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The Influencing Factors on Unemployment Level in Albania

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Abstract

This paper aims to reveal the importance of the relationship between unemployment and other independent variables in the case of Albania. Many studies have been conducted over the years in different countries to discover a link between unemployment and GDP growth, unemployment and immigration, unemployment and poverty as well as between average wage and unemployment. We have attempted to make a summary of the main studies in the field of unemployment. Undoubtedly a presentation of the performance of this indicator in European countries is needed to understand its current situation. Other important issues are the impact of the economic and financial crisis on unemployment rates and the impact that unemployment itself has on young people life choices. We have included a brief development of the Albanian unemployment history since the 1990s and a comparison with the poverty indicator. Using Gretl, a cross-platform software package for econometric analysis, we aim to discover the important relationships between the variables followed by our conclusions and some recommendations for this current and comprehensive problem.

Keywords: unemployment; GDP growth; poverty; average wage.

1. Introduction

Employment has been considered for years as one of the most important challenges of any country in the world, especially those who have experienced the period of transition after the fall of the communist system. The transition from a fully centralized economy to a free market economy, as well as the political changes that took place after the 1990s, have been accompanied by significant changes in the labor market for Albania. The labor market tends to change rapidly and continuously, so its study and further information and orientation is considered important, especially for young people as the age group that suffers the most from the phenomenon of high unemployment in Albania. Unemployment brings hardship to young people and individuals of all ages, it is an issue that affects every corner and has become today the most troubling problem for the government of any country, which is why we chose to address exactly this topic.

Unemployment brings many challenges and difficulties to young people living and individuals of all ages. It is allways an issue that affects every individual or entity and has become today the most troubling problem for the government of any country. Since the early 1990s, unemployment has pushed many Albanians to leave toward other developed countries. Over the last 20 years, unemployment has fluctuated mainly with an increasing trend, mainly the economic crisis in 2008 had a significant impact, and a greater increase in unemployment is expected as a result of the COVID-19 pandemic that the world is facing today. This current situation adds one more reason why we chose this topic. Unemployment is a concept used for those people of working age who are not employed, are willing and able to work and are actively looking for it. Unemployment rate is a measure of the unemployment rate, which is calculated as a percentage, comparing the number of unemployed individuals to the labor force. The labor force consists of all unemployed and employed individuals. There are several types of

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unemployment, which are addressed in the world literature. Frictional unemployment, which is encountered as a result of the constant movement of employees from one job to another or between different regions. This kind of unemployment is inevitable. Structural unemployment is encountered when there is a long-term mismatch between labor supply and demand. It occurs mainly when the development of some branches of industry increases or decreases and the workforce is not flexible enough to adapt immediately to these changes. Cyclical unemployment is encountered when the demand for goods and services falls as a result of the economic downturn, which will lead to a decline in demand for labor. Seasonal unemployment is related to the seasonal character of many jobs that causes next periods of unemployment.. Unemployment has been and is today one of the biggest problems that is worrying our country and most developed countries. Being unemployed does not only mean not having a source of income from wages, but also suffering, among other things, its social and health costs. For a country, to have a high unemployment rate, means high crime, informality and inequality among its citizens and for this reason the governments of different countries are trying to reduce the unemployment rate through economic policies, opening up new jobs, etc. Full employment does not mean zero unemployment, which means that not every man or woman in a country, free and able to work, does productive work every day of their lives. Full employment means that unemployment is reduced to short periods of unemployment, with the certainty that you will soon be employed in an old job, or in a new job that is within your capabilities. Since the early 1990s, unemployment has pushed many Albanians to flee to other developed countries. During the last 20 years, unemployment has fluctuated mainly with an upward trend, where the economic crisis in 2008 had a significant impact, and a greater increase in unemployment is expected as a result of the COVID-19 pandemic that the world is facing today. Many studies have focused on unemployment and its relationship to other economic or social indicators. There are many hypotheses that have been put forward about its causes, and many have tried to find solutions, and yet today it still remains among the biggest problems. Valerie R. Bencivenga and Bruce D. Smith, members of the research department at the Bank of Minneapolis, in a 1995 paper, developed a model consistent with the fact that rural-urban migration and the existence of unemployment are essential aspects of the growth process and development. According to the paper, it is precisely unemployment that comes as a result of endogenous factors, which creates the time volatility of rural-urban wages. Thus, internal migration is treated as a factor that affects the wage gap between rural and urban areas. Theoretical studies on the effects of emigration on unemployment do not lead to unanimous results. Harris and Todaro (1970) use a bi-sectoral model of migration and unemployment to describe the potential negative effects of immigration on unemployment. Ortega (2000), however, makes a theoretical rationale for the positive effects of immigration on the unemployment rate. In general, empirical studies on the impact of emigration on the labor market in host countries conclude that emigration flows do not adversely affect domestic labor markets. In contrast to the above-mentioned studies, which were conducted at the national level, Angrist and Kugler (2003) used in their study 18 European countries, with data from the period 1983-1999 and found a slight negative impact of emigration to domestic labor markets. Jean and Jimenez (2007), also tried to assess the impact of immigration on unemployment (as well as its link to labor market policies), in 18 OECD countries for the period 1984-2003 and failed to find a permanent impact of immigration. Other papers have studied the causal link between immigration and unemployment (Pope and Withers (1985) for Australia; Marr and Siklos (1994) and Islam (2007) for Canada). These studies do not reach a conclusion regarding the fact that emigration causes higher average unemployment rates, but have concluded that unemployment has a negative impact on emigration. In this line, Morley (2006) examines the causal link between migration / GDP / capita and finds evidence of a long-term link between GDP / capita and immigration (data from Australia, Canada and the US). According to the conclusions reached by the study of Ekrame Boubtane, Dramane Coulibaly and Christophe Rault, there is a positive impact of immigration on the employment rate of the host country. This conclusion consequently leads to the logic that the negative impact of emigration on the total unemployment rate is not due to the fact that migration discourages jobseekers. Moreover, the negative impact of immigration is on both unemployment rates, domestic and foreign. The aim of the paper was to confirm the negative impact of emigration on employment opportunities in the host country. According to the results, the main concern in

host countries about the negative impact of emigration on employment opportunities of local persons has not been confirmed. Numerous debates on economic policy, such as unemployment and economic growth, are often linked to wage increases that depend on social security contributions. The social system that exists in most countries is composed of two components: old-age pensions and unemployment insurance, while wages are determined by agreements between firms and unions. The link between unemployment and its social contributions has been extensively addressed by Nickell and Layard (1999). The link between pensions and the country's economic growth has been addressed by Saint-Paul (1992) and Belan (1998).

2. Material and Methods

To analyze the data of this research study we have used secondary data, and we have relied on the literature review conducted above. Data on the main indicators that we used are: unemployment rate, poverty rate, remittances, basic wage and real change in GDP (GDP growth), data that we found on the official website of the Central Bank of Albania, INSTAT and the World Bank. The data we used belong to the period from 2000-2019. We used the multifactorial econometric model through the Gretl econometric program to discover the existence of a relationship between the independent variables (average wage, poverty rate and GDP growth) and the unemployment dependent variable. After using the multifactorial econometric model we used onefactorial econometric model (simple regression)for each independent variable so we could reduce the possibility effect of each independent variable with each other for the same period from 2000-2019. The form of the function is of the type:

Formula 1.Multiple Linear Regression.

$$Unemployment = \beta 0 + \beta 1 * Poverty + \beta 2 * Average\ wage + \beta 3 * GDP + \beta 4 * remittances + \varepsilon .$$

Formula 2.Simple Linear Regression.

$$Unemployment = \beta 0 + \beta 1 * poverty + \varepsilon .$$

$$Unemployment = \beta 0 + \beta 2 * average\ wage + \varepsilon .$$

$$Unemployment = \beta 0 + \beta 3 * remittances + \varepsilon .$$

$$Unemployment = \beta 0 + \beta 4 * GDP + \varepsilon .$$

Main Hypothesis:

HO: There is no statistically significant economic factor that affects unemployment in Albania.
H1: At least one of the economic factors studied is statistically significant and affects unemployment in Albania.
Based on this main hypothesis we have raised four secondary hypotheses. The first hypothesis is about poverty, the second hypothesis is about the average wage, the third is about the importance of GDP and the fourth about remittances.
First Hypothesis:

Ho: The link between unemployment and poverty is not important.

H1: The link between unemployment and poverty is important.

Second Hypothesis:

Ho: The link between unemployment and the average wage is not important.

H1: The link between unemployment and the average wage is important.

Third Hypothesis:

Ho: The link between unemployment and GDP change is not significant.

H1: The link between unemployment and GDP change is important.

Fourth Hypothesis:

Ho: The link between unemployment and remittances is not important.

H1: The link between unemployment and remittances is important.

4. Results and Discussion

Table 1. Data for the Model

Year	*Unemployment(%)* [1]	*Average Wage.(mijë lekë)*[2]	*Remittances (mln lekë)*[3]	*Poverty (%)*[4]	*GDP Grouth rate (%)*[5]
2000	16,57	14.963	63.026	53,22	7,9
2001	16,57	17.218	77.863	53,65	4,2
2002	16,67	19.659	80.557	54,1	5,8
2003	16,68	21.325	95.289	50,27	5,7
2004	16,59	24.393	98.839	46,47	5,7
2005	16,46	26.808	99.608	42,6	5,4
2006	16,20	28.822	115.344	40,4	5,9
2007	15,97	33.750	117.667	38,13	7,5
2008	13,06	36.537	102.292	35,8	3,3
2009	13,67	40.874	103.170	36,63	3,8
2010	14,09	43.625	129.007	37,46	3,7
2011	13,48	46.665	124.749	38,29	2,5
2012	13,38	50.092	116.084	39,1	1,4
2013	15,87	52.150	101.849	40,1	1
2014	17,49	53.025	116.372	40,3	1,8
2015	17,08	54.000	127.328	38,3	2,2
2016	15,22	54.488	129.843	38,8	3,3
2017	13,75	59.813	131.672	38	3,8
2018	12,34	61.023	141.292	31,3	4,07
2019	12,33	63.084	152.312	29,5	2,21

Source: Author

[1] Data from World Bank (2019)

[2] Data from INSTAT (2000-2019)

[3] Data from Bank of Albania (2000-2019)

[4] Data from World Bank (2000-2019)

[5] Data from INSTAT (2000-2019)

3.1. Subsection Heading

Before testing this data in Gretl, we also did Excel-based 10 logarithms in order to avoid variance between variables, which would cause the econometric model to be distorted.

Model : OLS, sample 2000-2019 (T = 20)
Dependent Variable: Unemployment

	Coefficient	*Error std.*	*t-Student*	*p. critic*	
Const	1,84906	0,223112	8,288	<0,0001	***
Average wage	−0,146931	0,0488351	−3,009	0,0075	***

Model : OLS, sample 2009-2019 (T = 11)
Dependent Variable: Unemployment

	Coefficient	*Error std.*	*t-Student*	*p. critic*	
const	1,19721	0,0208564	57,40	1,88e-09	***
d_d_GDP Grouth	0,276191	0,0723953	3,815	0,0088	***
d_d_Poverty	1,26415	0,644715	1,961	0,0976	*
(REMI) d_d_d_d_d_d_d_d_~	−0,00927452	0,00325355	−2,851	0,0292	**
d_Average wage	−1,57156	0,967917	−1,624	0,1556	

Average deviation. var.	1,156334	Dev. std. deviation. var.	0,051786
Residual Sum	0,006148	Std.error of regression	0,032010
R-squared	0,770756	R-squared corrected	0,617927
F(4, 6)	5,043259	P. critic for F	0,039904
Log-prob	25,58414	Akaike criteria	−41,16828
Schwarz criteria	−39,17881	Hannan-Quinn criteria	−42,42237
Rho	0,493290	Stat. Durbin-Watson	1,012081

Model Equation:

$$\text{Unemployment} = 1{,}19 + 0{,}27\text{GDP Grouth} + 1{,}26\text{Poverty} - 0.0093\text{Remitt} - 1{,}57\text{AvgWage} + \varepsilon$$

Average deviation. var.	1,178375	Dev. std. deviation. var.	0,050257
Residual Sum	0,031932	Std.error of regression	0,042119
R-squared	0,334623	R-squared corrected	0,297658
F(1, 18)	9,052349	P. critic for F	0,007541
Log-prob	36,02016	Akaike criteria	−68,04031
Schwarz criteria	−66,04885	Hannan-Quinn criteria	−67,65156
Rho	0,663117	Stat. Durbin-Watson	0,693973

$$\text{Unemployment} = 1{,}84 - 0.146\text{Average wage} + \varepsilon$$

Model : OLS, sample 2000-2019 (T = 20)

Dependent Variable: Unemployment

	Coefficient	*Error std.*	*t-Student*	*p. critic*	
Const	2,68638	0,527876	5,089	<0,0001	***
Remittances	−0,299382	0,104781	−2,857	0,0105	**

Average deviation. var.	1,178375	Dev. std. deviation. var.	0,050257
Residual Sum	0,033016	Std.error of regression	0,042828
R-squared	0,312022	R-squared corrected	0,273801
F(1, 18)	8,163637	P. critic for F	0,010468
Log-prob	35,68612	Akaike criteria	−67,37225
Schwarz criteria	−65,38078	Hannan-Quinn criteria	−66,98349
Rho	0,567300	Stat. Durbin-Watson	0,845656

$$\text{Unemployment} = 2{,}68 - 0.299\text{Remittances} + \varepsilon$$

Model : OLS, sample 2000-2019 (T = 20)

Dependent Variable: Unemployment

	Coefficient	*Error std.*	*t-Student*	*p. critic*	
Const	0,335778	0,175072	1,918	0,0711	*
Poverty	0,523865	0,108744	4,817	0,0001	***

Average deviation. var.	1,178375	Dev. std. deviation. var.	0,050257
Residual Sum	0,020963	Std.error of regression	0,034126
R-squared	0,563188	R-squared corrected	0,538921
F(1, 18)	23,20765	P. critic for F	0,000138
Log-prob	40,22866	Akaike criteria	−76,45732
Schwarz criteria	−74,46585	Hannan-Quinn criteria	−76,06856
Rho	0,560009	Stat. Durbin-Watson	0,860823

$$\text{Unemployment} = 0{,}33 + 0.52\text{Poverty} + \varepsilon$$

Model : OLS, sample 2001-2019 (T = 19)

Dependent Variable: Unemployment

	Coefficient	Error std.	t-student	p-crtitc	
Const	1,18047	0,0106406	110,9	<0,0001	***
d_GDP Growth	0,146088	0,0642323	2,274	0,0362	**

Average deviation. var.	1,176219	Dev. std. deviation. var.	0,050676
Residual Sum	0,035441	Std.error of regression	0,045659
R-squared	0,233295	R-squared corrected	0,188194
F(1, 17)	5,172796	P. critic for F	0,036188
Log-prob	32,74122	Akaike criteria	−61,48244
Schwarz criteria	−59,59357	Hannan-Quinn criteria	−61,16277
Rho	0,655359	Stat. Durbin-Watson	0,536082

$$Unemployment = 1{,}18 + 0{,}14 GDP\ Growth + \varepsilon$$

After performing tests on the significance of the model it turns out that the model is significant. But we note that after performing the test in Gretl (multifactorial econometric model) one of the independent variables (average salary) does not appear significant (important), furthermore when we used simple regression this variable appeared significant. For this result we think this is related to the data, where there is no lack of the fact that the data may not be complete as in the case of poverty where some data were not published, but also the data of other variables obtained from official Albanian sources, there is a possibility that there has been political influence, where not all unemployed or employees were published, in this way influencing the unemployment rate; also and not all remittances as incoming and outgoing are all declared. It should not be forgotten that there are still employees who receive a wage which is below the minimum level wage, although they can be declared as employees with a minimum wage, which is delivered in cash, affecting the average wage. All these factors we think have a significant impact on the validity of the data of the variables taken in the study, which is also reflected by the testing itself in the econometric model. At the end of the testing of the econometric model in Gretl, the first hypothesis Ho is rejected and the first alternative hypothesis H1 is confirmed: At least one of the economic factors taken into study is statistically significant and affects unemployment in Albania.

5. Conclusions

At the end of this topic we come to the conclusion that unemployment has been, is and will always be a delicate and very important issue in the design and implementation of various policies for the development and economic sustainability of a country. As well as in other European countries, the issue of unemployment must be considered as very important, especially in the case of women and young people. In addition to the economic factors studied that affect the unemployment rate (poverty, remittances, GDP growth and average wages), a very large impact on these factors will have the impact of the COVID-19 pandemic, and consequently will have an impact on unemployment as well. After conducting factor testing in the Gretl program for the period 2000-2019 we came to the following conclusions: Determinability coefficient; R2 = 77%, ie 77% of the variability of the unemployment rate, is explained by the factors taken into account, namely the basic wage, the poverty rate, the real change in GDP and remittances. This coefficient changed when we used simple regression for each independent variables; R2 =33%, 33% of the variability of the unemployment rate is explained by average wage; R2=31%, 31% of the variability of the unemployment rate is explained by remittances; R2=56%, 56% of the variability of the unemployment rate is explained by poverty, showing that poverty has an important effect on unemployment rate and R 2= 23%23% of the variability of the unemployment rate is explained by the real change in GDP. If GDP grows by 1% and other variables remain constant, then the unemployment rate will rise by 0.27%, but when we tested this variable with simple regression the unemployment rate will rise by 0.146%. GDP growth is in the same direction as the unemployment rate and is a significant factor. If the poverty rate increases by 1% and other variables remain constant, then the unemployment rate will increase by 1.26% or will rise by 0.52% when this variable is tested with simple regression.Poverty is also in the same direction as the unemployment rate. The

same result as the regression conducted by Blank and Blinder (1986), who concluded that unemployment rates were positively correlated with the percentage of people living in poverty. The link between unemployment and poverty is important. If remittances increase by 1% and other variables remain constant, then the unemployment rate will decrease by 0.009%, or will decrease by 0.299% when we test this variable with simple regression. So the variables move in the opposite direction. This result can be interpreted as follows:

• Emigration reduces the number of population in the country, as a result the level of unemployed falls;

• Emigration is accompanied by an increase in family income, as a consequence of leaving the status of unemployed.

If the average wage or will decrease by 0.146% when we use simple regression for this variable. We noticed that after performing the multifactorial econometric model in Gretl, the average salary) does not appear significant (important), but with simple regression it does appear significant,and GDP Growth is in the same direction as the unemployment rateincreases by 1% and other variables remain constant, then the unemployment rate will decrease by 1.57% , which looks like it doesn't make sense even though is a significant factor, so there is a chance that some data have not been published, and there is a possibility of political influence, where not all unemployed or employed people may be declared, in this way influencing the unemployment rate; also and not all remittances as incoming and outgoing are all declared. It should not be forgotten that there are still employees who received a salary which was below the minimum, although they may have been declared as employees with a minimum wage, which was delivered in cash, affecting the average wage. All these factors we think have a significant impact on the validity of the data of the variables taken in the study, which is also reflected by the testing itself in the econometric model. At the end of the testing of the econometric model in Gretl, the first hypothesis Ho is rejected and the first alternative hypothesis H1 is confirmed: At least one of the economic factors taken into study is statistically significant and affects unemployment in Albania.

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