

THE IMPACT OF CONSUMPTION FROM OWN RESOURCES ON THE RATES OF SEVERE POVERTY AMONG THE PERSONS FROM HOUSEHOLDS IN ROMANIA

Cristina Stroe¹
Silvia Cojanu²

Abstract

The own consumption is an important component in the framework of the income and expenditure of the population, that oscillated over the past 5 years between 14-18%. At the same time, the own consumption is an indicator that reflects to a great extent the level of the welfare of the population. The paper focused on the influence of own consumption on the severe poverty rates (a form of extreme poverty). Severe poverty rates have been estimated, determined at the threshold of 40% of the median income, for persons in the households, considering some of the main features of the household - the residence area (the component of own consumption is particularly important in the rural area), the number of people in the household, considering also age and gender. The severe poverty rates have been determined using the available income in which the component of own consumption has been included and then excluded and, through the differences obtained, we were able to analyze the influence of own consumption on households' severe poverty and how this influence has evolved in the period in question. Data used in simulations are part of the Household Budget Surveys (National Institute of Statistics, 2011-2014).

Keywords: *Severe poverty, consumption from own resources, impact, dynamics, households*

JEL classification: I3, D1

1. Introduction

The consumption from own resources (with other name as the own consumption or the equivalent of the consumption of food and non-food products from own resources) is an important component in the frame of households' income and expenditure. In this study, we focused only on income and not on the expenses, as the severe poverty rates and also the relative poverty rates are calculated at the available income level and not at the expenditure level. It was found that the level of consumption from own resources changes under the influence of the dynamics of the total income of the household and has significant value in rural households, but also in the case of more prominent poverty, if the possibility of consuming from own resources exists. Then, the paper is focusing on the influence of consumption from own resources on the severe poverty rates, determined considering the available income of the persons in the households, at the threshold of 40% of the median income. Thus, the severe poverty rates have been simulated, for the first phase, by including consumption from own resources in the available income, then excluding it from the available income of the persons of the households, calculated per equivalent adult, at the threshold of 40% of the median available income at individuals' level (these analyzes can be performed for household level also). We will analyse the impact of consumption from own resources on poverty by assessing the differences between the severe poverty rates taking and not taking into account the consumption from own resources. The microdata used in simulations and analysis were obtained through the Household Budget Surveys of the National Institute of Statistics for 2011-2013/2014. These aspects in dynamics are analyzed considering the various determinants of the

¹ Senior researcher, second degree, National Scientific Research Institute for Labour and Social Protection, Bucharest, Romania, cristinaradu@incsmpps.ro

² Third degree researcher, PhD, National Scientific Research Institute for Labour and Social Protection, Bucharest, Romania, silvia.cojanu@yahoo.com

household, such as area of residence, the size of the household, the age of the head of the household, the gender dimension, etc.

2. Consumption from own resources - important part of the income and expenditure of the households

Consumption from own resources is an important component in the framework of the income and expenditure of the population, representing in the period 2011-2014 between 14.2-16.5% of the total income of households and between 15.6-18.2% of the total expenditure of the households, according to the data provided in the Statistical Yearbooks of Romania, of the National Institute of Statistics. Even if these shares of the values of consumption from own resources are on a descendant trend for the four analysed years, regardless of analysing them as percentage of income or as percentage of expenditure of the households (fig. no. 1), they are situated at significant, important quotas for the households, especially for the poor households.

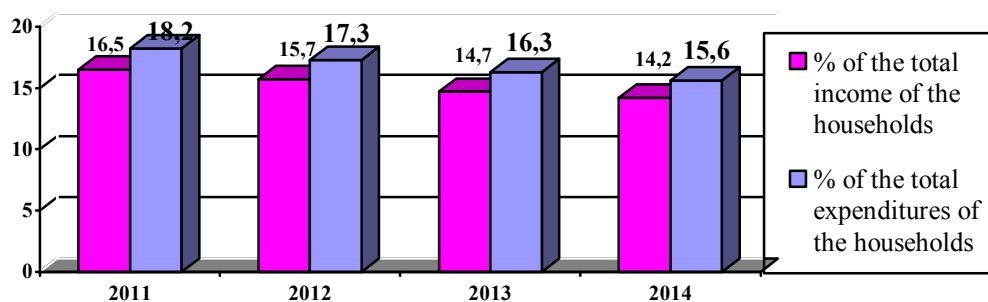


Figure no. 1. The share of the equivalent value of the own consumption in the income, respectively in the total expenditure of the households (%)

Source: The National Institute of Statistics, online tempo

As the income from wages stands for nearly half of the monetary income obtained by households, and the benefits of the social assistance contribute with about a quarter to the monetary income, consumption is an important component in particular in the framework of the income of households in the rural areas, where the equivalent of the consumption from own resources has exceeded 3 to 4 times the value recorded in households in the urban area for 2001-2015 (fig. no. 2), according to the data provided by the National Institute of Statistics (tempo online database).

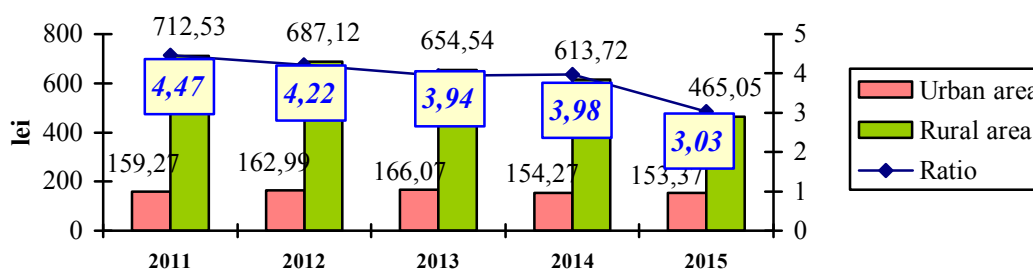


Figure no. 2. The equivalent value of the own consumption on areas of residence (lei) and the ratio of the equivalent value of own consumption in rural and in urban areas

Source: The National Institute of Statistics, online tempo

On income deciles at household level, regardless of the reporting year of the period 2011-2014, the higher values of the equivalent value of consumption of agricultural products from own resources, of more than 25%, are to be found, as expected, among households whose total income is in the first 3 deciles of income (i.e. households with the

smallest incomes), consumption from own resources for these households is between 30-48%, compared to the upper deciles (deciles 8-10), of households with the highest total incomes, where the consumption from own resources represents less than 9% of total income over the reported period.

Among the lower deciles of income, the percentages of consumption from own resources were diminishing from one year to another (fig. no. 3), as the share of monetary income increased in the total income of the household, as there was also an increase in the total income of the households (and of the margins of total income per person afferent to deciles). For the first income decile, the consumption from own resources represents 43-48% of total household income, which is significant for these households with the smallest total incomes.

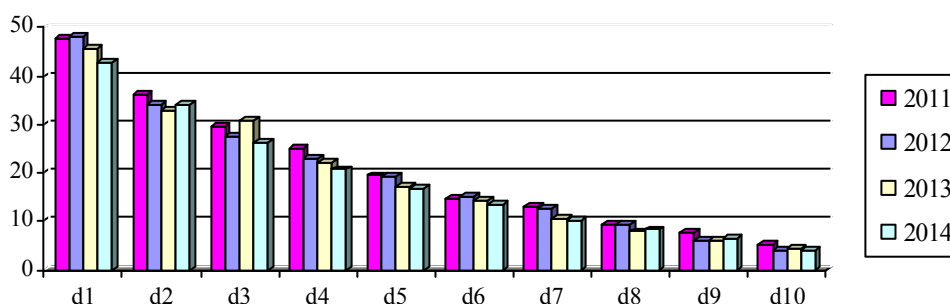


Figure no. 3. The share of the equivalent value of the own consumption in the total income of households, by decile, in dynamics for 2011-2014 period (%)

Source: The National Institute of Statistics (NIS), online tempo

Therefore, the consumption from own resources changes under the influence of changes in the total income and of the monetary income of the population, but also under the influence of potential behavioural changes of the concerned segments. This would mean that households in which the total incomes are reduced, might have to choose a forced replacement in consumption, and, if possible, consume from own resources. Therefore, in times of poverty growth, it has been found that “the level and share of consumption from own resources increases” (research results of 2 projects of the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, 2009). In these projects, researcher’s affirmations emphasized the idea that, vice versa there is a similar connection, as “an income increase up to a level considered sufficient, upon subjective criteria, is not reflected in immediate and significant changes of the level of consumption of food from own resources”. At the same time, it is appreciated that “a certain behavioural inertia maintains for a period of time the level of consumption from own resources, but its share in the total expenditure of consumption decreases due to increases of monetary expenditure for consumption”. Whereas in this paper we refer to income when analysing consumption from own resources and its relation to households confronted to severe poverty, the claim of the authors of the above mentioned study referring to expenditure can be applied in the case of the analysis at total income level and monetary income level. On the basis of the theory of permanent income proposed by the economist Milton Friedman (1957, pp.16), who claims that “individuals adapt their behavior of consumption not only to the level of current income of, but also to the entire income, present and future”, it can be assumed that the consumption from own resources can follow the same trend, being correlated to these incomes, obviously for the households where the consumption from own resources is possible, and here we refer either to households in rural areas (where consumption from own resources is better highlighted than in the urban area), or even to those urban households that can access their own production from the rural areas, but also

to households in rural areas, in particular the poorest, for which consumption from own resources represents an important basis for daily living and even for survival, etc.

At the same time, certain socio-economic features of the persons / as well as certain households characteristics may be considered influencing factors, often important determinants in increasing the risk of poverty and, therefore, it is important for these variables to be included in the analysis for a complete and complex image.

Consumption from own resources has a strong influence on the poverty rate, leading to reducing the incidence of poverty in a significant proportion, especially taking into account certain characteristics of the household. And the significance of the consumption from own resources will be seen, in particular, in the analyzes considering the area of residence, the household composition, in particular in the households which are affected to a greater extent by poverty and for which measures must be taken to reduce poverty in a far greater proportion and faster, as these types of households are poor, maybe the poorest, traditionally, but also their share in the total population is high.

3. Severe poverty - the severe poverty rates, households affected by severe poverty

In the specialized literature on the issue of poverty and its severe and extreme forms, in the National Strategy on Social Inclusion and Poverty Reduction for the period 2015-2020 (GD no 383/2015), but also in the EU Strategy of economic growth (Europe 2020 Strategy) which makes reference to the increase of social inclusion and reducing poverty, the principal indicator regarding poverty is the risk of poverty rate determined at the threshold of 60% of the median income per equivalent adult. At the same time, another indicator is the one referring to severe poverty and it is calculated at the threshold of 40% of the median income (all these strategic documents, but also the specialized literature, make reference to other indicators for the quantification of poverty and social exclusion, but in the present study we will only refer to the severe poverty).

The component of consumption from own resources is an important segment of the incomes of the population, also showed by the EUROSTAT statistical data at the European level (table no. 1) which makes reference to the relative poverty considered standard (determined at the threshold of 60 % of the median income) and to the severe poverty (determined at the threshold of 40 % of the median income).

Table 1. Proportion of population at risk of poverty, excluding and including production for own consumption, Romania, 2012 (% population in each category)

At risk of poverty threshold, 60% median of income		At risk of poverty threshold, 40% median of income	
<i>As usually measured</i>	<i>Including production for own consumption</i>	<i>As usually measured</i>	<i>Including production for own consumption</i>
22.42	20.96	10.92	9.48

Source: European Commission, Employment, Social Affairs and Inclusion, calculations based on European Commission, EUROSTAT, cross-sectional EU-SILC 2013 UDB August 2015, The EU Social Situation Monitor

According to European statistics, “by raising the effective level of income of those whose income is relatively low in cash terms, the inclusion in disposable income of the production of goods for own consumption tends to reduce the proportion of people at risk of poverty (defined as having income below 60% of the median). The effect is especially significant in Romania, where it reduces the proportion at risk from just over 22.5% of the population (the second highest figure in the EU) to less than 21%. For an at-risk-of-poverty threshold of 40% of the median income, the effect of including production for own consumption in the measurement of income is to reduce the proportion at risk in Romania

from just below 11% (the second largest in the EU) to 9.5%”. The European statistical data shows that, regardless of the fact that we make reference to the standard relative poverty, or to the severe poverty, the component of consumption from own resources plays an important role in the quantum of available income, helping to reduce poverty with 1.4 percentage points, both in the case of standard poverty (1.46 pp.), and in the case of severe poverty (1.44 pp.).

To analyze the impact of consumption from own resources on severe poverty, the severe poverty rates determined at 40% of the median income per equivalent adult were estimated. The simulations were carried out on the basis of micro data from the Family Budget Surveys / the National Institute of Statistics, for 2011-2014. These aspects caught in dynamics will take into account the different characteristics of the household, such as area of residence, size of the household, age of the head of the household, the gender dimension, etc. These analyzes will be carried out at individuals’ level (they may be carried out at household level) first taking into account the consumption from own resources in the frame of available income and the rates of severe poverty will be estimated / simulated considering these features, in dynamics, then these analyzes will be carried out once again under the same conditions, with the extraction from income of the component of consumption from own resources. The impact of consumption from their own products (consumption from own resources) will be deducted from the differences obtained from the two rates of severe poverty, on the various characteristics of the analyzed households. The estimates in dynamics of this impact will highlight the extent to which the consumption from own resources has a certain influence on the severe forms of poverty for certain households, also taking into account the specific characteristics of the households.

The calculation of the severe poverty rates in the analyzes below (starting with fig. no. 3) was made at the level of persons in the household, based on the available income, including and then excluding consumption from own resources, in order to analyze the importance of the consumption from own resources within the framework of the available income of the households, and to amend the rates of severe poverty in the presence or in the absence of the type of consumption, in the 4 years of analysis (2011-2014).

3.1 Severe poverty - total households

Even if the severe poverty rates determined at household level present some variations, recording both increase, as well as some reductions in the period 2011-2014, the differences between the rates of poverty are not that significant from one year to another (fig. no. 3).

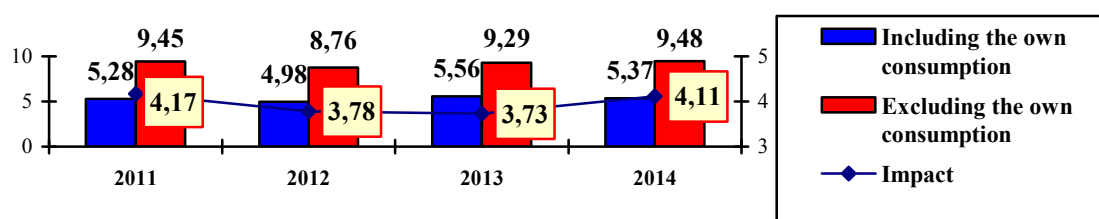


Figure no. 3. The severe poverty rates among the persons in households, determined at the threshold of 40% of the median income, when including and then excluding in/from income the component of the own consumption, in the period 2011-2014 (%)

Source: Simulation/analysis of data from Household Budget Survey, NIS, 2011-2014

Thus, the severe poverty rates, calculated when the component of consumption from own resources has not been taken to account, reached a maximum of 9.48% in 2014 and a minimum of 8.76% in 2012. By including the consumption from own resources in the available income, the poverty rates significantly decrease, drifting around the threshold

of 5%, with a minimum recorded in 2012 (4.98 %) and a maximum reached in 2013 (5.56%). Thus, according to the calculations, from the differences obtained between the 2 values of severe poverty rates, the component of consumption from own resources is underlined, showing that it influences to a significant extent the available income of the persons in the household and contributes to a significant reduction of severe poverty, with 3.73 to 4.17 percentage points over the period in question.

3.2 Severe poverty - area of residence

Considering the area of residence, the influence of consumption from own resources on available income is very diverse, being much more significant in the rural area, where it contributes to a reduction of the severe poverty (fig. no. 4 and 5).

Thus, at the level of persons from households in the urban areas, the rates of severe poverty are relatively small, regardless if the component of consumption from own resources has been taken into account or not within the framework of the available income (rates of poverty between 2.53-2.62% when it includes the consumption of own resources and rates between 2.98-3.60% when excluding the consumption of own resources from the available income), which means a reduced impact of consumption from own resources for these people from private households in the urban areas, of less than 1 pp. (fig. no. 4).

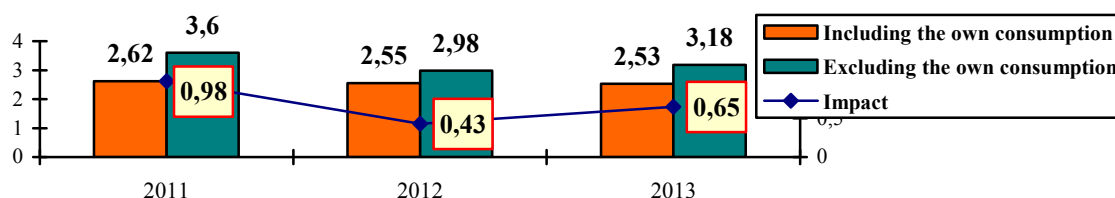


Figure no. 4. The severe poverty rates among persons from households in urban area, determined at the threshold of 40% of the median income, when it includes/and then excludes the own consumption in/from the income, 2011-2013 (%)

Source: Simulation/analysis of data from Household Budget Survey, NIS, 2011-2013

In exchange, the values are much more nuanced in the rural area (fig. no. 5), where the rates of severe poverty calculated are much higher, 3.1-3.6 times higher than those recorded in the urban area, between 7.91-9.22% when including consumption from own resources in the income of the persons. If the consumption from own resources is not taken into account, persons in the rural households are faced with a significant situation of severe poverty, with much higher rates, between 15.76-16.66%. Thus, for these households in the rural areas, consumption from own resources is an important component in the framework of personal income, contributing to a significant reduction of severe poverty, between 7.44-8.03 pp. over the period in question.

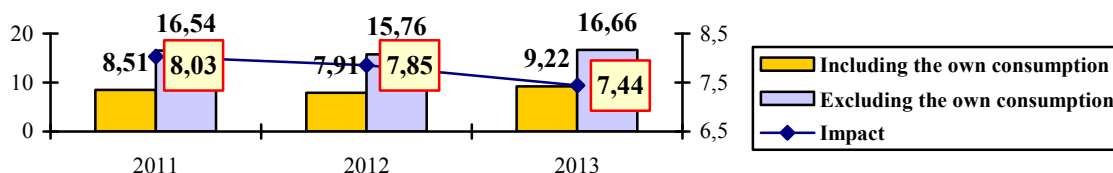


Figure no. 5. The severe poverty rates among the persons from households in the rural area, determined at the threshold of 40% of the median income, when including and then excluding the component of the own consumption in/from the income, in 2011-2013 (%)

Source: Simulation/analysis of data from Household Budget Survey, NIS, 2011-2013

3.3 The severe poverty - household components (number of persons)

Considering the size of the household, respectively the number of persons who live in the household, the severe poverty rates are presented below (fig. no. 6-7).

A relevant impact is noticeable for large households, with 5 members, where the consumption from own resources contributes to the reduction of severe poverty in a visible way. At the same time, in the absence of the consumption from own resources, the rates of severe poverty are very high, so that these households are faced with a situation of accentuated severe poverty, where the rates are placed between 13-15%. Consumption from own resources is an important element for the available incomes of these households, so for these households there is a significant impact of consumption from own resources and the differences between the two poverty rates, when including and then excluding the consumption from own resources, are also very important, reducing poverty with 5.52-6.53 pp. (fig. no. 6).

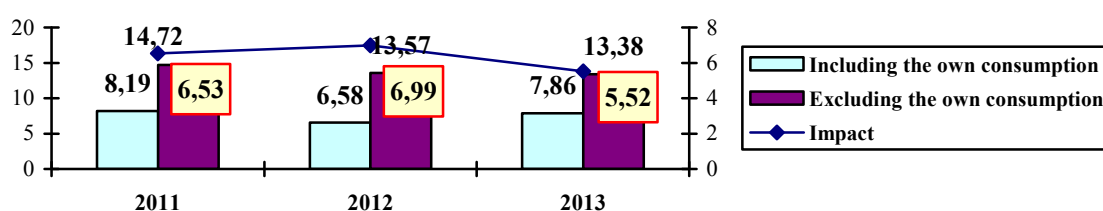


Figure no. 6. The severe poverty rates in households consisting of 5 persons, determined at the threshold of 40 % of the median income, when including and then excluding the component of the own consumption in/from the income, 2011-2013 (%)

Source: Simulation/analysis of data from Household Budget Survey, NIS, 2011-2013

For large households, consisting of 6 persons, the rates of poverty in the presence and absence of consumption from own resources are large: when the consumption from own resources is taken into account, the rates oscillate between 12.94-14.28%, while when this type of consumption is excluded from the income, severe poverty reaches very high rates of 21-23%. Also, this type of consumption is much more important in the framework of the income of households with many members comparing to those made up of fewer people, this is visible in the large differences between the two rates of severe poverty, between 7.91-8.97 pp. (fig. no. 7). Thus, for households with many members, which are facing a situation of severe poverty, this type of consumption contributes significantly to the reduction of severe poverty.

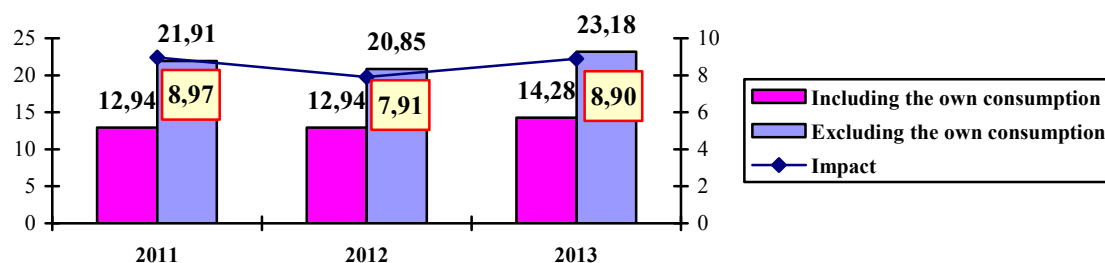


Figure no. 7. The severe poverty rates in households consisting of 6 persons, determined at the threshold of 40% of the median income, when including and then excluding the component of the own consumption in/from the income, 2011-2013 (%)

Source: Simulation /analysis of data from Household Budget Survey, NIS, 2011-2013

Conclusions

Given the dimensional restrictions of the paper, but also because of the differences between the severe poverty rates with and without consumption from own resources are not that significant for certain characteristics of the household (gender and age of the head of the household), these have not been referred to in these analyzes.

The most important results that have demonstrated the relevant impact of the consumption from own resources on the incomes available to persons from households and have led to a profiling of those households, after certain variables / features, for which the higher differences have been obtained for the severe poverty rates, when taking into account and not taking into account this type of consumption, were as following:

- Consumption is an important component in incomes and expenditures of the population, representing in the period 2011-2014 between 14.2-18.2%;
- Analysing at households' level, the difference between the consumption recorded in the rural area and the one in the urban area is important and is approx. 3-4 times higher in favour of households from rural areas;
- On income deciles at households' level, the most representative values of the own consumption are in households with total income in the first 3 deciles of income (most reduced incomes), consumption from own resources representing 30-48% of income;
- At the level of the households' individuals, the rates of poverty without consumption from own resources were situated between 8.76-9.48% in the period 2011-2014. By including the consumption from own resources in the available incomes, the rates of poverty significantly decreased oscillating between 4.98-5.56%. So, the component of consumption from own resources has significantly influenced the available incomes of persons from the households and has contributed to a significant reduction of severe poverty, with 3.73-4.17 pp. over the period in question;
- Considering the area of residence of the households, in the rural area this type of consumption is an important component of the income, contributing to a significant reduction of severe poverty, between 7.44-8.03 pp. in the period under consideration, while for the urban households, the consumption from own resources has contributed with only 0.43-0.98 pp. to the reduction of poverty;
- Considering the number of persons in the household, the highest rates of severe poverty shall be found for the large households, with more than 4 members, severe poverty increasing strongly, extending up to approx. 24% (in the case of households with 6 members), compared to the 9.5% as it was recorded on the total, at the level of persons from the households. For these households with many members, confronted with high rates of severe poverty (but also standard poverty), consumption from own resources contributes substantially to the reduction of severe poverty, reducing it with 4-9 pp., which means a considerable reduction, with a major impact of consumption from own resources on increasing available income and on severe poverty reduction.

So for these rural households, but also for the large households which have more than 4 members, a considerable impact on the consumption from own resources on the available income of the persons is noticed, contributing to a large extent to the reduction of severe poverty, which decreases considerably when consumption from own resources occurs. The situation is even more dramatic when the two variables concerning the residence (households in rural area) and the number of people who make up the household (large households with more than 4 members) correlate, respectively in the case of households with many members from the rural area, as they are confronted to high rates of severe poverty (and relative poverty). And this is all the more worrying as part of household members are children that contribute to the increase in consumption, without

bringing in the household additional sources of appropriate income, which leads to a poverty more accentuated for these segments of the population.

Even if the estimates have been carried out in this study only for 3-4 years, we want to emphasize an image of severe poverty, but also of the influence that consumption from own resources might have on personal incomes of households, clearly contributing to the reduction of severe poverty. Certain features of the households influence the consumption from own resources; inclusion of the own consumption into the households' incomes contributes to a great extent to the reduction of severe poverty and standard relative poverty, especially for some households' types (from rural areas or with many members). The high values of the severe poverty for these households, even when the consumption from own resources is included in the available income, must be considered alarm signals and these households confronted with severe poverty should represent a priority as target groups for the policies to reduce poverty and its severe and extreme forms.

References

1. Friedman, M., 1957. *A Theory of the Consumption Function*. [e-book] USA: Princeton University Press.
2. Institutul National de Statistica, 2015, *Anuarul Statistic al Romaniei*, Romania: INS.
3. European Commission. *Research findings - Social Situation Monitor – The effect on the risk of poverty of including goods for own consumption in income*. [online] Available at: <<http://ec.europa.eu/social/main.jsp?catId=1050&intPageId=1968&langId=en>> [Accessed 30 September 2016].
4. Institutul National de Statistica (tempo online). [online] Available at <www.insse.ro> [Accessed 3 October 2016].
5. Hotărârea Guvernului nr. 383/2015 pentru aprobarea Strategiei naționale privind incluziunea socială și reducerea sărăciei pentru perioada 2015-2020 și a Planului Strategic de acțiuni pentru perioada 2015-2020. [online] Available at: <<http://lege5.ro/Gratuit/g4ytimjrg4/hotararea-nr-383-2015-pentru-aprobarea-strategiei-naționale-privind-incluziunea-sociala-si-reducerea-saraciei-pentru-perioada-2015-2020-si-a-planului-strategic-de-actiuni-pentru-perioada-2015-2020>> [Accessed 17 October 2016].
6. Hotărârea Guvernului nr. 488 din 26 mai 2005 privind aprobarea sistemului național de indicatori de incluziune socială. [online] Available at: <<http://www.mmuncii.ro/pub/imagemanager/images/file/Legislatie/HOTARARI-DE-GUVERN/HG488-2005.pdf>> [Accessed at: 17 October 2016].
7. European Commission. *Strategia UE de creștere economică (Strategia Europa 2020)/The EU Strategy of economic growth strategy (Europe 2020 Strategy)*. [online] Available at: <http://ec.europa.eu/europe2020/europe-2020-in-your-country/romania/country-specific-recommendations/index_en.htm> [Accessed at: 6 October 2016].
8. Anghelache, C., Maniu, A.I., Mitrut, C., Voineagu V., 2006. Sistemul de indicatori utilizati în măsurarea sărăciei. *Theoretical and Applied Economics* [e-journal] 8/2006, pp. 45-52. Available at: <<http://store.ectap.ro/articole/135.pdf>> [Accessed at: 10 October 2016].
9. University of Agricultural Sciences and Veterinary Medicine, 2009. *Proiect Impactul produselor agricole asupra sănătății populației. Proiect Contribuții la creșterea sănătății umane prin promovarea consumului de alimente ecologice, diversificate și cu valoare nutritivă ridicată*. [pdf] Available at: <<http://documents.tips/documents/ps-526-faza-15.html#>> [Accessed 23 September 2016].
10. Teșliuc E., Grigoraș V., Stănculescu, M., 2016. *Studiu de fundamentare pentru Strategia națională privind incluziunea socială și reducerea sărăciei*. [pdf] Available at: <http://www.mmuncii.ro/j33/images/Documente/Familie/2016/SF_BancaMondiala_RO_web.pdf> [Accessed at: 15 September 2016].