THE RELATIONSHIP BETWEEN ECONOMIC GROWTH, UNEMPLOYMENT AND POVERTY

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The independent variable in this paper will be nominal GDP in the context of economic growth, while the dependent variables in this study and analysis are unemployment and poverty. The paper provides secondary data from 2004–2019. Based on the results of Chuttoo (2020), the economic growth of 4% has an unemployment rate of 1%. Empirical findings of the study by Shah, Shabbir, and Parveen (2022) show that economic growth has led to the reduction of unemployment. The methodology of the work will take care of two econometric models: in Model 1 the economic growth within the GDP will be analyzed in relation to unemployment, and in Model 2 the nominal GDP growth in relation to poverty will be analyzed. In the paper, we will have graph analysis, descriptive statistics, correlations, as well as linear regressions. The empirical findings of the study have shown that the economic growth within the nominal GDP has a negative relationship to unemployment and poverty in Kosovo, but the effect of this growth has not affected the reduction of the rate of unemployment and poverty in Kosovo.

Keywords: Economic Theory, Governance, Economic Growth, Poverty, Unemployment

1. INTRODUCTION

In this paper, the ratio of economic growth and unemployment in Kosovo is analyzed for the period 2004–2019. The analysis is mainly based on economic growth and its impact on unemployment and poverty in Kosovo. The analyzed data are part of a 16-year period, but we do not have data for many years for analysis, because the state of Kosovo has been freed from the regime since June 1999, and Kosovo was under the umbrella of the former Yugoslavia. The paper will include an analysis of the most important macroeconomic parameters in the country. Also, the paper aims to elaborate more concretely on the variables of the study: economic growth, unemployment, and poverty. Given that Kosovo is one of the countries that have had the highest economic growth in the Western Balkans, despite this economic growth, Kosovo still has the highest unemployment and poverty in the Western Balkans. This has prompted us to do a more literal empirical analysis to show why economic growth has not had that much impact on reducing unemployment and poverty.

The economy of Kosovo has had a full recovery after the impact of COVID-19 on the economy, but the full support of private consumption and a normal return of diaspora visits to Kosovo has influenced the economic recovery in this country. Likewise, another indicator that has influenced the economic recovery is the increase in loans (World Bank, 2022). After an economic contraction of 5.3% in 2020, real GDP is projected to grow by 7.5% in 2021. Kosovo’s economic activity is projected to grow by 3.8% by 2022. Uncertainty about the outlook still remains high (International
The main idea of economic growth is directly related to the reduction of unemployment. Each study focuses on using the method of analysis of economic growth in relation to the unemployment rate based on facts and in accordance with theoretical arguments and based on Okun's Law, which means that economic growth has an impact on unemployment. Many policymakers of the 1960s agreed that economic growth could directly or indirectly affect the unemployment rate. However, the first equations of the relationship between economic growth relative to unemployment and poverty are significant, as well as sensitive to economic growth relative to unemployment. More specifically, according to Okun’s Law, “to achieve one percent (1%) reduction in the unemployment rate, then real GDP must increase by about 2.5%.” Okun presents the statistical relationships that underlie the analysis of unemployment and economic growth. The increase in GDP will be accompanied by a decrease in unemployment, as an example, we have the case of the United States of America, where the increase in the economic development of this country was 6.8%, and the decrease in the unemployment rate is 2.1% for the year 1984. This, respectively, is shown through Okun's Law, where for every 1% increase in real GDP growth, the unemployment rate falls by 0.5% (Dornbusch & Fischer, 2000). Okun's Law cannot determine very precise data, but it still helps in discussing economic growth and the impact of this growth on unemployment and vice versa (Osinubi, 2005).

Empirical findings for time series data on the impact of economic growth on unemployment for the years 1991–2018 by applying the autoregressive distributed lag (ARDL) model, empirically analyzing it, conclude that economic growth has influenced the reduction of unemployment as in the period both short-term and long-term (Karikari-Apau & Abeti, 2019). According to Chatttoo (2020), economic growth has influenced the reduction of unemployment, but it is not at the level of significance. The economic growth of 4% has influenced the reduction of unemployment by 1%. Studies on South Africa show that economic growth has a negative relationship with reducing unemployment in the long run (Khaild, Akalpler, Khan, Shah, & Shah, 2021). The authors’ findings conclude that there is an effective relationship between unemployment and economic growth in the Western Balkans, but there is a need for a fundamental analysis of economic growth and unemployment (Ahmad, Shafiq, & Gillani, 2019; Yang & Shafiq, 2020). Economic growth in Zimbabwe has had the effect of increasing employment and opening new jobs (Comteh, 2021). The authors’ GDP show the state of Jordan, that there is a relationship between economic growth and unemployment, and there is a correlation between the rate of economic growth and unemployment. Economic growth in the context of GDP measurement does not always reflect the economic situation of a country in a real way making countries that have great economic growth, but this growth has not affected the other macroeconomic parameters of the country. So, it can say that GDP, although in the economic literature it is said that it reflects the economic performance of a country. In reality, it does not reflect such a thing by measuring economic growth in relation to unemployment and poverty, based on the findings of different authors and more concretely in some countries of the Western Balkans that economic growth has not given any great effect in reducing the negative parameters that these countries have.

Kosovo’s average economic growth for the 2004–2019 has within the nominal GDP is 4.70%, which is among the highest compared to the countries of the Western Balkans: Albania, Serbia, Bosnia and Herzegovina, Montenegro, and North Macedonia. Also, compared to the countries of the Western Balkans, Kosovo has the highest youth unemployment in the Balkans, based on the data that has been analyzed. In 2020, the unemployment rate among Kosovar youth was 49.1%. Since 2004, unemployment among young people was 66.5%, despite the economic growth, it has not yet had such an impact on creating job vacancies to reduce unemployment among Kosovar youth. The reduction of unemployment for this period (2004–2020) among Kosovar youth has decreased by only 16.44%. Even the poverty rate according to the size of the family, the economy has decreased by only 5% in total for all these time periods mentioned above (Kosovo Agency of Statistics, 2021).

In an empirical analysis made 2 years ago, measuring economic growth in relation to the unemployed over a period of 11 years, we find that economic growth has not had any great effect on reducing unemployment in Kosovo. Analyzing these data, we have come to the conclusion that economic growth has had a very low impact on reducing unemployment, which has rejected Okun’s Law (Misini & Badivuku-Pantina, 2017). Even against the economic growth for every year that Kosovo has, among the biggest problems that this country has today are unemployment and poverty, because of which a large number of blacks are interested in leaving Kosovo precisely because of the lack of prospects for employment.

The remainder of this paper is structured as follows. Section 2 presents the literature review of relevant literature. Section 3 presents the research methodology. In Section 4, the results are presented. Section 5 is the conclusion of the paper.

2. LITERATURE REVIEW

Economic growth in the context of GDP measurement does not always reflect the economic situation of a country in a real way making countries that have great economic growth, but this growth has not affected the other macroeconomic parameters of the country. So, it can say that GDP, although in the economic literature it is said that it reflects the economic performance of a country. In reality, it does not reflect such a thing by measuring economic growth in relation to unemployment and poverty, based on the findings of different authors and more concretely in some countries of the Western Balkans that economic growth has not given any great effect in reducing the negative parameters that these countries have.
growth in relation to the decrease in the unemployment rate (Hijazeen, Seraj, & Ozdeser, 2021). The addition of economic growth has not affected the reduction of the level of unemployment to his findings (Ridlo & Sari, 2020).

Nowadays, in Nigeria, economic growth is not having such a great impact on reducing unemployment and poverty, as there is a lack of an effective strategy, which will be accompanied by a deliberate policy on income distribution. For this reason, despite the fact that there is economic growth in Nigeria, there is no reduction in poverty and unemployment, because their income is not being distributed equally to all layers of the population of that country (Osinubi, 2005). Poor people have limited access to key assets, including land, and physical and human capital. The poor have low incomes and their consumption is low. Most of the poor have a low lifestyle and quality of life, for whom agriculture is a way of life. Seasonal employment is another possibility that the poor have for survival. So, sustainable economic growth is necessary to increase their income and raise their standard of living (Vijayakumar, 2013).

Based on the results of the authors’ analysis, it is said that the effect of economic growth on poverty reduction is not direct. This means that economic growth can reduce poverty only when growth generates jobs or opens employment opportunities (Purnomo & Istiqomah, 2019). Trade liberalization has had the greatest impact on poverty reduction in Africa, based on empirical results from the autoregression model (Yameogo & Omojolaibi, 2021). Economic growth under trade liberalization has had the effect of reducing poverty in Guyana for the period 1980–2010 using quarterly data and the ARDL technique model for analysis. Economic growth has been influenced by the growth of the agricultural sector and exports, which has affected the reduction of poverty in this country (Modeste, 2019). Manwa, Wijeweera, and Kortt (2019) analyze their findings for the period 1980–2011 by applying the panel fixed-effects model, and the relationship between economic growth and the reduction of the poverty rate has influenced trade liberalization in the countries of Botswana, Lesotho, Namibia, South Africa, etc. There are authors who have had their findings on private investments that have influenced the reduction of poverty. Their study revealed that private investment has a positive impact and significant indirect effect on poverty reduction through economic growth (Tamrin, Iskandar, & Effendi, 2022).

In the context of GDP growth, we can say that it does not reflect an overview of the real economic results of the state of living standards of citizens, and it is not a real economic measure of a country, because we have many countries that have very high economic growth, but the state in question has big problems with unemployment and poverty for many years because economic growth has not affected the raising of the standard of living for all citizens proportionally, but for a small structure of citizens. As an example, we have the case of the countries of the Western Balkans, even against the growth that they have had and are still some countries with a problem with unemployment and poverty that is still very high, and it remains a challenge for the policymakers of these countries to raise the employment that not to emigrate to the most developed countries of the world.

3. RESEARCH METHODOLOGY

The paper will include genuine scientific analysis, which will include analyzes of GDP growth in relation to unemployment in Kosovo for certain periods of time, based on the data published by competent institutions. Likewise, the paper will present or measure the correlation of economic growth within the GDP in relation to poverty in Kosovo. The data is secondary and based on quarterly data. In the future, authors can take it as a basis the further analysis when the results are released for other years (more data for years). It can be analyzed continuously for each year of the periods that produce data by the competent institutions, to measure the correlation of these variables that we have analyzed on the future the nexus between economic growth to unemployment and poverty in Kosovo.

The paper will use secondary data (quarter) from reports published by competent institutions (Central Bank of the Republic of Kosovo, Kosovo Agency of Statistics), as well as from the database of international institutions (World Bank, International Monetary Fund).

The paper will analyze some econometric techniques and models starting from the statistical analysis of graphs, descriptive statistics, and linear regressions by analyzing the variables presented below:

\[ y = \beta_0 + \beta_1 x + \epsilon \]  

Referring to the first econometric model, we arrive at the formulation of macroeconomic indicators to analyze the two variables:

**Model 1**

\[ u_t = \beta_0 + \beta_1 GDP_{nt} + \epsilon \]  

where,
- \( u_t \): unemployment (dependent variable);
- \( GDP_{nt} \): nominal GDP (independent variable);
- \( t \): years.

To measure the impact of economic growth within nominal GDP in relation to poverty, we arrive at the formulation of the second econometric model:

**Model 2**

\[ p_t = \beta_0 + \beta_1 GDP_{nt} + \epsilon \]  

where,
- \( p_t \): poverty (dependent variable);
- \( GDP_{nt} \): nominal GDP (independent variable);
- \( t \): years.

In the structure of these models, we will present the empirical results of these models built as above.

4. RESULTS

In the following, the econometric models will be presented tabularly and analyzed according to the models cited above. The results analyzed within these variables (nominal GDP, unemployment, poverty) will have this structure: firstly, the variables were analyzed for the time period 2004–2009 through
the curve of the graphs; secondly, we will have the analysis of descriptive statistics for these variables; thirdly, we will have the correlation analysis, and finally, we will have the linear regression and test results.

In this paper, we will present three graphs, the first graph will show years and nominal GDP, the second graph will show unemployment over the years, and the third graph will show poverty over the years.

**Figure 1. Nominal GDP changes over 2004–2019**

![Nominal GDP changes over 2004–2019](image1)

**Figure 2. Unemployment rate changes over 2004–2019**

![Unemployment rate changes over 2004–2019](image2)

**Figure 3. Poverty level changes over 2004–2019**

![Poverty level changes over 2004–2019](image3)

*Source: Calculation of the authors.*

Within this graphs, we see that during the years from 2004 to 2019 nominal GDP has been growing steadily. While in the second graph we see that we had an increasing fluctuation of unemployment from 2004 to 2008. Then there was a decrease in unemployment from 2008 to 2014, again we had a small increase in unemployment from 2014 to 2015 on after a steady decline in unemployment. This graph shows that there have been fluctuations...
in both rising and decreasing unemployment over these time periods.

The third graph shows that from 2004 to 2006 we had an increase in poverty, from 2006 to 2019 we had a decrease, except in some years we had a small increase in poverty, but poverty remained again high in Kosovo.

Within the data we have on unemployment and GDP, we will present the table of descriptive statistics for these two variables.

### Table 1. Descriptive statistics of unemployment and GDP

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>St. dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>$U_t$</td>
<td>36.215</td>
<td>7.116129</td>
<td>26</td>
<td>47.5</td>
</tr>
<tr>
<td>$\text{GDP}_n$</td>
<td>4.701235</td>
<td>1.380397</td>
<td>2.9118</td>
<td>7.056172</td>
</tr>
<tr>
<td>$\text{GDP}_t$</td>
<td>4.720952</td>
<td>1</td>
<td>64</td>
<td></td>
</tr>
</tbody>
</table>

Source: Calculation of the authors.

The variables that are in Table 1 are the two variables that make the description of unemployment and nominal GDP, clarifying the average, standard deviation, minimum and maximum, while in the following table we will present the descriptive statistics of poverty and GDP nominal.

### Table 2. Descriptive statistics of poverty and GDP

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>St. dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>$P_t$</td>
<td>29.28625</td>
<td>10.63233</td>
<td>16.8</td>
<td>45.4</td>
</tr>
<tr>
<td>$\text{GDP}_n$</td>
<td>4.701235</td>
<td>1.380397</td>
<td>2.9118</td>
<td>7.056172</td>
</tr>
<tr>
<td>$\text{GDP}_t$</td>
<td>4.965442</td>
<td>1</td>
<td>64</td>
<td></td>
</tr>
</tbody>
</table>

Source: Calculation of the authors.

Table 2 includes a descriptive analysis of the two variables analyzed, poverty and GDP, describing the average, standard deviation, minimum and maximum for these two variables mentioned above.

In the following table, we will present the correlation of the variables of nominal GDP, unemployment, and poverty.

### Table 3. Correlation (GDP, unemployment, poverty)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Significance level</th>
<th>Nominal GDP</th>
<th>Unemployment</th>
<th>Poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal GDP</td>
<td>1.0000</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Significance</td>
<td>0.0001***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.8433</td>
<td>-0.8433</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>Significance</td>
<td>0.0002***</td>
<td>0.0002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poverty</td>
<td>-0.8601</td>
<td>-0.8601</td>
<td>0.8121</td>
<td>1.0000</td>
</tr>
<tr>
<td>Significance</td>
<td>0.0001***</td>
<td>0.0001</td>
<td>0.0008</td>
<td></td>
</tr>
</tbody>
</table>

Note: *** significant at the 1% significance level. Source: Calculation of the authors.

In this table (Table 3), we can say that the correlation between the variables is strong because all of them are significant. Therefore, we can say that the increase in GDP in the context of economic growth has had an effect on reducing unemployment and reducing poverty.

In the following table, we will have the analysis of the aforementioned variables, through the simple linear regression model.

### Table 4. Regression analysis (Unemployment and GDP)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Model 1.1</th>
<th>Model 2.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\ln (\text{unemployment})$</td>
<td></td>
<td>( \beta_t ) -0.0048***</td>
<td>0.0088</td>
</tr>
<tr>
<td>$\text{GDP}_n$</td>
<td></td>
<td>( \beta_t ) 68</td>
<td>n/a</td>
</tr>
<tr>
<td>Intercept</td>
<td></td>
<td>( \beta_t )</td>
<td>n/a</td>
</tr>
</tbody>
</table>

F-statistic Test statistic | 0.9542*** | 85.08*** |
Prob. > F | 0.00001 | 0.0001 |
R-square | 0.86 | 0.89 |
Hottest | 0.03 | n/a |

Note: *** significant at the 1% significance level; ** significant at the 5% significance level; n/a — not applicable. Source: Calculation of the authors.

There are two models of regression, Model 1.1 where the regression analysis is performed following the trend (that is \( \beta_t = 0 \)), and Model 2.1 where there are many trends and interruptions (that is \( \beta_t = 0 \)). Based on the weighted analysis, we can conclude that the nominal variable of GDP has a significant negative and statistically significant impact on reducing unemployment.

In this table (Table 4), we can conclude that the variable of nominal GDP has a negative and statistically significant impact on reducing unemployment. The unemployment rate of -0.0048 is significant at the level of 1%, which means that if the nominal GDP increases by 1 million euros, then it will have a negative impact on reducing unemployment to an average of -0.0048%. F-statistic shows that the variables included in the equation are relevant in all cases. This analysis is at the significance level of 0.00001.
There are two models of regression, Model 1.1 where the regression analysis is performed following the trend (that is $\beta_1 = 0$), and Model 2.1 where there are many trends and interruptions (that is $\beta_0 = 0$). Based on the weighted analysis, we can conclude that the nominal variable of GDP has a significant negative and statistically significant impact on reducing poverty.

Also, the results of the macroeconomic analysis show that the impact of growth has not reduced unemployment and poverty in Kosovo that much.

5. CONCLUSION

In the framework of this study, from the empirical findings, we can conclude that Kosovo has had economic growth, but this economic growth has not affected so much the reduction of unemployment based on economic theory and, more concretely, on Okun's Law. Likewise, Kosovo's economic growth has not had that much impact on poverty reduction. The impact of this growth has not been sufficient for raising the well-being of citizens and has not given any satisfactory results in raising the standard of living, because this increase in GDP in the context of economic growth has not given results in employment for reducing poverty and emigration.

In the results section, it is noted that in all the analyzes that have been done by analyzing these variables, the economic growth within the nominal GDP in relation to unemployment and poverty are significant. These variables that have been analyzed and studied in the relationship between themselves show significant results referring to the level of significance and testing in a professional scientific manner. Economic growth within the nominal GDP has influenced the reduction of unemployment, and this growth has also influenced the reduction of poverty, but it remains a challenge to study this topic for future projects since our findings show that economic growth has had a small impact on the reduction of these macroeconomic parameters in the country, and the limitation of the paper is that the time periods were analyzed only for 16 years because we did not have data for more years. Likewise, obtaining data has been one more challenge for the conclusion, especially in the report on poverty and unemployment in Kosovo, given the lack of data over the years and a change in data from reports of international institutions to local ones.

Therefore, based on these results and analysis, we suggest that in order to influence the reduction of unemployment, foreign investments should be higher, and this will affect the raising of the standard of living, which will directly affect the reduction of poverty. Investments have a greater impact on reducing unemployment. However, Misini and Badivukë (2016), referring to and analyzing the measurement of economic growth within the GDP, show that investments are at the penultimate level of the GDP components that have influenced economic growth in Kosovo. The indicator that has the highest impact on reducing overall poverty is employment. Employment is achieved through investments and investments increase when we have favorable investment policies. Kosovo should focus on promoting the growth of investments to influence the reduction of unemployment, poverty, and the reduction of emigration.

The institutions are very important in policymaking and governance that they do for the future of the country by making favorable policies, governments encourage investments that will affect the growth of chain parameters in a country's macroeconomics, while non-poor policies destroy the country through corruption, nepotism, etc., and this has a common denominator called "bad governance". In order to improve the economic and social situation in the country, the institutions must be more open-minded and eliminate the social inequalities that are due to corruption and govern very well with public money.

REFERENCES


