

ANALYSIS OF THE RELATIONSHIP BETWEEN UNEMPLOYMENT AND GDP IN BOSNIA AND HERZEGOVINA: EVIDENCE FROM OKUN'S LAW

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Abstract: *This paper analyzes the relationship between the unemployment rate and gross domestic product (GDP) growth in Bosnia and Herzegovina, with the aim of determining whether Okun's law holds in the observed period. The research is based on macroeconomic data for the period from 2000 to 2025, collected from relevant statistical sources. The study applies descriptive and econometric methods of analysis, including stationarity tests (ADF and DF), the Bounds cointegration test, and the ARDL model. The results indicate that there is no statistically significant long-term relationship between the unemployment rate and GDP growth, while a short-term negative relationship between these variables has been confirmed. The findings suggest that Okun's law has limited applicability in Bosnia and Herzegovina and is primarily valid in the short run. Additionally, the results indicate that unemployment dynamics are influenced by other macroeconomic and structural factors, highlighting the complexity of the relationship between economic growth and the labor market..*

Key words: *unemployment, gross domestic product (GDP), Okun's law, macroeconomic indicators, ARDL model, cointegration, Bosnia and Herzegovina*

JEL classification: *E24, E32, E23*

1. INTRODUCTION

Unemployment represents one of the key economic and social problems of modern society, as it affects not only economic growth and stability, but also the living standard of the population. According to the definition of the International Labour Organization (ILO), unemployment includes all persons who are capable of and willing to work, actively seeking employment, but unable to find it. This problem is

particularly pronounced in transition countries, such as Bosnia and Herzegovina, where the labor market is characterized by structural mismatches, a high unemployment rate, especially among young people, and insufficient diversification of economic activities.

In contemporary economic theory, particular importance is attached to the relationship between unemployment and gross domestic product (GDP), which is most commonly analyzed through macroeconomic models and empirical research. The movement of GDP represents the basic indicator of a country's economic activity, while the unemployment rate reflects the condition of the labor market. Their mutual relationship indicates the efficiency of the economic system and the ability of the economy to generate new jobs.

The main objective of this paper is the analysis of the relationship between unemployment and gross domestic product in Bosnia and Herzegovina, with special emphasis on identifying the causal relationships between these variables. The paper will use macroeconomic data collected from relevant and reliable statistical sources, such as the Agency for Statistics of Bosnia and Herzegovina, the World Bank, and Eurostat. The analysis will be based on the application of statistical methods, including descriptive analysis and comparison of data over a certain period of time.

The hypothesis of the paper is: the growth of gross domestic product (GDP) positively affects the reduction of the unemployment rate in Bosnia and Herzegovina.

The empirical part of the paper is based exclusively on the analysis of macroeconomic indicators and the statistical processing of data, thereby enabling an objective assessment of the relationship between the observed variables and

the drawing of relevant conclusions regarding their interconnection.

2. THEORETICAL PART

A condition in which the working-age population is seeking employment but is unable to find it is called unemployment. Economists write about different types of unemployment, such as:

1. Frictional unemployment – this is temporary unemployment that occurs when an employee moves from one job position to another;
2. Structural unemployment – unemployment caused by a mismatch between workers' skills and the actual needs of the labor market;
3. Cyclical unemployment – unemployment associated with economic cycles, specifically with a decline in consumption and production itself
4. Seasonal unemployment – unemployment that occurs during certain periods of the year, most commonly in tourism and agriculture.

The approach to unemployment from a macroeconomic perspective focuses on the relationship between the unemployment rate, GDP, fiscal policy, and inflation. According to Okun's law, a negative relationship has been established between GDP growth and the unemployment rate, i.e. the unemployment rate decreases when the economy grows.

2.1. CAUSES OF UNEMPLOYMENT

The causes of unemployment themselves can be observed through two basic approaches:

- Microeconomic
- Macroeconomic

In this paper, the emphasis is placed on macroeconomic factors, such as:

- Economy and GDP growth – slow economic growth limits the creation of new jobs;
- Inflation – high inflation can reduce real purchasing power and investments, which directly;
- Industrial structure and investments – countries with insufficient production and low investments have a higher risk of unemployment;
- Employment policies and social benefits – excessively high social benefits can reduce motivation in seeking employment, while active employment policies facilitate integration into the labor market.

2.2. CONSEQUENCES OF UNEMPLOYMENT

Unemployment has multiple consequences, both on the lives of citizens and on the macroeconomic level, which are reflected in:

- Economic consequences: reduction in revenues (tax revenues), reduction in GDP, increase in public expenditures for social protection;
- Social consequences: increase in stress and psychological problems, increase in poverty, social exclusion;
- Citizens' perception (view): a high unemployment rate increases the feeling of insecurity and reduces trust in institutions.

3. REVIEW OF RELEVANT LITERATURE

Unemployment and economic growth represent one of the central issues of contemporary macroeconomics, which is why their interrelationship is the subject of numerous theoretical and empirical studies. Most economic studies indicate that economic growth, measured through gross domestic product (GDP), is one of the key factors influencing the movement of the unemployment rate. Data from the World Bank and Eurostat show that countries achieving stable GDP growth generally record a reduction in the unemployment rate, indicating the existence of a negative correlation between these variables.

One of the most significant theoretical frameworks for analyzing this relationship is Okun's law, which describes the negative relationship between the GDP growth rate and the unemployment rate. Arthur Melvin Okun, an American economist and professor at Yale University, was the first to empirically establish this relationship during the 1960s. Based on the analysis of the economy of the United States of America, Okun concluded that an increase in unemployment by 1% leads to a decrease in GDP by approximately 3%. This finding laid the foundation for numerous subsequent studies examining the dynamics of the labor market and economic growth.

Subsequent studies further confirmed the significance of Okun's law, but at the same time pointed to its limitations. Papers published by institutions such as the Federal Reserve Banks of the United States show that this relationship exists as a stable statistical correlation, but that its strength varies depending on economic conditions, the phase of the business cycle, and the structural characteristics of the economy. Furthermore, the research by Hadžić 2023 indicates that in certain periods there are significant deviations from the predictions of Okun's law, which confirms that the

relationship between GDP and unemployment is not completely fixed.

Empirical studies in transition countries, including Bosnia and Herzegovina, indicate that this relationship is additionally conditioned by specific structural factors. Research shows that GDP growth in these economies often has a weaker impact on reducing unemployment compared to developed countries, which is explained by insufficient labor market flexibility, mismatch between labor supply and demand, as well as the dominance of low-productivity sectors (Kovačević, 2024).

Particular importance is also attached to contemporary empirical studies analyzing the short-term and long-term effects of economic growth on the labor market. For example, the analysis of the impact of financial assistance from the International Monetary Fund (IMF) during 2020 showed that an increase in economic activity, expressed through GDP growth, led to a reduction in the unemployment rate by approximately 2.3%, indicating the existence of a relatively strong negative correlation in the short term (Halebić, 2025).

In addition to GDP, numerous studies emphasize the significance of other macroeconomic variables, such as inflation and productivity, which indirectly influence unemployment trends. The relationship between these variables confirms that the labor market functions within a broader macroeconomic system, and that unemployment cannot be analyzed in isolation from overall economic developments.

Based on the review of relevant literature, it can be concluded that there is a strong theoretical and empirical basis for analyzing the relationship between GDP and unemployment. Although most studies confirm a negative relationship between these variables, its intensity varies depending on the economic context. Precisely for this reason, it is necessary to conduct an empirical analysis at the level of Bosnia and Herzegovina in order to determine the specificity of this relationship within the given economic environment.

4. RESEARCH METHODOLOGY

This paper analyzes the relationship between the unemployment rate and the growth of gross domestic product (GDP) in Bosnia and Herzegovina, using macroeconomic data in the form of time series. The unemployment rate and the GDP growth rate were taken as the basic variables in the research.

Data were collected for the period from 2000 to 2025 from relevant sources, such as the World Bank, Eurostat, and Macrotrends. For the most

recent years, available estimates were used in accordance with the trends of economic indicators.

For the purpose of examining the relationship between the variables, statistical and econometric methods of analysis were applied, including testing of stationarity, cointegration, and the application of the ARDL model.

4.1 ANALYSIS OF SERIES STATIONARITY

The first step in the research refers to checking the stationarity of the time series. Stationarity implies the stability of the mean value and variance over time, which represents a basic condition for the application of econometric models.

ADF (Augmented Dickey-Fuller) and DF (Dickey-Fuller GLS) tests were used to test stationarity.

Table 1: Analysis of Series Stationarity¹

Variables	ADF	DF
GDP Growth	-4.33*	-4.24*
D(Unemployment)	-2.85***	-2.85*

Source: Author's processing

Data on gross domestic product were obtained from the Agency for Statistics of Bosnia and Herzegovina (BHAS), while data on the unemployment rate were taken from the databases of the World Bank, the International Labour Organization (ILO), and the Agency for Labour and Employment of Bosnia and Herzegovina. The use of official statistical sources enables greater reliability and comparability of data, as well as greater methodological harmonization of the research with contemporary economic analyses.

The GDP growth variable represents the annual rate of change in real gross domestic product expressed in percentages. This variable was used as an indicator of the overall economic activity and economic growth of Bosnia and Herzegovina. Real GDP was used because it eliminates the impact of inflation and enables a more realistic observation of changes in the volume of production and economic activities over time.

The unemployment variable represents the unemployment rate expressed as a percentage of the total labor force. The unemployment rate was used as the basic indicator of the condition of the labor market and an indicator of the underutilization of labor potential in the economy of Bosnia and Herzegovina. In accordance with the methodology of the International Labour

¹ *, **, *** → significant at the level of 1%, 5% i 10%

Organization, unemployed persons are considered to be individuals who do not have a job, are actively seeking employment, and are ready to work.

Before conducting the econometric analysis, data processing was carried out in order to adapt the model to time series analysis. In order to avoid the problem of non-stationarity, stationarity testing was conducted using the ADF and DF tests. The results showed that the GDP growth series was stationary at the level, while the unemployment series became stationary after the first differencing. Therefore, the differenced unemployment variable denoted as D(Unemployment) was included in the model.

The differencing of the unemployment series was performed by subtracting the value of the variable from the previous period from the current value, thereby removing the trend and achieving stationarity of the series. Such a procedure represents standard practice in time series analysis and enables the obtaining of more reliable and statistically valid model results.

After checking stationarity, the selection of the optimal number of time lags was conducted using the Akaike Information Criterion (AIC). Based on the lowest value of the AIC criterion, two lags were selected, meaning that the model includes the values of variables from the previous two years in order to more precisely model the short-term dynamics of the relationship between GDP growth and unemployment.

The table presents the results of stationarity testing of time series using the ADF (Augmented Dickey-Fuller) and DF (Dickey-Fuller) tests. The aim of these tests is to determine whether the observed variables have a unit root, that is, whether they are stationary or non-stationary. Stationarity represents an important condition for conducting econometric analysis because non-stationary series can lead to the occurrence of spurious regression and unreliable model results.

The results show that the GDP growth variable has ADF test values of -4.33 and DF test values of -4.24, with both statistics being statistically significant at the 1% level. This means that the null hypothesis of the existence of a unit root was rejected, that is, the GDP growth series is stationary at the level. In other words, changes in the GDP growth rate do not show a long-term trend and fluctuate around a constant mean value.

On the other hand, the unemployment variable was not stationary at the level, but stationarity was achieved after the first differencing, which is denoted as D(Unemployment). The values of the ADF and DF tests after differencing amount to -

2.85, with the results showing statistical significance. This indicates that the unemployment series is integrated of order one, that is, I(1), meaning that it becomes stationary only after removing the trend through the first difference.

Based on the obtained results, it can be concluded that the GDP growth rate is stationary at the level, while the unemployment rate is stationary after the first differencing. This means that the variables are of different orders of integration, that is, one is integrated of order zero I(0), and the other of order one I(1). It is precisely such a combination of variables that justifies the application of the ARDL model, since the ARDL methodology enables the analysis of relationships between series that are integrated of different orders, provided that no variable is integrated of order two I(2).

4.2 COINTEGRATION ANALYSIS

After determining stationarity, testing for the existence of a long-term relationship between the variables was conducted using the Bounds test (Pesaran, Smith & Shin, 2001).

Table 2: Cointegration Analysis of the Series

F-statistic	K	Level of significance	I(0)	I(1)
1,72	1	10%	3,02	3,51
		5%	3,62	4,16
		1%	4,94	5,58

Source: Author's processing

Before conducting the econometric analysis, data processing and stationarity testing of the time series were performed using the ADF and DF tests. The results showed that the GDP growth variable was stationary at the level, while the unemployment variable became stationary after the first differencing, which is why the differenced variable D(Unemployment) was included in the model.

Considering the different order of integration of the variables, the ARDL model was applied for the analysis of the relationship between unemployment and GDP growth, as it enables the estimation of short-term and long-term relationships between I(0) and I(1) series. Also, the optimal number of lags was determined by applying the Akaike Information Criterion (AIC), whereby two time lags were selected.

The table presents the results of the Bounds cointegration test used within the ARDL methodology for determining the existence of a long-term relationship between the observed

variables, in this case between the unemployment rate and GDP growth. The essence of this test is the comparison of the obtained F-statistic value with the critical boundary values for the lower bound I(0) and the upper bound I(1) at different levels of significance.

The obtained F-statistic value amounts to 1.72, while the number of independent variables (K) is 1. The critical values for the 10% significance level range from 3.02 for the lower bound I(0) to 3.51 for the upper bound I(1). At the 5% significance level, the critical values are 3.62 and 4.16, while at the 1% level they are 4.94 and 5.58.

Since the obtained F-statistic of 1.72 is lower than all lower and upper critical values at all significance levels, the null hypothesis of the absence of cointegration between the variables cannot be rejected. This means that there is no statistically significant long-term relationship between the unemployment rate and GDP growth.

The obtained results indicate that changes in GDP growth in Bosnia and Herzegovina do not have a stable long-term impact on the unemployment rate during the observed period. Such a result may be a consequence of structural problems in the labor market, the high level of the informal economy, labor force migration, as well as the insufficient connection between economic growth and the creation of new jobs. In other words, economic growth did not automatically lead to a proportional reduction in unemployment, which indicates the limited applicability of Okun's law under the conditions of the economy of Bosnia and Herzegovina.

4.3 ARDL MODEL AND LAG LENGTH SELECTION

The ARDL model was used for the analysis of short-term and long-term relationships. This model is particularly suitable for the analysis of time series of different orders of integration.

The optimal number of lags was determined using the Akaike Information Criterion (AIC).

Table 3: Lag Length Selection

Lag	AIC
1	4,95
2	4,77
3	4,77

Source: Author's processing

The table for selecting the optimal number of lags was obtained based on data processing in the econometric software EViews using the Akaike Information Criterion (AIC). Annual data on the GDP growth rate and the unemployment rate for Bosnia and Herzegovina were used, obtained from the databases of the Agency for Statistics of Bosnia and Herzegovina (BHAS), the World Bank, and the Agency for Labour and Employment of Bosnia and Herzegovina.

The results show that the lowest value of the AIC criterion amounts to 4.77 and occurs with two and three lags.

Due to the simpler and more economical specification of the model, two lags were selected, meaning that the model includes the values of variables from the previous two years in order to provide a more precise representation of the short-term dynamics of the relationship between GDP growth and unemployment.

The table presents the selection of the optimal lag length based on the Akaike Information Criterion (AIC), which is often used in econometric analysis for determining the number of time lags that should be included in the model. The aim of selecting the optimal number of lags is to find a model that best explains the relationship between variables with the smallest possible loss of information and without unnecessarily complicating the model.

The results show that the value of the AIC criterion for one lag amounts to 4.95, while for two and three lags it amounts to 4.77. Since a lower value of the AIC criterion indicates a better specification of the model, the model with the lowest value of this criterion is considered optimal.

Based on the presented results, two lags were selected, meaning that the model includes the values of variables from the previous two years.

The selection of two lags allows the analysis to include the short-term effects of changes in GDP and unemployment from the previous period, thereby achieving a more precise modeling of the dynamics of the relationship between the observed variables.

Also, the selection of the optimal number of lags is important in order to avoid problems of autocorrelation and over-parameterization of the model. In the specific case, the model with two lags proved to be the most appropriate for the analysis of the relationship between unemployment and GDP growth in Bosnia and Herzegovina.

Table 4: Analysis of the Long-Term Relationship

F-statistic	p-value
2.63	0.063

Source: Author's processing

The table presents the results of testing the overall statistical significance of the model through the F-statistic and the corresponding p-value. The F-statistic is used to assess whether the independent variable, namely GDP growth, has a statistically significant impact on changes in the unemployment rate in the model.

The obtained value of the F-statistic amounts to 2.63, while the p-value amounts to 0.063. Since the p-value is greater than the standard significance level of 5% (0.05), the null hypothesis of the absence of a statistically significant relationship between the observed variables in the long run cannot be rejected.

The results indicate that there is no statistically significant long-term relationship between GDP growth and the unemployment rate in Bosnia and Herzegovina, which is consistent with the previously conducted cointegration analysis and the results of the Bounds test. In other words, changes in economic growth did not have a sufficiently strong and stable impact on unemployment trends during the observed period.

Such results may indicate the specific characteristics of the labor market in Bosnia and Herzegovina, such as structural unemployment, mismatch between the labor market and economic growth, the high level of the informal economy, and labor force migration. Therefore, it can be concluded that the application of Okun's law in Bosnia and Herzegovina has a limited scope and that economic growth did not automatically lead to a reduction in unemployment.

4.4 ANALYSIS OF THE SHORT-TERM RELATIONSHIP

Table 5: Analysis of the Short-Term Relationship

Variable	Coefficient
Unemployment	-0.72
Unemployment (-1)	1.67
Unemployment (-2)	-0.96

Source: Author's processing

The table presents the estimated coefficients of the short-term dynamics of the relationship between unemployment and GDP growth within the ARDL model. The coefficients show how changes in the unemployment rate in the current and previous periods affect GDP growth trends. The ARDL model (Autoregressive Distributed Lag) was selected because it enables the analysis of short-term and long-term relationships between variables that are not integrated of the same order, that is, when certain series are stationary at the level I(0), while others become stationary after the first difference I(1). In this research, the application of the ARDL approach was justified after the conducted ADF and DF stationarity tests, which showed that GDP growth and the unemployment rate have different degrees of integration, but no variable is integrated of order I(2). The advantage of the ARDL model is also reflected in the possibility of application on smaller data samples, which is particularly significant in the macroeconomic analyses of Bosnia and Herzegovina, where the available number of annual or quarterly data is limited.

The number of time lags was determined based on the Akaike Information Criterion (AIC), which enables the selection of the model with the best relationship between estimation precision and model complexity. Models with different numbers of lags were tested, whereby the model with the lowest value of the AIC criterion was selected. Based on the results presented in the lag length selection table, the model with ___ lag(s) proved to be optimal, as it had the lowest value of the Akaike Information Criterion. The inclusion of time lags enables the observation of the delayed effect of changes in unemployment on GDP growth, that is, the fact that the effects of economic changes do not occur immediately, but are transmitted through a certain period of time.

The obtained results show that the coefficient accompanying the current unemployment rate amounts to -0.72. The negative sign of this coefficient indicates that an increase in unemployment in the current year leads to a decrease in GDP growth in the same year. Such a result is consistent with the theoretical assumptions of Okun's law, according to which an increase in unemployment has a negative impact on economic growth and overall economic activity.

The coefficient accompanying unemployment with one time lag amounts to 1.67, indicating a positive effect of the previous unemployment rate on GDP growth in the following period. Such a result may indicate certain short-term adjustments of the labor market and economic activity, that is, the possibility that after a period of increased

unemployment, a certain economic recovery occurs.

On the other hand, the coefficient accompanying unemployment with two time lags amounts to -0.96, which again shows the negative impact of unemployment on economic growth in a longer short-term period. This indicates that the effects of changes in unemployment are not one-time effects, but are also transmitted to subsequent periods.

Overall, the results indicate the existence of a short-term relationship between unemployment and GDP growth in Bosnia and Herzegovina. The negative coefficient accompanying the current unemployment rate confirms the basic theoretical assumptions of Okun's law, according to which an increase in unemployment leads to a slowdown in economic growth. However, the varying effects of time lags show that the relationship between these variables is complex and influenced by numerous structural characteristics of the economy and labor market of Bosnia and Herzegovina.

4.5 CONCLUSION OF THE METHODOLOGY

Based on the applied econometric methods, it can be concluded that there is no statistically significant long-term relationship between the unemployment rate and GDP growth in Bosnia and Herzegovina, but a short-term negative relationship between these variables has been confirmed. The obtained results indicate that Okun's law partially applies under the economic conditions of Bosnia and Herzegovina, primarily in the short term, while the long-term relationship between economic growth and unemployment is neither sufficiently pronounced nor stable.

From a methodological perspective, the research was conducted using the ARDL model (Autoregressive Distributed Lag), which is suitable for analyzing relationships between variables of different orders of integration, that is, a combination of I(0) and I(1) series. Before estimating the model, stationarity testing of the time series was conducted using the ADF and DF tests, whereby it was determined that the GDP growth rate was stationary at the level, while the unemployment rate became stationary after the first differencing. Such results justified the application of the ARDL methodology, since no series was integrated of order two I(2), which represents the basic condition for the use of this model.

In order to determine the existence of a long-term relationship between the variables, the Bounds cointegration test was conducted. The results showed that the value of the F-statistic was lower than all critical values at the relevant levels of

significance, which is why the existence of a long-term cointegration relationship between the unemployment rate and GDP growth was not confirmed. Such a finding indicates that changes in economic growth in Bosnia and Herzegovina did not have a sufficiently strong and stable long-term effect on reducing unemployment.

However, the analysis of short-term dynamics showed the existence of a negative relationship between the current unemployment rate and GDP growth. The negative coefficient accompanying the unemployment variable confirms the basic assumption of Okun's law according to which an increase in unemployment leads to a slowdown in economic activity and a reduction in economic growth. Nevertheless, the model results indicate that this relationship is unstable and subject to changes over time, which is confirmed by the different signs and intensity of the coefficients for the time lags.

The obtained results can be explained by the specific characteristics of the economy of Bosnia and Herzegovina. The labor market is characterized by high structural unemployment, mismatch between labor force qualifications and market needs, a pronounced informal economy, a low level of investment, and continuous migration of the working-age population. Under such conditions, economic growth does not automatically lead to a proportional increase in employment, which reduces the intensity of the relationship between GDP and unemployment.

In addition, the economy of Bosnia and Herzegovina largely depends on external factors, foreign investments, remittances from abroad, and economic developments in the European Union. Therefore, the labor market is influenced by numerous factors that are not directly related to domestic economic growth. Also, a significant portion of employment is linked to the public sector and administration, which additionally reduces labor market flexibility and the impact of economic growth on employment.

The discussion of the results shows that Okun's law has limited applicability in Bosnia and Herzegovina compared to developed market economies. While in developed countries GDP growth often directly affects the reduction of unemployment, in Bosnia and Herzegovina this relationship is not sufficiently pronounced due to structural problems of the economy and the labor market. Precisely for this reason, the research results indicate that economic policy measures should not be directed exclusively toward increasing economic growth, but also toward implementing labor market reforms, improving the business environment, reducing the informal

economy, and encouraging investments that generate new jobs.

It is important to point out certain limitations of the research as well. The analysis was conducted on a limited number of macroeconomic variables, while unemployment trends are also influenced by other factors such as inflation, labor productivity, fiscal policy, population migration, and the level of foreign investments. Future research could include a larger number of economic indicators, as well as the application of more complex econometric models for a more detailed examination of the relationship between economic growth and the labor market in Bosnia and Herzegovina.

Based on all of the above, it can be concluded that economic growth in Bosnia and Herzegovina is not a sufficient condition for the long-term reduction of unemployment, but that the short-term negative relationship between these variables nevertheless confirms certain assumptions of Okun's law. The research results indicate the need for implementing structural economic reforms that would enable a stronger connection between economic growth and the labor market, as well as the creation of a sustainable model of economic development based on increasing employment and labor productivity.

CONCLUSION

The conducted research aimed to examine whether there is a relationship between the unemployment rate and the growth of gross domestic product (GDP) in Bosnia and Herzegovina, that is, whether Okun's law applies during the observed period. Based on the applied econometric methods and the analysis of available macroeconomic data, results were obtained indicating certain specific characteristics of this relationship.

The results of the Bounds test showed that there is no statistically significant long-term relationship between the observed variables. Also, the application of the ARDL model confirmed that there is insufficient evidence indicating the existence of a stable long-term relationship between the unemployment rate and GDP growth in Bosnia and Herzegovina. Such findings suggest that unemployment trends in the long run are not exclusively determined by changes in economic activity.

However, the research results indicate the existence of a short-term relationship between the analyzed variables. The negative coefficient accompanying the unemployment rate confirms that an increase in unemployment in the current period leads to a reduction in the GDP growth rate, which is consistent with the theoretical assumptions of Okun's law. Based on this, it can be concluded that Okun's law has limited

applicability in Bosnia and Herzegovina and is primarily expressed in the short term.

The obtained results can be explained by the specific characteristics of the economy of Bosnia and Herzegovina, such as structural problems in the labor market, mismatch between labor supply and demand, as well as the influence of external factors such as global economic developments. In the long run, the relationship between GDP and unemployment is influenced by numerous factors, including technological development, changes in the economic structure, demographic trends, and economic policies, which additionally complicates this relationship.

Finally, it can be concluded that although there is a certain relationship between economic growth and unemployment, it is not sufficiently stable to be generalized across all time periods. Therefore, for a more complete understanding of this relationship, it is necessary to include other relevant variables in future research, as well as to use broader temporal and methodological frameworks.

REFERENCES

- [1] Đerić, Branko i Rebić, Mladen, 2025, *Osnovi ekonomije*, Istočno Sarajevo, Centar za izdavačku djelatnost Ekonomskog fakulteta Istočno Sarajevo, str. 287–290, 404–409.
- [2] European Commission, 2025, "Bosnia and Herzegovina Economic Reform Programme", dostupno na: European Commission Economic Reform Programme
- [3] Halebić, Jasmin, 2025, "Okun's Law and Assessment of Stimulus to the Economy of Bosnia and Herzegovina", *BH Ekonomski forum*, Vol. 13, No. 2, str. 29–41.
- [4] Jovanović, Luka, 2026, *Nezaposlenost i ekonomski rast u savremenim ekonomijama*, Beograd, Singidunum univerzitet.
- [5] Kovačević, Stefan, 2024, *Ekonometrijska analiza Okunovog zakona u tranzicionim ekonomijama*, Beograd, Fakultet organizacionih nauka.
- [6] Marković, Jelena, 2026, "Primjena Okunovog zakona u zemljama Zapadnog Balkana", *Ekonomski horizonti*, Vol. 25, No. 1, str. 55–70.
- [7] Nikolić, Ivana, 2024, "Uticaj privrednog rasta na stopu nezaposlenosti", *Anali Ekonomskog fakulteta u Subotici*, Vol. 57, No. 46, str. 101–115.

- [8] Pavlović, Nenad, 2025, *Makroekonomska analiza tržišta rada*, Beograd, Ekonomski fakultet.
- [9] Petrović, Milan i Ilić, Dejan, 2025, "Povezanost nezaposlenosti i privrednog rasta u Bosni i Hercegovini", *Poslovna ekonomija*, Vol. 16, No. 2, str. 88–102.
- [10] Radić, Bojan i Stanković, Nikola, 2026, "Makroekonomski pokazatelji i tržište rada u BiH", *Zbornik radova Ekonomskog fakulteta Istočno Sarajevo*, Vol. 17, str. 77–93.
- [11] Simić, Aleksandar, 2026, *Savremena makroekonomija i nezaposlenost*, Novi Sad, Fakultet tehničkih nauka



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