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Assessing the macroeconomic challenges in Romania after the economic and financial crisis

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Abstract. *This paper aims to provide an analysis of Romania`s macroeconomic situation during the period 2012-2023. The shock caused by the economic and financial crisis followed later by the COVID-19 pandemic, led to the deterioration of key economic and social indicators, such as economic growth, GDP per capita, the unemployment rate, the NEETs rate, and other socio-economic indicators. Romania has undergone that was relatively adequate in terms of economic development in the post-crisis period, but further efforts and progress are needed to ensure a proper balance between the social objectives and fiscal targets.*

Keywords: crisis, social, economic, gross domestic product, wages.

JEL Classification: G01, H10, H60, J24, E24.

1. Introduction

The economic and financial crisis originated from the real estate crisis of 2006 in the United States, which was fueled by the greed of banks granting a large number of real estate loans without well-defined conditions. This, coupled with the inability of a significant portion of the population to meet loan repayments due to high interest rates, increased the risk of defaults on many real estate loans, leaving banks unable to collect interest income. In Europe, the crisis amerged in 2007, primarily due to the freezing of the global banking system, which caused the contraction of the European economy. As a result, private debt held by financial institutions was transformed into public debt.

In Romania, the crisis began in 2008, primarily due to a decline in exports and the financing of imports, with the most significant impact being felt in 2009. With the onset of the economic crisis, the economic and social situation deteriorated. The persistence of the crisis and its duration even over a short period, slowed the pace of recovery for both economic and social disparities, resulting in slower development overall.

In the last decade, after the amelioration of the negative effects of the economic and financial crisis in Romania, government institutions have focused on achieving short-term macroeconomic stability by adopting policies aimed at supporting economic growth and reducing the gaps between Romania and the developed European Union Member States. These policies aimed to provide social protection by promoting social inclusion, reducing inequalities and poverty, creating better-paid jobs to reduce the unemployment rate - especially among young people - and increasing the employment rate in the labour market.

The motivation for choosing this topic lies in the need to identify how the situation in Romania evolved from both an economic and social perspective following the recovery from the economic and financial crisis. This paper aims to analyse the trends of the main macroeconomic indicators in Romania and examine how the development process was influenced.

2. Literature review

The scientific literature analyses how countries react to economic shocks caused by crises. Europe (including Romania) experienced an economic and financial recession that transformed the private debt of financial institutions into public debt, with the main cause being the freezing of the global banking system, which led to the contraction of the European economy. According to Blyth (2015), European Union Member States attempted to cover the fiscal gaps created by financial institutions, which resulted in an increase in public debt, while automatic stabilizers supported the economy (tax receipts decreased, and transfers increased).

An important indicator of overcoming the shock produced by the economic crisis is GDP, along with its key determinants. Therefore, it is essential to examine the role of consumption and investment, the main components of GDP. Private consumption is one of the most important factors influencing GDP dynamics (Anghelache, 2011) and is also among those factors that determine improvements in the standard of living (Diacon and

Maha, 2015; Tudorache, 2021). Although consumerism is often considered a factor that slows down development dynamics, it serves as a relevant proxy for a high standard of living in low- and middle-income countries. It is also important to note that stimulating consumption to compensate for a lack of domestic demand and, implicitly, increasing production, becomes crucial in certain cases. On the other hand, high consumption does not necessarily support economic growth and may contribute to accelerating inflation (Chioma, 2009).

Investments are another key factor determining economic growth (Yanikkaya, 2003; Tudorache, 2020). A positive correlation between investment and economic growth has been demonstrated worldwide (Gibescu, 2010), including for Central and Eastern European countries (Kurecic et al., 2015). Furthermore, the literature indicates that a high level of GDP per capita can generate prosperity in a country, as GDP reflects various characteristics of society, including: infrastructure, social organization, international positioning, political structure, and culture (Georgescu, 2018).

In the long term, productivity is the most important determinant of a country's real income level (Krugman, 1994), and increasing productivity should be at the center of both national and international political agendas, as a key condition for prosperity. Countries can boost productivity by expanding both public and private investments in human capital (education, vocational training, and other related actions).

Additionally, social indicators reflect the level of well-being within a country. In this context, people living in poverty are those who lack sufficient material resources to meet their basic needs (food, clothing, and shelter). One of the most vulnerable groups to poverty is young people. The share of young people who are not in employment, education or training (NEETs) is rising in European countries - a worrying trend, as it increases the risk of unemployment, poverty, and social exclusion, all of which negatively impact economic growth and citizens' well-being (Quintano et al., 2018; Tudorache, 2021).

During the economic crisis, the NEETs rate (young people who are not in education, employment, or training) increased, a trend also driven by the rise in the unemployment rate, the limited work experience of young people, and their low qualifications (Marelli and Signorelli, 2015; Patache, 2015; Deaton, 2017; Jianu, 2019). Early school leaving is a major cause of poverty and underemployment, which subsequently lead to reduced productivity and a diminished economic growth potential (Antonescu and Chisăgiu, 2016).

The relationship between the poverty rate and income inequality suggests that populations with higher incomes also have access to more opportunities. In this context, there is a strongly positive and statistically significant relationship between income inequality - measured by the Gini coefficient - and poverty (Karagiannaki, 2017; Burke et al., 2019). The persistence of income inequality creates also barriers to accessing loans (Todaro and Smith, 2011). In this respect, it should be noted that, as income inequality increases, the proportion of the population eligible for loans decreases. In particular, when low-income individuals cannot access loans, they are unable to afford higher education, start businesses, or save, which in turn hampers national development and limits the capacity of the poor to escape poverty, thus perpetuating income inequality (Jianu, 2017).

According to the literature, the relationship between the poverty rate and unemployment is generally positive. However, there are countries with high poverty rates and low unemployment rates, typically developing countries that do not face significant unemployment issues (for example, Romania). Empirical evidence also shows a positive relationship between the unemployment rate and poverty (Šileika and Bekerytė, 2012; Nasar, 2014). To reduce unemployment and poverty rates, it is crucial to implement vocational training and retraining programs, increase education funding, and raise the minimum wage. These policies are necessary to combat poverty, alleviate unemployment, and encourage greater participation in the labour market (Jula N. and Jula D., 2015).

3. Methodology

In this paper, I analysed the evolution of the main macroeconomic indicators that illustrate how the crisis influenced the economic and social situation. The research method employed is temporal analysis (based on graphical assessment), with the time period under analysis being 2012-2023. It should be noted that I used annual data for all the indicators analysed in order to ensure a standardized approach across the data examined.

In an effort to better capture the consequences and socio-economic recovery, I aimed to identify the key socio-economic indicators as accurately as possible. In this context, the indicators used in this study are presented in *Table 1*, with the corresponding data sources indicated.

Table 1. *Structure of the indicators*

Indicator	Source	Indicator	Source
Final consumption expenditure (% of GDP)	Eurostat	Real wage growth	National Institute of Statistics - Romania
Final consumption expenditure of households (% of GDP)	Eurostat	Real labour productivity per person	Eurostat
Gross fixed capital formation (% of GDP)	Eurostat	Employment rate 20 to 64 years	Eurostat
GDP per capita (percentage change on previous period)	Eurostat	Unemployment rate 15 to 74 years	Eurostat
Government deficit (% of GDP)	Eurostat	Unemployment rate 15 to 24 years	Eurostat
Government consolidated gross debt (% of GDP)	Eurostat	Early leavers from education and training rate	Eurostat
Economic growth	Eurostat	NEETs rate	Eurostat
Output-gap (% of potential GDP)	Ameco	Gini coefficient	Eurostat
Inflation rate based on HICP	Eurostat	Poverty rate	Eurostat
Wage growth	National Institute of Statistics - Romania		

Source: Own processing using Microsoft Office 2019.

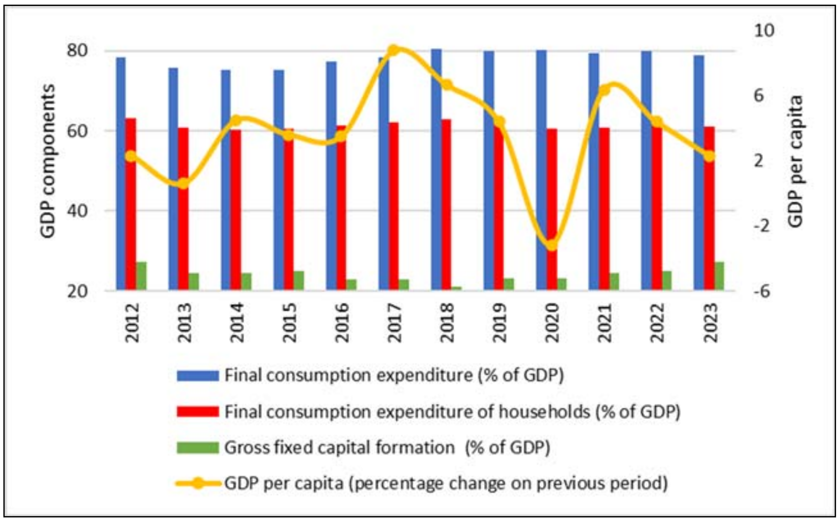
First, I focused on the economic indicators, followed by a detailed examination of the social indicators, which are the ultimate manifestation of the developments at the level of economic structures. Finally, based on the turning points identified in the indicators, their trends, and existing correlations, I attempted to draw conclusions regarding the post-crisis socio-economic recovery in Romania.

4. Results and interpretations

In this section, I analysed the evolution of the main macroeconomic and social indicators in Romania during the period 2012-2023, capturing the moment of recovery from the economic and financial crisis, which had a negative impact on the stability of the Romanian economy.

First, in *Figure 1*, I examined the evolution of final consumption expenditure, final consumption expenditure of households, gross fixed capital formation and GDP per capita. Final consumption expenditure, which includes both government and household consumption, has the largest share in Romania's GDP. The values of this indicator have remained relatively constant, with a slight increase since 2014 (75.2%), reaching approximately 80% in the period 2018-2020, followed by a slight reduction in the period 2021-2023, to around 79% of GDP. At the same time, as shown in the graph, household consumption expenditure represents the largest component of final consumption expenditure - accounting for about 60% of GDP in each year of the analysed period. The high values of this indicator are mainly attributed to strong demand for goods and services and policies aimed at stimulating consumption through wage increases, which in turn boost purchasing power.

Figure 1. *The evolution of final consumption expenditure, final consumption expenditure of households, gross fixed capital formation and GDP per capital in the period 2012-2023*



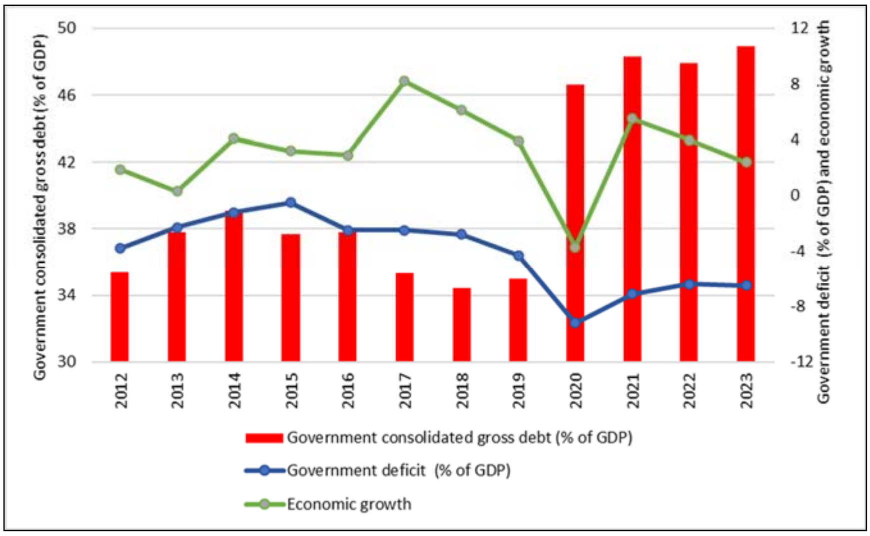
Source: Own calculations using Eurostat database.

Regarding investments, represented by gross fixed capital formation, these are crucial for long-term economic growth and ensuring the optimal development of the national economy. In 2012, the investment share of GDP was 27%, showing a slight downward trend until 2018, when it reached the lowest point of the analysed period - 21.1% of GDP. After 2019, however, investment levels began to rise again, with the 2023 value reaching 27% of GDP, the same level as in 2012. Key sectors driving investment growth include construction, energy, road infrastructure, and technology.

With a view to the GDP per capita, it can be observed that, during the analysed period, with the exception of 2020 data - when the percentage change in GDP per capita was negative (-3.2%) - the indicator followed an upward trend. In 2020, with the outbreak of the COVID-19 pandemic, several sectors of the economy were temporarily shut down due to the restrictions implemented by the government, which led to a reduction in both aggregate supply and aggregate demand, while some employees were furloughed or unemployed. This resulted in a decline in household incomes and, consequently, a reduction in aggregate demand. However, with the onset of economic recovery in 2021, GDP per capita resumed its growth. The highest growth rates for GDP per capita occurred in 2017, when it recorded an 8.8% increase, followed by 2018 at 6.7%, and 2021 at 6.4%.

According to *Figure 2*, the relationship between public debt, the budget balance, and economic growth is direct. Therefore, in cases where the budget deficit increased, Romania's public debt also began to rise. It is important to also consider the effect of GDP growth on the share of public debt in GDP. After 2009, the economy began to stabilize, and the budget deficit was reduced, with the lowest values recorded in 2014 (1.2% of GDP) and 2015 (0.5% of GDP). At the same time, positive and successive rates of economic growth were registered, with the highest values occurring in 2017 (8.2%) and 2018 (6.1%).

Figure 2. *The evolution of government consolidated gross debt, government deficit and economic growth in the period 2012-2023*

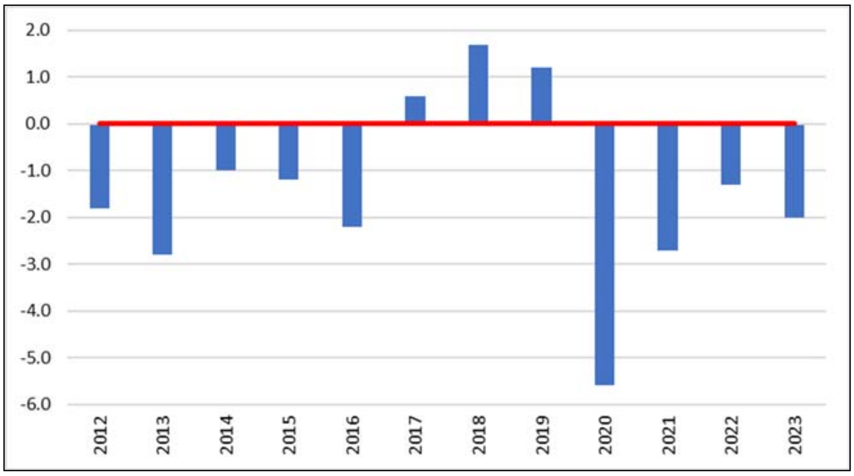


Source: Own calculations using Eurostat database.

A downward trend in public debt can also be observed between 2014 and 2019. However, with the outbreak of the COVID-19 pandemic, several sectors of the economy were temporarily closed, leading to a decline in economic activity. The economy contracted by 3.7% in 2020, after which it followed an upward trajectory in the subsequent years. On the other hand, the pandemic resulted in increased public expenditures, primarily in the healthcare sector, to cover the costs of medical equipment needed to treat patients infected with the SARS-CoV-2 virus, as well as to provide sick leave and unemployment benefits to workers affected by the closure of economic activities. In 2020, the budget deficit peaked at 9.2% of GDP, and remained high in the following years: 7.1% of GDP in 2021, 6.4% in 2022, and 6.5% in 2023. To finance the budget deficit, Romania's public debt increased by more than 10 percentage points of GDP in 2020, compared to 2019. As a result, Romania's public debt reached 46.6% of GDP in 2020, up from 35% of GDP in 2019, and continued to rise, reaching 48.9% of GDP by 2023.

The output gap estimated for Romania during the analysed period (2012-2023) (*Figure 3*) reflects a recessionary phase of the economic cycle, with the exception of the 2017-2019 period, when an expansionary output gap was recorded. The most significant recessionary output gaps were observed in 2020 (-5.6%), 2013 (-2.8%), and 2021 (-2.7%). The period 2012-2016 was marked by the lingering effects of the economic and financial crisis, which, combined with pro-cyclical austerity measures, kept the economy in a recessionary output gap for an extended period. In contrast, the 2017-2019 period saw several measures adopted to stimulate the economy, including tax reductions aimed at boosting consumption (such as the elimination of the tax on fuel in 2013, the reduction of VAT on food to 9% starting June 1st, 2015, and on non-food goods to 19% starting January 1st, 2016, the reduction of taxes on dividends in 2017, and tax incentives for construction in 2019), as well as support for SMEs and investments in transport infrastructure. However, the COVID-19 pandemic led Romania back into a recessionary output gap, a situation that has persisted to the present day. In this context, government authorities must adopt countercyclical measures to reduce the output gap.

Figure 3. *The evolution of output-gap in the period 2012-2023*

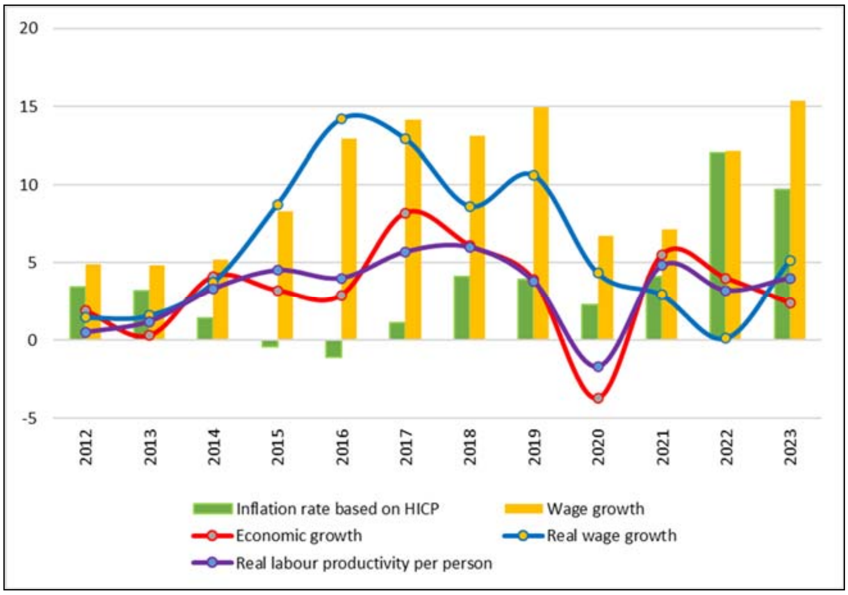


Source: Own calculations using Ameco database.

Figure 4 shows the evolution of the inflation rate, economic growth, real labour productivity per worker, wage growth, and real wage growth. Regarding the inflation rate, in 2011, the National Bank of Romania set the target at 3% ± 1 percentage point. As of 2013, the target was adjusted to 2.5% ± 1 percentage point. According to the graph, at the beginning of the analysed period, the inflation target was met, followed by two years of deflation (2015 -0.4% and 2016 -1.1%). This deflation was primarily caused by VAT rate reductions, which led to lower prices for basic goods. Subsequently, in 2018 (4.1%) and 2019 (3.9%), the inflation rate increased slightly. The main contributing factor was the rise in energy prices, which increased production costs for companies and transportation costs, ultimately impacting the prices of final goods. In 2020, the inflation rate met the target (2.3%), but was followed by three years of significant price increases. The inflation rate reached 4.1% in 2021, driven by supply chain disruptions and increased demand for goods and services following the COVID-19 restrictions in 2020. The last two years of the analysed period were marked by high inflation rates (12% in 2022 and 9.7% in 2023), largely due to the war in Ukraine, which caused both a food crisis and an energy crisis.

Regarding real labour productivity per worker, it followed a generally positive trajectory, except for 2020 (-1.7%), when productivity declined due to the economic disruptions caused by the COVID-19 pandemic. The highest values for this indicator were recorded in 2018 (6%) and 2017 (5.7%). According to *Figure 4*, real labour productivity per worker evolved in the same direction as the economic growth rate and the real wage growth rate.

Figure 4. *The evolution of the inflation rate, economic growth, real labour productivity per person, wage growth and real wage growth in the period 2012-2023*



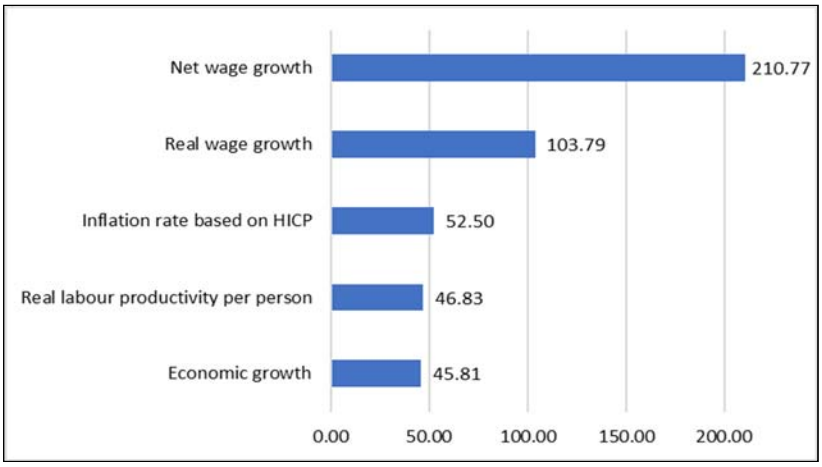
Source: Own calculations using Eurostat and National Institute of Statistics of Romania database.

As for the increase in average net salary and its real growth rate, *Figure 4* shows a positive trend, with the exception of the years 2018 and 2020. Throughout the analysed period, the largest increases in average net salary were recorded in 2023 (+15.36%), 2019 (+14.95%), and 2017 (+14.17%). These wage increases were the result of government policies aimed at raising the minimum wage, as well as the need for wage hikes in certain economic sectors to attract and retain workers.

According to *Figure 5*, in the period 2012-2023, the average net nominal salary increased significantly (+210.77%) compared to the rise in consumer prices (cumulative inflation rate of 52.5%), reflecting an increase in the purchasing power of consumer. This is further confirmed by the 103.79% increase in real wages. On the other hand, the economy grew by 45.81% during the same period, a dynamic also reflected in the 46.83% increase in real labour productivity per worker. Undoubtedly, the standard of living in Romania has improved compared to the first post-crisis years, with some social gaps having been reduced. However, social imbalances persist, and wage increases have also contributed to the overheating of the economy, putting pressure on aggregate demand and the budget deficit. These challenges must be addressed cautiously in the coming years to ensure a return to financial sustainability.

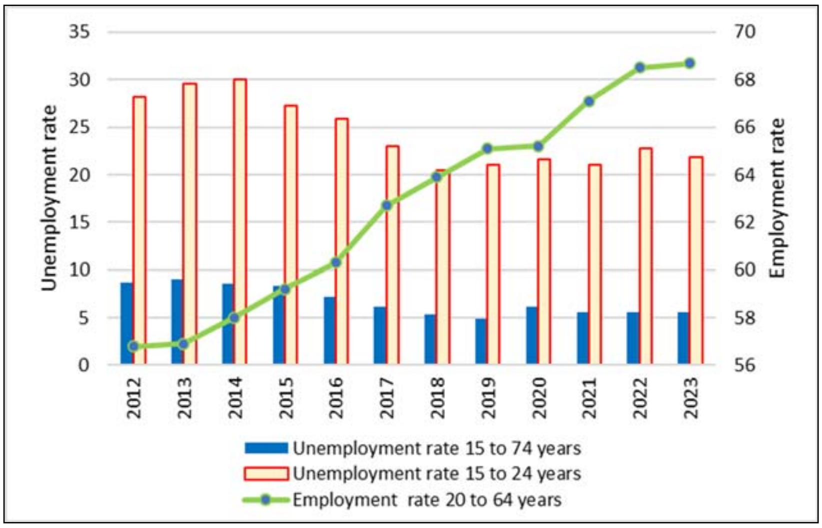
Figure 6 analyses the evolution of the employment rate, the unemployment rate for people aged 15-74 and the unemployment rate for people aged 15-24. The unemployment rate for the 15-74 age group (the overall unemployment rate) was increase in the immediate aftermath of the economic and financial crisis, when more people lost their jobs as a result of the closure of more many companies. The highest value of the total unemployment rate was recorded in 2013 - 9%, after which it entered a downward trajectory until 2019, when was recorded the value of 4.9%. In 2020, the outbreak of the COVID-19 pandemic led to the closure of several companies, which led to a slight increase in the unemployment rate, but the impact was not significant this time. The unemployment rate for the age group 15-24 years (the youth unemployment rate) shows much higher values than the total unemployment rate, which highlights the higher challenges among young people in terms of integration into the labour market. In this case, the highest value of the unemployment rate was recorded in 2014 – 30%, after which it began to decrease slightly, the lowest value recorded during the analysed period being 20.5% - in 2018. The main reason why the unemployment rate among young people is higher is the lack of experience they have in the field of work, and in some cases employers prefer personnel with more experience in the field in which they operate, which limits their integration into the labour market.

Figure 5. *The cumulative increase of inflation rate, economic growth, real labour productivity per person, wage growth and real wage growth in the period 2012-2023*



Source: Own calculations using Eurostat National Institute of Statistics of Romania database.

Figure 6. *The evolution of the employment rate 20 to 64 years, unemployment rate 15 to 74 years and unemployment rate 15 to 24 years in the period 2012-2023*



Source: Own calculations using Eurostat database.

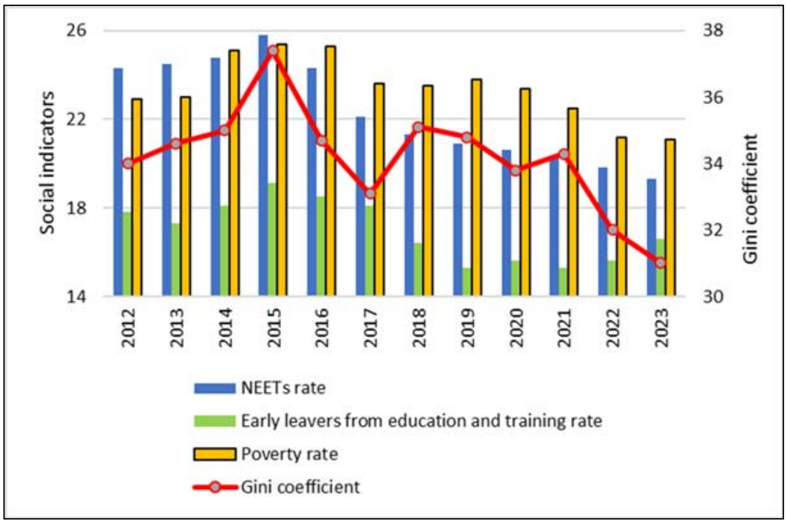
On the other hand, it should be stated that the unemployment rate calculation methodology takes into account the unemployed who are actively looking for a job and are willing to start their activity on the labour market immediately after finding an opportunity. This aspect understates the unemployment rate in many cases compared to what it should actually capture. It is also important to analyse the employment rate, in which case it can be seen, according to the graph, that it had low values in 2012 at the beginning of the analysis period (56.8%), later registering higher values (in 2023 - 68.7%), but still lower than other European states. In some regions of Romania, namely in the rural areas, many people do not have a job and do not want to be employed, these people not being included in the unemployment rate calculation. Among the reasons why some people do not want to get hired, the following can be highlighted: having low qualifications, eligibility for modest salaries, the granting of social benefits, respectively surviving on self-consumption.

Figure 6 examines the evolution of the employment rate, the unemployment rate for people aged 15-74, and the youth unemployment rate for people aged 15-24. The unemployment rate (15-74 age group) increased in the immediate aftermath of the economic and financial crisis, when many people lost their jobs due to the closure of several companies. The highest value of the total unemployment rate was recorded in 2013, at 9%, after which it began a downward trend, reaching 4.9% in 2019. In 2020, the outbreak of the COVID-19 pandemic led to the closure of several businesses, resulting in a slight increase in the unemployment rate; however, the impact was not as significant as during the previous crisis. The youth unemployment rate (15-24 age group) was consistently higher than the total unemployment rate, highlighting the greater challenges young people face when trying to integrate into the labour market. The highest value for youth unemployment was recorded in 2014 at 30%, and it gradually decreased, with the lowest value during the analysed period being 20.5% in 2018. The main reason for the higher youth unemployment rate is the lack of experience young people have in the workforce. In many cases, employers prefer more experienced personnel, limiting the job opportunities available to young people.

On the other hand, it is important to note that the unemployment rate calculation methodology only considers those who are actively looking for a job and are willing to start working immediately after finding an opportunity. This definition tends to understate the unemployment rate, as it does not capture individuals who may be discouraged from seeking work or who are not actively looking but are still unemployed. It is also essential to analyse the employment rate, which, according to the graph, was relatively low at the beginning of the analysed period in 2012 (56.8%) but showed an upward trend, reaching 68.7% in 2023. However, the employment rate remains lower than in many other European countries. In some regions of Romania, particularly rural areas, many people are neither employed nor actively seeking work. These individuals are not included in the calculation of the unemployment rate, which can distort the overview of the labour market challenges. Several factors contribute to this situation, including low qualifications, the availability of modest salaries, reliance on social benefits, and self-consumption in rural households.

Figure 7 shows the evolution of the NEETs rate, the early leavers from education or training rate, the unemployment rate, and the Gini coefficient. According to the graph, the NEETs rate remained high throughout the analysed period, with the peak recorded in 2015 at 25.8%. After that, it began to decrease slightly, reaching its lowest value in 2023 at 19.3%. At the same time, the early leavers from education or training rate followed a similar trend to the NEETs rate and the poverty rate. The highest value for early school leavers was recorded in 2015 at 19.1%, after which it decreased slightly, with the lowest values occurring in 2019 and 2021 at 15.3%. Although the values of this indicator decreased after 2015, they remained relatively high compared to other European Union countries. Regarding the poverty rate, the highest value during the analysed period was also recorded in 2015 at 25.8%. It then followed a downward trajectory, reaching 19.3% in 2023. Similarly, the Gini coefficient, which measures income inequality, recorded very high values, especially in 2015 at 37.4%. Although this indicator decreased slightly in the following years, it remained at a high level, with the lowest value recorded in 2023 at 31%. Therefore, despite the economic progress made, authorities must continue to develop and implement policies that promote social development. These measures should encourage young people to complete high school, attend vocational schools, or pursue higher education, as this will help reduce both the poverty rate and income inequality.

Figure 7. *The evolution of NEETs rate, the early leavers from education and training rate, poverty rate and Gini coefficient in the period 2012-2023*



Source: Own calculations using Eurostat database.

5. Conclusions

This paper shows that the labour market has not been significantly affected by the COVID-19 crisis and after 2012, the labour market developments continued on a positive path. However, the data explored indicates the main economic challeges triggered by the economic and financial crisis, in particular the negative impact on the capacity of the Romanian economy to reach the potential GDP and the adverse effect on the budget deficit. In this respect, it should be mentioned that the Romanian economy grew at its potential or at a higer level than it only in three years, these being the ones before the pandemic, after this shoch the economy entering again on a recessionary path. The budget deficit challenges have worsened in the context of the national efforts to absorb the economic shock of the economic and financial crisis, these being also intensified by the trade deficits, the high increase in the nominal wages, but also by the ineffective public spending and low fiscal collection capacity.

According to the data, in the period 2012-2023, the net average wage grew (+210.77%) at a higher rate than the one of consumer prices (+52.5% - based on HICP), which is reflected in a real wage increase of 103.79% (a relevant indicator for the purchasing power of consumers). The efforts to increase wages are justified by the high social challenges generated by the crisis, but the future policies should promote an equilibrium between the consumer and the producer needs, by implementing a mechanism for establishing the minimum wage, depending on inflation, economic growth and other relevant indicators to the economic cycle. Besides that, the economic growth (+45.81%) evolved mainly, in line with the real labour productivity per person (+46.83%), while the social indicators improved their position, even if the challenges remains taking into account that these are still positioned at a higher level. However, the socio-economic policies implemented in the post-crisis period have successfully reduce the social imbalances, such as NEETs rate, early leavers rate, the poverty rate and the income inequality, but there is still room for improvements, without neglecting the budgetary challenges.

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