

Income Inequalities and Social Vulnerability in Romania

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Theoretical focus.

Development gaps represent one of the most discussed topics at the global level, meaning not only the economic side, but also the social, technical or cultural aspects. Highlighted by the existence of disparities or gradients of concentration, these gaps can increase over time, creating dysfunctions in the administration of the territory. Uneven development at the regional or local level is not a new phenomenon, nor is it inevitable. There have always been regions that developed faster, favored by the geographical position or the presence of abundant resources, provided that there is a minimum entrepreneurial, innovative spirit. The resulting disparities can be an impetus for the regions left behind to compete and find development solutions. Some authors believe that the approach to disparities in the context of territorial development should start from the problems faced by people living in areas that have lost the start of development, offering opportunities to citizens, local administration and economic agents, ensuring access to information with the aim of reducing the gaps in living standards compared to more developed regions (Bran et al., 2018; Sandu, 2022). The manifestation of a divergence between centripetal (agglomeration) and centrifugal (dispersion) forces has the effect of increasing regional inequalities (Pinho et al., 2010). Similar conclusions emerge from other studies (Bosker, 2009) which attest to a greater importance of the regional context as a determining factor of income differences in the West of Europe, as opposed to its East where the national context has a much greater importance, generating most often disparities between the capital region and the rest of the territory. The key problems seem to be those aimed at both the precariousness of development opportunities and productivity, as shown by more recent studies (Gómez-Tello et al., 2020). Metropolitan regions that benefit from increased productivity attract workers with higher education and, implicitly, higher wages, especially since Europe has a long tradition of using capital subsidies to stimulate innovation (Ehrlich & Overman, 2020). Structural characteristics, such as the diversification of industrial activities or the demographic structure, are less important than the productivity and skill level of the labor force (Bracalente & Perugini, 2010). The manifestation of a strong contrast effect, as a result of the excessive concentration of human capital in the big metropolises, especially the highly qualified one, correlated with the increase in productivity, a phenomenon frequently attested worldwide (Faggian et al., 2019). This effect generated by the relative macrocephaly urban of the capital is not singular in Eastern Europe, where the process of metropolisation seems to excessively favor the capital to the detriment of regional centers, an expression of administrative centralism (Zdanowska, 2015; Shaker, 2015).

Data and Methods

The information needed for the estimation was collected from official statistical sources (Tempo-Online Database of the National Institute of Statistics, Population Census, National Bank of Romania and Eurostat). All the data, available at various scales of analysis, were extrapolated to the level of local administrative units, and the income information was weighted in some situations with the specifics of the professional structure of the population. In this way, a final database was obtained, which includes the following variables:

- 1) the population in 2021;

- 2) the annual income obtained from salaries (including the income of those who practice liberal professions);
- 3) the annual income obtained from social benefits, by category (pensions, family allowances, unemployment benefits, social benefits, etc.);
- 4) annual income from migration for work abroad (remittances);
- 5) annual income obtained from independent agricultural activities;

Summing them up and reporting to the population generated the average annual/monthly income per inhabitant, expressed in euro (according to the exchange rate from 1.07.2021). The secondary statistical processing first assumed the calculation of the weight of the four categories of income mentioned, as support for an analysis AHC (hierarchical ascending classification), with the aim of highlighting the local/regional specificity and the dependence on one of the income sources. After processing, the results of the statistical estimates were mapped and then illustrated in a customized manner using the Adobe Illustrator program, both in the data related to the income categories and for the typologies made, accompanied by the graphic profile of the types.

Findings

The calculation of annual per capita income for the year 2021 highlights a major disparity between the eastern and southern extremities of the country and the central and northwestern regions. Excessive rurality, the economic structure dependent on agricultural activities carried out predominantly in a subsistence regime and the poor building infrastructure correlated with a reduced level of quality of life are frequently cited. The annual income mapping retained eight income categories, based on the division into four quartiles, of which the first and last (Q1, respectively Q4) were divided in turn to reduce the gap between the minimum and maximum value, but also to highlight the extremes (Figure 1).

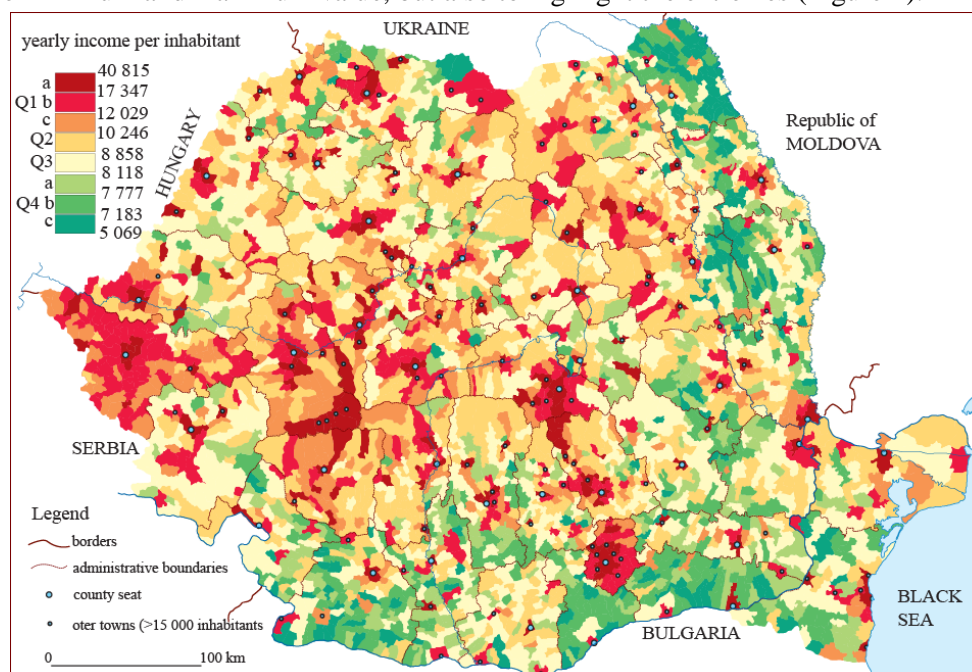


Figure 1: Distribution of the annual income of the Romanian population (2021). Source of raw data: Tempo Online database, INS

The differences between urban and rural areas are very large at the national level, including due to the significant concentration of income in the capital, which holds 20.2% of total income for 9% of the country's inhabitants (Table 1).

Table 1: Annual income and share of income categories, at regional level, in 2021. Source of raw data: INS

Region	Place of residence	Average annual income (lei/inhabitant)	Income categories (%)			
			wages	Social benefits	Remittances	Income from agriculture
Bucharest	Urban	40 815	78,5	20,0	1,4	0,0
Muntenia - Dobrogea	Urban	21 462	65,0	27,9	6,9	0,2
	Rural	9 496	37,7	53,2	5,7	3,4
Moldavia	Total	14 077	47,2	36,8	14,3	1,7
	Urban	21 314	58,0	28,9	12,9	0,2
	Rural	9 010	29,2	49,8	16,6	4,3
Transylvania – Banat	Total	18 049	60,7	32,6	5,8	0,8
	Urban	25 147	67,1	27,3	5,5	0,1
	Rural	10 476	42,6	47,6	6,9	2,8
ROMANIA	Total	18 234	60,5	32,0	6,5	1,0
	Urban	26 088	68,4	25,7	5,8	0,1
	Rural	9 688	37,4	50,4	8,8	3,4

As it emerged from the analysis of income distribution and the typology of their structure, there are significant differences between the four categories of income (salaries, social benefits, external income and income from independent agricultural activities) in terms of their contribution to total income, in spatial profile. The most consistent part returns to salaries and expresses strong contrasts. Beyond the particularities generated by the demographic structure or accessibility, the strong disparities between the few better defined metropolitan areas and the rest of the territory denote the existence of important reserves of unused labor force but also the precariousness of economic structures, often marked by subsistence agriculture. Social benefits (which include pensions, family allowances, social benefits, unemployment benefits, etc.) have a weight that can be considered abnormally high (32%). Practically, for a third of the population, the dependence on these incomes is very strong. The weight values are distributed between 11.6 and 86.1%, with a median located at 58.4% which reinforces the previous statement, especially through the constant with the median weight of salaries. Although it is difficult to predict, this unsatisfactory situation may worsen in the future due to the combination of the continuous reduction of the active population quotas and the accelerated aging of the population. The income secured by the transfer of amounts sent from abroad constitutes a significant part of the total (6.5% if we take into account only the officially known amounts). The fact that the maximum values can exceed 50% indicates the manifestation at the local level of a very high dependence on this income category and a genuine new way of life, based on traveling to work abroad, either through circular movements (seasonal) or for longer periods. The last category, income from independent agricultural activities, also provides a contrasting picture, between regions where it can matter significantly and those where it is extremely low. From the presentation of the distribution of the values of the four differentiated income categories, it follows the existence of a distinct regional profile that can be interpreted as ways of adapting to the reformation of the economic system inherited from the communist period. To what extent these adaptations can be considered the result of resilience can only be detected through multivariate analyses, using specific analysis models, but the strong spatial footprint of each typology remains important, anchored in regional realities that should not be ignored by decision-makers.

However, the operation of a hierarchically ascending classification on the income structure highlighted 8 sufficiently coherent types from a spatial perspective, quite well correlated with the particularities of economic and social development at the regional level. It is distinguished by the divergence of the two essential categories (salaries and social benefits), the first types having a high share of salary income and the latter a predominance of income provided by the state.

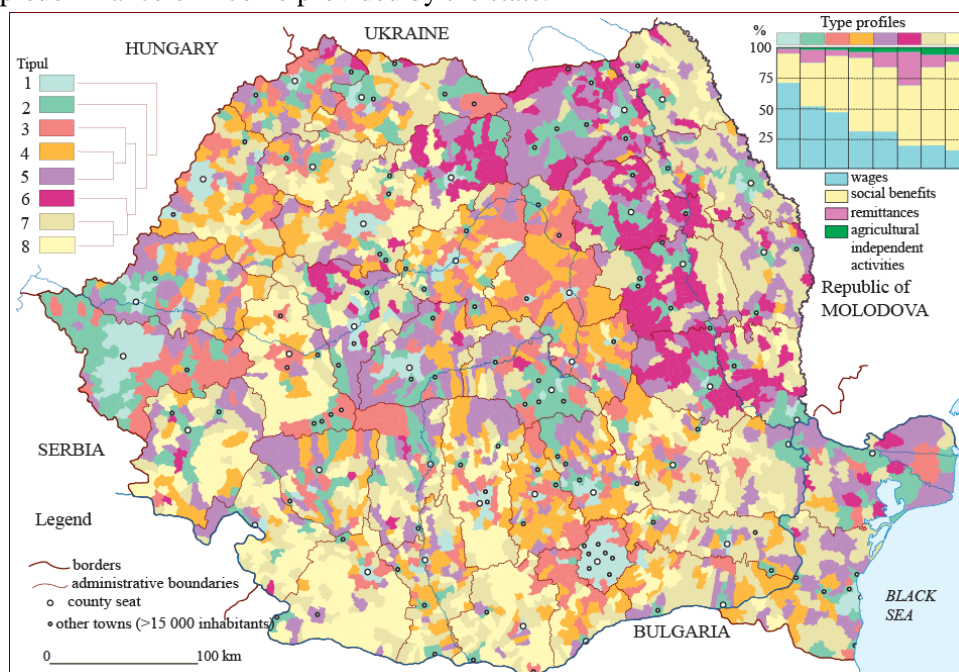


Figure 2: Typology of the income structure of the Romanian population in 2021. Raw data source: Tempo Online database, INS.

Secondarily, some types were also differentiated by the significant share of income earned abroad. Independent subsistence farming activities, as expected, did not influence the classification although there is a gradient from the first to the last type indicating a correlation with social benefits.

Conclusions

This summary analysis of the disparities induced by the distribution of average annual income and its structure at the detailed (municipal) level shows that, after 1990, certain differences in economic development have become more acute, with the main dividing line now being between the intra-Carpathian and extra-Carpathian regions, as evidenced by other studies focused on the importance of social development in creating disparities (Mitrică et al., 2019). Previously, through the industrialization policy, the premises of a relative "harmony" had been created, the areal distribution of the most dynamic territories being somewhat more uniform. This divergence was largely determined by historical factors (more efficient urbanization and earlier integration into the circuits of the Western market in the regions that belonged to the Austro-Hungarian Empire until 1918, etc.). Of undoubted importance was the faster access to the western markets, together with the transition to the market economy and the accession to the European Union. Consequently, the territorial contrasts are somewhat less in Transylvania and Banat, especially compared to the south of the country where the capital city of Bucharest creates an excessive concentration effect limiting development possibilities in its area of influence, with the exception of the core of the metropolitan area. The northern and eastern facade of the country is in another paradigm that of a periphery that adapts by resorting to massive migration for work abroad. Without this solution

avored by the gradual integration into the Western European political-economic structures, these regions would be in a completely unfavorable situation even compared to the extreme south of the country which, from certain perspectives, benefits from the presence of the capital that concentrates the bulk of foreign direct investments.

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