours used in the packaging of a product convey a positive image of the product that influences consumer behaviour?

Q.3: Does white bring the perception that a brand is sincere and red the image of an exciting brand?

Q.4: Does black carry the image of a sophisticated market while brown carries the image of a rude brand?

Study hypothesis

1. There is a positive relationship between the colours used in advertising a product and buying behaviour.
2. There is a positive relationship between the colours used in a product's packaging and consumer behaviour.
3. There is the influence of the white colour on the perceived sincerity of a brand while the red colour carries the perception of a brand's excitement.
4. The presence of the black colour has an impact on the sophisticated perception of a brand but on the other hand the brown colour brings the perception of rudeness.

6. Results of the Analysis

6.1. Descriptive analysis

Regarding this study, the random sampling technique for data collection was chosen. In combination with the sampling method, the "snowball" sampling method was also used. This is a sort of method for which the researcher first selects a group of individuals who are asked for the names of other individuals belonging to the same population. In this way, the specimen continues to grow like a snowball, while new individuals are recommended to the researcher. The sample chosen included people aged between 15 and 65 years. The collection of key data for this research paper is done through a questionnaire designed in three sections. The first deals with consumer purchasing behaviour for food products, the other subdivision deals with the impact of colours on advertising and the last part deals with the impact of colours on food packaging. It can also be said that it was a self-

managed study. By filling out the questionnaires, 191 out of 200 interviewees were obtained. All people responded responsibly, assuring them that their interviews would be kept confidential.
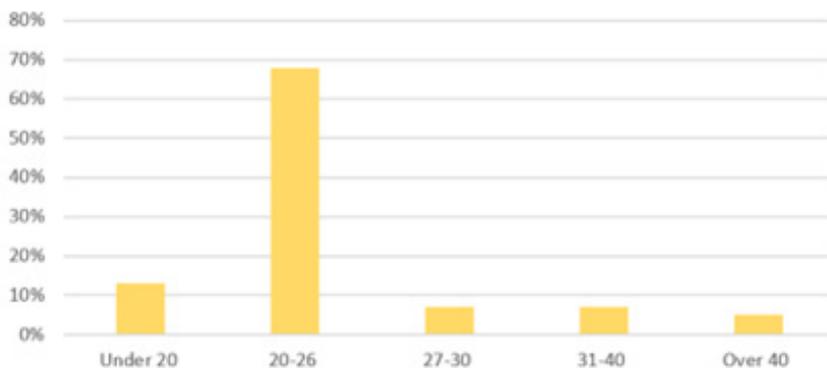
Among all the interviewees in terms of gender, 40% were male and 60% female.

GRAPH 1: Gender
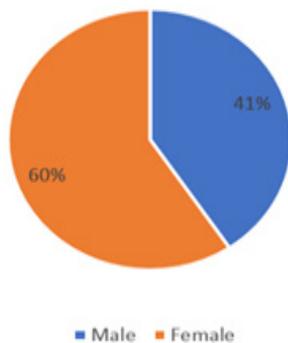
Regarding age, we were able to see that 13% of interviewees were under the age of 20, 68% were in the 20-26 age group, 7% were in the age group 27-30 years old, 7% were in the 31-40 age group and 5% were over 40 years old.

GRAPH 2: Age

If we look at the data on education, we see that 62% of respondents had a bachelor's degree, 25% had a master's degree, 7% had a doctoral degree and the rest had some other qualification.

GRAPH 3: Education

- Bachelor Degree - Master Degree - Doctoral Degree - Others
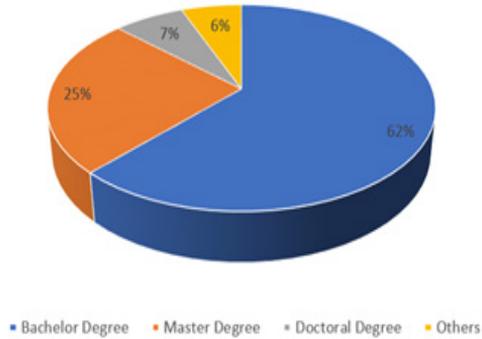
For the implication of colours in terms of purchase, 38% of people prefer red, 33% orange, 12% yellow, 8% green, 7% blue, and 2% purple.

GRAPH 4: Colours
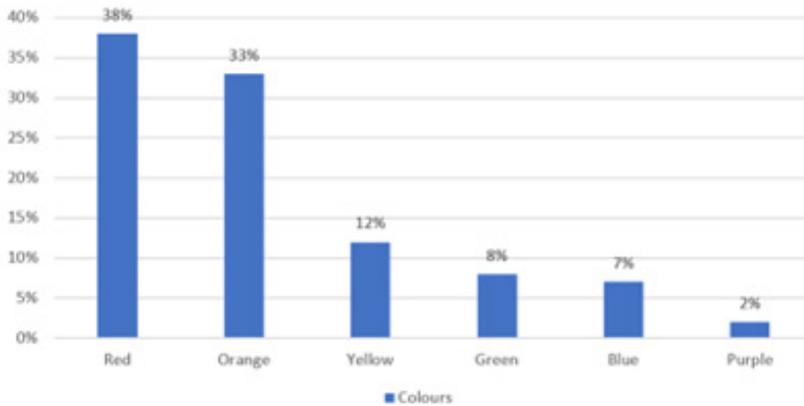
- Colours

6.2. Formulation of hypothesis

Fraser and Banks (2004) argued that white, since it was the reflection of all colours, can be associated with sincerity as it is associated with purity, simplicity, hygiene, clarity. On the other hand, the colour red can be associated with arousal as it is considered an exciting, arousing and stimulating colour (Bellizzi et al. 1983, Clarke and Costall 2007, Crowley 1993, Gorn et al. 1997 and Walters et al. 1982). Furthermore, according to Fraser and Banks (2004), the colour red is generally associated with characteristics of activity, strength and stimulation and is considered uplifting (Bellizzi et al. 1983). Therefore, it is assumed:

1. There is the influence of white colour on a brand's perceived sincerity while red colour brings a brand's perception of excitement. Black stands for sophistication and charm (Fraser and Banks) 2004, Mahnke 1996). It is a very powerful colour

that signals power, brightness and dignity (Wexner 1954). In the world of fashion, black expresses status, elegance, wealth and dignity (e.g. black limos, black tie events, costumes).

Clarke and Costal (2007) linked brown with rudeness and seriousness, with nature and earth. Fraser et al. (2004) and Mahnke (1996) associated brown with reliability and support while Wexner (1994) associated brown with protection. The above statements provided the rationale for hypothesizing:

2. The presence of the black colour has an impact on the sophisticated perception of a brand but on the other hand the brown colour carries the perception of rudeness.

TABLE 2: Coefficients – Sincerity of perceiving a brand

	Unstandardized coefficients		Standardized coefficients	Calculated t	Significance	Critical value of t
Colour	B	Std. Error	Beta			
White	19.625 .798	2.366 .200	.396	8.296 3.994	.0098 .0099	1.645

TABLE 3: Coefficients – Sincerity of perceiving a brand

	Unstandardized coefficients		Standardized coefficients	Calculated t	Significance	Critical value of t
Colour	B	Std. Error	Beta			
Red	17.977 1.301	1.219 .141	.706	14.753 9.254	.0397 .0365	1.645

TABLE 4: Coefficients – Sophistication of a brand perception

	Unstandardized coefficients		Standardized coefficients	Calculated t	Significance	Critical value of t
Colour	B	Std. Error	Beta			
Brown	13.261 1.467	1.773 .164	.695	7.478 8.967	.0467 .0489	1.645

TABLE 5: Coefficients – Sophistication of a brand perception

	Unstandardized coefficients		Standardized coefficients	Calculated t	Significance	Critical value of t
Colour	B	Std. Error	Beta			
Black	16.861 1.373	1.145 .127	.760	14.727 10.838	.00697 .00853	1.645

Since the value of p in Tables 2, 3, 4 and 5 is greater than 0.06, we can say that at the level of significance shown, we accept the hypotheses H1, H2 conclude as follows:

(a) White colour has an impact on the perceived sincerity of a Brand.
(b) Red colour has an impact on a Brand's perceived excitement.
(c) Black colour has an impact on a brand's perceived sophistication.
(d) Brown colour has an impact on a Brand's perceived rudeness

6.3.   Hypothesis Testing and Results

As it is discussed above on facts and theoretical data on the influence of colours on consumer buying behaviour, in this section it will be proved by calculations that the above assumptions are true.

Let's look at the relationship between colour and consumer behaviour by performing correlation and linear regression analysis. To do this we need the data table nr.6, in which X is marked the consumer behaviour (number of people who have chosen the colour Y) and Y is marked the frequency of each colour with units of measurement PHZ (Peta Hertz).

**TABLE 6:** Table of data, obtained from the answers to the questionnaires.

Colour	Y	X
Red	0.67	73
Orange	0.61	64
Yellow	0.54	22
Green	0.51	15
Blue	0.48	10
Purple	0.45	3

By placing this data in Excel, the value of the correlation coefficient is obtained respectively . While the graphical representation of the correlation is presented in Figure 6. Through table 6, the regression analysis was performed. The effect of colour of the product in the consumer behaviour has a linear form:

$$Y=\alpha X+\beta$$

Again, it is used the Excel option to calculate the coefficients as well as to obtain the graphical representation of this dependency.

GRAPH 5: Correlation analysis. Series 1- X Series and 2 Series- Y Series.
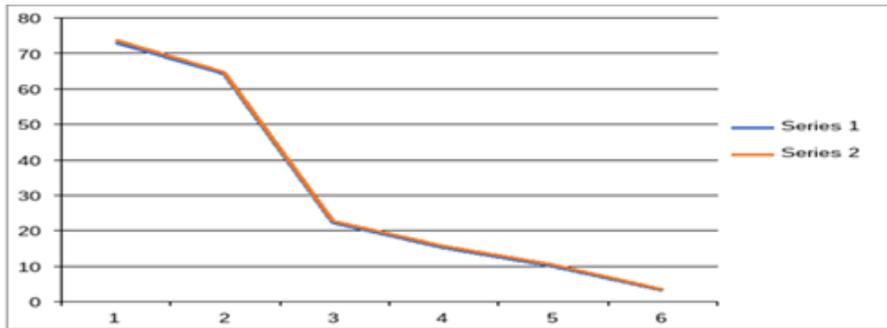
Looking at Graph 5 and the coefficient R with value R=0.976, it is notice that R=0.976>0.7 and R=0.976≈1, which indicate strong relationship between variables (the colour of the product strongly affects the consumer behaviour in their buying decisions). Whereas in our case the linear function has the form:

Y=0.658X-159.1

So, α=0.658 and β=-159.1.

The value of the coefficient in the function reveals a linear positive relationship between colour of the product and consumer behaviour.

To test all four hypotheses, data were collected based on questionnaires. The reliability of the questionnaires was verified through Cronbach's alpha value, which in all four cases was found to be greater than 0.70, indicating that the questionnaires used for the study were reliable. To test the hypotheses, the data collected through the survey in the form of a questionnaire were processed using SPSS and the results obtained are presented in Tables 2, 3, 4 and 5. Looking at the answers analysed by the SPSS system we conclude that the perception of four colours; red, white, brown and black, influence the consumer's choice. The general perception associated with these colours not only makes a difference to the product but also applies the belief that this product is specifically identified by these colours. Public perception about the differentiation of one product from another is difficult to achieve but judging from the above data we come to a conclusion, which defines colour as a very significant stimulus in determining a product as valuable to be purchased by potential consumers.

VII. Conclusions

The study suggests that there are many factors that influence consumer choice for a specific product, whether it is viable or not. However, there are only two dimensions that have been discovered through this study: one is the impact of colours on advertising and the other is the colours on a product's packaging.

We must recognize that each individual has their own perception and choice. Packaging and design are very important. The research concluded that colours have a major impact on the consumer's purchasing choice. It can be seen that, in addition to the fact that consumers have been attracted to the bright and attractive colours of the advertisements, they have also shown a positive attitude towards buying a colour packaged product. During the holiday season, companies change their strategies. Strategies related to the colour, shape, design, or pricing of products. The most important change in the holiday season would be the approach in terms of gifts because the importance of giving is concentrated during the holidays.

The results and analysis clearly showed that the colours white, red, black and brown have an impact on the sincerity, excitement, sophistication and rudeness of the brand, respectively.

People of different cultures have different choices. Their colours and choices vary on an individual basis. In Albania, usually colour choices are influenced by family and friends, mainly they have a strong influence on those colours of products we buy every day. In particular, mothers choose glossy food packaging for their children.

What is happening today is that the industrial superpowers know how colour psychology works in predicting consumer behaviour in the market. Thanks to the power of the media and advertising, they push people to choose what they think is right. To meet demand and expand market share, manufacturing business owners, merchants, and anyone in business with an interest in customer behaviour need to be aware of how potential buyers perceive, penetrate, and behave in order to gain part in the production, distribution and promotion of eligible products.

The analysis of the hypotheses confirmed a relationship between consumer purchasing behaviour and conventional cultural colours. Purchasing decisions are influenced not only by quality, price, promotion, and distribution but also by local culture, traditions, and socially accepted values. Understanding consumer colour preferences across different product categories is therefore crucial. The identification and application of colours are directly associated with consumer behaviour, which makes it essential to consider fundamental principles of colour positioning and packaging in new products. Since the message conveyed by a product's colour is significant, specialists must ensure that packaging is both attractive and meaningful. As colours elicit diverse emotional responses, they should be selected carefully to communicate the intended message. Finally, neuromarketing plays a vital role in shaping consumer brand perception. The findings of this study suggest that marketers can leverage their knowledge to select suitable colour schemes for logos, packaging, and advertising design, thereby creating and reinforcing the specific personality of the brand.

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