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**EFFECTS OF EMPLOYMENT SERVICE AGENCIES AND MACROECONOMIC POLICIES ON
UNEMPLOYMENT IN REPUBLIC OF CROATIA**

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ABSTRACT

Unemployment in the Republic of Croatia is an economic problem that has lasted since independence until today. Trends in Croatia are specific in nature because the labor market is registering a demand for labor that is constantly growing (much more pronounced in the summer months due to tourism) and on the other hand there is a high level of migration towards the demand for work. According to economic theorists, unemployment problems in Croatia are the result of many years of weak policies of the labor system and pensions as well as poor economic solutions in the field of taxes and benefits that employers must meet. Currently, Croatia is facing a very low standard of living compared to developed EU member states. In addition, the structure of the workforce itself, in terms of education and skills, is part of the problem related to unemployment in the Republic of Croatia. The problem of relatively high unemployment is the one that has received the most attention in the Croatian economy in recent years.

The problem of relatively high unemployment is the one that has received the most attention in the Croatian economy and in this regard Croatia is very specific case for many reasons that are identified problems unemployment in this study.

Keywords: Croatian Employment Office, Employment Policy, Temporary Employment Agencies

Introduction

Unemployment is one of the most serious and difficult problems facing modern economies to this day. Unemployment is a socio-economic phenomenon in which part of the labor force in a particular country or region is looking for work, but it cannot find it. Unemployed people are considered to be able-bodied people who are temporarily unemployed and are actively looking for work, but they cannot find it because of their own fault.

On the other hand, the employed are those people who perform any paid work (have a work contract), are self-employed (have their own business) and those who are employed in private agricultural farms and estates (have no established employment relationship).

Unemployment is a crucial existential problem for every person. While the causes of unemployment are multifactorial, the consequences of unemployment are experienced in the emotional and social sphere. An unemployed person is confronted with a nuisance of worthlessness and hopelessness, depression, experiencing a stressful lifestyle, etc. In modern market conditions employment opportunities are limited. The research problem included unemployment as the central problem of Croatia's economy. The aim of this paper is to analyze unemployment in the Republic of Croatia as one of the central macroeconomic problems. Implementing structural reforms with the withdrawal of EU funds could result in lower unemployment rates in future.

1 Unemployment trends in Croatia

In Croatia, unemployment is linked to structural changes in the economy (Joint Memorandum on Social Inclusion of the Republic of Croatia, 2007). A particularly vulnerable category of unemployment is young people because they are the first to have to leave and the last to enter the labor market, and there are few employment opportunities in a market where they have to compete with individuals with more experience. Therefore, youth unemployment is higher than unemployment of people in other age categories (Bilic & Jukic, 2014). Despite the fact that in certain periods the unemployment rate fell below 10%, unemployment in this area can be characterized as a problem that has lasted for more than two decades (Rancic & Durbic, 2016).

The effect of the global economic crisis on the Croatian labor market is significant, although not as dramatic as in some other countries in the region. Employment has fallen and unemployment has risen, albeit less than in most EU countries. In addition, the labor force participation rate has fallen, with skilled production workers being hit hardest by the crisis. According to the data, Croatia is among the three worst ranked EU countries looking at numerous labor market indicators: unemployment rate, long-term and very long-term unemployment rate, youth unemployment rate, employment rate, activity rate, but also the average length of working life of employees (Jurcic, 2017). Although the Government has found some way to fight youth unemployment, the problem remains a steady decline in the number of employees who lose their jobs as the economy weakens, and an increase in young people with secondary education who have not even been given a job.

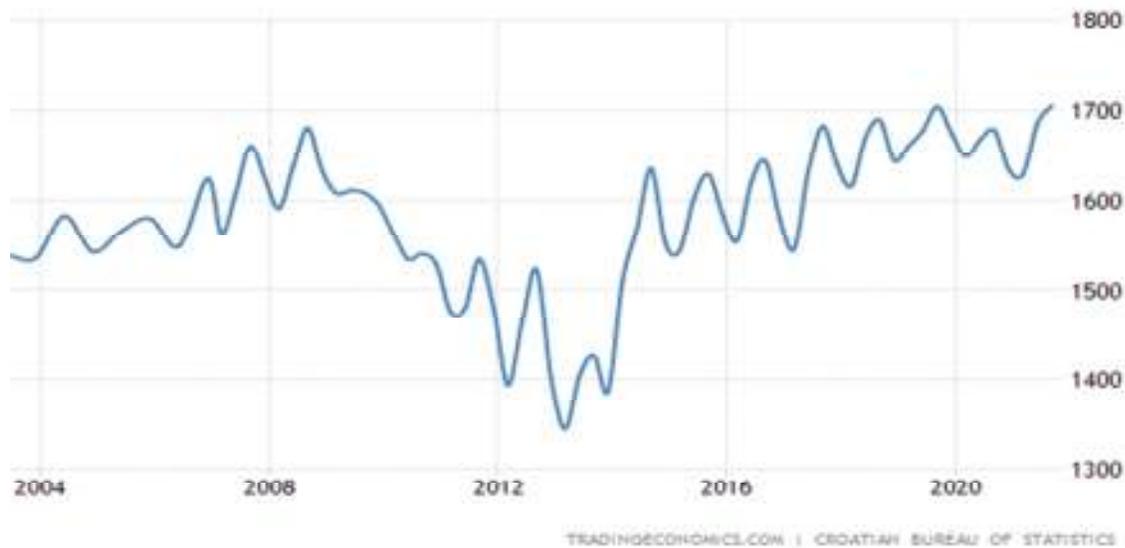
Table 1: Number of unemployed in Croatia from 2008 – 2021

Years	Unemployed persons	Unemployment rate %
2008	240.455	13,5
2009	291.545	16,7
2010	319.845	18,6
2011	315.438	18,6
2012	358.214	20,9
2013	363.411	21,5
2014	316.763	19,4
2015	285.468	17,6
2016	263.617	14,7
2017	187.363	12,0
2018	148.919	9,6
2019	128 650	6,7
2020	159.845	8.6
2021	136.816	8.4

Source: <https://statistics.hzz.hr/Statistics.aspx=2021>

During 2021, positive changes were achieved in the labor market, looking at the results of both administrative sources and the Labor Force Survey, i.e. there was a slight increase in employment, a significant decrease in unemployment as well as a decrease in the unemployment rate. All four index components: state budget income from value added tax revenues, volume of industrial production, retail trade, and tourist arrivals, recorded a higher value in December 2021 compared to December 2020.

Figure 1: Employment trends in Croatia (thousands)



Source: <https://tradingeconomics.com/croatia/employed-persons>

Figure 1 shows the employment trends in Croatia. The figure shows that in employed persons in Croatia averaged from 1572.59 thousand in 1998, a record low of 1344 thousands in the first quarter of 2013, and reaching an all-time high of 1705 thousands in the third quarter of 2021. The current number of employees is about 1,575,000.

The linear regression model is one of the fundamental tools of econometrics and is used to model a wide variety of economic relationships. The general model assumes a linear relationship between a dependent variable, y , and one or more independent variables, x .

$$Y = \beta_0 + \beta_1 X + \varepsilon$$

Formula for linear regression model y is the predicted value of the dependent variable (y) for any given value of the independent variable (x).

β_0 is the intercept, the predicted value of y when the x is 0.

β_1 is the regression coefficient – how much we expect y to change as x increases.

x is the independent variable (the variable we expect is influencing y).

ε is the error of the estimate, or how much variation there is in our estimate of the regression

coefficient.

Linear regression finds the line of best fit line through your data by searching for the regression coefficient (B_1) that minimizes the total error (e) of the model.

Finding the coefficient by hand is done using these formulas:

$$\beta_0 = \frac{(\sum y)(\sum x^2) - (\sum x)(\sum xy)}{n(\sum x^2) - (\sum x)^2}$$

$$\beta_1 = \frac{n(\sum xy) - (\sum x)(\sum y)}{n(\sum x^2) - (\sum x)^2}$$

Analysis of the evolution and the structure of unemployment is realized using the linear regression model, where the dependent variable is the unemployment rate, and the independent variable is the years. We analyze the unemployment rate in Croatia during the period 2008-2021.

Linear regression can be performed by hand which is a long process which can be substituted using software which make the job easier and gives the wanted output.

The Coefficients table provides us with the necessary information to predict unemployment rate in years, as well as determine whether unemployment rate contributes statistically significantly to the model (by looking at the "Sig." column). Furthermore, we can use the values in the "B" column under the "Unstandardized Coefficients" column, as shown below:

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1751.226	481.766		3.635	.003	701.547	2800.905
	years	-.862	.239	-.721	-3.604	.004	-1.383	-.341

a. Dependent Variable: unemployment

In the first section beta is shown the linear regression equation. By the given results the coefficient β_0 is 1751.226 and β_1 is - 0.862 which leads the linear regression equation to look like unemployment = 1751.226 – 0.862 years. The average decrease from one year to another is 0.862%. And as we can see this value is statistically significantly because is less the level 0.05.

The next table is the ANOVA table, which reports how well the regression equation fits the data (i.e., predicts the dependent variable) and is shown below:

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	169.034	1	169.034	12.991	.004 ^b
	Residual	156.135	12	13.011		
	Total	325.169	13			

a. Dependent Variable: unemployment

b. Predictors: (Constant), years

This indicates that the regression model predicts the dependent variable significantly well. How do we know this? Look at the "Regression" row and go to the "Sig." column. This indicates the statistical significance of the regression model that was run. Here, $p < 0.005$, which is less than 0.05, and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data).

The Model Summary table, as shown below:

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.721 ^a	.520	.480	3.6071

a. Predictors: (Constant), years

b. Dependent Variable: unemployment

This table provides the R and R^2 values. The R value represents the simple correlation and is 0.721 (the "R" Column), which indicates a high degree of correlation. The R^2 value (the "R Square" column) indicates how much of the total variation in the dependent variable,

For unemployment rate, the time during which study indicator had annual successive mutations, is still considered a factor with a pretty good influence, by weighting obtained of 52.0%, given by the coefficient of determination.

The value of this factor led to determination of correlation ratio, which result of 0.721 shows that is a large positive correlation.

$$R^2 = \frac{SS_{reg}}{SS_{tot}}$$

Calculation R Square

n – sample size

p - regressor (2)

$$\bar{R} = 1 - (1 - R^2) \times \frac{n - 1}{n - p - 1}$$

Calculation of Adjusted R Square

$$\text{Std. error of estimate} = \sqrt{\text{mean square of residual}} \quad (\text{Grainca,2022})$$

Croatia, like other countries, faces the problem of employment of women, according to the level of education, according to the age structure. On this occasion, we will make an analysis of these categories as well.

1.1 Gender-based unemployment in Croatia

The table below shows the total number of male and female unemployed persons in the observed period and their share in the total number of unemployed. Throughout all the years shown, the number of female unemployed persons was higher than the number of unemployed male persons.

Table 2: Number of male and female unemployed persons and share of male and female unemployed persons in the total number of unemployed persons

Year	Male	Female	Totali	Male	Female
2004	129029	180846	309875	41.6	58.4
2005	127944	180795	398739	41.4	58.6
2006	116519	175097	291616	40	60
2007	102482	161964	264446	38.8	61.2
2008	89541	147200	236741	37.8	62.2
2009	107115	156059	236174	40.7	59.3
2010	136806	165619	302425	45.2	54.8
2011	141409	163924	305333	46.3	53.7
2012	152079	172244	324323	46.9	53
2013	163070	182042	345112	47.3	52.7
2014	153484	174702	328186	46.8	53.2
2015	130698	155208	285906	45.7	54.3
2016	107947	133913	241860	44.6	55.4
2017	83145	110823	193968	42.9	57.1
2018	66402	87139	153541	43.2	56.8
2019	57125	71525	128650	44.4	55.6
2020	66070	82576	148648	44.4	55.6
2021	60988	75828	136818	44.6	55.4

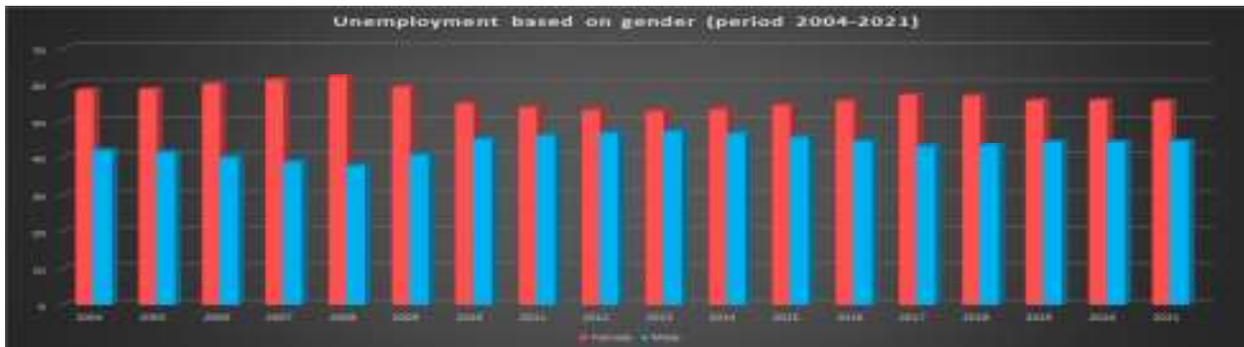
Source: independent production of the author according to: <https://statistics.hzz.hr/Statistika.aspx?report=1> (2021)

Out of the total number of unemployed persons in December 2021, there were 55,052 unemployed men (43.8 per cent) and 70,663 unemployed women (56.2 per cent). The number of unemployed men decreased by 23.6 per cent while the number of unemployed women decreased by 19.5 per cent if compared to December 2020. The share of men in registered unemployment decreased, whereas the share of women increased by 1.3 percentage points in the reference period.

Several factors are responsible for this situation on the labor market. One of the factors is that there are jobs and occupations where the demand for women does not exist such as mechanical, construction, managerial jobs. The causes of economic inactivity in men are most often schooling and retirement, and the causes of economic inactivity in women are most often family and household obligations. The problem of more female unemployed people can be solved by more flexible employment conditions such as part-time employment, work from home and more flexible working hours. There is also a difference in salaries between men and women, which in Croatia is 11.6%, which shows that women on average receive a lower salary than men. Equality

in wages, adequate recognition and evaluation of women’s skills and knowledge, and policies that will enable employees to reconcile their family and work obligations will attract more women to the labor market and affect the country’s economic growth (Kerovec, 2003).

Chart 1 Unemployment based on gender(period 2004-2021)



Source: Grainca, 2022

1.2 Unemployment by level of education

Regarding the structure of unemployment according to the level of education, there are changes in the structure. The largest number of unemployed are people with completed high school, their percentage in 2008 was 61%, while in 2013 this percentage was higher by 2% and amounted to 63%. In 2008, 25% of the unemployed were persons with completed primary school, and this percentage decreased in 2013 to 21%. Unemployed persons without any level of education in 2008 accounted for 7% of total unemployment, for 2013 this figure is lower and amounts to 5%. Unemployed persons with completed higher (3%) and higher (4%) level of education participate with the lowest shares in 2008, while in 2013 these shares are higher, higher level of education is 5% and high 6%. The reasons for such changes can be various, the definitive changes are the labor market needs for labor. The structure of unemployment shows an increase in unemployed persons who have acquired a higher and higher level of education. Unemployment of young highly educated people stands out as a major problem in the Republic of Croatia.

Table 3: Distribution of unemployment by level of education

Year	No schooling and uncompleted basic school	Basic School	4(or more)-year vocational secondary school and grammar school	Non-university degree	University level and postgraduate degrees
2004	20989	71001	197385	8481	12019
2005	19679	71240	196797	9065	11957
2006	19311	69775	181527	9259	11744
2007	18550	65641	161102	8519	10634
2008	17011	59909	142827	7641	9353
2009	17476	64246	160751	9296	11404
2010	18068	70852	186875	11593	15037
2011	17443	68575	189318	12664	17333
2012	18136	68829	201632	15271	20456
2013	18357	71326	201632	15271	22114
2014	17688	67740	202266	17695	22797
2015	15664	59222	174449	15931	20641
2016	14154	50070	144147	14509	18980
2017	11997	39775	113218	12415	16562
2018	9611	30818	89318	10145	13650
2019	8087	25109	75060	8559	22835
2020	8416	27235	89410	10293	13634
2021	6903	24598	82423	9839	13054

Independent production by the author according to:

<https://statistics.hzz.hr/Statistics.aspx?report=1>

Table 3 shows the amount of unemployment by level of education in the Republic of Croatia. During the crisis in Croatia, unemployment rose in all educational structures. The above table shows that continuously over the years, the largest number of unemployed people have completed high school and reaches its maximum in 2013. In the same year, it can be seen that a large number of people with a university degree were unemployed and marked a growth of 143% from 2008 to 2014. This was the largest growth among these groups during the crisis in Croatia. This is a major problem in the country and best indicates the structural problems of the mismatch between the education system and the real needs of the labor market, as well as the overall

economic policy pursued decades ago, which resulted in the current situation in which young educated professionals are unable to enter the labor market. after school

If regarded by educational background, persons with 1 to 3-year vocational secondary school background (38,700 or 30.8 per cent) and persons with 4 (or more)-year secondary school and grammar school background (37,129 or 29.5 per cent) had major share in the educational structure of the unemployed. This categories have been followed by persons with basic school background (23,603 or 18.8 per cent), persons with university level and postgraduate degrees (11,324 or 9.0 per cent), persons with non-university degree (8,698 or 6.9 per cent) and persons with no schooling and uncompleted basic school background (6,261 or 5.0 per cent).If compared to the same month last year, the number of unemployed decreased in all educational categories. The sharpest decrease in unemployment was evident with the group of persons with non-university degree (by 24.5 per cent) and the smallest decrease was evident with the group of persons with basic school background (by 15.2 per cent).

Multiple linear regression (MLR), also known simply as multiple regression, is a statistical technique that uses several explanatory variables to predict the outcome of a response variable. The goal of multiple linear regression is to model the linear relationship between the explanatory (independent) variables and response (dependent) variables. In essence, multiple regression is the extension of ordinary least-squares (OLS) regression because it involves more than one explanatory variable.

$$y = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_p x_{ip} + \varepsilon$$

Formula for multiple linear regression

In our example the multiple linear regression will look like

$$y = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \beta_3 x_{i3} + \beta_4 x_{i4} + \beta_5 x_{i5} + \varepsilon$$

y = dependent variable—the unemployment rate

xi1 = no schooling and uncompleted basic school

xi2 = basic school

xi3 = 4(or more) year vocational secondary and grammar school

xi4= non-university degree

xi5= university level and postgraduate degrees

B0 = y-intercept at time zero

B1 = regression coefficient that measures a unit change in the dependent variable when xi1 changes - the change in unemployment rate when number of unemployed with no schooling change.

B2 = coefficient value that measures a unit change in the dependent variable when xi2 changes—the change in unemployment rate when number of unemployed with basic school change.

B3 = coefficient value that measures a unit change in the dependent variable when xi3 changes—the change in unemployment rate when number of unemployed with secondary school change.

B4 = coefficient value that measures a unit change in the dependent variable when xi4 changes—the change in unemployment rate when number of unemployers with non-university degree change.

B5 = coefficient value that measures a unit change in the dependent variable when xi5 changes—the change in unemployment rate when number of unemployers with university level and postgraduate degrees change.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-7614.187	33271.643		.229	.825	84336.733	69110.369
	no_schooling	3.401	5.957	.175	.571	.584	-10.336	17.139
	basic_school	-.604	.869	-.153	-.695	.507	-2.609	1.401
	secondary_school	1.735	.543	1.003	3.193	.013	.482	2.988
	no_university_degree	-2.018	3.406	-.075	-.592	.570	-9.872	5.836
	university_level	.658	1.595	.035	.415	.689	-2.996	4.312

a. Dependent Variable: unemployment

By the given result the multiple linear regression will look like:

$$\text{unemployment rate} = -7614.187 + 3.401 \text{ no_schooling} + (-0.604)\text{basic_school} + 1.735 \text{ secondary_school} + (-2.018)\text{no_university_degree} + 0.658 \text{ university_level}$$

These estimates tell us about the relationship between the independent variables and the dependent variable. These estimates tell the amount of increase in unemployment rate that would be predicted by a 1 unit increase in the predictor. Note: For the independent variables which are not significant, the coefficients are not significantly different from 0, which should be taken into account when interpreting the coefficients.

So, for every unit (i.e., point, since this is the metric in which the tests are measured) increase in no schooling, a 3.401 unit increase in unemployment is predicted, holding all other variables constant. Or, for every increase of one unemployers with no schooling, unemployment is predicted to be higher by 3.401. But this is not statistically significantly different from 0 because its p-value is larger than 0.05.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	89225736432	5	17845147286	70.995	.000 ^b
	Residual	2010872668	8	251359063.5		
	Total	91236609100	13			

a. Dependent Variable: unemployment

b. Predictors: (Constant), university_level, no_schooling, no_university_degree, basic_school, secondary_school

That the independent variables statistically significantly predict the dependent variable, $F(5, 8) = 70.995$. The p-value associated with this F value is very small (0.0000). The p-value is compared to alpha level (typically 0.05) and as we can see $p < 0.05$, from that we can conclude that our group of independent variables (university level, no schooling, no university degree, basic school, secondary school) shows a statistically significant relationship with the dependent variable (unemployment).

Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.989 ^a	.978	.964	15854.308	.978	70.995	5	8	.000

a. Predictors: (Constant), university_level, no_schooling, no_university_degree, basic_school, secondary_school

b. Dependent Variable: unemployment

The value of this factor led to the determination of correlation ratio, which result of 0.989 shows that is a large positive correlation. It indicates a strong linear relationship between the predictors.

R^2 also known as the coefficient of determination with its value in our case shows that our independent variables explain 97.8% of the variability of our dependent variable.

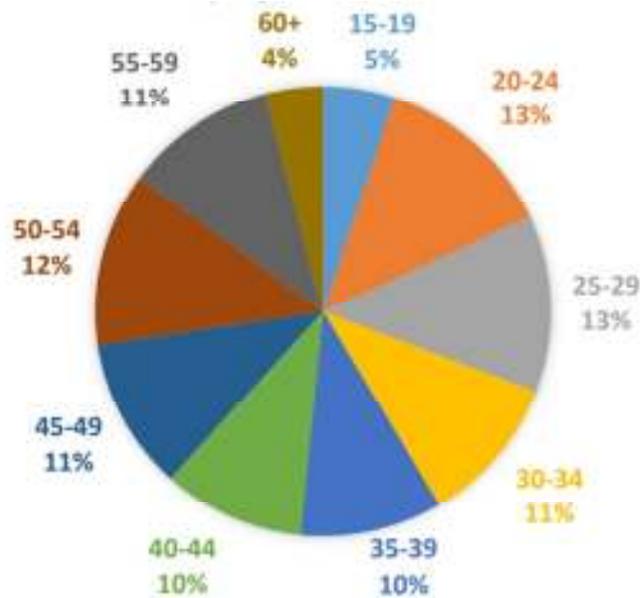
The average distance that the observed values fall from the regression line, as it is shown in the standard error value is an average of 15854.308 units from the regression line (Grainca,2022).

This indicates a large mismatch between the education system and the real needs of the labor market. One of the reasons why young people are not able to find a job is that employers are looking for a certain practical experience in Croatia, because such persons have not gained the experience in education that educational institutions should provide them. (Obadic & Majic, 2013). Youth unemployment must be viewed from the general economic picture and the situation in educational and institutional practices and the lack of communication between them. Also, a big problem in Croatia is the "brain drain".

1.3 Unemployment by age structure

An important aspect in the structure of unemployment is the analysis according to the age structure.

Graph 1: Distribution of unemployment by age structure



Source: independent production by the author according to:
<https://statistics.hzz.hr/Statistics.aspx?report=1> (10.09.2020)

The Graph shows a picture of the number of unemployed, which is 4,432,542 people when the number of unemployed by age structure is obtained. The percentages obtained are the shares of the sum of the number of unemployed of the individual age structure and presented in percentages. The data in Graph 1 can be seen that the age groups with the lowest number of unemployed are 60+ and 15-19 years. These two categories are not a problematic category because the structure of 60+ years has achieved some form of pension insurance, while the category of 15-19 years includes persons who are in the process of schooling. A big problem in Croatia is that a large share of young people who cannot find a job, in their profession, is the age structure of 20-24 and 25-29 years who have the largest share in the number of unemployed. This category can generate long-term structural changes if not addressed. Low demand on the labor market and discouragement regarding finding a job have prompted young people in the Republic of Croatia to decide to withdraw from the labor market or not to enter it (Obadić, 2017). Some have continued their education, and others have become part of the category of the unemployment group, which is more and more numerous, who are not educated, do not work or are professionally trained.

NEET (Not in Education, Employment, or Training). In Croatia, a lot has been invested in this area, for example through government measures for young people where the tax base is reduced by 100% for people under 25 and the tax base is reduced by 50% for people under 30. Since 2013, Croatia has started implementing activities within the Youth Guarantee, which is a new approach to solving the problem of youth unemployment, which seeks to activate all persons under the age of 30 in the Republic of Croatia as quickly as possible in the labor market. The average youth unemployment rate in the European Union in 2020 was 14.2%, and youth unemployment in Croatia was 24%. This data shows that Croatia still has a higher share of youth unemployment than the EU. Groups aged 50-54 and 55-59 have a large share in unemployment. The reason for this can be found in the fact that employers send them to early retirement because

the job is increasingly relying on informatics and IT skills and as such is closer and easier to younger people than older ones.

1.4 Duration of unemployment in Croatia

Table 6 shows the duration of unemployment in the country. Economically, a variable is short-term in nature if its duration is less than one year, and long-term in nature is anything over a year. The table shows that Croatia has more short-term unemployment than long-term unemployment, which is a good sign. In the period of the highest unemployment by duration, there is a group of 0-3 months. The country's goal should be to lower long-term unemployment as much as possible.

Table 4: Duration of unemployment in Croatia

Year	0-3 Month	3-6 Month	6-9 Month	9-12 Month	1-2 Year	2-3 Year	3-5 Year	5-8 Year	8+ Year
2004	50767	36721	25695	20081	45309	36739	44840	30895	18828
2005	49098	35481	25721	20196	50935	27777	45549	33051	20941
2006	48308	32069	21724	17032	44964	29461	38951	35217	23882
2007	42123	29560	20363	15331	37032	24176	33734	35708	26420
2008	40334	26092	17293	12793	31837	19415	29355	31506	28116
2009	56549	36735	23123	16187	31714	17710	23790	27566	29809
2010	62420	44681	31592	23910	48831	18647	20524	21895	30377
2011	64810	43220	29812	22154	55536	26229	18741	16704	28128
2012	73150	49923	32685	25560	54071	29076	21973	12491	25393
2013	72753	50151	35336	27109	65805	30393	28595	11341	23630
2014	66291	45864	32300	24183	58452	34525	31630	13469	21473
2015	63588	39050	24254	17521	45503	27795	32313	16551	19331
2016	54902	33013	20166	14278	32802	22061	28578	18359	17693
2017	49181	27287	15102	10430	23279	13616	21182	17606	16284
2018	43433	23054	12410	8040	16526	8817	13237	13640	14385
2019	39380	20440	11103	7356	13815	6418	8105	10042	11991
2020	43857	29196	2722	9238	16508	6799	6961	7958	11249

Independent production according to <https://statistika.hzz.hr/Statistika.aspx?typeofreport=1> (14.09.2020)

Duration of employment - 15,282 persons (10.8%) were employed for an indefinite period of time, and for a definite period time 125,899 persons (89.2%). Compared to 2019, the number of employments has decreased indefinite time by 7.3% and increased temporary employment by 2.4%.

Among people with a lower level of education, the percentage of the long-term unemployed is significantly higher. This is fair the share of the long-term unemployed (more than one year) in the total number of unemployed without school and with unfinished primary school it reached 62.0%, and with completed primary school 50.4%. The percentage of the long-term unemployed was significantly lower among children aged three and four high school (36.8% and 32.6%, respectively). They had the smallest share of the long-term unemployed groups of unemployed with higher and higher education (29.4% and 27.8%, respectively). It is therefore possible conclude that the level of education significantly affects the duration of unemployment.

1.5 Unemployment caused by the Covid-19 pandemic

The crisis caused by the Covid-19 pandemic is the largest economic downturn recorded since the Great Depression in 1929. The pandemic caused the largest closure ever in human history. As a result of the closure, there will be a greater economic downturn than in the 2008 financial crisis. Some research says that the economic impact of this crisis will be felt by the end of 2023. According to the Central Bureau of Statistics, in the second quarter of 2020, gross domestic product (GDP) decreased by 15.1% in real terms compared to the same quarter of 2019. This is the largest real decline in quarterly GDP since the introduction of the quarterly GDP estimate. The real decline in GDP was recorded in all components of GDP except general government consumption. There is also a decrease of 11.9% of gross value added (GVA) compared to the same quarter of 2019. The quarterly decline in GVA was recorded in most industries, and the decline was mostly influenced by the activities of Wholesale and retail trade, transport and storage, accommodation and food service activities and the processing industry. From the currently available data from the Central Bureau of Statistics in July 2020, compared to July 2019, a decrease in the total number of employees of 4.6% is visible. The decrease in the number of employees was realized in 14 areas of activity, and the largest in the area of accommodation and food preparation and serving of 27.4%. Such a decline in this activity is the cause of a bad tourist season, which will certainly have an impact on the decline in GDP at the end of the year. Table 1 shows an increase in the number of unemployed in 2020 compared to 2019 by 20,000 people. According to that table, it can be seen that the number of unemployed persons is 148,646, which is an increase in the number of unemployed compared to last year of 15.5%. Croatia has introduced job support to companies in the midst of the Covid-19 pandemic. Grants are in the form of subsidies of up to HRK 4,000 per worker. The criterion for awarding the subsidy is that the company must prove to the Tax Administration that for the monthly period in 2020 it had a decrease in revenue of more than 50% compared to the same period in 2019. (<https://statistika.hzz.hr/Statistika.aspx?typeofreport=1> (14.09.2020))

In summary, the analysis of unemployment in Croatia is linked to different time stages. Since 2000, we have seen that the unemployment trend has been steadily declining until 2008 when the global crisis begins. We also notice that unemployment has been declining since 2013, but we must take these data with great caution given the large emigration of young people from the Republic of Croatia and the impact on the decline in unemployment in the country. The table shows that unemployment decreased in 2008, after which the global economic crisis caused a

sharp rise in the unemployment rate, which reached its peak in 2013. With the economic recovery, the unemployment rate began to decline and in 2016 amounted to 8.6%. This period still records high structural unemployment and a low growth rate of potential output, which means that there is additional room for further improvements (ECB, 2016).

The problem of Croatian unemployment is a higher share of female unemployed persons compared to male unemployed persons. Also, problematic category are unemployed people in the age structure of 20-24 and 25-29 years, which in the long run can negatively affect economic flows. Also, a large number of highly qualified professionals who are not able to find a job situation that generates migration or the so-called. "Brain drain", which creates a huge loss for the state. This situation points to the structural problems of the mismatch between the education system and the real needs of the market. Croatia's EU membership has helped the economy emerge quickly from the crisis. Today, the country is facing a new crisis caused by the Covid-19 pandemic that has caused the largest closure in human history. According to current data, the pandemic has already caused an increase in the number of unemployed people by 20,000 people compared to 2019. Average real net wages in Croatia follow market trends and the country's GDP. As a solution to unemployment, the process of automation and robotization is mentioned, which can lead to the growth of the economy, production and wages.

2.Role of the Croatian Employment Office

Employees in the labor market in the Republic of Croatia operate in the form of: state (public) agencies and private agencies. The normative framework for the functioning of the Croatian Employment Service underwent a change on 1 January 2019 when the new Labor Market Act (Official Gazette, 118/2018) came into force, which regulates the entire area of the labor market in a unique way by unifying the previous Mediation Act in employment and rights during unemployment and part of the Employment Promotion Act. The new law changed the source of financing the Institute's operations, given that the tax reform of the Government of the Republic of Croatia affected the fiscal relief of employers by abolishing employment contributions, so funds for financing employment activities and all rights during unemployment are provided in the state budget (<http://www.hzz.hr>).

The law regulates the following areas:

- Records of unemployed persons and other job seekers,
- Preparation for employment and employment mediation, active employment policy, rights during,
- Employment in temporary seasonal work in agriculture, and the role and work of the Croatian , Employment Service. Pursuant to the Labor Market Act, the Office, on the basis of public authorizations, performs the following tasks:

- monitors, analyzes and researches economic, social and other trends, employment, employment and unemployment and their mutual influences, on the basis of which it proposes measures to improve employment, keeps records and issues certificates on the unemployed and other persons, mediates employment between employers and persons seeking employment, monitors the needs

for workers, their employment and in this regard cooperates with employers in the Republic of Croatia and other Member States of the European Union. European Economic Area and the Swiss Confederation, • independently or in cooperation with social partners, educational institutions and other legal entities, organizes and implements programs of vocational guidance, education and other forms of active employment policy,

- cooperates with educational institutions in order to harmonize educational programs with the needs of workers and to provide professional guidance,
- monitors the implementation of the education program organized or the costs are borne by the Institute, in order to evaluate the acquired competencies of the participants and the effectiveness of the program with regard to employability,
- implements international agreements on employment and rights during unemployment,
- performs employment of Croatian citizens abroad and realization of their rights,
- decides on the rights of unemployed persons and performs the payment of benefits on the basis of adopted decisions.

2.1. Temporary Employment Agencies

In addition to the CES, which has a public character in Croatia, there are also private employment agencies. The legal source for the functioning of agencies for temporary employment is the Labor Law (Official Gazette, nos. 93/14, 127/17 and 98/19). According to the law, this is a form of flexible employment and work through a temporary employment agency. Temporary employment through agencies, as one of the atypical forms of employment, enables the agency as an employer to assign a worker to another employer (user) for temporary work. The Institute for Work through Temporary Employment Agencies is in line with Directive 2008/104 / EC of the European Parliament and of the Council of 19 November 2008 on temporary agency work (OJ L 327, 5.12.2008).

Since 2013, the Agency for Temporary Employment in Croatia can perform two types of activities: as an employer that employs a worker for the purpose of assigning the same worker to another employer, beneficiary and perform activities related to employment of employees, ie employment mediation, conditionally special regulation (Article 44, paragraphs 1 and 4, ZR).

According to the records of the Ministry, the number of temporary employment agencies in Croatia is increasing. In 2019, 255 temporary employment agencies were registered, while the number in 2020 increased by 56 agencies than in 2019 (Ministry of Labor). The total number of employees and the total number of agencies through this type is in Croatia, for 2020 the number of assigned workers was 12996, while the number of assignments was 18817. Compared to 2019, a significant decrease was RECORDED OF a total of 50.14% fewer workers and 40.29% fewer assignments. According to the submitted data for 2019, the total number of assigned workers was 25,919, while the number of assignments was 4,6693. Compared to 2018, this is a significant increase, 42% more employees and even 72% more assignments.

In relation to the number of employees, based on the educational structure, it indicates that the largest number of employees have completed a four-year high school in grammar schools, vocational or art schools lasting four years, while the least is university specialists and doctors. According to the place of transfer to users, a small number of workers are transferred to users abroad. Out of the total number of 18,817 assignments made in 2020, only 1,292 were abroad, while the predominant number of assignments (17,525) was made in the territory of the Republic of Croatia.

3 Employment policy in the labor market

In Croatia, unemployment has its own specifics that are related to the period of war conflicts, the period of transitions and globalization. After independence, the state had the high costs necessary for the reconstruction and demining process, which have not yet been fully completed (Baric et al., 2003). Unemployment in Croatia is a consequence of structural changes in the economy, liquidations and bankruptcies of companies, layoffs, reduced employment opportunities, spatial and professional mismatch between labor supply and demand (Ott, 2007). The highest increase in unemployment was recorded in the transition period. In that period, there was an uneven relationship between the dynamics of job closures in the public sector and the dynamics of job creation in newly established private companies (Scare, 2001). Unemployment in that period was also affected by the macroeconomic environment, which was accompanied by a high cost of capital, restrictive credit policy, fiscal burden, government bureaucracy, high initial and minimal production and service costs, high as well as too low labor costs (Scissors, 2001).

In the Republic of Croatia, active employment policy measures began to be applied in 1992, which have undergone conceptual changes on five occasions to date. Significant changes have been recorded since 2006, when the annual plans for stimulating employment were adopted, an obligation that is in line with the European Employment Strategy. In 2009, a new cycle of active employment measures was established. The National Employment Promotion Plan for 2009 and 2010 also established the basic principles of public employment policy, which are implemented by the Croatian Employment Service through its programs. The programs are designed in terms of motivation, education and co-financed employment and are aimed at:

- a) women of primary age (women aged 25 to 49) with lower or inadequate education,
- b) unemployed and employed persons from the older working contingent (persons older than 50 years) who are threatened with loss of employment,
- c) young people who have dropped out of the secondary education system,
- e) young people without work experience and
- e) the long-term unemployed, with special emphasis on persons with disabilities, victims of domestic violence, single parents, treated addicts, Croatian war veterans, as well as persons of the Roma national minority, however, measures aimed at them are excluded from this review.

The general position of the theorists is that the Republic of Croatia has an inflexible labor market that reacts slowly to changes, creating long-term unemployment and social exclusion. The labor market is poorly connected to the education system. By joining the EU, the country has strengthened new trends in employment policy, as well as in the segment and the concept of flexicurity as a flexible relationship between employment and social security in job search, clearly regulated employment relationships, lifelong learning, and active employment measures. Croatian employment regulations are still formal, but not real in line with EU policy. It is necessary to create a more favorable macroeconomic climate, simpler and more stable legislation and encourage investment in profitable activities, which will not only be of a service nature, but will create new value that will go to investment (Boskovic, 2021). On the other hand, the need to preserve the social security of citizens, in conditions of economic and pandemic crisis. Croatia continues to record a high unemployment rate, a record low labor force engagement with a high percentage, the so-called "gray" economy and "undeclared" work, youth unemployment, mild recession and internal regional inequality in unemployment. The sharp drop in employment was caused by the transition shock, the devastation of war, non-transparent privatization and the global recession. Some citizens are endangered by their social rights through non-payment of salaries or contributions to pension and health funds. Programs important for employment should: revive and encourage the establishment of new companies, support foreign investment, educate and prepare professionals at all levels of administration and local self-government. The Government should take concrete measures to protect economic entities during the COVID-19 pandemic, with an emphasis on the real sector. While in the old EU member states expenditures for employment policy in the past 20 years are focused on training and advanced training of workers as part of active measures, in the Republic of Croatia passive measures still prevail. The result is lower employment and an increase in the work of the unemployed in the "gray" economy.

The package of active employment policy measures within the competence of the Croatian Employment Service for 2020, accepted by the CES contains (CES Yearbook):

1. Aid / support for employment - state aid that is granted with the aim of encouraging the employment of the unemployed and is available to entrepreneurs who operate for profit,
 - 1.1. Employment grants for gaining first work experience / internship.
2. Training grants - intended for employers who, due to changes in production processes, the transition to new technologies or the lack of a skilled workforce, need additional training for their employees.
3. Aid for self-employment:
 - 3.1. Aid for self-employment - is granted to unemployed persons to co-finance the costs of opening and operating a business entity,
 - 3.2. Business expansion grants - are awarded to a business entity that has already received self-employment support, regardless of the year of grant granting, whose contractual obligations for self-employment have expired, and has proven that it has fulfilled all obligations to the Office.
4. Education and training:
 - 4.1. Unemployment education - is aimed at increasing the level of employability of the unemployed and harmonizing their qualifications with the needs of the local labor market,
 - 4.2. Employee education - the goal is to increase the level of competitiveness and expertise of employees and other job seekers by referring them to vocational training, retraining or training programs in accordance with the development of the labor market,

- 4.3. On-the-job training - the goal is to train unemployed persons to acquire practical knowledge and skills needed to perform the tasks of a particular job,
- 4.4. Education of the unemployed to complete primary school and acquire the first occupation - the goal is to raise the level of employability and competitiveness of persons without completed primary school by creating conditions for completing primary school and acquiring the first occupation,
- 4.5. Activation program - the goal is to train unemployed people to acquire practical knowledge and skills necessary for their active inclusion in the labor market.
5. Public works - imply the activation of unemployed persons in socially useful jobs that are not competitive with the existing economy in order to motivate them for further inclusion in the labor market.
6. Aid for job preservation:
- 6.1. Aid for job preservation in the textile, clothing, footwear, leather and wood sector - job preservation for employers in the manufacturing industry who have difficulties in doing business due to reduced competitiveness caused by technological changes in business processes and relocation of production to countries and regions with extremely low labor costs, insufficient investment in technology and innovation and their commercialization with a non-competitive workforce,
7. Permanent seasonal - a measure intended to provide support to seasonal workers during the period when they are not working, to provide the necessary workforce to employers from all industries that have periods of reduced workload during the year due to the seasonal nature of business.

During 2020, 23,245 persons were newly included in the programs of active employment policy within the competence of the Croatian Employment Service, namely 11,267 men (48.3%) and 11,978 women (51.7%).

Newly involved persons are covered by the following measures (Active employment policy measures - gov.hr):

- Permanent seasonal worker - 6,264 people (26.9%)
- Unemployment benefits - 4,355 persons (18.7%)
- Aid for self-employment - 3,778 persons (16.3%)
- Public works - 2,305 persons (9.9%)
- Education of the unemployed - 2,149 persons (9.2%)
- Employment grants for gaining first work experience / internship - 1,553 persons (6.7%)
- Aid for job preservation in the sectors of textiles, clothing, footwear, leather and wood - 1,429 persons (6.1%)
- Training grants - 622 persons (2.7%)
- Activation programs - 398 persons (1.7%)
- On-the-job training - 361 persons (1.6%)
- Education of employees - 3 persons (0.01%), and
- Vocational training for work without employment - 26 people and Training for gaining appropriate work experience (30+) - 2 people (which is the fulfillment of contractual obligations from previous years).

Recommendations

Unemployment is one of the three key macroeconomic aggregates and is a precondition for the dynamics of the economic growth of the countries and the well-being of the people.

1. The analysis of the unemployment rates according to certain age groups indicates the fact that young people aged 25-34 have the highest unemployment rate. In order to improve the unemployment situation of these people, the state should introduce reforms in the education system with a special focus on creating new educational programs in line with the needs of the labor market and strengthening cooperation between higher education institutions and companies. Also, the state should support youth entrepreneurship as well as provide continuous training and retraining for relevant skills.

2. The country a new crisis caused by the Covid-19 pandemic that has caused the largest closure in human history. According to current data, the pandemic has already caused an increase in the number of unemployed by 20,000 people compared to 2019. The average net real wages in Croatia follow market trends and the country's GDP. As a solution to unemployment, the process of automation and robotization is planned, which can lead to increased economy, production and wages.

3. According to the third structural feature, analysis of unemployment rates according to level of education, the highest unemployment rate has people with four years of secondary education, which imposes the need for a comprehensive and complex approach of education policy makers and active policy makers in the market. labor.

References

1. Joint Memorandum on Social Inclusion of the Republic of Croatia (2007) Ministry of Health and Social Welfare, Zagreb.
2. Bilic, N., Jokic, M. (2014) Youth unemployment - an economic, political and social.
3. Rancic, N., & Durbic, J. (2016). Causes of unemployment and the impact on reduction unemployment through institutional and structural reforms in the Republic of Croatia Lawyer, 50 (1), p. 39-54.
4. Ljubo Jurcic,(2017),2017,Global Economy Ten Years After the Beginning of the crisis, Economy Review,vol.68, N0.6,
5. Republic of Croatia,(2021,(Croatian Bureau of Statistics,
6. Central Bureau of Statistics,(2020),Women and Man in Croatia,Zagreb,p.34-49.
7. Nada Kerovec,(2003), (In) equality of women in the labor market, Zagreb,
8. Obadic A., Majic E.VII(2013), Analysis of the structure of unemployment of highly educated persons ,No. 2.
9. Alka Obadic (2017), Youth Unemployment and Compliance of the Educational, System with the needs of the labor market, No.(129-150).
10. European Central Bank (2016). Annual Report
11. Croatian Employment Service accessed 15 May 2020, www.hzz.hr. Art. 10. of the Law on Mediation in Employment and Rights during Unemployment, Official Gazette, no.

- 12/13 ; Law on Amendments to the Law on Employment Mediation and Rights during Unemployment, Official Gazette, no. 25/12.
12. Kristina Mazalin and Maja Parmac Kovacic, "Determinants of perceived employability of students", *Social Research* 24, no. 4 (2015),
 13. Robin-Olivier, Sophie, A French Reading of Directive 2008/104 on Temporary Agency Work, *European Labor Law Journal* (hereinafter: ELLJ), vol. 1, no. 3, p. 398;
 14. Frenzel, Helen, The Temporary Agency Work Directive, ELLJ, vol. 1, no. 1, p. 121
 15. The conditions for performing this activity are prior registration of the agency according to a special regulation and entry in the records of the ministry responsible for labor,
 16. Ministry of Labor (2020), Family Pension System and Social Policy, Agency Work Report, Zagreb,
 17. Ivo Druzic,(2003) "Market Restructuring and Privatization of the Croatian, Economy", in: Privatization of the Croatian Economy, ed. Baric, Vinko et al.
 18. Katarina Ott. (2007) ed., Public Finance in Croatia, 3rd ed.Zagreb: Institute of Public Finance
 19. Marinko Scare,(2001) "Unemployment in Croatia and Determinants of Labor Demand", no. 28.Druzic,(2003),Market Restructuring and Privatization of the Croatian Economy, 137-1
 20. Anton Vukelic (2002) The Anomy of Individual Social Groups in Contemporary, Croatian Society: Doctoral Dissertation, 125,
 21. Scissors, (2001) "Unemployment in Croatia and determinants of labor demand "Journal of Social Policy", 8, no. 1 : 19-34,
 22. N. Boskovic, (2021), Labor Market in the European Union and the Republic of Croatia Collected Papers of the Faculty of Law, University of Rijeka, vol. 42, no. 1,91-110
 23. CES Yearbook 2020 June -2
 24. Active employment policy measures - gov.hr.
 25. B.Grainca,(2022),data and variables, Effects Of Employment Service Agencies and Macroeconomic Policies on Unemployment in Republic of Croatia,Page 6-8,10,12-14.

Internet sites:

1. <https://statistics.hzz.hr/Statistics.aspx=1> (retrieved: 07.09.2021),
2. <https://tradingeconomics.com/croatia/employed-persons> (2020),
3. <https://statistics.hzz.hr/Statistika.aspx?report=1> (08.09.2021),
4. <https://statistics.hzz.hr/Statistics.aspx?report=1> (10.09.2021),
5. <https://statistics.hzz.hr/Statistics.aspx?report=1> (10.09.2021),
6. <https://statistika.hzz.hr/Statistika.aspx?tipIzvjestaja=1> (14.09.2021),
7. <https://www.hzz.hr>