

THE IMPACT OF THE PANDEMIC ON SME EMPLOYEES IN EU MEMBER STATES

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Abstract

Small and medium-sized enterprises play a very important role in the country's economy, as they contribute significantly to growth and job creation. However, small and medium-sized businesses around the world have been severely affected by the COVID-19 pandemic. The main objective of this paper is to investigate how the pandemic affected the performance of small and medium enterprises and how effective the measures taken by the state in combating the effects on this sector were. We also aim to highlight the measures taken to save employees from unemployment. Through its content, the paper indicates that the vast majority of employees were severely affected by the pandemic, with HoReCa employees being the ones who suffered the most. The data used in this research are from 2020, and the dependent variable is the number of employees in small and medium-sized enterprises, and the independent variables are the unemployment rate, the inflation rate, the annual growth rate of real GDP and the incidence rate of households. COVID per 100,000 inhabitants. Among the most important measures taken by the authorities to reduce the effects of the pandemic on SMEs and employees are the state granting 75% unemployment benefits, the use of new sources of funding (grants, state-funded programs, etc.).

Keywords: COVID-19, employees, unemployment, measures taken.

1. Introduction

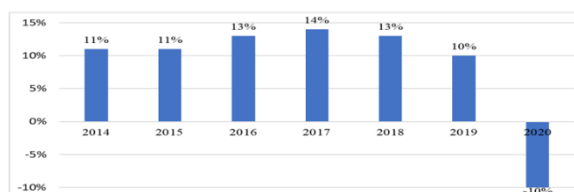
Small and medium-sized enterprises are the backbone of the economy. They represent 99% of companies in the European Union, employing over 100 million people. SMEs also contribute innovative solutions to climate change, with those emerging in the economy being key to the transition to a sustainable and digital economy. Small and medium-sized enterprises are of vital importance in terms of Europe's competitiveness and prosperity. In addition to the significant social impact, the COVID-19 pandemic has also caused a major shock to the European Union's economies, as the spread of the virus has led to disruptions in supply chains, volatility in financial markets and declining consumer demand for certain key sectors. which tourism and travel.

The COVID-19 pandemic has affected all countries in the world, affecting economic activity both globally and nationally. As a result of the "lock-downs" imposed in each country, economic activity decreased significantly. Thus, these decreases also had effects on the employment rate, and therefore on the unemployment rate. The crisis caused by the COVID-19 pandemic has negatively affected employees in all fields, especially those in the hospitality and tourism industry. As a result of the state of emergency, SMEs in Europe have felt the losses caused by the restrictions imposed. The problem facing the SME sector is that the COVID-19 pandemic has gone from a health crisis to

an economic crisis. That's why business owners have tried to survive the two crises by using the resources at their disposal.

According to a study conducted by Oracle, the COVID-19 pandemic affected employees around the world, causing them to feel lonely and out of control¹. Also, globally, over 62% of workers consider 2021 to be the most stressful year at work. In the last year, 80% of employees worldwide said they were affected by the pandemic, 29% said they were experiencing financial difficulties, 28% said they had suffered a mental deterioration, 25% did not feel motivated to continue their careers and 23 They felt separated from their own lives. In 2020, the number of employees in SMEs decreased by 10%, due to the restrictions imposed by the pandemic. In figure 1 we presented the evolution of the number of employees in the EU member states, in the period 2014-2020.

Figure 1. Evolution of the number of employees, at EU level, in the period 2014-2020



Source: European Commission, 2020. An SME strategy for a sustainable and digital Europe. Brussels: EC,

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¹ <https://www.oracle.com/ro/news/announcement/people-believe-robots-can-support-their-career-2021-10-26/>.

2. Analysis of the specialized literature

Some authors analyze the impact of the COVID-19 pandemic on the labor market in EU member states². It also looked at measures taken by each EU member state to combat the social effects of the pandemic crisis, as well as how the EU's efforts to implement the objectives of the European Pillar of Social Rights and more specifically: Labor and Employment, Skills and Innovation, Welfare Status and Social Protection, all of which were discussed at the Porto Social Summit on 7 May 2021. The author also analyzed the evolution of labor supply and demand, taking Considering three macroeconomic indicators: employment rate, unemployment rate and index of actual hours worked, data from Eurostat. The author's conclusions are based on capitalizing on the challenges of the pandemic crisis and transforming them into new opportunities for development, innovation and job creation. Also, an important aspect to consider in the future is the digitalization of the business and the implementation of a sustainable economy, based on green energy.

The effects of the pandemic are being felt significantly on the economies of the countries of the European Union³. Many companies were forced to close their jobs temporarily or permanently, so the employees were laid off. According to the study conducted by the National Council for Small and Medium Enterprises in Romania, among the most important effects that entrepreneurs face are: massive reduction in sales, temporary or permanent closure of companies, delays in payment of suppliers, restriction of activity, etc. Thus, it was concluded that the most affected areas are HoReCa, air transport, tourism, culture, etc.

A number of authors have analyzed the link between the epidemiological evolution of COVID-19 and its effects on the macroeconomic environment⁴. Thus, they analyzed the link between the COVID-19 positivity rate and the unemployment rate. The authors found that there is a direct link between the number of cases of COVID-19, the unemployment rate and global economic activity. A number of authors analyzed the impact of the COVID-19 pandemic on SME employees and used hierarchical linear models to observe the link

between unemployment, psychological distress among young people (20-35 years), and risk factors⁵.

Thus, in the literature, unemployment is independently associated with greater psychological distress and confidence and optimism have declined significantly during the pandemic, due to financial stress and loneliness. One of the authors findings is that policy makers need to develop and expand initiatives in various areas to help reduce the mental health consequences of rising unemployment. Interventions in the labor market must also be promoted so that young people can be helped to find a job and integrate into employment. The results of the study show that the effect of unemployment on citizens can be reduced by a greater sense of self-control, confidence and optimism.

Another author analyzed unemployment from two points of view: as a mechanism of propagation and as socioeconomic costs⁶. It has been found that in order to stop the social and economic impact of unemployment, fiscal policy can be designed as preparation and prevention. The conventional view of unemployment is that it is either a failure of the market or a feature of the market. The first aspect comes from the imperfections of the market (salary rigidity, etc.). Globalization, automation and job loss are perceived as unavoidable.

Unemployment also causes very high direct and indirect costs for both the economy and individuals.

Other authors⁷ have examined the role of entrepreneurship in the process of reducing unemployment, concluding that certain existing barriers such as access to finance and the inadequate structure of the labor market contribute to impeding the development of the SME sector. Some authors consider that a period of unemployment causes a permanent loss of earnings, throughout life, because the unemployed are sicker and spend more on health expenses (depression, anxiety, etc.)⁸. All these major health effects create a circle that prevents the unemployed from re-entering the labor market. In the years following the Great Recession, firms refused to hire the unemployed and included clauses such as "the unemployed should not apply." However, it should be noted that this way of rejecting the unemployed has been challenged and rejected over the years. Some

² Dumitrescu, A. L., (2021), *The impact of the COVID-19 pandemic on the labor markets of the Member States of the European Union*, Journal of Global Economics. 2021, vol. 13 Issue 1.

³ Pripoaie, R., (2021), *The effects of the COVID-19 pandemic on unemployment and inflation*, Economic Development and Research Conference 2021, Chisinau, Moldova.

⁴ Goes, M., Gallo, E., (2020), *Infection Is the Cycle: Unemployment, Output and Economic Policies in the COVID-19 Pandemic*, Review of Political Economy.

⁵ Achdut, N., Refaeli, T., (2020), *Unemployment and Psychological Distress among Young People during the COVID-19 Pandemic: Psychological Resources and Risk Factor*, International Journal of Environmental Research and Public Health.

⁶ Tchereva, P., R., (2017), *Unemployment: The silent epidemic*, Working Paper no. 895.

⁷ Botric, V., (2012), *Regional Differences in Self-Employment: Evidence from Croatia*, Economic Research-Ekonomska Istraživanja.

⁸ Abraham, K., Haltiwanger, J., Sandusky, K., Spletzer, J., 2016, *The Consequences of Long Term Unemployment: Evidence from Matched Employer/Employee Data*, NBER Working Paper no. 22665. Cambridge, MA: National Bureau of Economic Research.

authors found that employment history and duration of unemployment have a very significant negative impact on the likelihood of subsequent employment.

Also, during the pandemic, in developed countries, the demand for unemployment benefits rose sharply as a result of the overwhelming number of people who lost their jobs. There were differences in the demographic group, educational level and income of each household.

3. Data and methodology

The main purpose of this paper is to investigate whether the COVID-19 pandemic has affected the performance of small and medium enterprises and whether employees in this sector have experienced losses. In order to achieve a more realistic and complex picture of the SME sector, the analysis includes all EU Member States, the analysis period being 2020. The dependent variable of this study is the number of employees in SMEs and as independent variables I have included the unemployment rate, the inflation rate, the real GDP growth rate, the incidence rate of COVID cases, according to the data presented in Table 1. I must also specify that I chose these data due to their availability for the 27 countries members of the European Union.

Table 1: Description of variables

Variable name	Variable symbol	Description	Unit	Data source
<i>Dependent variable</i>				
Number of employees in SMEs	Number of employees	Number of employees in SMEs	%	Eurostat
<i>Independent variable</i>				
Unemployment rate	Rate unemp	Unemployment rate	%	World Bank
Inflation rate	Infl	Inflation rate (average annual rate)	%	World Bank
The economic activity	Gdp_Growth	Annual real GDP growth rate	%	World Bank
Covid incidence rate cumulated per 100,000 inhabitants	Covid incidence rate	Incidence rate of covid cases cumulated per 100,000 inhabitants	%	European Centre for Disease Prevention and Control

Source: own data processing according to the specialized literature

The dependent variable used in this study is the number of employees in small and medium-sized enterprises, an indicator that is expressed as an annual percentage change. We chose this indicator because it is a way to measure the performance of SMEs. We also considered the impact of the pandemic on employees in small and medium-sized enterprises, where a large number of them faced unemployment during the pandemic.

The unemployment rate is defined as the job-seeking population that is looking for a job but cannot find a job during a certain period. The definitions of labor and unemployment differ depending on the country and the country's economy.

The inflation rate is defined as the general increase in prices (expressed as a percentage) over a certain period of time.

The rate of economic growth is expressed by the indicator of the annual growth rate of real GDP, which expresses the value of goods and services produced in a country during a year, but in which prices are expressed in the prices of a reference year.

The incidence rate of COVID-19 cases is an indicator that expresses the evolution of the pandemic at the national level, a very important indicator for the economy because most of the measures have been adopted as a result of its sharp increase.

4. Results and discussions

Next, I analyzed the data that I will use in descriptive statistics, correlation analysis, and regression analysis. The calculations were performed using the EViews econometric software. Table 2 presents descriptive statistics of the variables included in the study and this table shows that the highest standard deviation is recorded by the variable incidence rate of COVID cases per 100,000 inhabitants, which demonstrates the impact of this pandemic on individuals.

Table 2. Descriptive statistics of the variables included in the study

Variable	Min.	Max.	Mean	Median	Std. Dev.	Skewness	Kurtosis	Obs.
Number of employees in SMEs	-0.482515	6.513346	1.769006	1.644056	1.436332	1.383069	5.759113	27
Unemployment rate	2.01000	17.31000	6.039259	5.360000	3.316261	1.976258	7.001548	27
Inflation rate	0.250371	3.827854	1.704965	1.630523	1.001963	0.314736	2.120876	27
The economic activity	0.410278	5.539566	2.995129	2.682760	1.400894	0.167694	1.979775	27
Covid incidence rate cumulated per 100,000 inhabitants	100.2000	1376.100	544.2259	501.4000	322.6119	0.793557	3.036697	27

Source: own calculations based on EViews econometric software

In Table 3 we present the results of the correlation analysis and we can see that the unemployment rate is positively related to the impact of the pandemic on employees, having a significant effect on them and the performance of the SME sector, with a statistically significant value less than 0.01.

Table 3. Correlation matrix

	Number of employees	Unemp	Infl	GDP_Growth	Covid incidence rate
Number of employees	1.0000				
Unemp	0.450341***	1.0000			
Infl	-0.374142	-0.584508	1.0000		
GDP_Growth	0.109713	-0.368791	0.310404	1.0000	
Covid incidence rate	-0.107213	-0.255683	0.198813	0.165806	1.0000

*, **, *** indicates that the coefficients are significant at 90%, 95% and 99%

Source: own calculations based on EViews econometric software

The table below shows the results of the regression analysis and by performing it we determined which of the variables included in the study are the main determinants of the decrease in the performance of SMEs, respectively the number of employees. According to the data presented, it is observed that the unemployment rate and GDP Growth are statistically significant. Based on the statistical results and the statistically significant coefficients, we can conclude that the unemployment rate and the economic activity are the main factors that affect the employees during the pandemic period.

Table 4. Regression results – model 1

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	0.88063	1.288342	0.068354	0.9461
Rate unemp.	0.194173***	0.097791	1.985588	0.0597
Infl.	-0.311791	0.313167	-0.995605	0.3303
GDP_Growth	0.352299***	0.195755	1.799690	0.0856
Covid incidence rate	-2.81E-05	0.000812	-0.034617	0.9727
R-squared	0.321645	Mean dependent var		1.769006
Adj. R-squared	0.198308	S.D. dependent var		1.436332
S.E. of regression	1.286052	Durbin-Watson stat		1.698786
Sum squared resid	36.38648			
F-statistic	2.607852			
Prob (F-statistic)	0.063518			

*, **, *** indicates that the coefficients are significant at 1%, 5% and 10%

Source: own calculations based on EViews econometric software

The results show that an increase in the unemployment rate can lead to a decrease in the performance of the SME sector, having a significant influence on employees as well. According to the R-squared value, we find that 32.16% of the variation in the number of employees in SMEs is explained by the model. Thus, we can conclude that the independent variables included in the study have an impact on employees and the SME sector, especially during the pandemic period, as shown by the results: R-squared (32.16%) and Adj. R-squared (19.83%).

For the impact of the COVID-19 incidence rate the sign is the anticipated one but the small sample size increased the volatility of the estimator with effect on the significance level. For the robustness of the analysis, we estimated separate models in which the number of employees was regressed depending on the incidence of the COVID rate, the incidence of the COVID rate and the increase in GDP, respectively the incidence of the COVID rate and the unemployment rate. Also, due to the small number of available observations, the results obtained are not econometric significant, but the meaning of the influence of the variable. The incidence of the COVID rate remains the same as in the global model⁹.

Despite the fact that it is not a new problem in the empirical field, the analysis performed is subject to some shortcomings. Thus, the short period of data analysis is caused by the unavailability of data on COVID cases, given that the first cases of COVID-19 appeared in the European Union in March 2020. Thus, our analysis refers to a single year (2020).

5. Conclusions

Small and medium-sized enterprises in the European Union have been severely affected by the COVID-19 pandemic. Thus, the blockade created and the quarantine of the population led to their food and the increase in the number of unemployed. Small and medium-sized enterprises make an overwhelming contribution to economic development, being the main employees in the economy. Thus, SMEs provide over 65.8% of existing jobs, which demonstrates the importance of access to finance for this sector vital to the functioning of an economy. By 2020, 90% of SMEs say they are economically affected by the consequences of the pandemic, with the most affected sectors being services, construction and industry¹⁰. The economic impact caused by the pandemic crisis varies from one sector to another, and from one company to another, because it depends on a number of factors. Among the biggest factors are the ability to adapt to changes in the economy, the existence of stocks, etc.

In the early stages of the COVID-19 pandemic crisis, European governments provided support to SMEs by introducing short-term financial assistance measures to reduce the effects these companies faced. Among the most important measures adopted by the state, in order to save this sector are the postponement of the payment of taxes, the application of short-term unemployment schemes. The pandemic crisis has also paid special attention to employees in terms of their

⁹ Jula, D., Jula, N. (2022), *Econometrics*, 5th ed., Mustang Publishing House, Bucharest, pp. 85-87.

¹⁰ https://economie.hotnews.ro/stiri-finante_banci-24049654-impactul-pandemiei-asupra-imm-urilor-romanesti-masuri-luat-alte-state-care-putea-putira-autoritatile-romane-planuri-afaceri- simplified-fast-procedures-for-granting-guarantees-innovation-stimulation.htm.

training. In conclusion, despite the vital role that SMEs play in the economy, this sector has been very vulnerable to the pandemic crisis. Thus, investing in SMEs and their digital transformation provides an opportunity for Europe's economy to recover in a way that has lasting and effective effects.

As a result of the statistical results obtained, we can conclude that the increase in the unemployment rate and the growth rate of real GDP are the main determinants of the decrease in the number of employees in small and medium enterprises, both during the pandemic and before the pandemic. The conditions imposed by the pandemic (traffic restrictions, remote work, access by a limited number of people) have caused a difficult situation for SMEs around the world, as many companies have had to cease operations either temporarily or permanently, which led the state to take a number of measures in each country to support employees. Therefore, given the fact that the

impact of the pandemic crisis was strongly felt, both in Romania and in all EU member states, I must point out that the results of the study are as expected.

Due to the small sample size, the risk of estimators not being significant slightly exceeds the standard 5% threshold (the probability of F-statistic is 0.06), which subsequently requires further analysis, as the data is published.

Thus, as the literature shows, access to finance is of vital importance in the development of the SME sector, especially today, when companies face a low degree of absorption of skilled labor and face major problems in terms of It is. regarding competitiveness.

As a future direction of research, we intend to analyze empirically how the pandemic has affected each type of enterprise and to carry out the analysis for the year 2021. I also consider that it would be interesting to include in the research the potential candidate countries for the European Union.

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