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# Development and poverty in Romania

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*Abstract*
*The paper is concerned with poverty in Romania during a period of economic growth (2000-2008). The poverty incidence and profile before financial and economic crisis and the evolution of poverty in the context of economic growth and of a strong increase of households income have been studied, aiming to identify who is the most vulnerable at poverty risk and to find out if the growth was pro-poor or didn't . A comparison with the others EU Member States offers some reference points for the evaluation of the actual dimensions of poverty.*

*Keywords*: poverty, economic growth, Romania, financial and economic crisis

## 1. Introduction

Poverty is an almost forgotten subject in the public debate of the previous years in Romania, though a long time during the transition to the market economy and economic downward it was the main matter of concern for social policy makers, political debate, and mass-media and for research. That is due to the obvious increasing of households' income and to improving of the general living standard after the year 2000. However poverty was a real fact and it is about to a new expanding in the present circumstances, as a result of growing unemployment, insufficient resources for social protection, cutting up of wages in public institutions and private companies, and of utility price rising.

It is generally accepted that, in absolute terms, the poverty spreading and depth depends on economic development of the country or of the region where the people live in, that economic growth is a condition and a driving force of the poverty alleviation, and that an economic downturn is likely to amplify poverty. Of course, there are many other determining factors of poverty, out of which the distribution of income, wealth and assets is very important. At the same time, it is more and more acknowledged that poverty is harmful for human, social and economic development. Poverty is hampering the education of children (and adults) and is weakening the health, which has a negative long and short term impact on human capital and on its efficient participation to economic activity. Increasing poverty harms social cohesion, and diminishes mass consumption demand. Above all, poverty is painful for the poor people; it hurts their feelings and dignity. There are some of many reasons why combating poverty is very important.

The paper is organized as follows. At first, some methodological issues regarding poverty and pro-poor growth measurement are presented, and then the paper contains an analysis of poverty incidence in Romania during 2000-2008 period, a comparison with EU Member States, and an evaluation of growth pro-poorness.

## 2. Measurement issues

The results of a variant of the poverty measurement methodology developed by the Statistical Office of the European Communities (Eurostat) are used in this study. It is a so called relative method, derived from defining poverty as a situation in which people have not sufficient resources to enjoy a living standard generally accepted in the society where they are living. According to this approach, the poverty status of a person is defined related to a poverty threshold established at 60% of the median equalized disposable income.

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The welfare indicator used is the household disposable income, estimated by summing all monetary incomes and incomes in kind received by households' members (from work, from property, from social transfers and from other sources), and deducting taxes and social contributions paid by household. At this point it must be noticed that according to national estimations, the disposable income comprises the sum of all incomes, including income in kind (out of which consumption from own production is an important component of Romanian households' income), while the data on the income, inequality and poverty estimated by Eurostat and posted on its website refers to the monetary income only. That causes a certain underestimation of the income as welfare proxy in Romania, particularly as compared to the developed European countries. Inequality and poverty in Romania are overestimated by using only monetary income, because the share of consumption from own resources is higher at the bottom of income distribution.

In order to take into account the household composition, the households' total incomes are been equalized by using the modified OECD equivalence scale, according to which the equalized size of each household is established by attributing a coefficient equal to 1 to the first adult, 0,5 to each subsequent adult, and 0,3 to each child (younger than 14 years). The equalized income (disposable income per adult equivalent (AE)) results by dividing the total income of the each household by the number of adult equivalent units in the same household, and it is attributed to each household member.

The incomes of households surveyed in different months are adjusted for inflation by the monthly consumption price index, and are recalculated in each year's January prices. In comparing the income indicators and poverty thresholds at EU level, the estimates at standard purchasing power parity are applied, that is taking into account differences between national consumption prices.

The poverty rate/headcount rate is the main poverty indicator used in the analysis. It is the share of poor in the population, and it is estimated at the national level and for different population categories (by individual's age, occupational status and education, by household type, by residence area and region), and it measures the incidence of poverty. Other indices, as Foster-Greer-Thorbecke class of indices (FGT), measure the deepness and severity of poverty.

Income and poverty indicators are estimated on the basis of data collected by Households Budget Survey (HBS) conducted by the Institute of National Statistics from 2001, and by Households Integrated Survey (HIS) in the previous period. Eurostat estimates are based on information collected by a new standardized household survey: European Union Statistics on Income and Living Conditions (EU-SILC), aimed to allow sound international comparisons in this domain.

To evaluate of growth is pro-poor or not, two indicators are applied in this study. One is the pro-poor growth rate (PPG), proposed by Martin Ravallion and Shaohua Chen, and the other one is the poverty equivalent growth rate (PEGR), proposed by Nanak Kakwani, Shahid Khandker and Hyun Son. According to Ravalion, growth is pro-poor if the increase of mean income is going along with an increase of the income received by poor, whilst by Kakwani the growth is pro-poor only if the incomes of poor are rising more than the mean income. The first is a position supported by World Bank experts, and the second states the view of UNDP International Poverty Centre's team.

The pro-poor growth rate (PPG) is derived from the growth incidence curve, a variant of the famous "Pen's parade", a graphical presentation of the incomes by population quantiles. The growth incidence curve presents the increasing rates of the average incomes received by population quantile groups. The pro-poor growth rate is estimated averaging the growth rates

of incomes for the poor (population with the income below the poverty threshold in the base year),

$$PPG_{2/1} = \frac{1}{H_1} \int_0^{H_1} g_{2/1}(p) dp, \quad where \tag{1}$$

$$g_{2/1} = \frac{y_2(p)}{y_1(p)} - 1 \tag{2}$$

is the growth rate of the mean income received by the population in $p$ quantile group, in the current and the base year ($y_1(p)$ and $y_2(p)$, respectively), and $H_1$ is the poverty rate in the base year.

According to Ravallion's approach, the growth is pro-poor if the indicator has a positive value.

I estimated the pro-poor growth rate between 2000 and 2008 on the basis of the average incomes of population grouped by income percentiles, as the mean of growth rates of the first 17 percentile groups (the share of poor in 2000).

The second indicator, the poverty equivalent growth rate (PEGR), is based on the decomposition of poverty change (increase or decrease) in two components representing the changes due to growth and inequality changes, and it is estimated as a ratio of total poverty elasticity ($\delta$) to growth elasticity of poverty ($\eta$), multiplied by the difference of the natural logarithms of mean incomes in the current and the base year ($\gamma$),

$$\gamma^* = \frac{\delta}{\eta} \gamma, \quad where \tag{3}$$

$$\gamma = \ln(\bar{y}_2) - \ln(\bar{y}_1), \tag{4}$$

$$\delta = \frac{\ln(P(z, \bar{y}_2, L_2)) - \ln(P(z, \bar{y}_1, L_1))}{\ln(\bar{y}_2) - \ln(\bar{y}_1)}, \tag{5}$$

$$\eta = \frac{\ln(P(z, \bar{y}_2, L_1)) - \ln(P(z, \bar{y}_1, L_1)) + \ln(P(z, \bar{y}_2, L_2)) - \ln(P(z, \bar{y}_1, L_2))}{2[\ln(\bar{y}_2) - \ln(\bar{y}_1)]}. \tag{6}$$

$P(z, \bar{y}_t, L_t)$ are poverty indices estimated for the base and current years (t=1,2), $z$ is the poverty threshold, $\bar{y}_t$ is the mean income of the base and current year, and $L_t$ is the Lorenz curves of the two distributions.

As Kakwani, Khandker and Son stated, the estimate is showing a pro-poor growth if $\gamma^* > \gamma$. If $0 < \gamma^* < \gamma$, that indicate a decrease of poverty along with income growth accompanied by increasing inequality, but not a pro-poor growth. The recession can be assigned as pro-poor, if $\gamma < \gamma^* < 0$, that means a poverty increase, whilst poor is less affected than the non-poor.

Poverty indices used in the estimation of the poverty equivalent growth rate ($P(z, \bar{y}_t, L_t)$) can be additively decomposable poverty measures. We used two indices of the Foster-Greer-Thorbecke class ($FGT_1$ and $FGT_2$), estimated on the basis of data on average incomes received by the percentile groups of population:

$$FGT_\alpha = \frac{1}{n} \sum_{i=1}^{m} \left( \frac{z - y_i}{z} \right)^\alpha,$$
(7)

where $y_i$ denote the income of poor person $i$. $m$ and $n$ are the number of poor and of total population, and $\alpha$ is a parameter named "poverty aversion parameter".

## 3. Poverty incidence in Romania

In 2008, the poverty rate was of 18% in Romania. It means that almost one out of five persons (3.9 million as a whole) lived in a household which incomes were less than a threshold of 460 lei/month/adult equivalent. In 2000, the share of population living below that year's poverty line (228 RON/month/AE, at January 2008 prices) was a little bit lower (17%), so one can observe that the proportion of people which are relatively far from the general living standard of Romanian society has not changed significantly until the beginning of crisis. Despite the high economic and households' income growth (including low incomes), a consistent part of population remains at a relatively high distance from the possibility to afford a standard of living reached by the greater part of Romania's inhabitants. Moreover, its share increased among some most vulnerable population categories.

While we observe poverty rates among population grouped by the **employment status**, we find that the independent workers, especially farmers, and the unemployed are at a high poverty risk and that their exposure to risk rose. The poverty rate among independent workers (including farmers) was of 30% in 2000, and increased to 41% in 2008 (out of which that of farmers was 44%). That's why the working poor rate is relatively high (15%) and increasing.

*Fig, 1. Poverty rates, by employment status*
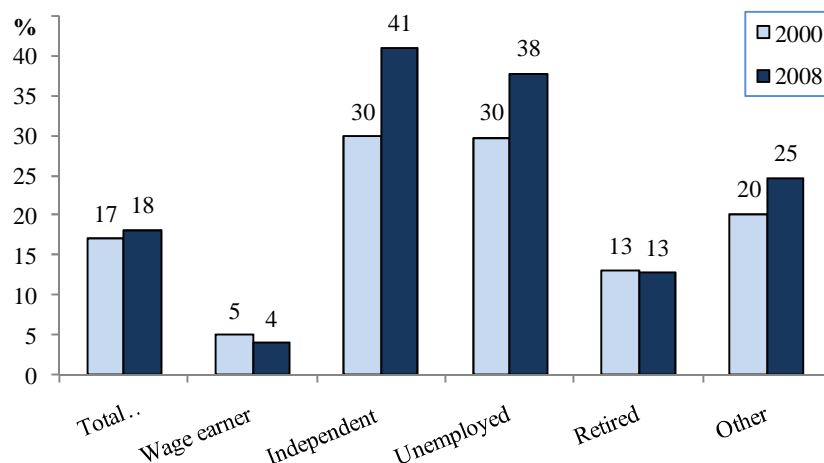


*Source:* NIS/ HIS and HBS data

The poverty risk of the unemployed is high also. The poverty rate among them rose from 30% in 2000 to 38% in 2008. That is extremely worrying at present time, since growing unemployment is likely to bring about growing poverty, if social support in unemployment will not improve.

Children and young people are more frequently affected by poverty than the other **age** groups. In 2008, more than one out of four children and one out of five person of 16 to 24 years old lived in poor households (26% and 21%, respectively). The presence of children, particularly of many children, represents a greater charge on households' budget, whose income can be used to cover more consumption needs and so its members' welfare is lower than if household has not dependent children. Besides many children associates usually with low education, a

weak labour market position and low income of parents, and with mother not employed or underemployed. Thus poverty is more spread among households with dependent children than among the others, with a poverty rate of 21% (in 2008) as against 14% for households without children. Most difficult and worsening is the situation of households composed by one adult with children (lone parents mainly) and of households with two adults and three children or more, whose poverty rates were of 31% and 47%, respectively (in 2008), much higher than in 2000 (26% and 34%).

Another household type at high poverty risk is that of three or more adults with dependent children, among which the poverty rate was of 24% (in 2008), but which share in poor was 31%. An important part of these households are multigenerational, formed with the aim to support relatives in difficulty: dependent elderly living with their son's or daughter's family, young families with children living with their parents in order to get support for children rearing or for the reason that they can't afford to buy or hire an own accommodation. Most of lone parents with dependent children are living also with their relatives. This is a form support that prevents the fall in poverty of a part of families in need, but if that bring together more vulnerabilities, all household members are at risk of poverty.

The poverty rate is lower among households of two adults with one or two dependent children (11% and 17%, respectively), but they represent almost a quarter (23%) of the population living in poor households.

Elderly are another age group expected to be at risk of poverty since they are inactive. Nevertheless the poverty rate among persons of 65 or more years old (16%) is lower than the rate estimated for the population as a whole, though a lot of pensions are low. A part of older people that benefit of low pensions is protected against poverty by living in households with wage earners or other retired in their composition, or by working in household production for own consumption. Those living alone, particularly older women with survivor's or farmer pensions, are at a higher poverty risk. The poverty rate among them was of 28% in 2008.

*Fig. 2. Poverty rates, by age groups*
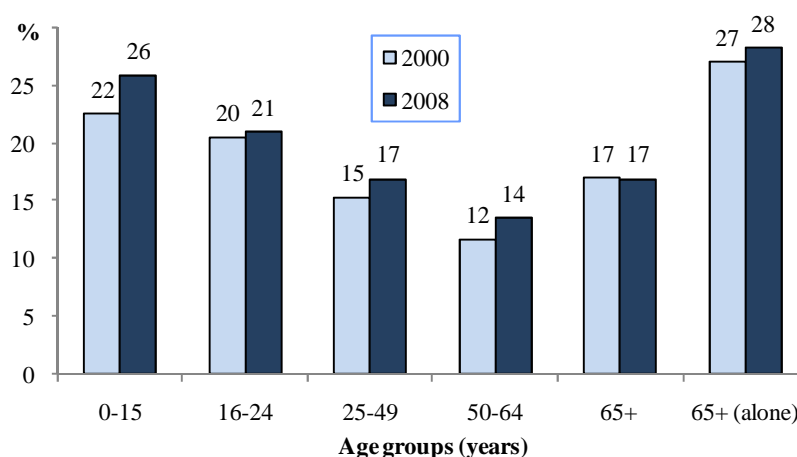


*Source:* NIS/ HIS and HBS data

Poverty is more than three times more widespread in **rural** than in **urban areas**. In rural areas, poverty rate rose from 24% to 30% between 2000 and 2008, while in urban areas it fell from 12% to 9%. The North-Eastern **region** is the poorest, with more than a one out of four inhabitants living in a household below the poverty line, while Bucharest is the region with the smallest poverty incidence, three to five times lower than in the others regions.

*Fig. 3. Poverty rates, by residence areas and region*
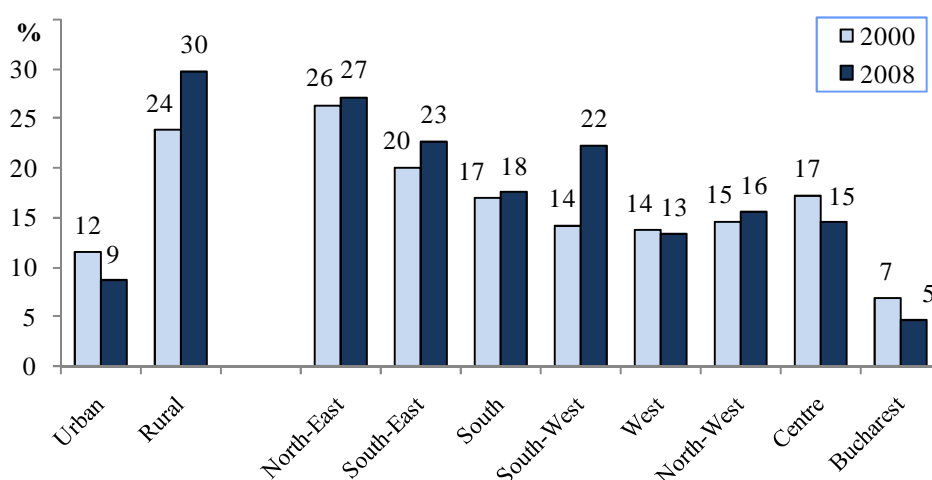
*Source:* NIS – HBS data

A comparison of poverty indicators estimated for Romania and the other EU Member States allows a view on the **European dimension of poverty in Romania**. According to Eurostat's estimates based on households' monetary income, Romania has the highest poverty rate among EU-27 Member States (25% in 2007). The average poverty rates, estimated by Eurostat at EU-27, EU-15, and the first ten new Member States (NMS-10) level, were of 17%, 17% and 15%, respectively. The lowest poverty risk is faced by population in Netherlands and Czech Republic (10%). Comparing poverty rates, it is important to mention that poverty thresholds used to estimate poverty vary widely among EU Member States. While, in 2007, in Romania a quarter of population disposed of cash income lower than 995 PPS/year/adult equivalent, in Netherlands and Czech Republic, for instance, 10% of population had incomes lower than 10924 and 3251 PPS/year/AE, respectively.



*Fig. 4. Poverty rates in EU Member States (2007)*
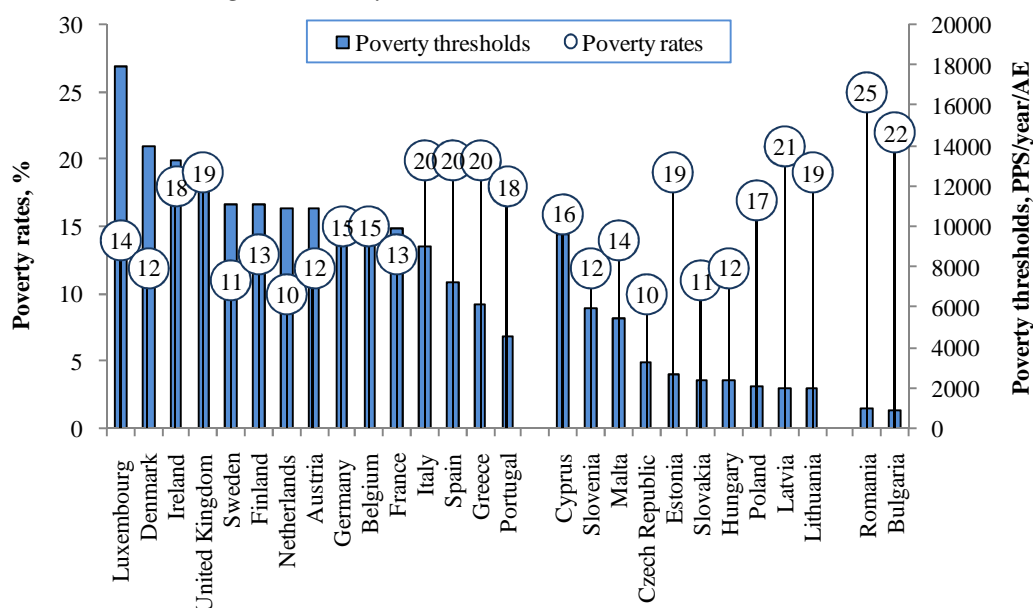
*Source:* Eurostat: Statistics Database

Since there are high gaps between poverty lines in Romania and in the most of EU countries, it can be said that the living standards of poor is much lower in Romania. Romania's poor are five to fourteen times poorer than the poor in EU-15 countries, and two to six times worse than poor in NMS-10. According to poverty thresholds' gaps, a poor person in Denmark, Germany or Czech Republic is 14 times, 11 times and 3 times, respectively, better off than a poor in Romania, and the gaps are bigger if the median incomes of poor are compared.

## 4. There was pro-poor growth in Romania?

Eight years before economic crisis arose (2001-2008), Romania had a high economic growth, accompanied by an even higher increase of households' income. GDP grew by an average annual rate of 6.2%, and the equalized households' disposable income increased by a mean rate of 9%, and so the income level doubled during that period.

As a result, according to an "absolute" approach, poverty decreased significantly. By applying a constant poverty threshold, set at 60% of 2004 year's median income, the poverty rate has been estimated at 32% and 6%, respectively, for 2000 and 2008 years. While the income of the poor side of the distribution increased along with economic growth, the greater part of the population living in households, which income were below the poverty line in 2000, surpassed the same line until 2008. Their well-being improved absolutely. In a sense, this allows to consider economic and income growth as pro-poor.

We estimated the pro-poor growth rate, proposed by Ravallion and Chen, and the result is indicating that the growth between 2000 and 2008 was pro-poor in accordance with World Bank's definition. The average of the growth rates of the incomes received by the population belonging to the bottom 17 percentile groups of income distribution (that is the poverty rate estimated for 2000, by that year's poverty threshold) was positive: PPG = 0,933 (i.e. the incomes of the bottom 17% of the distribution were by 93% higher in 2008 than in 2000).

*Fig. 5. Growth incidence curve (2008/2000)*
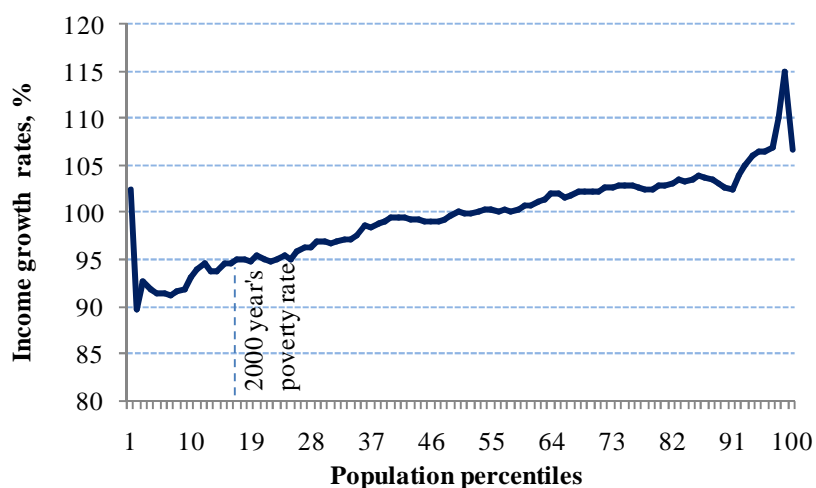


*Source:* NIS – HBS data

The "Pen's parade" and the growth incidence curve show the increase of the incomes along the entire distribution, but at the poor side the raise was slower. While the real disposable income of the poorest 20% of population rose by 94%, those of the "richest" 20% rose by 121%, and the absolute benefit from growth was six times greater for the 'richest' quintile than for the poorest one.

According to UNDP-IPC's definition, the growth was not pro-poor. The estimate of the poverty equivalent growth rate ($\gamma^*$) is lower than income growth rate ($\gamma$): 0,589 (for $FGT_1$) and 0,631 (for $FGT_2$) as compared to 0,702, that in non logarithmic terms means poverty equivalent growth rates of 80% and 88% as against the mean income growth rate of 102%.

## 5. Conclusions

The remarkable growth of Romania's economy, between 2000 and 2008, was accompanied by a large income increase and by a sharp drop of absolute poverty. However, relative poverty even increased slightly, and the situation of some population groups (independent workers, unemployed, children, and elderly living alone), of households living in rural areas and in South-Eastern and South-Western region worsens as compared to the general living standard. The growth can be considered pro-poor only by World Bank's criteria, but not by the stronger definition of UNDP-IPC experts. The high growth elasticity of absolute poverty is likely to turn into a great disadvantage during the current economic downturn. A new extending of absolute poverty could occur if economic crises do not come soon to an end. A deepening poverty could be very painful, if one takes into account the poverty history in Romania and the high living standard gaps between Romania and the other EU Member States.

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