

Analysis of the Composition and Trends in the European Union Labor Market Between 2010 and 2020

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Abstract:

This article aims, through research methods such as quantitative and qualitative analysis (empirical and descriptive), as well as comparison and interpretation, to highlight the composition and trends in the EU labor market between 2010-2020, given the link and mutual conditioning between socio-economic phenomena and the labor market, as part of the realities and trends of European social policy. Thus, the aim was to identify the differences between the Member States of the European Union, but also compared to the EU average, by analyzing the performance and the degree of fulfillment of the indicators pre-established by public policies, as specific objectives of social policy, aiming to ensure an adequate and non-discriminatory framework so that all citizens have equal access to resources and opportunities.

In order to present the trend in the evolution of employment, we analyzed the indicators regarding the active population, activity rates, employment rate, employed population, unemployment, unemployment rate, inactive population, but also the Job vacancy rate (annual average). Last but not least, we analyzed a delicate issue at the level of some member states of the European Union, highlighting both shortcomings in the transition from the education system to the labor market, as well as shortcomings in terms of employment of a category of population, namely NEET rate.

Keywords: social policy; employment; active population; unemployment rate; NEET.

JEL Classification: J21; J64.

Introduction

The European Union's social policy aims, among other things, to promote employment, to increase social welfare, to fight poverty and social exclusion, but also to ensure social protection (Eurofound, 2022). As we know, these are specific objectives of the European Union, but also of the Member States, taken individually, being set by the Europe 2020 Strategy and the European Pillar of Social Rights. Also, the social and economic aspects cannot be separated. Income inequalities of the population are mainly determined by the existence of labor income inequality (Inchauste & Karver, 2018).

The realities and trends of the European Union's social policy cannot be fully highlighted without an analysis of employment, given the reciprocal link and conditioning between socio-economic phenomena and the composition and trends in the labor market. Therefore, we believe that the analysis of social policy must also take into account indicators of labor force, such as the active population, employment, unemployment and other aspects that give us an image of the socio-economic life of each nation and on the EU as a whole. The indissoluble link between national and European policies, with a direct impact on European labor migration, has been analyzed by other authors (Héritier, 2005; Ette 7 Faist, 2007).

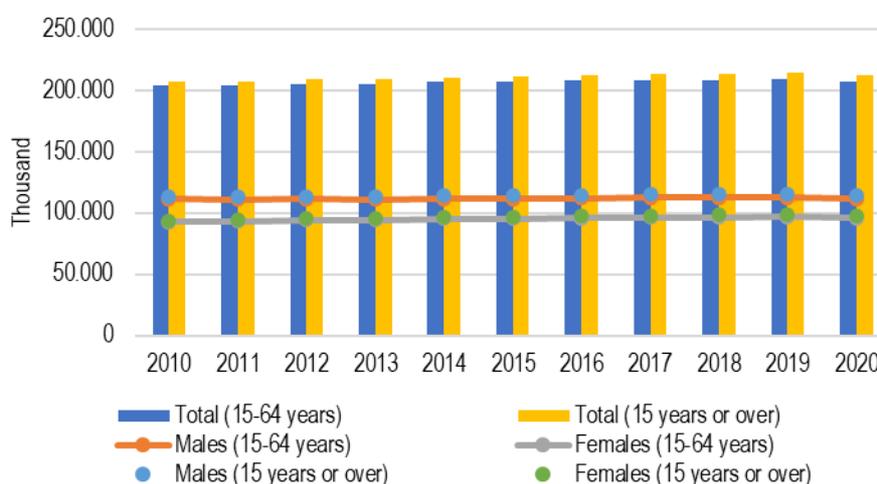
The influence of the COVID-19 pandemic on the entire economic system must not be overlooked; through the tensions and uncertainty created has changed labor market behavior, composition and trends in the European labor market, with an impact on national policies (Bieszk-Stolorz and Krzysztof, 2022). The influence of the COVID-19 pandemic is observed in our analysis at the level of 2020, after a trend on the labor market highlighted in the period 2010-2019.

1. The Evolution of the Labor Market: Composition and Trends

To obtain relevant and conclusive results, we will first analyze the indicator on the active population of the European Union, both for people aged 15-64 and for people aged 15 and over. According to Figure 1, the active population of the EU fluctuated slightly in the period 2010-2019, with a general trend of slight increase. In 2020, in the context of the COVID-19 pandemic, there is an obvious decrease compared to the previous year, by 2,448.4 thousand for people aged 15-64 and by 2,372.9 thousand for people aged 15 and over, according to the latest revised statistics provided by Eurostat.

Thus, in 2020, the active population in the EU was 206,665.2 thousand for people aged 15-64 and 211,898.1 thousand for people aged 15 and over. There is a higher participation of the male population in the active population of the European Union. Thus, at the level of 2020, the male population, economically active, for people aged 15-64 represented 53.78% of the total active population (111,154.2 thousand), decreasing compared to 2010, when it reached a percentage of 54.61% (111,425.5 thousand) of the total active population. The female population registered in 2020 a share of 46.22% (95,511.1 thousand) of the total active population, increasing compared to 2010, when it had a share of 45.39% (92,596.9 thousand). For people aged 15 and over, the share of the male population in 2020 was 53.97% (114,362.9 thousand), again, decreasing, compared to 2010, when it represented 54.72% (113,421.7 thousand) of the total active population. In total, the active female population aged 15 and over increased in the period 2010-2020, from 93,844.2 thousand (45.28% of the total active population) to 97,535.2 thousand (46.03% of the total active population).

Figure 1. Active population (total, by sex and age class), EU-27, 2010-2020, thousand persons

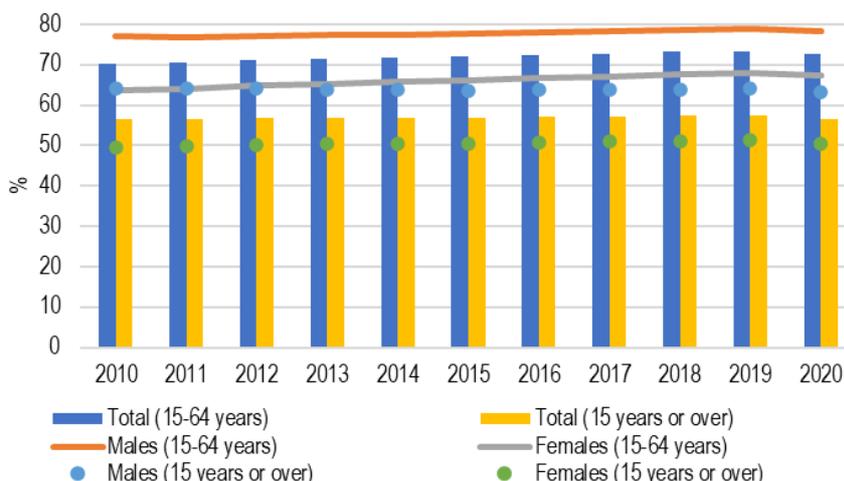


Source: own construction based on Eurostat database

The percentage of active people in relation to the total comparable population gives us the activity rate. Thus, the share of the active population of a certain age group in the total population of the same age group is observed with the help of the activity rate (in this case, age group 15-64 and age group 15 and over).

The activity rate of people aged 15-64 (working age population) registered a constant increase in the period 2010-2019, from 70.3% to 73.4%, but decreased in 2020 to 72.7%, in the context of the COVID-19 pandemic, according to Figure 2. For people aged 15 and over, the activity rate had an oscillating evolution, with equal values in 2010 and 2020 (56.6%) and with a maximum of 57.4% in 2019. In 2020, the highest activity rate for people aged 15-64 was recorded in Sweden (82.5%), followed by the Netherlands (80.9%) and Denmark (79.0%). For people aged 15 and over, Sweden had a rate of 66.2%. Compared to 2019, increases in the activity rate for people aged 15 and over were recorded only in Latvia (by 0.5%), Lithuania (by 0.5%), Luxembourg (by 0.2%) and Malta (by 0.8%).

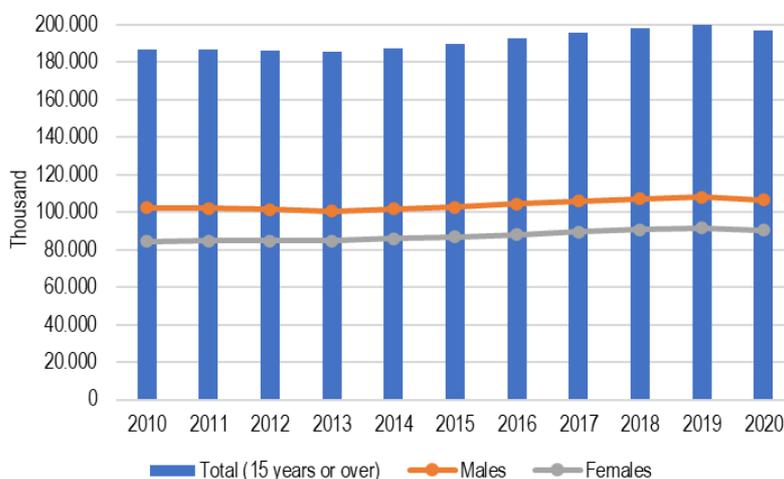
Figure 2. Activity rates (total, by sex and age class), EU-27, 2010-2020 (%)



Source: own construction based on Eurostat database

The labor market analysis cannot be complete without including the status of the labor force in the analysis. According to Eurostat and based on the definition provided by the International Labor Organization, the active population includes employed and unemployed persons. The employed population of the European Union was 196,897.1 thousand in 2020, after an oscillating evolution in the period 2010-2019, according to Figure 3, with a minimum of 185,474.9 thousand in 2013 and a maximum of 199,903.7 thousand in 2019. By sex, the male population had a higher share in the total employed population, of 54.79% in 2010 (102,411.5 thousand) and 54.13% in 2020 (106,572.5 thousand). The female population increased from 84,499.6 thousand (2010) to 91,750.2 thousand (2019), decreasing to 90,324.6 thousand in 2020. Both the female population and the male population had an oscillating evolution of their share in the employed population of the European Union, in the period 2010-2013, followed by constant increases between 2014-2019 and a decrease in 2020.

Figure 3. Employment (total and by sex), 15 years or over, EU-27, 2010-2020, thousand persons

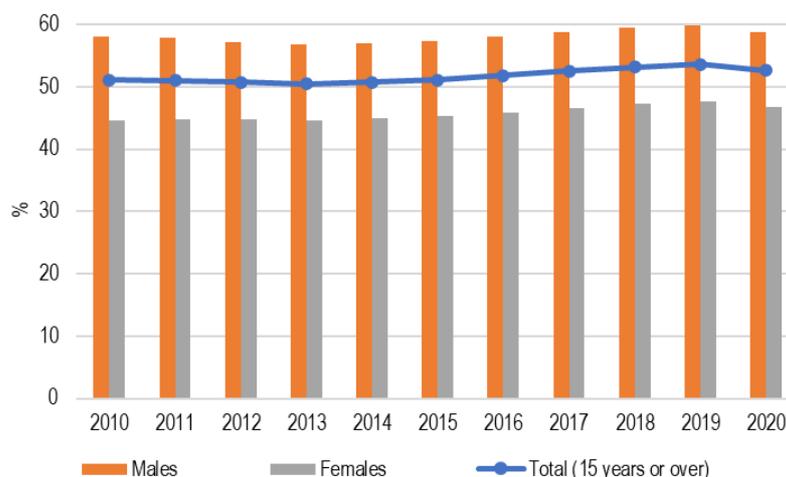


Source: own construction based on Eurostat database

The employment rate for people aged 15 and over in the European Union (as a percentage of the employed population in the age group 15 and over in the total population in the same age group) was 52.6% in 2020, after an evolution oscillating, with a minimum of 50.4% in 2013 and a maximum of 53.6% in 2019.

As we can see in Figure 4 below, the values are higher among the male population (58.0% in 2010 and 58.8% in 2020) compared to the female population (44.6% in 2010 and 46.8% in 2020). Although the evolution was oscillating in the period 2010-2012, there was a steady increase in the employment rate for both sexes until 2019. Among the Member States of the European Union, the highest employment rates in 2020 were recorded in the Netherlands (62.1%), Sweden (60.7%) and Malta (59.6%). At the opposite end, the lowest employment rates in 2020 are in Greece (42.7%), Italy (44.1%), Croatia (47.2%) and Spain (47.9%).

Figure 4. Employment rates (total and by sex), 15 years or over, EU-27, 2010-2020 (%)

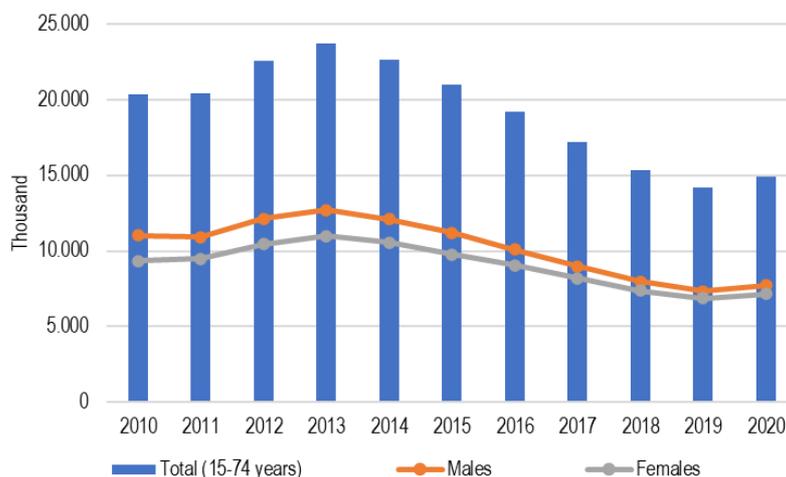


Source: own construction based on Eurostat database

The other component of the active population, the unemployed are defined by Eurostat and the ILO as people aged 15-74, who did not have a job / activity as a result of which they can earn income during the reference period, they are looking for a job (in the last four weeks) and they are available to start working in the next 2 weeks. According to Figure 5, in the period 2010-2013, the total number of unemployed increased from 20,355 thousand to 23,717 thousand, in 2014 and 2015 there was an oscillating evolution, and starting with 2016, the number began to decrease steadily, until 14,227 thousand in 2019. Due to the restriction of economic activity in the context of the COVID-19 pandemic, in 2020, the number of unemployed increased to 14,888 thousand.

It is also noted that analyzing by sex, the number of unemployed is higher among the male population, with a trend of approximation of the values of the two sexes. Thus, in 2010, the male unemployed numbered 11,010 thousand (corresponding to 54.09% of the total number of unemployed) and the female unemployed numbered 9,345 thousand (corresponding to 45.91% of the total number of unemployed). In 2020, the male unemployed numbered 7,735 thousand (corresponding to 51.95% of the total number of unemployed) and the female unemployed numbered 7,153 thousand (corresponding to 48.05% of the total number of unemployed).

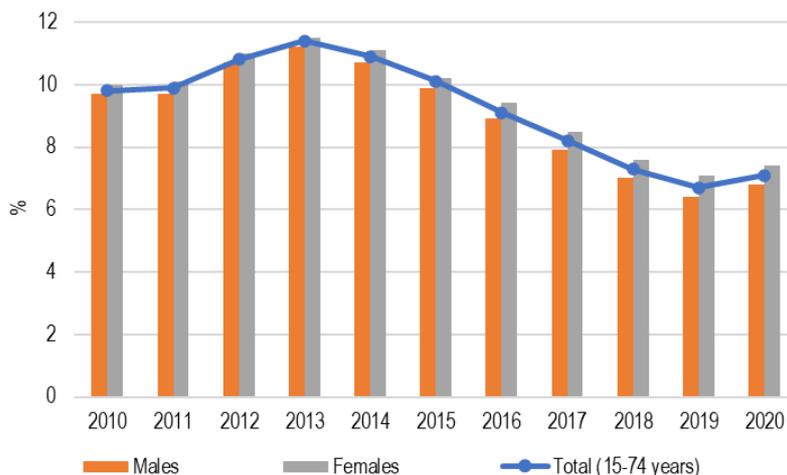
Figure 5. Unemployment (total and by sex), from 15 to 74 years, EU-27, 2010-2020, thousand persons



Source: own construction based on Eurostat database

In addition to the number of unemployed, we also analyzed the unemployment rate, as a share of the number of unemployed in the labor force (active population). Thus, after a period of growth between 2010-2013, with a maximum recorded in 2013 of 11.4%, the unemployment rate decreased steadily until 2019, to 6.7%.

Figure 6. Unemployment rates (total and by sex), from 15 to 74 years, EU-27, 2010-2020 (%)

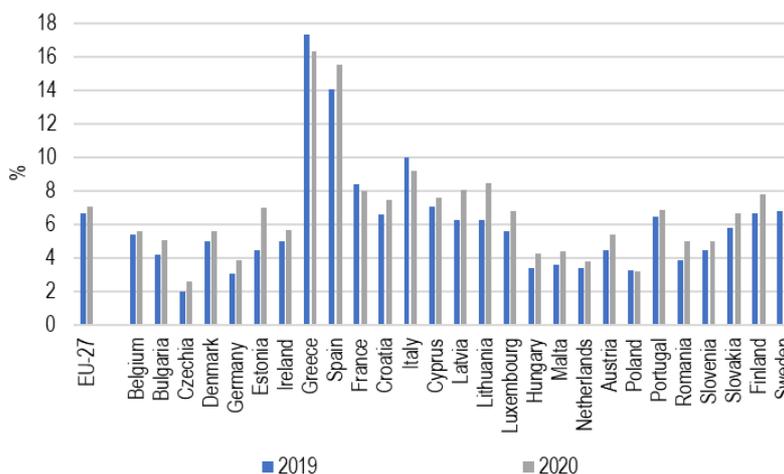


Source: own construction based on Eurostat database

In 2020, the unemployment rate reached 7.1%. The unemployment rate is higher among the female population, according to Figure 6 was 7.4% in 2020, decreasing compared to 2010, when it registered a share of 10.0% and after a maximum of 11.5%, in 2013. The unemployment rate among the male population was 6.8% in 2020, also down from 2010, when it reached a percentage of 9.7% and after a maximum of 11.2% in 2013.

In Figure 7 we present the unemployment rates at the level of the Member States of the European Union, for the years 2019 and 2020, to observe the interaction with COVID-19. Thus, in 2020, most Member States recorded increases in unemployment rates, like the EU average. Exceptions were Greece (unemployment rate fell from 17.3% to 16.3%), France (unemployment rate fell from 8.4% to 8%), Italy (unemployment rate fell from 10.0% to 9.2%) and Poland (unemployment rate fell from 3.3% to 3.2%). At the same time, the Figure 7 below allows us to observe that 10 countries registered in 2020 unemployment rates above the EU average (7.1%): Cyprus (7.6%), Croatia (7.5%), Finland (7.8%), France (8.0%), Greece (16.3%), Italy (9.2%), Latvia (8.1%), Lithuania (8.5%), Spain (15.5%) and Sweden (8.3%).

Figure 7. Unemployment rates (from 15 to 74 years), EU-27 total and Member States, 2019 and 2020 (%)

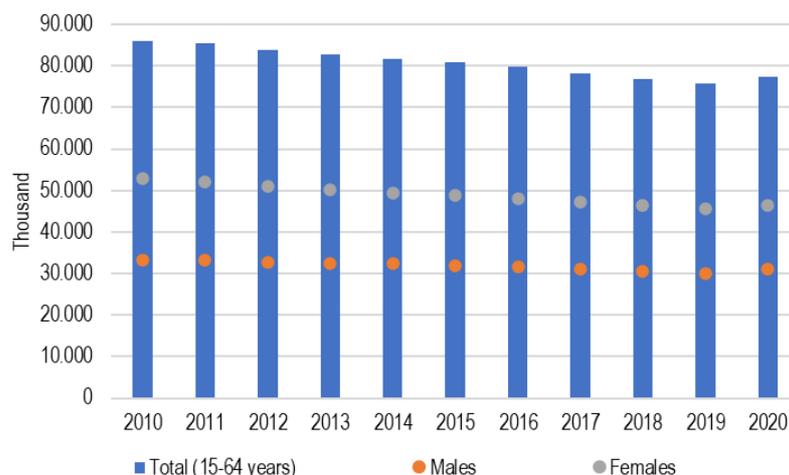


Source: own construction based on Eurostat database

Another important indicator in the analysis of the labor market is the economically inactive population (as people who neither worked nor were unemployed during the reference period). We note that the inactive population of the European Union for people aged 15-64, had a decreasing trend in the period 2010-2019, decreasing from 86,040.7 thousand to 75,794.8 thousand. In 2020, there was an increase of 1,663.2 thousand compared to the previous year.

Analyzing the inactive population by sex reveals a larger inactive female population. Thus, in 2020 it numbered 46,473.8 thousand (corresponding to 60.00% of the total inactive population), increasing compared to the previous year (45,746.4 thousand), but decreasing compared to the base year (52,804.5 thousand).

Figure 8. Inactive population (total and by sex), from 15 to 64 years, EU-27, 2010-2020, thousand persons

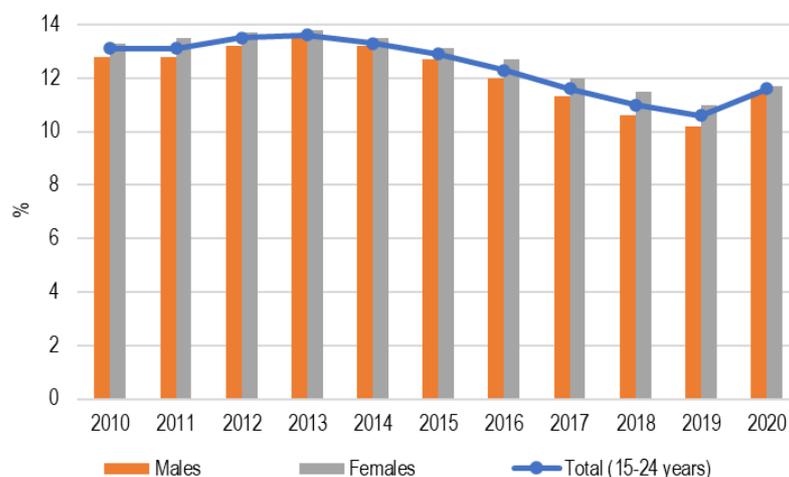


Source: own construction based on Eurostat database

During the analyzed period, the maximum of the economically inactive male population was 33,341.3 thousand, registered in 2011, and the minimum was 30,048.5 thousand, registered in 2019. In 2020, the economically inactive male population numbered 30,984.1 thousand (corresponding to 40.00% of the total inactive population).

The inactive population includes in its analysis a special case of young people aged 15-24, who are not employed and do not follow a form of education/training, young people called NEET (Not in Education, Employment, or Training). For some EU countries, young NEETs are a delicate subject, because it highlights limitations or shortcomings in the transition from the education system to the labor market, but also shortcomings regarding the employment rate of this category of population.

Figure 9. Young people neither in employment nor in education and training (total and by sex), from 15 to 24 years, EU-27, 2010-2020 (% of total population)

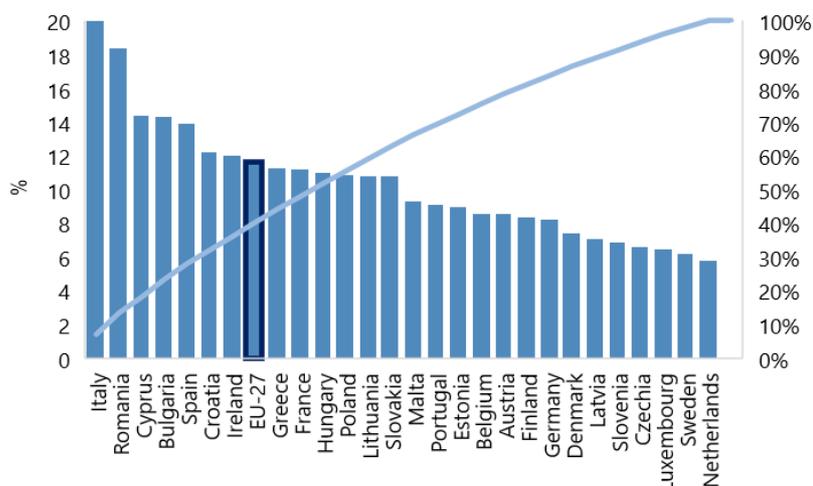


Source: own construction based on Eurostat database

In the period 2010-2013, the NEETs rate was increasing, from 13.1% to 13.6%. Subsequently, it decreased steadily, reaching a minimum of 10.6% in 2019. In 2020, there was an increase of 1% compared to the previous year and thus, the rate reached 11.6%. The trend was also maintained by sex, the female population having a slightly higher share in the total NEETs. Between 2010 and 2019, the inactive male population decreased from 12.8% to 10.4%. Subsequently, it increased to 11.5% in 2020. The female population had an increase between 2010 and 2013, from 13.3% to 13.8%, followed by a constant decrease until 2019, reaching 11.0%. Similarly, 2020 brought an increase of 0.7.

At the level of 2020, the highest NEET rates, above the EU average, are registered in Italy (20%), Romania (18.4%), Cyprus (14.4%), Bulgaria (14.3%), Spain (13.9%), Croatia (12.2%) and Ireland (12.0%). At the opposite end, the lowest rates were observed in Luxembourg (6.5%), Sweden (6.2%) and the Netherlands (5.8%).

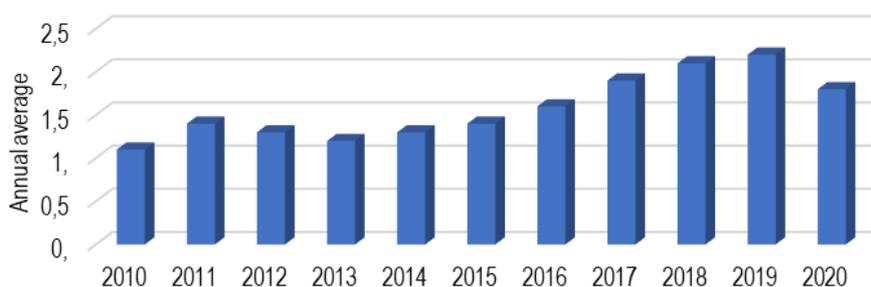
Figure 10. Young people neither in employment nor in education and training (from 15 to 24 years), EU-27 total and Member States, 2020 (% of total population)



Source: own construction based on Eurostat database

The share of vacancies in the total number of jobs (occupied and vacant) gives us the vacancy rate. In the European Union, the average annual vacancy rate for non-agricultural activities fluctuated between 2010-2020. Thus, a minimum of the average annual vacancy rate of 1.1% was registered in 2010 and a maximum of 2.2% in 2019. In 2020, the average annual job vacancy rate was 1.8% for the European Union. At the same time, the highest average vacancy rate was observed in the Czech Republic (5.3%) and the lowest rate in Greece (0.4%).

Figure 11. Job vacancy rate by NACE Rev. 2 activity (industry, construction and services), total, EU-27, 2010-2020 (annual average)



Source: own construction based on Eurostat database

Conclusions

From the analysis of the results obtained after the synthesis and comparison of statistical data related to the labor market, we can note a series of relevant conclusions regarding the composition of the labor market, the trend observed in the analyzed period and the influence of COVID-19 on those mentioned. The general trend was to increase the EU's active population by 2019, which was interrupted by the COVID-19 pandemic. Analyzing the active population by sex, a higher participation of the male population is observed, in the entire analyzed period, with an almost constant weight. The total activity rate for people aged 15-64 increased from 70.3% to 73.4% in the period 2010-2019, decreasing to 72.7% in 2020. For people aged 15 years and over, the rate of the activity reached 56.6% in 2020.

The employment of the EU had an oscillating evolution in the analyzed period. Thus, between 2010 and 2013, the employed female population registered an increasing trend, while the male population registered a decreasing trend. Subsequently, both sexes had positive evolutions, with an increasing trend, mainly due to the increase of the share of people aged 55-64. The gender gap in employment rates for the population aged 15 and over was 13.4% in favor of the male population in 2010. In the following years, it fell to 12% in 2020. The Netherlands had the highest employment rate in 2020, 62.1%. At the opposite pole was Greece, with an employment rate of 42.7%.

The number of unemployed increased between 2010 and 2013 from 20,355 thousand to 23,717 thousand, but subsequently decreased to 14,227 thousand in 2019. In addition, we noticed that the number of unemployed is

higher among the male population, but with a trend of approximation of the values of the two sexes in the last decade. Regarding the unemployment rate, there was a period of increase between 2010 and 2013, with a maximum of 11.4% recorded in 2013, but with a steady downward trend in the following years, reaching 6.7% in 2019. By sex, although for both there is a decrease in 2019 compared to the level of the base year, the gap increased from 0.3% (2010) to 0.7% (2019) between the female population and the masculine. The highest unemployment rate in 2019 was recorded in Greece (17.3%) and the lowest in the Czech Republic (2.0%). In 2020, 24 EU Member States saw increases in unemployment rates; France, Italy and Poland were exceptions.

We also noticed that the inactive population for people aged 15-64 had a decreasing trend in the period 2010-2019, interrupted in 2020, when there was an increase of 1,663.2 thousand compared to the previous year. Analyzing the inactive population by sex, we note a more inactive female population; approximately 60% of the total inactive population from 2020 being represented by the female population, but slightly increasing compared to 2010, when it represented 61.37% of the total inactive population. This situation is generated in some cases by the woman's culture towards the family and the care of the children.

The NEETs rate had reached 10.6% in 2019, after a maximum of 13.6% in 2013. If the gender gap was 0.5% in 2010, the NEETs rate was slightly higher for the female population. In 2020, the gap reached 0.2% (after a gap of 0.8% in the previous year). Very high rates are recorded in Italy and Romania.

Also, according to the data presented, the average annual vacancy rate for non-agricultural activities increased from 1.1% in 2010 to 2.2% in 2019, after fluctuations in previous years.

After presenting all these data, we can say that the trends on the labor market were stopped or slowed down with the installation of the COVID-19 pandemic. Thus, the isolation measures adopted affected the labor market, and the employed population decreased by 3,006.6 thousand in 2020 compared to the previous year, for people aged 15 years and over. The number of unemployed increased by 661 thousand for people aged 15-74 years, the unemployment rate reaching 7.1%, an increase of only 0.4% compared to the previous year, given the measures to keep jobs or inactivity; most employers have reduced working hours or made temporary layoffs. There were also people who went directly into inactivity, because the tense state created by COVID-19 did not allow them to look for a job.

The composition and trends on the labor market may change at this time under the impact of the COVID-19 pandemic, because workers can issue new job preferences, certain sectors of activity may be of greater interest, in terms of increasing demand for goods and services provided or new forms of work can be increasingly adopted by companies, if they have proved their efficiency during this period (teleworking) etc.

References

- [1] Bieszk-Stolorz, B., & Krzysztof, D. (2022). Assessment of the Similarity of the Situation in the EU Labor Markets and Their Changes in the Face of the COVID-19 Pandemic, *Sustainability*, 14(6): 3646. <https://doi.org/10.3390/su14063646>
- [2] Cojocaru, T.M. (2020). Qualitative research on the social, economic and demographic implications of labor mobility. *Journal of Applied Economic Sciences*, Volume XV, Fall, 3(69): 692-714. <http://cesmaa.org/Docs/JAES-Volume-XV-Issue-369-Fall-2020.pdf>
- [3] Ette, A. & Faist, T. (2007). The Europeanization of National Policies and Politics of Immigration: Research, Questions and Concepts. In T. Faist & A. Ette (Eds.), *Migration, minorities and citizenship. The Europeanization of National Policies and Politics of Immigration. Between Autonomy and the European Union* (pp. 3-31). London: Palgrave Macmillan. <https://doi.org/10.1057/9780230800717>
- [4] Fana, M., Tolan, S., Torrejón, S., Urzi Brancati, C. & Fernández-Macías, E. (2020). The COVID confinement measures and EU labour markets, Publications Office of the European Union, Luxembourg, ISBN 978-92-79-18366-2. DOI:[10.2760/69199](https://doi.org/10.2760/69199)
- [5] Heritier, A. (2005). Europeanization Research East and West: A Comparative Assessment, in Frank Schimmelfennig and Ulrich Sedelmeier (eds.), *The Europeanization of Central and Eastern Europe*, Ithaca, NY, Cornell University Press, pp.199-209. <http://hdl.handle.net/1814/3095>
- [6] Inchauste, G. & Karver, J. (2018). Understanding Changes in Equality in the EU. Background to 'Growing United: Upgrading Europe's Convergence Machine. World Bank Report on the European Union', World Bank: Washington, DC, USA.
- [7] Nivakoski, S., & Mascherini, M. (2021). Gender Differences in the Impact of the COVID-19 Pandemic on Employment, Unpaid Work and Well-Being in the EU. *Inter Econ.*, 56, 254–260

- *** Eurofound and European Commission Joint Research Centre. (2021). *What just happened? COVID-19 lockdowns and change in the labor market*, Publications Office of the European Union, Luxembourg
- *** European Foundation for the Improvement of Living and Working Conditions. 2022. *Social policies*. Available at <https://www.eurofound.europa.eu/topic/social-policies#s-05>
- *** Eurofound. (2020). *Women and labour market equality: Has COVID-19 rolled back recent gains?* Publications Office of the European Union, Luxembourg.