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# A COMPARATIVE ANALYSIS BETWEEN THE EVOLUTION OF SOME MACROECONOMIC INDICATORS IN ROMANIA AND THE REPUBLIC OF MOLDOVA

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**Abstract.** Recent international developments show more and more the necessity not only of belonging to a regional value system but especially to an ideological block capable of serving national aspirations. In this sense, the desire of the Republic of Moldova to align itself with European values and its integration into the European Union requires the fulfillment of not only political but also economic criteria. In addition to these, the degree of economic convergence, implicitly social, is particularly important. In this sense, the article proposes a comparative approach between Romania and the Republic of Moldova of some macroeconomic indicators, and among them mainly some social and labor market indicators, in order to appreciate the degree of closeness to the regional and EU27 developments.

**Keywords:** *convergence, European integration, proximity, labor market, social indicators*

**JEL code:** *P5, E66, E62, J4*

## Introduction

Against the background of the war in Ukraine and the way in which the regional crisis of energy and prices is managed, the macroeconomic developments in the Republic of Moldova and Romania did not evolve in the direction desired by the authorities. A member of the European Union since 2007, Romania has made efforts, through the national authorities, to integrate not only politically, but also economically, but the European Central East regional membership seems a sometimes stronger challenge than the membership of the western club of the EU27.

In this sense, the article seeks to discern which steps should be followed for the Republic of Moldova for a smoother economic integration in the EU27. At the same time monitoring comparatively the evolution of Romania and the synchronization or desynchronization of the Republic of Moldova with it, the results can indicate our shortcomings, but also the opportunities that can arise for building a better economic future in the two countries.

## Literature review

The concept of convergence has many nuances and meanings, and the concept of economic convergence also raises a series of questions starting from its meaning to the methodology or which type of convergence is more important to be pursued and achieved faster in time. In general, the concepts of β and σ convergence are based on the neoclassical framework of analysis and on the hypothesis of a decrease in capital stock (Solow, 1956, Barro and Sala-i-Martin, 2004), more precisely on the fact that economies with lower incomes present higher yields capital compared to countries with higher incomes and therefore poorer countries register higher rates of economic growth. But in addition to the classical meaning of capital used by Solow (1956), the more recent literature adds endogenous aspects such as the accumulation of human capital, investments in research, innovation, practical learning to explain convergence (Lucas, 1988; Aghion and Howitt, 1992), opposing - there is also literature that combats endogenous growth models (e.g. Acemoglu et al., 2005). Current studies point to taking into account the effects of agglomeration and local and regional disadvantages (Fujita et al., 1999; Krugman, 1991), but also the need for credible and solid institutions and good governance to achieve real convergence (Rodrik, 2000; Kaufmann and Kraay, 2002; Masuch et al., 2016).

Regarding regional convergence, numerous studies focus on income dynamics. Thus, for example, in the study by Sme¸tkowski & Wójcik (2012), applying numerous methods and tools, including beta and sigma convergence analysis, a series of regional growth models that are less known in the countries of Central and Eastern Europe are revealed (CEEC) for the period 1998-2005, regional convergence being observed as a result of the differences in the growth networks of individual countries, also observing a weak metropolitan convergence between the richest and poorest areas.

Also, in the study by Tamás Tánczos and Zoltán Egri (2018), for the period 2004-2014, the recovery effects of the economic and social performance and the convergence effects of the NUTS2 regions in Central and Eastern Europe are examined from a spatial perspective. The results of their study is in agreement with the theory that the less developed regions tend to converge towards the more developed ones, and the annual rate of convergence of social well-being is faster than the economic one, recording regional ways of recovering existing non-parallel way of achieving social and economic cohesion. More recent studies such as the paper of Żuk and Savelin (2018) analyze the convergence of real incomes from Central, Eastern and South-Eastern Europe (CESEE) to the most advanced economies of the EU. The period of analysis is between 2000 and 2016, and the paper aims to distinguish at the regional level between the factors of economic growth that could explain the differences between economies with rapid convergence and those with a slower convergence. The results indicate that the more successful regional economies show a strong improvement in institutional quality and human capital, the rapid reallocation of labor from agriculture to other sectors, but also favorable demographic developments and more outward-oriented economic policies. At the same time, in order to increase regional convergence, the study emphasizes the importance of further increasing the quality of institutions, the courageous approach to the problem of population aging and the support of innovation.

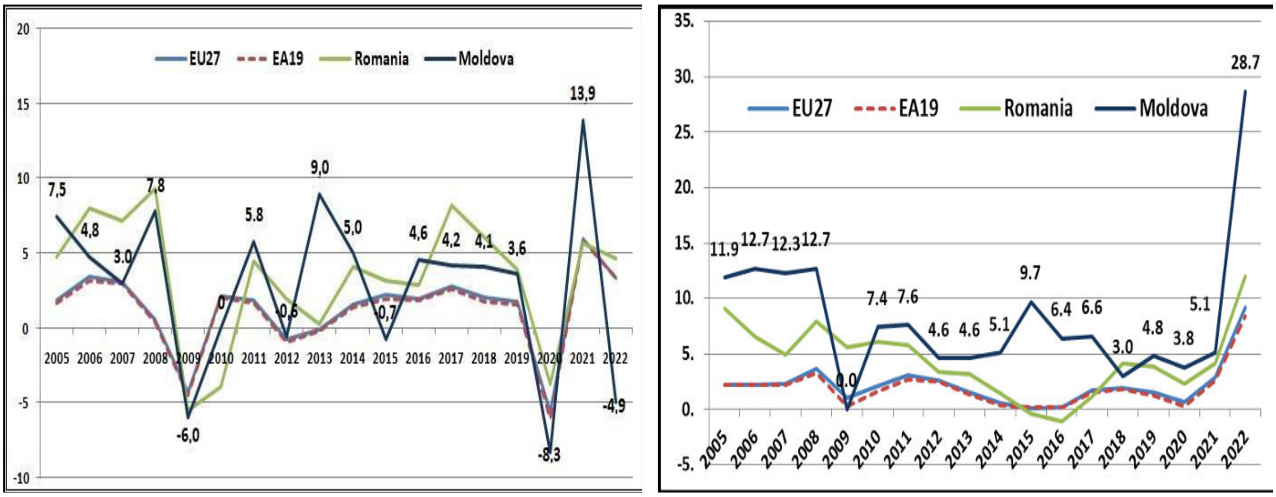
All these studies demonstrate the importance of concerns for regional convergence, of the most holistic approach, but also the need to diversify the subjects of analysis and to look for solutions that allow overcoming the regional framework and easier integration into the core group of EU27 countries in terms of economic and social convergence.

**Methodology**

Starting form a set of important macroeconomic indicators available in Eurostat database, a comparative analysis is developed between the Republic of Moldova and the Romania, EU27 and EA19. The period of analysis is 2005 – 2022, where the data for 2022 did not exist, they were extrapolated. The analyzed indicators are: Gross domestic product at market prices (GDP) (annual chain linked volumes, percentage change on previous period); Harmonized index of consumer prices (HICP) (annual average index and rate of change) (%); Net lending (+) /net borrowing (-) (% of GDP); Government consolidated gross debt (% of GDP); Income quintile share ratio - S80/S20 (ratio); At-risk-of-poverty rate before social transfers (pensions excluded from social transfers) (%); Unemployment – from 15 to 24 years (% of population in the labor force); Employment rate - from 20 to 64 years (rate)(% GDP); Total general government expenditure on Education; Gross domestic expenditure on R&D (GERD) (% GDP).

**Results**

As we can see from Figure 1 on the left, the economic growth in the Republic of Moldova conforms quite well to the evolution of the indicator at the European level (EU27), at the level of the Euro area (EA19), but also to the evolution of the economic growth in Romania. We thus observe that if the peaks are generally higher than the EU27 average and even the developments at the level of Romania with all this and the collapses are spectacular in critical periods such as 2009, 2020 and 2022. Another aspect is the evolution "in the teeth of a saw", we there are periods (except 2016-2019) with smooth ups and downs, suggesting to the authorities the need for structural adjustment of the economy by encouraging areas less exposed to boom and bust cycles.



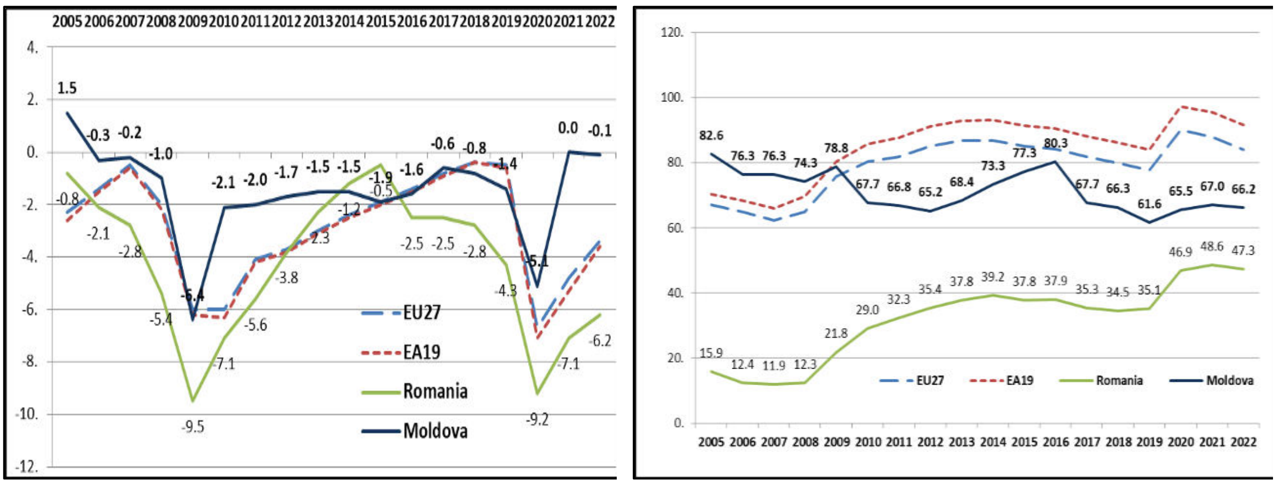

GDP (annual chain linked volumes, percentage change on previous period) HICP (annual average index and rate of change) (%)

**Figure 1. Gross domestic product at market prices and inflation**

*Source: Eurostat data, author processing; For Republic of Moldova, the inflation is ICP; for Moldova, in 2022 GDP data is from Word Bank*

Regarding inflation (see figure 1, right), for the period 2005-2022 we also observe a fairly good compliance with the European trend (EU27 and EA19) and even with regional developments (in our case with Romania), but we also observe a desynchronization in the period 2013-2018 for the Republic of Moldova, as well as a price explosion in 2022 amid the outbreak of war in Ukraine. The increased dependence on external developments, on foreign investments and remittances, unfavourable budgetary developments, the vulnerabilities of the banking sector, as well as an industrial structure still not aligned with European trends make both inflation and economic growth strongly affected in moments of crisis in the situation of the Republic Moldova.

If we look at the fiscal-budget developments, especially at net lending / net borrowing but also at the evolution of government consolidated gross debt (see Figure 2), we notice that overall, the Republic of Moldova registers a certain convergence of trends, but successful in both cases (deficit budget and public debt) to be generally below the average of the EU27 and the euro area (EA19). However, a series of fiscal and budgetary reforms are needed, as well as important measures to reduce the gap between revenues and budget expenditures, as well as to substantially increase revenues to the state budget against the background of increasing internal but especially external challenges.



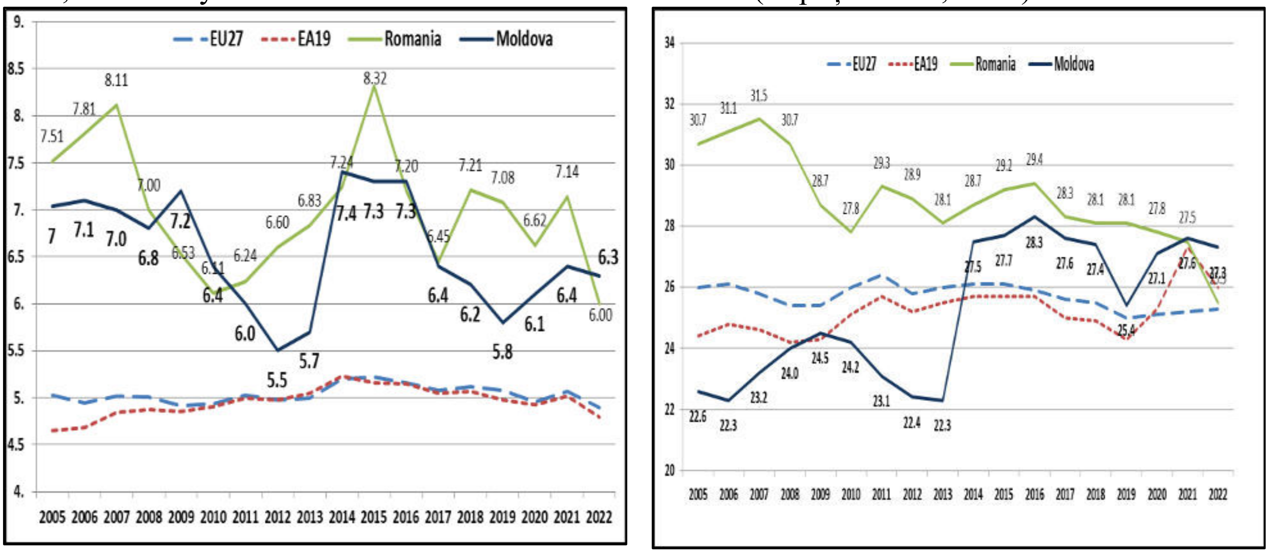

Net lending (+) /net borrowing (-) (% of GDP) Government consolidated gross debt (% of GDP)

**Figure 2. Government deficit/surplus and debt as percentage of gross domestic product (GDP)**

*Source: Eurostat data, author processing*

If we look at the ratio between the upper and the lower quintile as a measure of appreciation of the inequality of income distribution (see Figure 3, left), we observe at the level of the Republic of Moldova some synchronization and convergence with the evolution of the indicator for Romania, but at a relatively lower level, with a moderate inflammation during the outbreak of the COVID-19 crisis and the war in Ukraine. We note that the evolution is also extremely steep (both positive and negative) and does not conform to the EU27 and Euro zone trend, which registers some normalization around the value of 5, with a probable trend of gradual reduction in the future.

If we look at a significant indicator of the population's poverty risk assessment, more precisely At-risk-of-poverty rate before social transfers, i.e. where social benefits paid by the cities or state are not included in household income, we notice that the value of the indicator is constantly during the analysis period below the level registered by Romania, which demonstrates that to some extent the personal strategy of the population of the Republic of Moldova, including the volume of remittances from abroad by Moldovan citizens, was a relatively adequate one. The year 2014 reverses the trend after the financial crisis of 2009, of tempering poverty, against the background of the banking crisis and dubious financial transactions, leading to the tightening of monetary policy measures, to the increase of interest rates, to the reduction of the volume of loans, to the increase of non-performing loans, and finally to the increase in economic uncertainties (Lupușor et al., 2015).



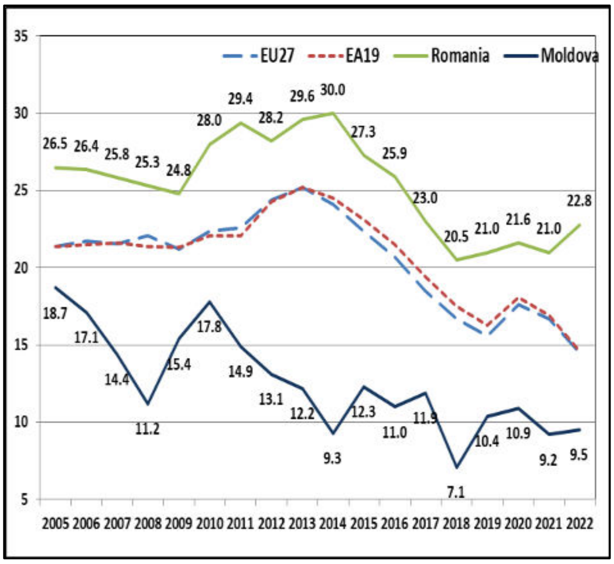

Income quintile share ratio - S80/S20 (ratio)

At-risk-of-poverty rate before social transfers (pensions excluded from social transfers) (%)

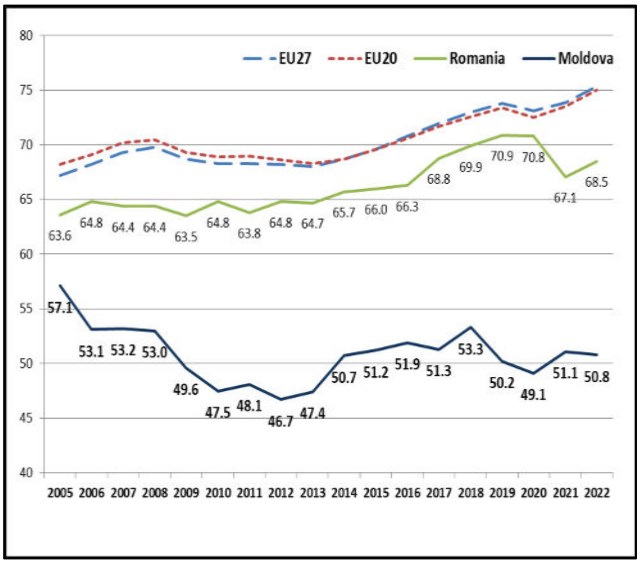
**Figure 3. Inequality and the risk of poverty**

*Source: Eurostat data, author processing*

Regarding the developments on the labour market, we note that at the level of the Republic of Moldova, unemployment among young people (15-24 years old) is below the EU27 and EA19 average (see figure 4, left), and substantially below the evolution of the indicator for Romania, keeping still a moderate decreasing tendency. These developments are also notable for the aspect that this unemployment among young people, according to the statistics institute of the Republic of Moldova, is rather registered in the urban environment and more notably among women. But on the contrary, as a worrisome trend we observe the situation of the employment rate for the 20-64 year old population, a trend in constant deterioration, moving away from the evolution in Romania, but also from the EU27 and the euro zone. Also, we can observe that at the level of the EU27 average and the euro area, the target set in the Europe 2020 strategy of 75%, the employment rate has been reached, following the trend towards the target of 78% set for 2030, which makes the structural disparity of employment at the level of the Moldova even more dramatic.




Unemployment – from 15 to 24 years (% of population in the labour force)

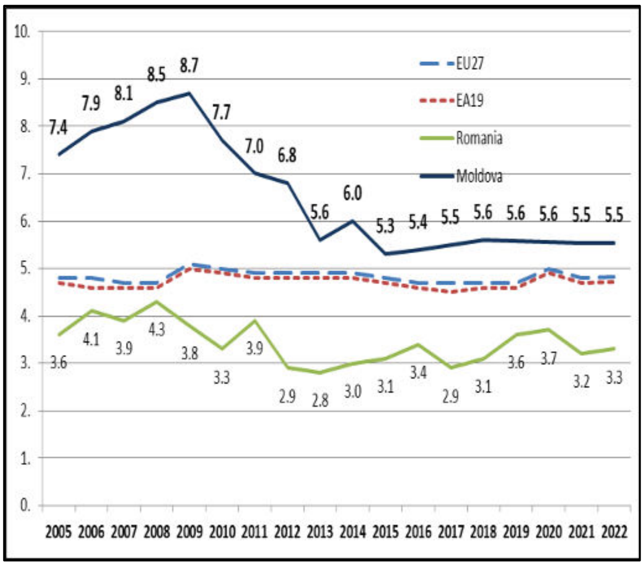



Employment rate - from 20 to 64 years (rate)

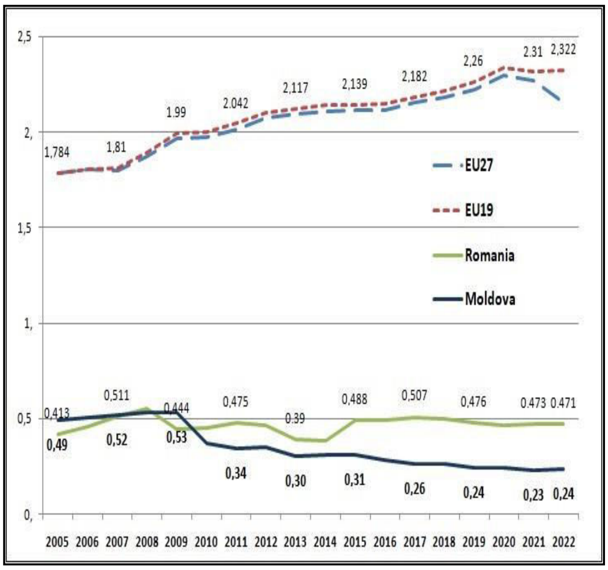
**Figure 4. Developments of the labor market - employment and unemployment**

*Source: Eurostat data, author processing*

If we look at the government spending on education, as a percentage of GDP, in the Republic of Moldova we notice that the situation is much better compared to the EU27 average and certainly compared to Romania, which will certainly allow for an easier and faster reduction of the economic and social gaps. However, the trend is decreasing, an aspect that may prove unfavourable in the medium and long term, education being the only element that can dramatically change the data of the problem in the context of the challenges of the future. The aspect is all the more worrying, as the Gross domestic expenditure on R&D as % GDP indicator is out of sync (see Figure 5, right) with the evolution at the level of the euro zone and the EU27 as a whole, over the entire analysis period.




Total general government expenditure on Education




GERD

**Figure 5. General government expenditure on Education and Gross domestic expenditure on R&D as % GDP**

*Source: Eurostat data, author processing*

**Conclusions**

In order to join the EU 27, the candidate states must comply with a series of political and economic conditions that require effort but also consistency. In addition to respecting the Maastricht criteria, both monetary (regarding inflation, interest rates and exchange rate) and fiscal (deficit and public debt), the candidate states must also align to some extent structurally, bringing and in terms of the institutional, political and social structure, the developments at the EU27 level as a whole.

In this sense, the article briefly analyzes, for the period 2005-2022, a series of indicators from the level of the Republic of Moldova, which may raise problems in terms of economic and social convergence with EU27. Thus, there are convergences but also desynchronizations, favorable aspects such as: still substantial investments in education at the government level, a decreasing unemployment among young people, a budget deficit, in the graph of the target of 3% of GDP (except for small adverse periods), but also less favorable aspects. Among the less positive aspects are: public debt still over 60% of GDP, inflation and economic growth still strongly linked to external developments, an economy with a relatively precarious industrial structure, but also substantial gaps of employment rates and high pressures in terms of poverty and income equity.

It should be noted that the less favorable developments should not worry, for example Romania, which joined the EU in 2007, in some chapters did not make spectacular progress, sometimes on the contrary, thus calling into question the period necessary for a country to be able to perform constantly and adequately at the European level. Thus, shortcomings must be seen as opportunities, as challenges that must be overcome, and not as insurmountable obstacles, the measure being given by the political ambition to reach the destination as quickly and effectively as possible.

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