

THE SOCIAL IMPACT AND RISKS OF THE COVID-19 PANDEMIC CRISIS IN GREECE

Soultana Anna Toumpalidou^{*}, Simela Chatzikonstantinidou^{**}

^{*} Faculty of Social, Political and Economic Sciences, Democritus University of Thrace, Komotini, Greece

^{**} Corresponding author, Faculty of Social, Political and Economic Sciences, Democritus University of Thrace, Komotini, Greece
Contact details: Democritus University of Thrace, University Campus 69100, Komotini, Greece



Abstract

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The purpose of this paper is to investigate the effects of the COVID-19 pandemic on unemployment in Greece. The outbreak of the pandemic at the beginning of 2020 was an unprecedented phenomenon for the governments of all states, which, with the increase in cases, were called to take measures to limit the spread of the virus, which necessarily limited freedoms but also caused changes in lifestyle and the activities of people but also in the operation of businesses resulting in the disruption of labor relations (Francis-Devine et al., 2022). A large percentage of businesses were forced to suspend their operations and, in many countries, total lockdowns of short or longer duration were imposed. Some countries, of course, have chosen to act differently by imposing smaller local lockdowns or even none. In this paper, we will deal with the case of Greece, which acted completely differently, especially during the first period of the outbreak of the pandemic, with the first imposing a total lockdown from the appearance of the very first cases of the pandemic (Goniewicz et al., 2020). Using panel data, we will assess the interaction and correlation of the unemployment rate with a range of variables, such as the number of cases, inflation, gross domestic product (GDP) and consumer price index, to assess whether and to what extent the spread of the virus ultimately affected the rate of unemployment in these two countries.

Keywords: Unemployment, COVID-19, Greece, Inflation, Panel Data, Regression, Model

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1. INTRODUCTION

According to the International Labour Organization (ILO, 2021b), due to pandemic 255 million jobs were lost worldwide, with the loss in working hours being four times more than the working hours lost during the economic crisis. In addition, international

poverty rates have risen for the first time in twenty years, with retail, catering, tourism and manufacturing being hit hardest, economically. According to Eurostat data on employment and unemployment, at the end of 2019, unemployment increased by 1,951 million in the European Union (EU), while at the end of 2020 the unemployed, at

European level, amounted to 16 million, with the unemployment rate reaching 7.5% in Europe (Eurostat, n.d.). In December 2020, the youth unemployment rate reached 17.8%, with youth unemployment compared to December 2019 increasing by 438,000. In Greece, according to Hellenic Statistical Authority (ELSTAT¹), unemployment reached 16.5% at the end of 2020, with the gross domestic product (GDP) to decrease by 11.7% in 2020, compared to the GDP of 2019. The economic effects of the pandemic in Greece are shown in the chart below, with the strengthening of the economy during the aforementioned period reaching 11.2 billion euros in fiscal measures and support expenditures for the general population (ILO, 2021b).

European leaders were also asked to face the challenge of COVID-19 by taking decisions and measures for the effective management of the pandemic. These measures, adopted fully by some countries or partially by others, included decisions to close borders and limit the mobility of citizens and the operation of businesses. The disruption caused by these measures mainly in the private sector but also in the sectors affected by the pandemic was decided to be dealt with by providing safety measures to protect citizens from bankruptcy. These economic security measures were implemented in all member states and were largely about protecting jobs, the survival of businesses and the general economy (Goniewicz et al., 2020).

This work aims to focus on the issue of unemployment and how it was affected by the course of the pandemic. Our research will focus on Greece. The selection of Greece is based on the case that from the beginning of the pandemic took a series of strict mandatory measures that even received positive reviews from the foreign press on how to deal with the spread of the virus.

The purpose of this research is to investigate the effect of COVID-19 on the EU unemployment rates. In addition, two research hypotheses are checked:

H1: Unemployment rates for the EU countries were affected by the COVID-19 pandemic

H2: There is a significant interaction of GDP with COVID-19 on unemployment rates.

This article follows the format below. Section 2 is the literature review, Section 3 refers to the research methodology, Section 4, presents the results, Section 5 includes a discussion of the research. Finally, Section 6 concludes the paper.

2. LITERATURE REVIEW

Previous research aims to examine the impact, mainly of the pandemic, on various economic sectors in developed as well as developing countries. The analysis of the main ones from these researches will help us in the final comparison of our study with the results of other research and in the creation of our econometric model based on which we will examine the degree of influence of each variable on the unemployment rate. The international literature has already recognized an interaction between the health, standard of living and well-being of citizens with unemployment which in turn appears

to affect overall mortality. More specifically, Ozili and Arun (2020) referring to the effects of COVID-19 on employment show a drop in consumption in the entire industry which led to an economic recession and an increase in unemployment in all types of employment.

Studying the impact of the new pandemic on the global economy showed that the virus affected economic activity through two channels. Initially, it is alleged that due to its rapid transmission, governments were led to take restrictive measures related to social distancing and the shutdown of many commercial branches, services and the banning of events. Secondly, but also importantly, the economy appears to have been affected by COVID-19 as its ever-increasing rate of spread has led to fear about the immediate future which in turn has had a negative impact on consumption and investment, both at the consumer level and also investors. Based on data from the early period of the pandemic, it evaluates these imposed containment measures in relation to economic activity and stock market indices. Its results show that the longer the days of lockdowns and the restrictions on global travel movements, implemented by many countries, the more strongly economic activities and stock prices were affected (Ozili & Arun, 2020).

According to research by Cajner et al. (2020), the employment rate in the USA in the first months of the pandemic and until the end of April 2020 showed a decrease of 21%. From then on and until the end of June, a gradual but not so significant increase was observed, which is mainly attributed to re-hiring due to the reopening of businesses. What is emphasized is that there is no significant increase in the employment of low-wage workers, who are said to be the most affected by this employment crisis, as many were not rehired and failed to find new jobs. Also, there is a reduction in the nominal wages of a large number of workers (7 million) but no planned wage increases. According to research by Béland et al. (2022), in Canada, there was a very large decrease in the number of small and medium enterprises in the country, between February 2020 and May 2020. The results of the survey reveal a decrease in the number of small and medium enterprises by approximately 15% for companies and 11% for sole proprietorships. The reduction is quite large for businesses owned by immigrants, women and those with a lower educational level. Also significant are the job losses and the reduction in working hours that resulted from the aforementioned reduction in the number of businesses.

The ILO with its data shows that the recession caused by the COVID-19 pandemic will exceed the effects of the global financial crisis of 2008–2009. It estimates that 25 million jobs will be lost worldwide, but consumption will further decrease and the economy will suffer a new recession due to the intense job insecurity that will increase since workers will now be waiting for a reduction in hours or wages (ILO, 2021a). The effects of COVID-19 on employment were also evaluated by Fana et al. (2020). The results of this research show that the effects of the pandemic on employment were asymmetric between and within countries. The countries that are said to have been

¹ www.statistics.gr

most affected by the virus itself, namely Spain, Italy but also the United Kingdom, are also the ones experiencing the strongest effects in the employment sector from the restriction, due to their specialization in production and institutions related to the labor market. Also, from the results of the same research, strong discrepancies in the effects of the pandemic on different groups of workers, either within the country or between countries, are revealed. In other words, we see that the most affected are the workers, those who are employed in activities that have had to stop their operation based on the measures. The percentage of these workers is high in countries that rely on low-production processes.

Hidden unemployment in Greece refers to those people who are either involuntarily unemployed or underemployed but are not registered as unemployed by the labor force survey. The unemployed are divided into two categories, those who do not want a job and those who want and cannot find a job, move to the limits of the labor

market and it is always possible under certain conditions to join it. Citizens belonging to the hidden unemployed are more likely to be excluded from policies or programs aimed at finding work for the unemployed because their special needs have not been properly assessed and do not affect the unemployment rate at all (Monastiriotis & Katsinas, 2020).

The table below shows non-seasonally adjusted monthly estimates of the main labor market indicators from the ELSTAT since the onset of the pandemic. The February figures show the improvement in the Greek labor market during the period prior to the pandemic. Most notably, the number of workers unemployed in February 2020 was 16.9% lower than in 2019, corresponding to a nearly three percentage point drop in the unemployment rate (from 19.8% to 17%). On the eve of the pandemic, unemployment had been falling compared to the previous year and there had been a modest increase in employment.

Table 1. Seasonally unadjusted estimates for persons 15-74 years old

	February	March	April	% change (monthly)	
	[1]	[2]	[3]	[2] vs [1]	[3] vs [2]
	2019				
[4] Employed	3758.9	3846.3	3884.3	2.3	1.0
[5] Unemployed	928.0	844.0	852.6	-9.1	1.0
[6] Inactive	3261.8	3254.4	3203.9	-0.2	-1.6
	2020				
[7] Employed	3779.2	3813.0	3839.3	0.9	0.7
[8] Unemployed	771.6	665.4	730.3	-13.8	9.8
[9] Inactive	3353.1	3423.1	3329.4	2.1	-2.7
	% change (annual)				
[7] vs [4]	0.5	-0.9	-1.2		
[8] vs [5]	-16.9	-21.2	-14.3		
[9] vs [6]	2.8	5.2	3.9		

Source: ELSTAT (www.statistics.gr).

Katris (2021) did a similar investigation with the help of a vector autoregressive (VAR) model to explore the impact of COVID-19 cases on Greece's general unemployment and on two more sensitive cases, i.e., female and youth unemployment. Furthermore, the forecasting ability of the VAR model was assessed. Similarly to the panel regression results, Katris's (2021) results recognize the effect of COVID-19 on unemployment rates limited under Granger causality for the EU27 countries since the VAR model did not show a significant effect. Compared to the results of Katris (2021), this investigation could not investigate or confirm the detailed result that "the COVID-19 impact on unemployment does not appear to stop after seven months for all types of unemployment" (Katris, 2021, p. 10). Still, this investigation revealed the effect of GDP and its obvious separation to total employment rates whereas Katris (2021) use an implied separation, that is the EU and Greece comparison.

3. RESEARCH METHODOLOGY

3.1. Methods

Data analysis was implemented on SPSS V28 and Eviews V9 statistical software programs under a 5% tolerance (p -level = 0.05). Descriptive statistics used

measures of central tendency and dispersion and included mean, median, standard deviation (SD), range, minimum and maximum values were calculated for unemployment rates per each category of the EU average, the EU countries, Turkey and the USA and for age categories total, under 25 and 25-74 and for males and females. Additionally, the coefficient of variation (CV) was calculated with the help of Excel to assess data variability.

The next step was to compare the mean values of unemployment of these combinations, i.e., males under 25, females over 24, etc., per each geographic distribution group. Since Kolmogorov-Smirnov test of normality revealed non-normal distributions, the Mann-Whitney non-parametric mean comparison test was used. In these tests each variable of *unemployment rate* was acted as the dependent variable and *pandemic effect* as the independent variable. The *pandemic effect* was a binary variable that included dates of measurements outside the pandemic occurrence, i.e., before 2020 (0 = No) and from 2020 to 2021 (1 = Yes).

A panel regression model was used to identify the relationship between *unemployment rates* and *per capita GDP* as well as their interaction, over the EU countries with *unemployment rate* acting as the dependent variable and *gender* and *COVID-19* as independent variables. These calculations were done with the help of EViews V9 software.

3.2. Data

The dataset was retrieved from Eurostat (n.d.) and it contained 57 monthly observations (from January 2018 to September 2022) for 9 unemployment rates. The investigated unemployment rates are shown in Table 2 and referred to 33 countries. The investigated countries are shown in Table 3 and describe 32 European countries, Turkey and the USA. The *EU average* is also presented as a control variable to the European countries results. The *per capita GDP* of the investigated countries was also added in order to investigate the second research hypothesis. In addition, a dummy variable *COVID-19* was constructed with 0 indicating pre-COVID-19 values (before January 2020) and 1 for values dated from January 2020. Another dataset that was used included annual values from 2011 to 2022 of the per capita GDP of the investigated countries as well as their total unemployment rates. Raw data for this dataset was retrieved from wordbank.org (The World Bank, n.d.-a).

Table 2. Investigated variables

Variable name	Description
<i>unt</i>	Total unemployment
<i>unm</i>	Unemployment rate (males)
<i>unf</i>	Unemployment rate (females)
<i>un25t</i>	Total unemployment rate for the age group under 25
<i>un25m</i>	Unemployment rate for the age group under 25 (males)
<i>un25f</i>	Unemployment rate for the age group under 25 (females)
<i>n74t</i>	Total unemployment rate for the age group between 25-74
<i>un74m</i>	Unemployment rate for the age group between 25-74 (males)
<i>un74f</i>	Unemployment rate for the age group between 25-74 (females)

4. RESULTS

4.1. Descriptives

The results show the numerical and graphical description of the variables of interest, that is the unemployment rates of Greece, the EU average, countries of the EU, Turkey and the USA.

The measures of central tendency and dispersion of these variables are shown in Table 3 where it can be easily concluded that the EU mean total unemployment rate (Mean = 6.98, SD = 0.515) was lower compared to Turkey (Mean = 12.49, SD = 1.275) and higher compared to the USA (Mean = 5.03, SD = 2.405) but it had the lowest SD value showing smaller deviation from mean compared to these 2 countries. The same behavior was found in all unemployment rate categories. The difference between the control variable (*EU average*) and the EU countries of the dataset was small when the measure of comparison was the mean but the comparison of median showed larger deviations.

The largest unemployment rate of the dataset was found in the group over 25 years of age (total, males and females) which was near 16% for the EU average and the EU countries of the dataset, near 28% for females in Turkey and near 10% in the USA (all categories)

Oddly so, the coefficient of variation of the USA unemployment rates was unexpectedly high, higher compared to the EU average. This might as well indicate unweighted results or, if this is not the case, large deviations in unemployment rates between each state.

Table 3. Unemployment rates per category and per geographic location (countries or group of countries)

Location	Descriptive statistics	Total			Under 25			25-74		
		Total	Males	Females	Total	Males	Females	Total	Males	Females
The EU average	N	56	56	56	56	56	56	56	56	56
	Mean	6.98	6.70	7.32	16.26	16.26	16.26	6.11	5.78	6.50
	Median	7.00	6.70	7.30	16.10	16.10	16.15	6.10	5.80	6.55
	SD	0.515	0.515	0.517	1.430	1.336	1.564	0.446	0.452	0.449
	CV	0.07	0.08	0.07	0.09	0.08	0.10	0.07	0.08	0.07
	Range	1.80	1.90	1.80	5.40	5.20	6.00	1.70	1.80	1.60
	Maximum	6.00	5.70	6.40	13.80	13.70	13.50	5.20	4.80	5.70
The EU countries	Maximum	7.80	7.60	8.20	19.20	18.90	19.50	6.90	6.60	7.30
	N	1712	1712	1712	1702	1668	1668	1710	1710	1710
	Mean	6.28	6.11	6.49	15.92	16.09	16.08	5.40	5.19	5.67
	Median	5.70	5.70	5.50	14.10	14.30	13.40	4.80	4.80	4.90
	SD	3.111	2.628	3.857	7.739	7.205	9.032	2.939	2.462	3.680
	CV	0.50	0.43	0.59	0.49	0.45	0.56	0.54	0.47	0.65
	Range	19.7	16.5	25.1	44.1	40.5	54.2	18.4	15.8	23.9
Turkey	Minimum	1.7	1.4	1.8	3.9	3.2	2.4	1.5	1.1	1.5
	Maximum	21.4	17.9	26.9	48.0	43.7	56.6	19.9	16.9	25.4
	N	47	47	47	47	47	47	47	47	47
	Mean	12.49	11.33	14.90	23.25	20.50	28.34	10.50	9.71	12.17
	Median	13.00	11.90	14.70	24.30	21.60	28.80	10.90	10.20	12.00
	SD	1.275	1.445	1.119	2.407	2.514	2.573	1.114	1.309	1.028
	CV	0.10	0.13	0.08	0.10	0.12	0.09	0.11	0.13	0.08
The USA	Range	4.60	5.40	3.90	8.40	8.80	8.60	4.30	5.10	3.70
	Minimum	9.80	8.40	12.90	18.10	15.00	23.50	8.20	7.10	10.50
	Maximum	14.40	13.80	16.80	26.50	23.80	32.10	12.50	12.20	14.20
	N	56	56	56	56	56	56	56	56	56
	Mean	5.03	5.03	5.04	10.12	10.81	9.42	4.28	4.21	4.36
	Median	3.95	4.00	3.90	8.50	9.55	7.80	3.25	3.20	3.30
	SD	2.405	2.203	2.654	3.969	3.462	4.532	2.210	2.043	2.416
CV	0.48	0.44	0.53	0.39	0.32	0.48	0.52	0.48	0.55	
Range	11.20	10.00	12.70	19.60	16.60	23.70	10.20	9.30	11.40	
Minimum	3.50	3.50	3.40	7.80	8.00	6.60	2.80	2.70	2.80	
Maximum	14.70	13.50	16.10	27.40	24.60	30.30	13.00	12.00	14.20	

4.2. Mean comparison

The next step of the analysis was to identify COVID-19 occurrence as a statistically significant factor in unemployment rates, that is if mean-value differences of these rates are significant. Under Mann-Whitney U test it was found that the independent investigation of the EU countries leads to significant differences before and during COVID-19 in all unemployment rates. The largest percentage difference was found in females under 25 (Difference = -13.60%). The EU average did not reveal any significant differences and showed a decrease in the unemployment rates in all cases except females under 25 years of age.

Turkey showed an increase in almost all unemployment rates except total unemployment in females and in females over 25 years of age, still, only females under 25 years of age were significant.

The USA unemployment rates showed the largest percentage change compared to all other cases with percentages up to 69% in females over 25 years of age. Only unemployment rates for males under 25 did not show significant change ($p = 0.106$). This rate also showed the lowest percentage difference which was equal to 25.30%.

Greece showed a decrease in all unemployment rates. The percentage differences varied from -3.4% to 19.9% with prevailing percentages near 19%. All unemployment rates were significant except for females under 25 years of age ($p = 0.152$). This category had the smallest percentage difference which was equal -3.4%.

This seeming paradoxical set of results for Greece has its bases in the support of the state for telework as well as the support of jobs in tourism. These results will be discussed in detail below.

Table 4. Effect of the COVID-19 pandemic

Location	Unemployment	No			Yes			% change	p
		N	Mean	SD	N	Mean	SD		
The EU average	Unemployment total	24	7.11	0.349	32	6.88	0.598	-3.20%	0.146
	Unemployment males	24	6.84	0.36	32	6.59	0.589	-3.60%	0.137
	Unemployment females	24	7.44	0.355	32	7.22	0.599	-3.00%	0.155
	Unemployment under 25 total	24	16.17	0.652	32	16.32	1.817	0.90%	0.842
	Unemployment under 25 males	24	16.29	0.713	32	16.23	1.669	-0.40%	0.934
	Unemployment under 25 females	24	16.05	0.623	32	16.42	1.998	2.30%	0.778
	Unemployment over 25 total	24	6.25	0.33	32	6.01	0.498	-3.80%	0.081
	Unemployment over 25 males	24	5.92	0.328	32	5.68	0.506	-4.10%	0.090
	Unemployment over 25 females	24	6.64	0.328	32	6.39	0.499	-3.80%	0.069
The EU countries	Unemployment total	744	6.18	3.347	968	6.36	2.916	2.90%	0.001
	Unemployment males	744	6.01	2.774	968	6.19	2.509	3.20%	0.002
	Unemployment females	744	6.4	4.178	968	6.57	3.591	2.60%	< 0.001
	Unemployment under 25 total	744	15.1	7.88	958	16.57	7.569	9.70%	< 0.001
	Unemployment under 25 males	744	15.35	7.275	924	16.69	7.097	8.70%	< 0.001
	Unemployment under 25 females	744	14.95	9.026	924	16.99	8.939	13.60%	< 0.001
	Unemployment over 25 total	744	5.34	3.177	966	5.45	2.742	2.10%	0.003
	Unemployment over 25 males	744	5.1	2.614	966	5.26	2.338	3.00%	0.005
	Unemployment over 25 females	744	5.63	4.005	966	5.71	3.41	1.30%	0.003
Turkey	Unemployment total	24	12.33	1.566	23	12.64	0.886	2.50%	0.782
	Unemployment males	24	11.03	1.629	23	11.64	1.179	5.50%	0.469
	Unemployment females	24	15.03	1.422	23	14.77	0.688	-1.70%	0.587
	Unemployment under 25 total	24	22.59	2.932	23	23.95	1.461	6.00%	0.213
	Unemployment under 25 males	24	19.92	2.973	23	21.11	1.793	6.00%	0.301
	Unemployment under 25 females	24	27.43	2.92	23	29.29	1.752	6.80%	0.044
	Unemployment over 25 total	24	10.38	1.324	23	10.62	0.855	2.40%	0.873
	Unemployment over 25 males	24	9.42	1.432	23	10.02	1.117	6.40%	0.301
	Unemployment over 25 females	24	12.4	1.171	23	11.93	0.809	-3.80%	0.142
The USA	Unemployment total	24	3.78	0.169	32	5.96	2.853	57.60%	0.001
	Unemployment males	24	3.83	0.179	32	5.92	2.581	54.40%	0.001
	Unemployment females	24	3.73	0.176	32	6.02	3.188	61.30%	0.001
	Unemployment under 25 total	24	8.49	0.394	32	11.34	4.922	33.60%	0.020
	Unemployment under 25 males	24	9.44	0.406	32	11.83	4.314	25.30%	0.106
	Unemployment under 25 females	24	7.52	0.516	32	10.84	5.599	44.30%	< 0.001
	Unemployment over 25 total	24	3.07	0.16	32	5.19	2.582	68.90%	< 0.001
	Unemployment over 25 males	24	3.04	0.188	32	5.09	2.346	67.70%	< 0.001
	Unemployment over 25 females	24	3.13	0.171	32	5.29	2.877	69.00%	< 0.001
Greece	Unemployment total	24	18.80	1.274	32	15.33	2.316	-18.5%	< 0.001
	Unemployment males	24	15.08	1.023	32	12.11	2.413	-19.7%	< 0.001
	Unemployment females	24	23.53	1.644	32	19.41	2.326	-17.5%	< 0.001
	Unemployment under 25 total	24	39.31	3.184	32	35.63	5.623	-9.4%	0.005
	Unemployment under 25 males	24	35.95	3.072	32	30.62	6.779	-14.8%	< 0.001
	Unemployment under 25 females	24	43.31	3.968	32	41.84	6.333	-3.4%	0.152
	Unemployment over 25 total	24	17.66	1.192	32	14.31	2.247	-19.0%	< 0.001
	Unemployment over 25 males	24	13.95	.925	32	11.17	2.272	-19.9%	< 0.001
	Unemployment over 25 females	24	22.38	1.582	32	18.26	2.332	-18.4%	< 0.001

4.3. Panel regression

In order to identify COVID-19 as a factor of simultaneous change in unemployment rates over the EU countries (see also Figure 1), panel regression

was implemented with the *unemployment rate* acting as the dependent variable and *gender* and *COVID-19* as independent variables. Hausman test directed to a fixed effects model ($X^2 = 23.15$, $df = 2$, $p < 0.001$). This model is described with the help of

results in Table 5 and showed a significant model ($F = 57.96$, $p < 0.001$) with high interpretability ($R^2 = 0.863$).

All independent variables were significant with *per capita GDP* acting as a reductive variable showing that countries with higher per capita GDP are expected to present lower unemployment rates (see also Figure 2). The minus sign on *COVID-19* dummy variable showed that the pandemic resulted in a decrease in unemployment rates. The interaction term showed a positive sign showing that COVID-19 pandemic had the largest effect on countries with higher per capita GDP. This means that larger economies were hit the most showing larger unemployment rates.

Table 5. Fixed effect panel regression results

Variable	Coefficient	Std. error	t-statistic	Prob.
Per capita GDP	-0.000282	1.97E-05	-14.26606	0.0000
COVID-19	-4.997816	0.666503	-7.498569	0.0000
Per capita GDP * COVID-19	0.000106	1.31E-05	8.068882	0.0000
Constants	20.18919	0.813908	24.80525	0.0000

Figure 1. Per capita GDP vs total unemployment rates over categories of COVID-19

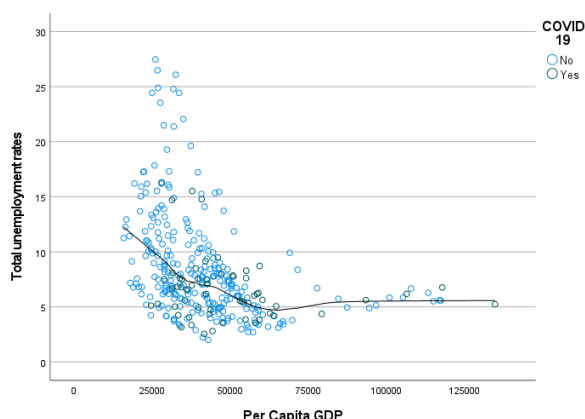
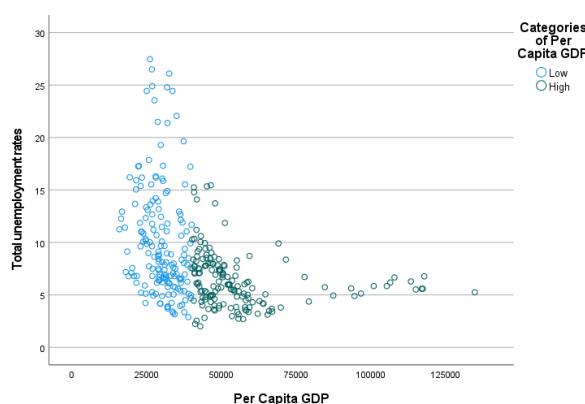


Figure 2. Per capita GDP vs total unemployment rates over categories of per capita GDP



5. DISCUSSION

In the last decade, the number of population groups facing issues of social exclusion has increased. Social

integration and labor market integration programs are considered increasingly important for ensuring social cohesion. At the same time, Greece presents a high rate of aging of its population, resulting in the future need to create new support units. In order to have a timely and valid reversal of the phenomenon, strategic policies should be made to strengthen the family and the child (Symeonidou, 2012).

The COVID-19 pandemic as well as the financial crisis that preceded it highlighted new forms of poverty the lack of housing, financial exclusion, energy poverty, over-indebted households, while it seems that women are more exposed to social risks than men. The population groups most affected and experiencing multiple and disproportionate forms of deprivation appear to be the elderly, large families, people with disabilities, single-parent families, people with chronic serious conditions, immigrants, low-income people, and minorities.

The factor of unstable work seems to affect health, as contemporary forms of poverty include people with precarious work (i.e., the working poor, the self-employed, and those employed part-time), households with medium and low work intensity with or no dependents. One of the characteristics of modern economies is that population groups that were not previously considered to be at risk of poverty are now exposed to poverty and social exclusion. The new economic and social context that has formed in Greece, both during and after the period of COVID-19 and the fiscal crisis and their consequences, as well as the fact that poverty is transferred from generation to generation and is linked to economic main factors that led to the formation of “new urban forms of poverty” through interconnected negative factors such as the loss of work, income, housing, a divorce, exclusion from insurance coverage (Balourdos & Naoumi, 2010).

In the medium term, poor households with few assets are likely to experience deeper or even extreme poverty due to limited access to banking services and products, as they have limited capacity to react. It should be noted that with the conditions created, maintaining work employment is not a criterion in order to remove the risk of poverty, as factors that lead to poverty through work should be taken into account. These factors include family structure, low-income or self-employed earnings, and precarious work. The above also includes those employed in uncertain and low-quality secondary jobs, which have low wages, i.e., it is a working population that experiences the structural adjustments of the labor market and is limited to the cycle of poverty (Economic and Social Council of Greece [OKE], 2014).

In addition, there is the so-called hidden poverty, which is associated with households that are forced to choose to cover certain expenses in order not to face an accumulation of debts, as a result of which their resources are limited to cover their basic living needs (Balourdos, 2012).

It should be noted that there is a direct connection between the concepts of poverty and social exclusion according to the theoretical traditions in poverty research in Europe (Petmesidou, 1996; Room, 1995). The modern concept of poverty is mainly associated with the redistribution of income and the lack of available

resources of the household or the individual and leads to a low level of consumption of goods or services. On the other hand, social exclusion is linked to social relationships, lack of social cohesion and limited social participation (Room, 1995).

The inability or limited ability of the welfare state to protect vulnerable social groups, the prolonged recession, as well as the crisis of informal support networks create favorable conditions for individuals not to escape from long-term poverty. It has been observed that children who grow up in poverty may be affected in terms of their development, future opportunities, socio-political behavior and may not be able to “escape” poverty as adults. Additionally, as mentioned above, the vulnerable social group of the elderly seems to be unable to access social services to meet their needs, despite the fact that in Greece the population is aging and the informal support networks of the elderly have been affected by the economic recession and the crisis of the COVID-19 pandemic (Hellenic Parliament, 2012).

6. CONCLUSION

What can be said about the response to the COVID-19 crisis in Greece is that Greece (the EU country), with several challenges in the operation of the National Health System and with a fragile economy, managed to cope better than countries which have on the one hand a more developed economy and on the other hand have a developed social state. In an attempt to understand the response to the crisis of COVID-19, the differentiation of the social structure of Greece is visible. In Greece, there are to a much lesser extent jobs in heavy industry, while small and medium-sized enterprises occupy the largest share of the labor market. This was also one of the reasons why the government followed the policy of financial support for both these companies and the workers. Furthermore, due to the underdevelopment of the welfare state, care was primarily based on the family environment.

The purpose of this paper is to investigate the effects of the COVID-19 pandemic on unemployment rates in European countries and in Greece. The EU average was also used as a control variable and Turkey and the USA rates for comparison. Both research hypotheses were confirmed. Under the ambiguity of the EU average and separate European countries it was shown that, in total, the pandemic did increase the unemployment rates, by sex by age, and both.

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These results are supported by the findings of the USA unemployment rates enhanced by the statistically significant interaction that was bound between the pandemic and higher economies, as expressed with the per capita GDP index.

As early as 2020, the effect of the pandemic on unemployment most affected women labor (ILO, 2020) as well as it affected mostly stronger economies, i.e., the G20 countries. According to Konle-Seidl and Picarella (2021), the unemployment rates rose after during the pandemic especially in under 25 years of age category. A newer estimation of the effect of the pandemic on the labor market (Francis-Devine et al., 2022) reports that the pragmatic negative results of unemployment involved ethnic minorities, women and low-paid jobs. This reference can be accurately connected to the aftermath of the pandemic to language handling jobs (Duggan, 2022; Busby, 2022).

Although there can be no argument that the effect of the pandemic had a negative impact on the labor market, in October 2022 when we were near the end of this disease, more detailed results show that state intervention helped to maintain an equilibrium between labor market demand and supply. Unarguably young people lose several job openings and delight in their career start (Lambovska et al., 2021), but in several cases, measures such as paid salaries for employees were businesses temporarily closed or the provision of economic to businesses that did fire employees seemed to work. Having this in mind, the results in the case of Greece, which revealed reversed unemployment rates than expected, showing significantly lowered unemployment rates, is easier to comprehend. State provisions, as well as tourism, relate jobs helped Greece’s labor market to withstand the negative effects of the pandemic, as in neighboring country Turkey, which has not joined the euro zone yet and is not obliged to follow the EU directives, showed a (non-significant) increase in almost all unemployment rates. Therefore, as a concluding remark, we would like to point out the positive results of the EU partnerships on this matter, which although did not show overall positive results, yet managed to maintain certain stability in its labor market.

Finally, it is useful to mention that the researchers approached the reality that has been shaped by the data so far from the effects of COVID-19 and it is their desire to study how in the future states will try to heal the social impact that it has formed when the pandemic is over.

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APPENDIX

Table A.1. Investigated countries

No.	Country	No.	Country	No.	Country
1.	Austria	12.	Greece	23.	Poland
2.	Belgium	13.	Hungary	24.	Portugal
3.	Bulgaria	14.	Iceland	25.	Romania
4.	Croatia	15.	Ireland	26.	Slovakia
5.	Cyprus	16.	Italy	27.	Slovenia
6.	Czechia	17.	Latvia	28.	Spain
7.	Denmark	18.	Lithuania	29.	Sweden
8.	Estonia	19.	Luxembourg	30.	Switzerland
9.	Finland	20.	Malta	31.	Turkey
10.	France	21.	Netherlands	32.	United Kingdom
11.	Germany	22.	Norway	33.	United States