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ROMANIAN ECONOMY – STRUCTURAL DEVELOPMENTS

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Abstract: Romanian economy has been the champion of the European economic convergence process over the past decades. The GDP/capita at PPS as percentage of the EU average increased from around 30% in 1995 to 79.3% in 2023, a level very close to Poland (79.7%), according to Eurostat estimates. This evolution was determined by the forces of the EU integration, including the massive capital inflows (FDIs, EU funds, remittances), and the human capital outflows. However, the economic growth and development model determined by the EU integration forces seems to come to the end, as pointed out by the recent macroeconomic developments. The annual growth pace of the Romanian economy significantly decelerated in 2023 (to 2.1%) and 2024 (to 0.7% in first half of the year), while the twin deficits persist at very high levels. This paper applies standard econometric tools and uses the International Monetary Fund database in order to assess the structural developments in Romania over the past decades and to identify the main challenges for the coming decade. According to the results, the Romanian economy is facing the risk of another severe adjustment in the coming quarters, due to the unsustainable pro-cyclical income policy, the low efficiency of the investments, and the upward trend of the public debt/GDP ratio (as the financing costs are higher than the the growth pace). Furthermore, Romania is confronted with the risk of initiating a divergence process from the EU average in the future, unless structural reforms are accelerated.
Keywords: Romanian economy, Hodrick-Prescott, structural reforms
JEL Classification: E60, F41, O10

Introduction

Romanian economy has been the champion of the EU economic convergence process over the past decades, as reflected by the significant increase of the GDP per capita at purchasing power standards, from around 30% of EU average in 1995 to almost 80% in 2023, according to Eurostat (2024).

This impressive performance was determined by the forces of the EU integration process, including the huge capital inflows, with spill-over impact in the economy.

For instance, Romania received over EUR 110bn in foreign direct investments, mainly in the manufacturing sector (which is today highly integrated with the European industry), as reflected by the statistics of the National Bank of Romania (NBR, 2023).

In fact, starting the 1990s the foreign companies discovered the potential to produce in Romania at lower prices and to sell on the international markets, but also the positive outlook for the growth and development paces in this country in the context of EU integration.

Furthermore, Romania received more than EUR 60bn in EU structural funds, according to Osservatorio Balcani e Caucaso (2024), which fuelled the investments in the critical infrastructure.

In this context, the marginal efficiency of capital grew by a cumulated pace of 3.2 percentage points in Romania during the period 2004 – 2023, a pace significantly higher compared to the dynamics in Bulgaria (2.7 percentage points), Hungary (1.9 percentage points), Czechia (1.7 percentage points), and EU (1.3 percentage points), according to AMECO (2024).

On top of these, there should also be mentioned the remittances, which supported the residential constructions and the retail sales in Romania – cumulated volume of over EUR 60bn since 2005, according to the statistics of the World Bank (World Bank, 2024, a).

On the flipside, the population of Romania declined by more than 4 million since 1989 (as reflected by the data of the National Institute of Statistics of Romania, NIS, 2024), as the positive economic developments over the past decades were not enough to fill the gaps with the EU Western economies in terms of living and working conditions.

Furthermore, 17 years after the entry into the European Union, Romania continues to present an underdeveloped infrastructure and a high level of the share of informal economy in GDP, high level of inequality among the regions, challenges in terms of qualified labour force, and the persistence of the twin deficits at very high levels, as pointed out by the International Financial Corporation (IFC, 2023) and the World Bank (World Bank, 2024, b).

For instance, in 1Q 2024 the budget deficit/GDP ratio stood at 7% in Romania, the highest level among the EU countries, and significantly above the EU average (3%), as reflected by the data released by Eurostat (2024).

Furthermore, the budget deficit/GDP ratio widened from 2.40% in the period January – July 2023 to 4.02% during January – July 2024, according to the statistics published by the Ministry of Finance (MF, 2024).

This evolution was determined by the pro-cyclical income policies implemented by the Administration in the context of the electoral year (in 2024 are scheduled general elections, presidential elections and euro-Parliament elections). For instance, the data of Ministry of Finance (MF, 2024) show the increase of the wages in the public sector by an annual pace of 23.9% in the period January-July 2024.

At the same time, the current account deficit widened by an annual pace of around 34% to EUR 12.2bn during the period January – June 2024, according to the National Bank of Romania (NBR, 2024).

In fact, Romania presented current account deficit for 35 years in a row and budget deficit for 33 years in a row in 2023, as reflected by the statistics of the International Monetary Fund (IMF, 2024), as can be noticed in Figure 1.

The bad tradition in terms of twin deficits in Romania is reflecting the discontinuity of the structural reforms, and the preference for the implementation of pro-cyclical fiscal and income policies over the past decades.

In this context, the annual growth pace has significantly decelerated in Romania in the recent quarters, to 2.1% in 2023 and 0.7% for the period January – June 2024 (according to Eurostat, 2024), an evolution that confirms the end of the growth and development model of the past decades (based on the forces of the EU integration).

This perspective is also supported by the fact that Romania continues to be at the end of the European Union top in terms of digitalisation, share of population with university studies, level of development of financial markets, quality of regulation, and allocation in terms of research and development.

This paper employs standard econometric tools and the database of the International Monetary Fund (annual data for the period 1996 – 2023) in order to estimate the dynamics of the potential output and to distinguish between the cyclical and the structural components of the budget deficit in Romania.

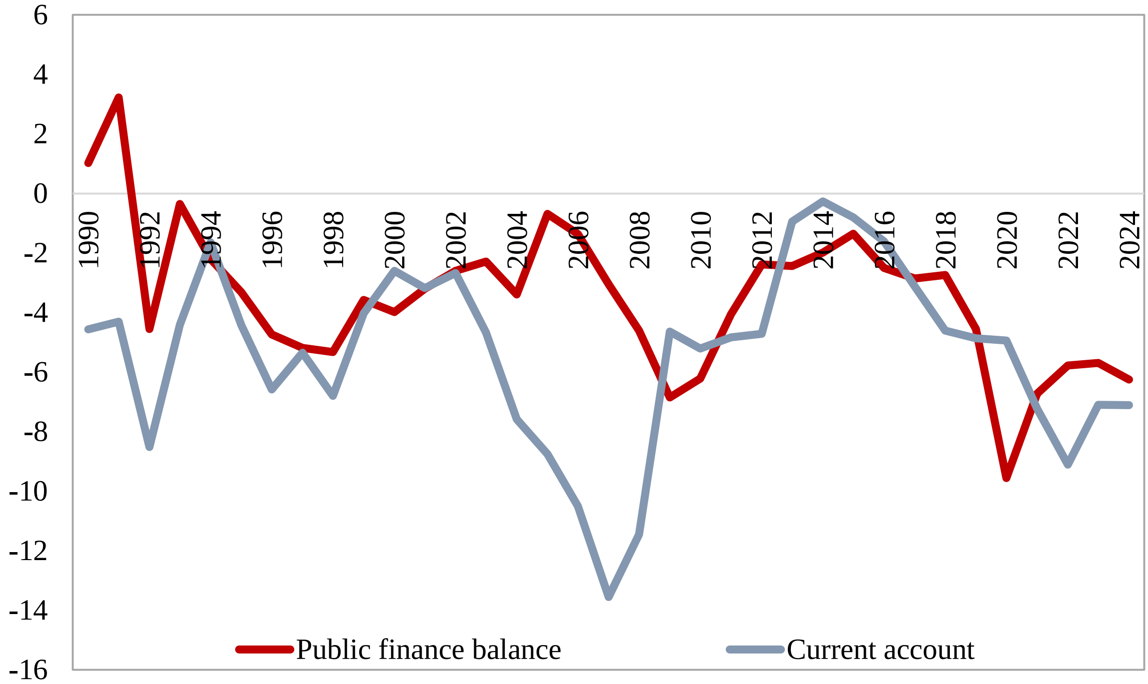

Figure 1. The budget deficit and the current account deficit in Romania (% of GDP)

Source: representation of the author using the database of the International Monetary Fund (2024)

The rest of the paper has the following structure: the next chapter briefly describes the methodology employed; the third chapter presents the main results of the econometric analysis; the conclusions are drawn in the last chapter of the article.

Methodology

This paper applies standard econometric tools in order to estimate the dynamics of the potential output, and the cyclical and structural components of the budget deficit in Romania, during the period 1996-2023, by using the database of the International Monetary Fund (IMF, 2024) and the econometric software E-Views.

On the one hand, the filter Hodrick-Prescott was applied in order to estimate the annual dynamics of the potential GDP and the output gap in Romania.

This is a widely used, simple and transparent method in the macro-econometric literature, being expressed by the following relation:

$$\mathbf{Min}\sum_{t=1}^{T}(\ln Y_t-\ln Y_t^{*})^2+\lambda\sum_{t=2}^{T-1}((\ln Y_{t+1}^{*}-\ln Y_t^{*})-(\ln Y_t^{*}-\ln Y_{t-1}^{*}))^2 \qquad (1.1)$$

where Y_t, Y_t^* and λ represent the GDP, the potential output, and the smoothness parameter, with the following characteristic: the lower its value, the closer the GDP to the potential.
In this paper a value of 100 was considered for this parameter, as suggested by the paper of Hodrick-Prescott (1997), while working with annual database.
On the other hand, in order to distinguish between the cyclical and the structural components of the budget deficit in Romania, this paper considered the method of Balassone and Monacelli (2000).
The budget deficit can be expressed by the following relation:

$$def_t = def_s + def_c \qquad (1.2)$$

in which def_t, def_s and def_c are the total budget deficit, the structural component, and the cyclical component (expressed as % of GDP).
As regards the cyclical component of the budget deficit, this is obtained by considering the output gap and the budgetary elasticity, as in the following relation:

$$def_c = (Y_t - Y_t^*) \times \eta \qquad (1.3)$$

where $Y_t - Y_t^*$ is the output gap, while η represents the budgetary elasticity to GDP.
The output gap was estimated by applying the Hodrick-Prescott filter, while for the budget elasticity to GDP this paper considered the estimates of the European Commission for Romania (0.3), as in the paper of Larch and Turrini (2009).
The budgetary elasticity to GDP can be expressed in the following relation:

$$\eta = \frac{\Delta(def_t / Y_t)}{\Delta Y_t / Y_t} \qquad (1.4)$$

which can be derived into the following relation:

$$\eta = \frac{R}{Y} x(\varepsilon_{R;Y_t} - 1) - \frac{X}{Y} x(\varepsilon_{X;Y_t} - 1) \qquad (1.5)$$

where η is the budgetary elasticity to GDP, def_t represents the total budget deficit (as % of GDP), Y_t – the GDP, R – the budgetary revenues, X – the budgetary expenditure and $\varepsilon_{R;Y_t}$ - the elasticity of budgetary revenues to GDP, $\varepsilon_{X;Y_t}$ - the elasticity of budgetary expenditure to GDP.

Results

According to the results of the macro-econometric estimates the annual dynamics of the potential output in Romania presented significant fluctuations over the past decades, as reflected in Figure 2.

There can be noticed the upward trend during the period 1996 – 2006, the annual pace of the potential GDP accelerating from 0.2% to 4.6%, a record high level, an evolution determined by the reforms implemented in order to join the European Union.

However, the annual pace of the potential output deteriorated from 2007 to 2012 (to 2.8%, the lowest level since 1999), as the Great Financial Crisis severely hit the Romanian economy, which was in an overheating mood in 2007 and 2008, with a strong dependence on the international financing flows.

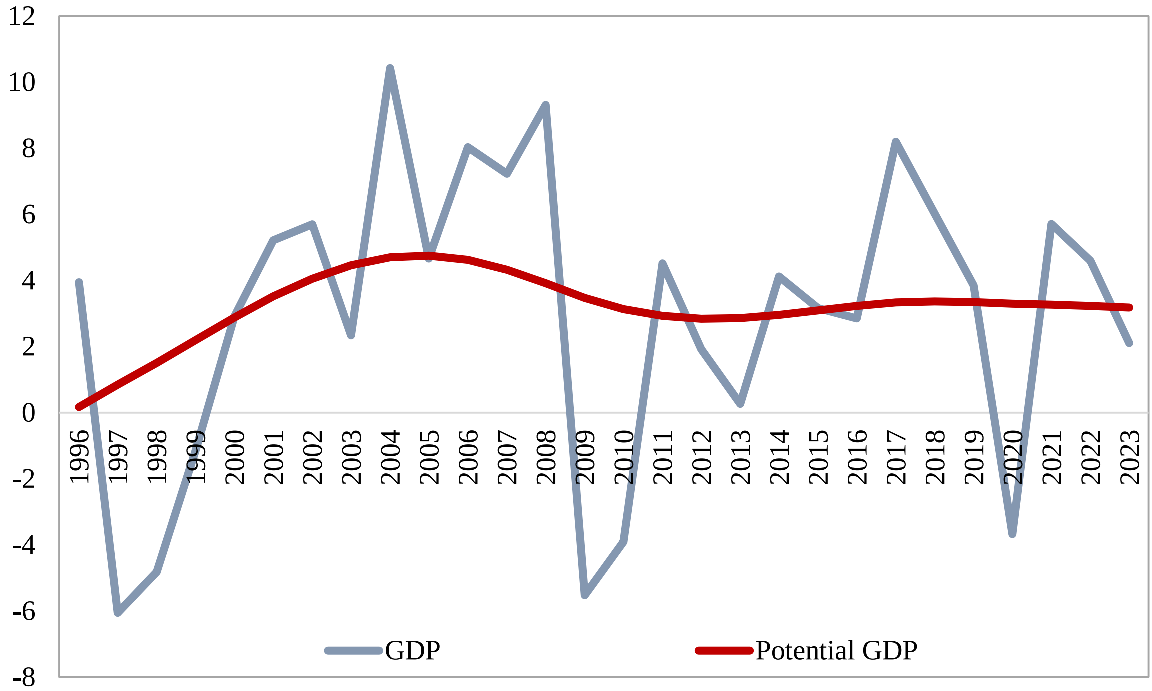

Figure 2. The annual dynamics of GDP and potential GDP (%)

Source: representation of the author based on the econometric estimates, employing the methodology described in the previous chapter and using the database of the International Monetary Fund (2024)

The annual pace of the potential output in Romania initiated another upward trend in 2013 (until 2018, to 3.4%, the highest level since 2009), as the economy entered the post-crisis economic cycle, and also gathered the fruits of the important structural reforms implemented under the international financing agreement (with International Monetary Fund, World Bank, and the European Commission).

On the other hand, the implementation of the pro-cyclical fiscal policies (more pronounced in 2019) and the outbreak of the COVID-19 pandemic (the worst health crisis in the world in more than one century) had a negative impact for the annual dynamics of the potential GDP in Romania, this indicator deteriorating to 3.2% in 2023, the lowest level since 2015.

Taking into account the slowing-down of the annual growth pace of the economic activity in Romania over the past quarters (to 2.1% in 2023 and 0.7% in first half of 2024, according to the data released by the National Institute of Statistics, 2024), the probability is very high for the annual dynamics of the potential output to deteriorate in the coming years, a scenario also supported by several factors:

1. the accumulation of risk factors in the direction of the outbreak of another world financial crisis (with the starting point in the public finance);
2. the high level of the budget deficit (and of the structural component of the deficit), also determined by the pro-cyclical income policies implemented in the electoral context of 2024;
3. the structural weaknesses in the domestic economy, including the low level of allocation for research and development and the low level of the digitalisation.

In terms of the public finance, the results of the macro-econometric estimates point out the high level of the structural budget deficit over the past decades in Romania, determined by the discontinuity of the structural reforms, and the implementation of the pro-cyclical fiscal and income policies.

Furthermore, there can be noticed the fact that the periods of the adjustment of the structural budget deficit in Romania were longer than the periods of widening this component of the budget deficit.

For instance, the structural component of the budget deficit adjusted from 5.9% of GDP in 1996 to 0.7% of GDP in 2005, a record low level, according to the estimates, represented in Figure 3.

In other words, it took 9 years to adjust the public finance in Romania, a process significantly influenced during that period by the implementation of structural reforms in order to prepare for the European Union.

Once the entry into the European Union was decided (Romania signed the EU Accession Treaty in the spring of 2005 in Luxembourg) pro-cyclical fiscal and income policies were implemented, which, in the context of the outbreak of the global financial crisis, determined the widening of the structural component of the budget deficit to 6.2% of GDP in 2008 (in three years).

The severe contraction of the economic activity and the lack of financing in the context of the global turmoil determined the Administration to ask for an international financing agreement in 2009.

The international financial institutions agreed a complex financing package for Romania, conditioned by the implementation of several structural reforms, including the measures to diminish the informal economy and to cut the public wages.

In this context, the structural component of the budget deficit adjusted gradually, in seven years, to 1.4% of GDP in 2015, the minimum since 2005, as can be noticed in the following chart (Figure 3).

After ending the international financing agreement, Romania embarked again on pro-cyclical fiscal and income policies in 2015 (including the significant decrease of the VAT and the increase of public wages), while slowing down the implementation of the structural reforms.

In this context, the structural component of the budget deficit widened again, to 2.4% of GDP in 2016, 4.3% of GDP in 2017, and 4.7% of GDP in 2019, the year before the outbreak of the coronavirus pandemic.

The public finances were severely hit by the outbreak of the COVID-19 pandemic, with the structural component of the budget deficit widening to 7.5% of GDP in 2020 and 2021, as reflected in Figure 3.

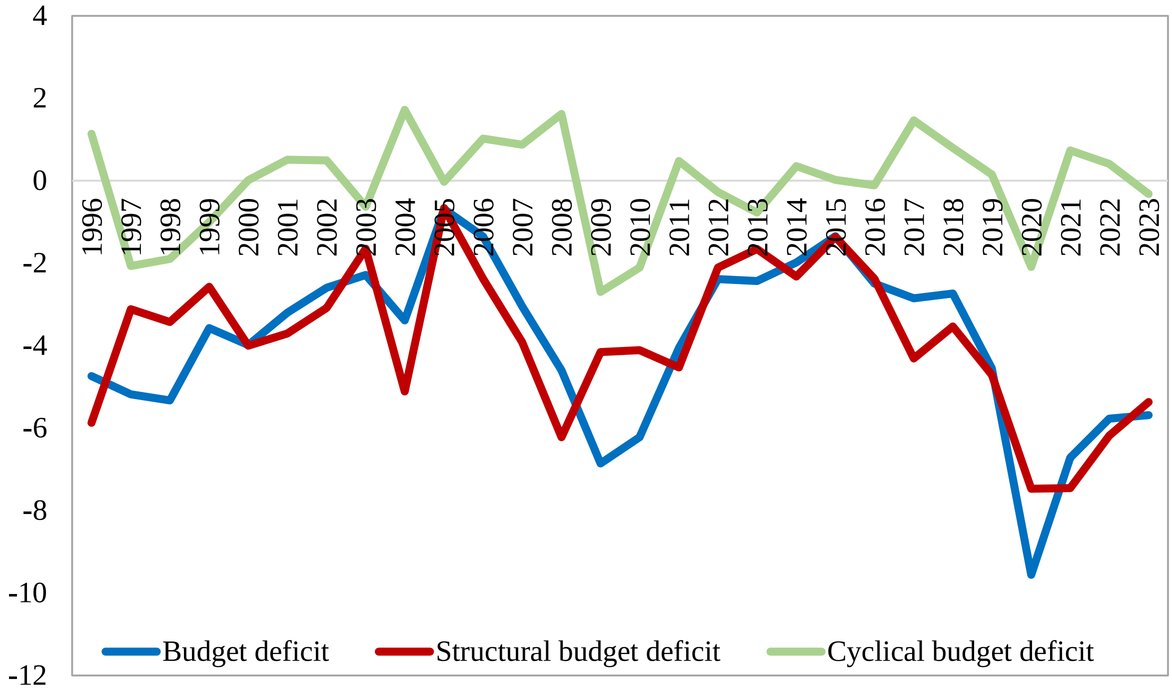

Figure 3. The structural and cyclical components of the budget deficit (% of GDP)

Source: representation of the author based on the econometric estimates, employing the methodology described in the previous chapter and using the database of the International Monetary Fund (2024)

According to these estimates, the structural component of the budget deficit stood at 5.4% of GDP in 2023.

We underline that the budget deficit in Romania persisted above 3% of GDP (the limit of the Stability and Growth Pact) since 2019, while the probability of widening in 2024 is very high, taking into account the significant slowing down of the pace of economic activity and the pro-cyclical income policy measures (including the increase of the public wages by an annual pace of over 23%, according to the statistics of the Ministry of Finance, 2024).

In other words, Romania is confronted again with the risks of a severe macro-economic adjustment, and very likely would have again to apply for an international financing agreement, especially taking account the high levels of the real interest rates in the mid-long run and the unsustainable upward trend for the public debt/GDP ratio (which is getting closer to 60%, the limit of the Treaty of Maastricht).

Conclusions

At present the economic activity is slowing-down (annual paces below potential), while the public finances are deteriorating in Romania.

These evolutions corroborated with the unprecedented tough international climate express the upward risk for the outbreak of another economic and financial crisis in Romania in the coming quarters.

Considering the past experience, the duration of the adjustment in terms of public finances (diminishing the structural component of the budget deficit as % of GDP) would be several years, as the manoeuvre room of economic policy is very low, the public debt/GDP ratio is very high, and the stance of several indicators (including the reform of public administration, the degree of digitalization, and the allocation for research and development) is very weak.

The results of this research point out that the Administration should learn from the past, and implement balanced fiscal and income policies, in order to avoid high level of structural component of the budget deficit and to have manoeuvre room to intervene in the period of macroeconomic downturns.

Furthermore, nowadays is more important than ever to focus on adopting structural reforms on a continuous basis, as these allow the economy to increase its resilience in the context of the confrontation among the largest economic blocks in the world.

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