

# ANALYSIS OF ECONOMIC GAPS BETWEEN URBAN AND RURAL ROMANIAN AREAS

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*In this paper the authors will perform a comparative analysis of the impact that the population residential areas have on the economic and social activity from Romania. Our analysis will be carried out for a time span of 10 years, between 2000 and 2009. The main purposes are to emphasize the economic gaps between the residential areas (urban and rural) and to identify the factors that determine these gaps.*

*The economic differences between rural and urban areas and their impact on the peoples' standard of living represent an important issue for international institutions like IFRC, UNICEF or OECD. Also, this topic represents a frequent subject in the economic literature from poor and developing countries. Studies conducted by Huong and Booth (2010), Alister, Alana and Ayele (2007), Chao, Zhidong and Mingxing (2008), Mateoc-Sîrb, Mateoc, Darvași and Mănescu (2008) or Sahn and Stifel (2002) are representative examples. Most of these papers focus on the living standards differences generated by the differences between income and expenditures between urban and rural areas.*

*To achieve our goals, we will use the statistical methods to analyze the data released by the National Institute of Statistics. We will try to find some correlations between the economic indicators – household incomes, value and structure of household expenditures, structure of household expenditures – the social indicators – residential area, education level, age and occupation. The highlight of the gaps between the rural and urban areas will be the main objective during this analysis.*

*We conclude that in Romania there are substantial differences between rural and urban areas. The income differences are determining different consumption patterns between rural and urban persons. In rural areas, the population is spending less in all goods and services aspect that reduce their standard of living. Anyway, the results obtained are the subject of at least two possible limits. The fact that the data series are too short may affect the results we have obtained. Also, the economic gaps analyzed represent an average for the whole country, what means that in some regions these differences may be even higher.*

*Keywords: economic gaps, households' incomes, households' expenditures, consumption, social indicators*

*JEL classification: E21, E24*

## **Introduction**

Since 2000, the macroeconomic evolutions led to an increase in the level of income per capita. Unfortunately, the differences between rural and urban area continue to be high. In Romania the population below the poverty line is about 15%, the level of rural poverty being double than the level of urban poverty. More than that, “75 per cent of poor children live in rural areas, where the poverty risk is three times higher than for children living in urban areas. Moreover, one third of these poor children live in agricultural families, with a poverty ratio seven times higher than for children living in families with at least one employee” (IFRC 2010:1). The problem of widening disparities between regions in the case of Romania is also identified by UNICEF.

The gap between rural and urban area is a concern for the European Union policy, because rural areas must exploit their potential or risk falling further behind urban areas (OECD). Member States can use their rural development programs to deliver the priorities of knowledge transfer, modernization, innovation and quality in the food chain, investment in human capital and the creation of employment opportunities (Programul Național de Dezvoltare Rurală, 2007 – 2013). The Transnational Co-operation Programme for a European area in transition on the way to integration "South East Europe (SEE)" 2007-2013 under the European Territorial Cooperation is significant for the regional disparities in terms of economic power, innovation, competitiveness and accessibility between urban areas and rural areas.

For Romania, within the "Operational Programme Increase of Economic Competitiveness" Programme under Convergence objective co-funded by European Regional Development Fund (ERDF), the general objective is the increase of Romanian companies' productivity, in compliance with the principles of sustainable development, and reducing the disparities between rural and urban areas.

Through the Millennium Development Goals are eradicate extreme poverty and hunger, achieve universal primary education, ensure an environmental sustainability by reducing discrepancies between rural and urban areas (UNDP).

The paper is structured as follows: the literature review chapter presents the results obtained in some representative papers on this subject, in the methodology we describe the analysis and the data used in the study, while the part with results and discussions enhances the results we obtained during our analysis.

### **Literature review**

Using data from Household Living Standard Survey, most of articles are presenting analysis of significant urban-rural discrepancies in poor countries.

In Vietnam, the economic differences between rural and urban areas have increased dramatically from 1993 to 1998, and peaked in 2002 before reducing slightly in 2004 and significantly in 2006. The urban-rural gap increases across the expenditure distribution, the components of expenditure. Also, the differences are in education, household demographic structure, industrial structure and related returns (Thu Le, Booth 2010: 8-14).

In the study "Urban-rural inequality in Africa", the authors measure inequalities in African countries, and determine the extent to which these inequalities are a consequence of discrepancies between urban and rural areas (Sahn and Stifel 2002:12-17). The analysis focuses on living standards, the asset index, education and health. The conclusion is that the living standards in rural areas lag far behind those in urban areas. The gaps between urban and rural areas are in fact dramatic spatial differences.

The paper "An empirical research of urbanization and urban-rural gap in China: 1952-2005" presents two important problems of urban-rural relationship in China nowadays: the accelerated urbanization process and an enlarged urban-rural gap. The researchers emphasize the urban-rural income gap. There is an intensively positive correlation between urbanization and urban-rural consumption gap. The rapid urbanization results in the increase of urban-rural inequalities (Chao, Zhidong and Mingxing 2008: 404-406).

"The urban-rural divide: Myth or Reality?", a study of teachers from Great Britain presents different types of deprivation, measures of deprivation and an analysis of why urban people are more deprived than rural people (Alister, Alana and Ayele 2007:16-19).

In the paper "A study on life quality in the rural area" the authors argued with the idea that in the developed economies there is a trend to remove differences between rural and urban and starting from these premises the authors are making an analysis of the life quality in the Romanian rural area in 2001-2007. The conclusion is that in Romania there is still a major discrepancy between rural and urban which is not beneficial for the Romanian rural area (Mateoc-Sîrb, Mateoc, Șeulean, Darvași and Mănescu 2008:118-121).

Professor Maria Vincze shows that one disadvantage of rural development in Romania is the lack of horizontal link between communes, difficult collaboration, connections between cities and unbalanced surroundings areas (Vincze 2000:7).

### Methodology

In order to achieve our goal, we will focus our analysis on the following differences between rural and urban areas:

- the endowment with durable goods
- the level and structure of households' incomes and expenditures
- the structure of consumption.

The endowment with durable goods will be evaluated using a qualitative scale. We will take in consideration eleven durable goods: washing machine (automatic or no), TV (white-black or color), computer, phone (fix and mobile), refrigerator, stove, fridge, vacuum cleaner, stereo system, car and freezer. The index of endowment with durable goods was constructed using a weighted mean between the weight of each durable goods and the share of households that own these goods (out of 100 households). The value obtained will show the average endowment level with durable goods. The lowest value may be zero – which means the households do not have durable goods at all -, while the highest value may be 100 – which means that all households have all the eleven durable goods taken in consideration.

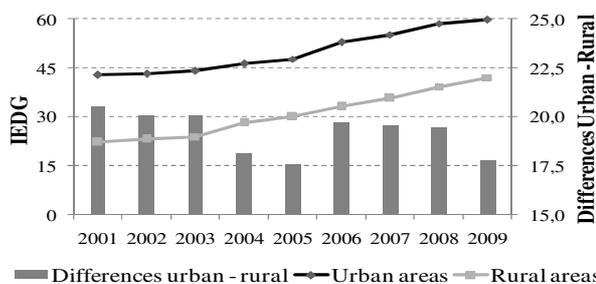
The analysis of incomes and expenditures will be realized using real values. The data series have been deflated by the inflation values, all the data (incomes and expenditures) being expressed in the prices of year 2000. Thus, the time series will reflect the real evolution of incomes and expenditures, an evolution in a situation of constant prices. The influence of other factors on incomes and expenditures evolutions was determinate using regression equations.

The quantification of educational level for the head of household is realized using a scale from 1 to 3. If the value obtained is near to 1, it means that the majority of households' heads have primary educational level; if the value is near to 2, it means that the majority of households' heads have secondary educational level; if the value is near to 3, it means that the majority of households' heads have higher educational level.

The measurement of consumption structure is realized using two types of data. In the case of agricultural products we have used the monthly quantities consumed by households (measured in kilos, liters or pieces), while in the case of services we have utilized the average monthly expenditures for each type of service. We considered more appropriate to use the quantities and not monthly values of expenditures for agricultural products in order to eliminate the prices impact. For the same reason, the monthly values of expenditures for services consumption were calculated in the prices of year 2000.

### Results and discussions

Analyzing the endowment with durable goods in rural and urban areas we observed that the rural areas are less endowed than the urban areas. The index of endowment with durable goods (IEDG) has recorded high differences between rural and urban (as we can see in Figure 1), in 2009 the value of index for rural areas being approximately at the level of the index in 2001 for urban areas. Fortunately, the gap between urban and rural is decreasing slowly from 20.5 in 2001 to 17.7 points in 2009.



**Fig. 1. Evolution of endowment with durable goods**

Source: NIS and authors' calculations

Analytically, the highest differences are in the case of automatic washing machines - in 2009, 79.8% out of urban households owned automatic washing machines, while only 28.8% out of rural households had an automatic washing machine - and vacuum cleaner - in 2009, 81.2% out of urban households and only 36.4% out of rural households owned a vacuum cleaner (NIS).

Even if the bathroom and the restroom are not durable goods, in the analysis of households' endowment we consider appropriate to analyze their situation. Unfortunately, the gaps between urban and rural are very big in this case also. As we can see in Fig. 2, the existence of bathroom, shower or restroom inside the house is normal in the urban areas, while in the rural areas the usual aspect is that these facilities to be outside the house.

The second analysis is related to the households' incomes and expenditures. As we expected, the level of incomes in the urban areas is higher than in rural areas. The differences are even much higher if we separate the incomes in financial and material revenues. Due to the fact that between 30% - 45% out of total incomes in rural areas are in a material (natural) form, the gap in the financial incomes are even much higher: during the time span 2000 - 2009, the highest differences between financial incomes in urban as reported to rural areas was recorded in 2009, 402 lei (in the prices of year 2000. The corresponding value in the prices of year 2009 is 1039,8 lei).

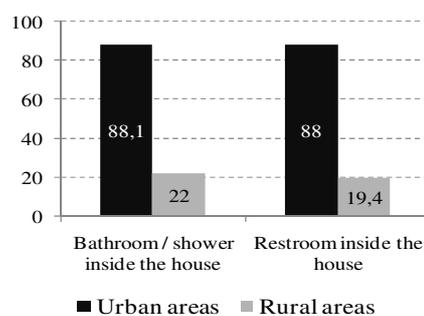
The study of incomes reveals another conclusion: as income per capita grows, the disparity between urban and rural incomes increases (as we can see on the Fig. 3) - from 76.2 lei in 2000 to 270.1 lei in 2009 for total incomes, or from 151.6 lei in 2000 to 402 lei in 2009 for the financial incomes. In other words, *the economic growth recorded by our country since 2000 instead of reducing the disparities between rural and urban incomes, it has grown them.*

An explanation for the income gap is represented by the differences in the educational level. The educational level in the rural areas is much lower than the educational level in the urban areas. In the rural areas the majority of households' heads have primary or secondary educational level, while in the urban areas the majority of households' heads have secondary or higher educational levels. Testing the correlation between households' incomes and the educational level, we deduced that there is a statistically significant relationship between these two variables at the 99% confidence level. The equation (1) expresses the fitted model:

$$HI = 0,00338317 Ed^{18,504} \quad (1)$$

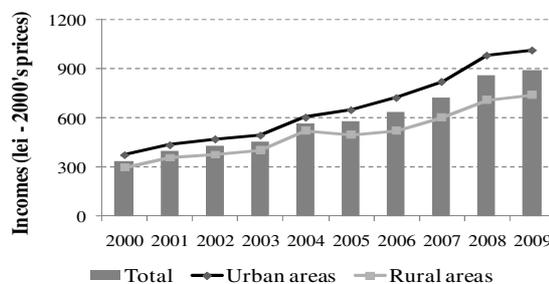
where: HI - household's income, Ed - educational level. Therefore, every time the educational level of the household's head will increase by 1%, the household's income will increase by 18,504%. In conclusion, the gap in the educational level between rural and urban represents a reason for the incomes disparities.

As in the case of incomes, the level of expenditures is higher in the urban than rural households. In the Fig. 4 we can see the evolution of expenditures and we deduce that the disparities between urban and rural increase during the time. The differences are even much higher if we separate the expenditures in financial and material. Due to the fact that between 30% - 46% out of total



**Fig. 2. The share of households by utility equipment in 2009**

Source: NIS and authors' calculations



**Fig. 3. Evolution of households' incomes**

Source: NIS and authors' calculations

expenditures in rural areas represents goods and services produced in the household (in urban areas the share of these goods is maximum 10%), the gap in the financial expenditures are even much higher: during the time span 2000 – 2009, the highest differences in real terms between financial expenditures in urban as reported to rural areas was recorded in 2008, 358 lei (in the prices of year 2000. In the prices of 2008, the difference is 884,3 lei).

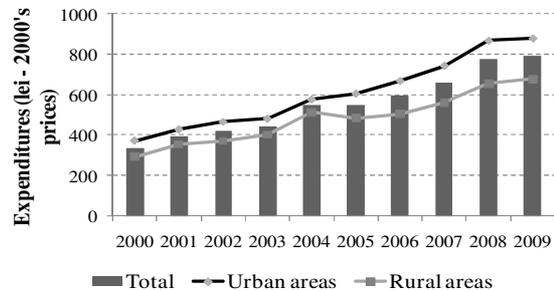
The disparity between expenditures in urban and rural areas is the result of incomes gaps. Testing the correlation between households' expenditures and incomes, we deduced that there is a statistically significant relationship between these two variables at the 99% confidence level. The equation (2) expresses the fitted model:

$$E = 75,0824 + 0,811866 \cdot I \quad (2)$$

where: E – household's expenditure, I – household's income. Then, every time the households 'incomes will increase by 100 lei, the households' expenditures will increase by 81,1866 lei ( $R^2 = 99,7574\%$ ).

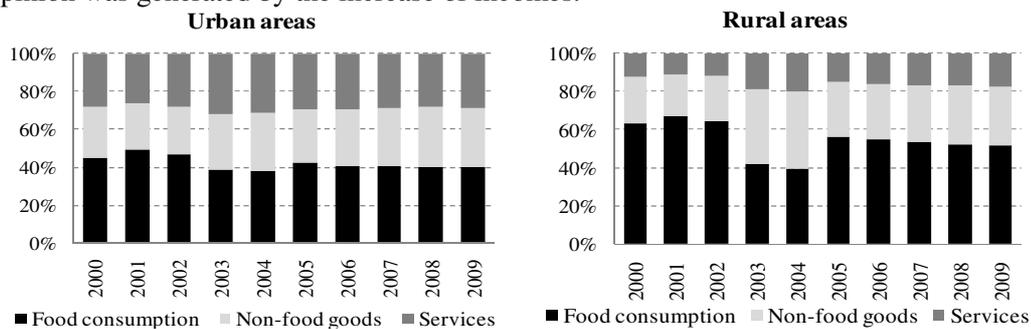
Before proceeding to analyze the structure of expenditures, we will study the extent to which household can cover their current expenditures. The data shows us that there is no significant difference between urban and rural regarding this aspect. In general, in rural areas it is a little more difficult than in urban areas to cover the current expenditures, but the values are approximately the same. Considering the major differences in incomes and expenditures between rural and urban, the similarity in perceptions regarding the cover of current expenditures make us believe that rural households are deprived of certain goods and services.

The differences in the structure of consumption are very clear. In rural areas, the food consumption represents more than 50% out of total consumption, while the consumption of services hardly reaches to 20%. On the other side, in urban areas in the last years, the food consumption was around 40%, while the consumption of services reached 30% out of total consumption. In general, a higher share for food consumption represents a sign of low living standards. The Fig. 5 shows us that the rural households are especially deprived of services. In the majority of cases, the economic data have demonstrated that an increase in the incomes reduced the share of food consumption in total expenditures. In the last 5 years, a slowly reduction in the share of food consumption for rural areas can be observed, reduction which in our opinion was generated by the increase of incomes.



**Fig. 4. Evolution of household's expenditures**

Source: NIS and authors' calculations



**Fig. 5. The structure of consumption**

Unfortunately, analyzing of which goods and services rural households are deprived, we find the highest differences in some of the most important services: health, education, cultural and recreational services. In their case the differences become more accentuated every year affecting

the quality of human resource. We consider they have a negative long term impact on the development of rural areas, their evolution accentuating the gaps between rural and urban areas.

Analyzing the food consumption we have discovered also some differences between rural and urban areas. The first difference is that in rural areas the consumption of “inferior goods” - bread, corn, potatoes - is higher than in urban areas. In rural areas, the consumption of bread and corn is by 1 kilo/person/month more than in urban areas, while in urban areas the consumption of meat and fruits is 1 kilo/person/month higher than in rural areas.

The consumption of fruits records an interesting situation. In general, in rural areas, the consumption of fruits does not necessitate any financial expenses, while in the urban areas the majority of fruits consumed are bought from markets. In spite of that, the urban households are consuming more fruits than rural households. Unfortunately the opposite situation is observed in the case of alcoholic drinks: in rural areas the consumption of alcoholic drinks per persons is higher than in urban areas. Milk consumption has another interesting evolution. The rural households are considering milk as an “inferior good”, while for the urban households the milk is a “normal good”. A possible explanation is the fact that in the rural areas milk represents a common agricultural product consumed by households, while in urban area milk is less consumed.

### **Conclusions**

As a result of our analysis we consider that in the Romania of year 2009 there are significant differences between urban and rural areas. First of all are the differences between the education level and consumption of educational and cultural services. These differences have a negative impact on the rural areas, the incomes gained by the rural households being considerably lower than the incomes obtained by urban families. As a result of income differences, the gaps in the expenditures between rural and urban households are increasing every year. We can see all this differences in the level of endowments with durable goods, in the structure of consumption and in the specific goods and services consumed.

The income differences determine the rural households to own and use less durable goods, to have the bathroom or the restroom outside the house in most of the cases, to pay for a holiday only occasionally, to spend less on health, personal care, education, water, sewerage, sanitation and utilities, to eat more bread, corn or drink more alcoholic beverages.

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