



Paper prepared for the 122nd EAAE Seminar
**"EVIDENCE-BASED AGRICULTURAL AND RURAL POLICY MAKING:
METHODOLOGICAL AND EMPIRICAL CHALLENGES OF POLICY
EVALUATION"**

Ancona, February 17-18, 2011



**Income distribution, standard of living and capabilities:
a cross-sectoral analysis.**

Croci Angelini E.¹ and Sorana S.²

1 Department of Economic Development, Macerata University, Macerata, Italy

2 Polytechnic University of Marche, Ancona, Italy

ssorana@gmail.com

Income distribution, standard of living and capabilities: a cross-sectoral analysis.

Croci Angelini E. and Sorana S.

Abstract

The aim of the paper is to investigate how agricultural relative incomes have changed in recent years, since the CAP has switched its emphasis from price support to rural development.

The distributional implications of agricultural and rural policies are indirectly evaluated looking at the dynamics of earnings and wages in agriculture, as well as at the rural household incomes described through monetary and non monetary variables, so to proxy their living standards. Our concern is not particularly on the agricultural policy tools, as much as on the evaluation of their end results.

A comparison spanning through time and across countries is performed on the basis of the information provided by the ECHP and EU-SILC surveys. The paper seeks to unravel the differences between rural and urban population in the different European areas and offers a description of how successes and failures varied, keeping the CAP in the background.

Keywords: Income distribution, Standard of living Earnings in agriculture.

JEL classification: D31, E24, J31, N50

1. INTRODUCTION

Recently, there has been a revival of interest about the question of the unequal monetary income distribution of different territories within the same country, in particular the difference of standard of living revealed by urban and rural households, not only in developing, but also in industrial countries.¹ The international debate on this topic makes it clear that while GDP is inadequate, it is very difficult to replace it with a single indicator of the well-being of a society. This is why it is necessary to select a numbers of indicators of the phenomena that influence the citizens, like social exclusion, inequality and the environment.

In addition, and connected to the difficulty of finding a new metric for the measurement of well-being, the concept of individual heterogeneity implies the existence of many sources of diversity between human beings, among which Sen (1999: 70-71) identifies the most important as those concerning:

- personal heterogeneities (e.g., levels of education, age, health status, etc.);
- environmental diversities (e.g., political, related to the physical environment, etc.);
- variation in the social climate (e.g., local culture, norms, social capital, etc.);
- differences in relational perspective (e.g., hierarchies, job-relations, etc.);

¹ Following the recent "Beyond GDP International Initiative" (<http://www.beyond-gdp.eu/>) literature in Italy, ISTAT is going to supplement GDP with a multidimensional approach that integrates this economic indicator with indicators of well-being and sustainability.

- distribution within the family (e.g., concerning the equality of distribution of resources, fairness, prioritization, etc.).

All these differences shape the extent to which a given set of resources is converted into capabilities. Consequently, as the individuals differ, their capabilities cannot be measured simply in terms of the resources available to them or over which they have command, but need to be assessed also in terms of what they are capable of doing and being with these resources.

One purpose of this paper is to underline the many diversities, so to identify their influence over the living conditions of the households entering the analysis. The role of the CAP in promoting rural development and in particular the farmers' households living conditions is not explicitly assessed; we have rather chosen to look at the dynamics of agricultural earnings and wages, relatively to similar occupations and in relation to society at large in several EU countries, and the distance one may find between monetary incomes and standard of living, through a multidimensional approach, which enables the addition of such notions as freedom and opportunities or heterogeneity of individual capabilities.

The theoretical reference framework is defined in the next section, where the principles of Sen's theory of capabilities are explained so to describe how the income and living conditions of the agricultural *vis-à-vis* the non-agricultural population in some EU countries compare. In the third section, after a brief presentation of the surveys this analysis is based upon, the monetary income conditions are presented by comparing earnings and wages in the agricultural sector with those calculated for two different sectors. The fourth section addresses the issue of monetary income distribution from the whole society point of view: individuals declaring to be employed in agriculture were traced back to the decile they belonged to. The fifth section offers a view of a capability-based hardships measurement of the rural households taking Italy as example so as to identify the existence of a spatial mismatch, in terms of spatial capabilities, between urban and rural areas. Finally, section 6 concludes.

2. SEN'S CAPABILITY APPROACH

Sen's theory is based on two fundamental concepts: functionings and capabilities. Functionings are the valuable activities and states that make up people's well-being – such as a healthy body, being safe, being calm, having a warm friendship, an educated mind, a good job. Functionings are related to goods and income but they describe what a person is able to do or be as a result. Capabilities are “the alternative combinations of functionings that are feasible for [a person] to achieve.” Put differently, they are “the substantive freedoms he or she enjoys to lead the kind of life he or she has reason to value.” (Sen, 1999). Capabilities describe the real actual possibilities open to a person, and correspond to a measure of person's positive freedom.

According to Sen, policy should be oriented to develop capabilities among population members so as to equalize the possibilities of well-being. Sen shifts the attention from the analysis of the possession of the commodities and resources to the different ability to convert them into functionings. This ability may vary greatly across individuals. Moreover, the different

conversion ability is not only influenced by individual characteristics but also by environmental characteristics such as geographic, social and institutional variables.

The capability approach can contribute to enlarge the point of view of an analysis of living conditions in rural areas and to underline the difference between urban and rural household. The role of spatial inequalities in the distribution of the resources among individuals have a direct impact on the development of the individual capabilities: for this reason the environmental characteristics may explain how poverty and social exclusion are spread across space and can create marginal areas. The analysis aims to highlight the relation between individual and environmental characteristics. The attention indirectly focuses on the role of the CAP to promote the rural development and to reduce the economic and social gap, if any, between urban a rural households.

Although acknowledging the role of income in the determination of poverty levels for individuals and families, Sen argues against the coincidence between poverty and low income. Operationally, Sen's capability approach needs emphasize two levels of analysis:

- the fundamental level consisting in conceptual characteristics;
- the practical level where operational problems emerge.

The fundamental level in turn is constituted by three different approaches meant to yield a full picture:

- the direct approach takes the form of a direct examination of what is known about relative advantages, by considering and confronting functional vectors and capabilities;
- the integrating approach incorporates the traditional procedures of interpersonal comparison in income space by considering the capabilities (often in an informal way)
- the indirect approach, is centered on the traditional income space, adequately adjusted and calculated by using information about non income determinants of capabilities.

A wide number of capabilities and functionings concerning every aspect of human life is to be established. Sen only offers some examples of base capabilities, but avoids drafting an exhaustive list. Sen's formulation of the capability approach has the disadvantage of being too much generic, as no official list of capabilities to contemplate for scientific research is offered. According to Ingrid Robeyns (2002), the lack of specificity, rather than a shortcoming, is to be considered a value towards realizing a universal applicability of this approach. Robeyns (2002) defines the approach "a framework of thought", i.e. a structure of thought, a methodological instrument for normative analysis rather than a directly applicable theory able to provide answers to every question. The capability approach is neither an algorithm able to measure poverty or inequality, nor a theory of distributive justice. The capability approach is a methodological framework that simply sets an analysis field: the man and his capabilities. Sen neither establishes which capabilities or functionings must be taken into account nor how the different capabilities should enter the formulation of an index of well-being. Yet, this vagueness makes the approach functional to study the individual in all his aspects rather than in a ontological way: i.e. it considers the single one in relation to the multitude. Every normative methodological structure usually depends upon an explication or an ontological vision of the

human nature or of the society. Sen's approach does not uphold any vision of the world in particular, but it exclusively defines a new field of analysis – the individuals and their capabilities – and new variables – the individual functionings. The choice of the decisive functionings and of the entire set of individual capabilities to be considered in a research about the quality of life is exclusively subordinated to the subject of the analysis and to the researcher's sensitiveness. These are innovative postulates regarding the traditional literature of normative economy

According to Sen, any actual application needs draft a list arising from the reference context. The capability approach has various applications: in academics or in politics; purely speculative or related to actual cases; theoretical or empirical; it can concern the study and the social, political, economic, psychological and legislative analysis. The approach offers the possibility to study local and global contexts. As a methodological structure it shows an extremely versatile character and its peculiarity is due to the determination of the field of analysis, to the individual and his capability, without specifying which capabilities must be held definitively endogenous to the analysis structure. According to Sen, an *a priori* determination of capabilities reduces the field of analysis and the hypothetical applications of the approach. In order to make the different studies comparable it is necessary, however, to identify a methodology and some standards to select a set of capabilities useful to study the actual case.

Various characteristics strongly influence its applicability: human diversity, understood not only as individual heterogeneity, but also as environmental diversity; external issues, change of social climate and distribution within the families; all variables that weigh on the individual ability to convert resources into capabilities. Objectivity too, not to be confused with the consistency of the capabilities which, by definition, vary across individuals and within societies.

The characteristic influencing the most the operability of Sen's approach is its counterfactual nature incorporated in the different choices an individual may realize. Being intrinsic to its own capability system, it doesn't derive from empirical, but from factual observations. Income is a concept allowing a more specific measurement that permits a more articulated analysis and a simpler interpretation. In the passage from the direct approach to a practical level of applicability, Sen's approach reveals some problems ranging from the data needed, which vary according to the precision level of the analysis to be carried out; to the incompleteness of the informative basis. The availability of the data needed to perform an analysis by applying Sen's approach determines the necessity to observe the individual state and social characteristic, which often are not monetary and incomplete.

Another issue emerging in operating the capability approach regards the aggregation of the data available in a synthetic index, a complex operation that can be faced at many levels. The aggregation introduces a series of difficulties since summarizing all the existing relations between the various functionings could miss (or duplicate) a substantial part of information.

Finally, one problem with Sen's approach is to tend to focus on functionings rather than on capabilities. Poverty of income is expected to overlap with poverty of health, education and poor housing conditions because the monetary dimension affects all these aspects. In order to

understand the potentialities and the differences between the two approaches it is necessary to shift the attention from functionings to capabilities, therefore it is necessary to understand the individual ability. For example, to analyze the capability to have an education or to acquire a good health means to investigate in the social dimension of a given society.

3. THE DYNAMICS ON EARNINGS AND WAGES IN AGRICULTURE

A first snapshot looks at the situation of agricultural incomes as emerging from the ECHP survey. A second one is offered by the EU-SILC survey. Both surveys address issues related to the household (e.g. financial situation, region of residence) and other to the individuals (e.g. gender, age). In both surveys some questions (e.g. activity status) refer to the same year (t) and others (e.g. incomes) refer to the previous year (t-1).

In the following these surveys are briefly described.

3.1. *The ECHP evidence*

The ECHP survey runs from 1994 (wave 1) to 2001 (wave 8). Table 1 shows some country details as to the household sample dimension, as well as to the personal sample which distinguishes among 1) individuals self-declaring to be employed in the agricultural sector (farmers), 2) all individuals self-declaring to be active and belonging to a different sector (non-farmers) lumped together, and 3) all inactive individuals and missing answers. The breakdown per country is meant to offer a glimpse of the numbers faced by the analysis. The first ECHP wave was chosen so to avoid panel erosion as much as possible (i.e. keeping best sampling), encompass a longer period and have an earlier picture, referring to pre-CAP McSharry reform.

Table 1: Sample size in the ECHP survey - wave 1 - 1994

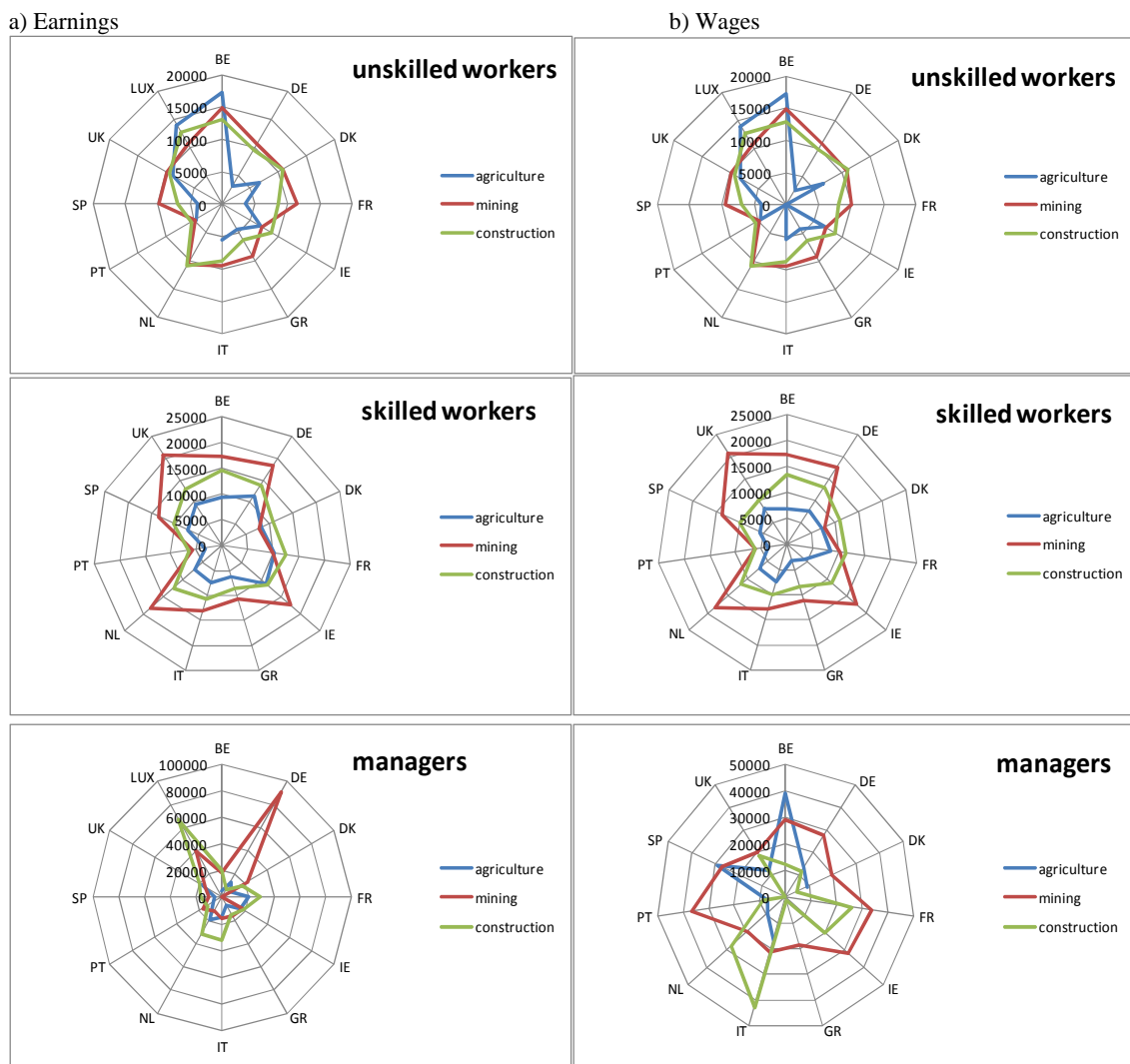
<i>Country</i>	<i>households</i>		<i>individuals</i>		<i>total</i>
	<i>total</i>	<i>farmers</i>	<i>non farmers</i>	<i>inactive</i>	
Germany	4968	119	5454	3917	9490
Denmark	3482	150	3491	2262	5903
Netherlands	5187	166	4525	4716	9407
Belgium	3490	82	3382	3246	6710
Luxembourg	1011	61	1080	905	2046
France	7433	255	6301	7777	14333
United Kingdom	5779	150	5678	4689	10517
Ireland	4048	849	4236	4819	9904
Italy	7115	693	7455	9581	17729
Greece	5523	1151	4630	6711	12492
Spain	7206	628	6575	10690	17893
Portugal	4881	1374	4746	5501	11621
total	60123	5678	57553	64814	128045

Source: own elaboration on ECHP database

In the diagrams of Figure 1 both agricultural earnings (incomes from self-employed and employees) and wages (employees incomes only) have been plotted against earnings and wages in economic activities in similar sectors of activity and for three occupation levels (unskilled and skilled workers as well as managers). Mining and construction were chosen on the basis of both the activity description (deemed “similar” perhaps arbitrarily) as well as data availability for all countries. In fact, not all 12 countries have the matrix of 18 economic sectors and 20 occupation levels completely full.

The evidence collected for earnings shows that almost in all countries (and except for managers for whom evidence is somewhat more mixed) the blue line denoting individuals active in agriculture lies inside the radar diagram.

Figure 1. Earnings and wages in three economic sectors



Source: own elaboration on ECHP database

3.2. The EU-SILC evidence

The new EU Statistics on Income and Living Conditions (EU-SILC) covers 25 European Union (EU) countries as well as other non EU countries and replaces the EU-15 European Community Household Panel (ECHP). By now it has become the EU reference source for comparative statistics on income, poverty and social exclusion. EU-SILC raises some new issues regarding the EU common indicators already in use - especially with regard to the income concept(s) to be used for calculating the income-based indicators (through detailed information on income components). The EU-SILC survey was implemented gradually across countries: since 2005 (wave 2) it provides two types of annual data for all EU countries except Malta:

- Cross-sectional data with variables on income, poverty, social exclusion and other living condition and
- Longitudinal data at individual level, observed periodically over a four year period.

In order to evaluate the changes in the living-conditions of the household and individuals employed in the agricultural sector, the same 12 countries existent in wave 1 of ECHP survey were selected. Wave 2 was chosen so to be able to extend the analysis in the future also to those countries that either joined the EU lately or might join it later. The consideration about sample erosion still applies, although by its very nature, a rotational survey should be much less open to this problem. Table 2 shows some country details for households and individuals similarly to what was shown in Table 1.

Table 2: Sample size in the EU-SILC survey - wave 2 - 2005

Country	households		individuals		
	total	farmers	non farmers	inactive	total
Germany	13106	216	11355	13411	24982
Denmark	5957	86	3526	8289	11901
Netherlands	9356	123	4646	13083	17852
Belgium	5137	119	4649	5206	9974
Luxembourg	3622	138	3863	3534	7535
France	9754	412	9347	9010	18769
United Kingdom	9820	137	9603	6935	16675
Ireland	6085	430	5387	6215	12032
Italy	22032	1204	20004	26103	47311
Greece	5568	876	4740	6765	12381
Spain	12996	889	14541	14945	30375
Portugal	4620	559	5023	5133	10715
total	108053	5189	96684	118629	220502

Source: own elaboration on EU-SILC database

4. INCOME DISTRIBUTION

The above presented picture focuses on average incomes (earnings and wages) as declared by the interviewees. Although detailed per kind of occupation, it still is uninformative about how much any such averages are representative of any given situation. In the following, the evidence about income distribution is presented for both surveys. Each country's population has been split into deciles and the frequency of self-declared farmers in each decile is shown in Table 3, where modal values appear in bold.

4.1. The ECHP evidence

Table 3 shows that the chance one has to find a person declaring to be employed in agriculture in the first decile is highest in Italy and Greece (31% and 28%, respectively) and lowest in Luxembourg (0%) while the chance to find a farmer in the last decile is highest in Luxembourg and the Netherlands (22% and 16%, respectively) and lowest in Spain (2%).

Table 3: Individuals active in the agricultural sector per income decile – 1993/4

decile	Belgium	Denmark	Germany	Ireland	Greece	Spain	France	Italy	Luxemb.	Netherl.	Portugal	UK
1	0.18	0.35	0.04	0.07	0.28	0.16	0.10	0.31	0.00	0.12	0.17	0.05
2	0.12	0.09	0.12	0.08	0.11	0.11	0.09	0.09	0.03	0.06	0.15	0.02
3	0.04	0.05	0.07	0.07	0.13	0.14	0.06	0.13	0.16	0.07	0.13	0.07
4	0.1	0.07	0.09	0.11	0.12	0.08	0.10	0.11	0.16	0.04	0.12	0.07
5	0.12	0.11	0.14	0.11	0.10	0.11	0.15	0.07	0.03	0.09	0.13	0.12
6	0.08	0.14	0.10	0.10	0.09	0.08	0.17	0.08	0.13	0.07	0.07	0.14
7	0.06	0.09	0.16	0.11	0.06	0.10	0.08	0.06	0.06	0.12	0.08	0.09
8	0.06	0.03	0.06	0.11	0.04	0.10	0.08	0.07	0.16	0.12	0.06	0.19
9	0.1	0.03	0.13	0.14	0.03	0.09	0.08	0.05	0.06	0.16	0.05	0.09
10	0.14	0.04	0.09	0.12	0.03	0.02	0.08	0.03	0.22	0.16	0.03	0.15
total	1	1	1	1	1	1	1	1	1	1	1	1

Source: own elaboration on ECHP database

4.2. The EU-SILC evidence

Table 4 illustrates how the situation has changed a few years later. In the meanwhile some important policy changes occurred in the agricultural sector, and – although an easy *post hoc propter hoc* criterion might be far too simple to be reliable – with all the disclaims one might think of, it appears that individuals employed in agriculture more recently get along in a somewhat worst way than they used to. The difference between the earlier 1990s situation and the subsequent mid-2000 conditions shows a complex picture, still very heterogeneous.

While a complete and full comparison between Table 3 and Table 4 would be sobering and therefore will be left to the reader, the general impression is that nowadays it appears to be more unlikely to find a farmer in the two last/upper and richest deciles.

Table 4: Individuals active in the agricultural sector per income decile – 2004/5

decile	Belgium	Denmark	Germany	Ireland	Greece	Spain	France	Italy	Luxem.	Nether	Portugal	UK
1	0.18	0.05	0.14	0.17	0.14	0.16	0.23	0.10	0.18	0.05	0.26	0.13
2	0.11	0.14	0.14	0.05	0.13	0.08	0.07	0.10	0.11	0.14	0.14	0.08
3	0.04	0.11	0.12	0.05	0.11	0.14	0.08	0.12	0.04	0.11	0.13	0.11
4	0.07	0.23	0.15	0.15	0.13	0.12	0.12	0.10	0.07	0.23	0.09	0.09
5	0.07	0.09	0.05	0.13	0.09	0.11	0.14	0.11	0.07	0.09	0.14	0.06
6	0.02	0.09	0.12	0.09	0.12	0.13	0.11	0.08	0.02	0.09	0.06	0.14
7	0.16	0.11	0.08	0.09	0.11	0.10	0.07	0.09	0.16	0.11	0.06	0.14
8	0.13	0.05	0.09	0.09	0.08	0.09	0.04	0.12	0.13	0.05	0.06	0.06
9	0.07	0.07	0.12	0.13	0.06	0.06	0.07	0.08	0.07	0.07	0.02	0.11
10	0.16	0.07	0.00	0.04	0.04	0.01	0.07	0.10	0.16	0.07	0.03	0.08
total	1	1	1	1	1	1	1	1	1	1	1	1

Source: own elaboration on EU-SILC database

5. IMPLEMENTATION OF SEN'S APPROACH

5.1. *Empirical implementation of Sen's approach for Italy in 2004*

The quantification of poverty and social exclusion through Sen's multidimensional approach is not an easy task. A specific methodology to evaluate functionings and capabilities has not yet emerged. Sen (1985) suggests that a good way to implement the analysis of well-being through the capabilities could exploit the answers to the questionnaires and the observations about the individual conditions investigating also beyond the economic sphere. Considering the importance of the functionings, Sen asserts that " In the richer countries, the functionings involving longevity, nourishment, basic health, avoiding epidemics, being literate, etc., may have less variation from person to person, but there are other functionings that do vary a great deal. The ability to entertain friends, be close to the people one would like to see, take part in the life of community, etc., may vary a good deal even within a rich country..." (Sen, 1987, pp. 30-31).

The availability of statistical panels and administrative data encouraged many empirical studies addressing various aspects of poverty and social exclusion seen through the capability approach. In this section a description of what emerges for Italy is offered, employing EU-SILC data. The existence of possible territorial concentrations of hardships was explored by seeking whether any difference exists between the urban area and the rural area at the regional level. The deprivation indicators have been built using three blocks of information available on the EU-SILC 2004 survey: income, housing conditions and life conditions. Every operation carried out by the analysis introduces some arbitrariness inherent to the choice of the indicators employed as proxies for the various dimension characterizing deprivation, as well as to the methodology used to combine the values of the different dimensions into a single final figure.

The first deprivation indicator is the lack of income (monetary poverty). Sen claims that, while it is important to distinguish conceptually the notion of poverty as lack of capabilities,

from the concept of poverty as lack of income, the two perspective must be connected, as income represents an important means of capabilities acquisition. Although the use of monetary poverty, being too narrow, is controversial, Sen (1999) also maintains that a relative deprivation in the income space can make the deprivation absolute in terms of capabilities.

Table 5 reports the annual disposable income in deciles for the Italian population based on EU-SILC, which also offers a poverty indicator that differs from the national poverty indicator for the following characteristics:

- a. it is based on income (not on consumption);
- b. it calculates the threshold at 60% of the national median equivalized disposable income instead of 60% of median per capita consumption (household with a single person) as the national methodology does;
- c. it uses a different equivalence scale: the "OECD-modified equivalence scale" instead of the Carbonaro scale.

Table 5 Annual equivalized disposable income thresholds in Italy - 2004 and 2005 (€)

deciles	2004	2005	% change
1	5790	6868	18.62%
2	7600	8834	16.23%
3	9304	10723	15.26%
4	10970	12473	13.70%
5	12464	14306	14.78%
6	14184	16337	15.18%
7	16368	18720	14.37%
8	19110	21925	14.73%
9	24874	27937	12.31%

Source: own elaboration on EU-SILC database

On the basis of the equivalized disposable income and the poverty indicator, 18.4% of the population on the entire national territory is "at risk of poverty"² Regional data show that – not surprisingly, Southern Italy has the highest share of families "at poverty risk". In particular, Sicily scores the highest, with nearly 40% families "at risk of poverty" on the total resident population³.

As to other non monetary household conditions affecting living standards, the deprivation analysis has been performed using the fuzzy sets methodology (Zadeh, 1965; Cerioli and Zani, 1990; Cheli and Lemmi, 1995).⁴ The exercise consists in a specification of different elements taken as a source of household deprivation (the structural characteristics of the house, the

² According to EU definition, a household is at risk of poverty when its equivalized income is below 60% of the median national income.

³ For a more detailed account of household conditions on a regional breakdown see Sorana, 2009.

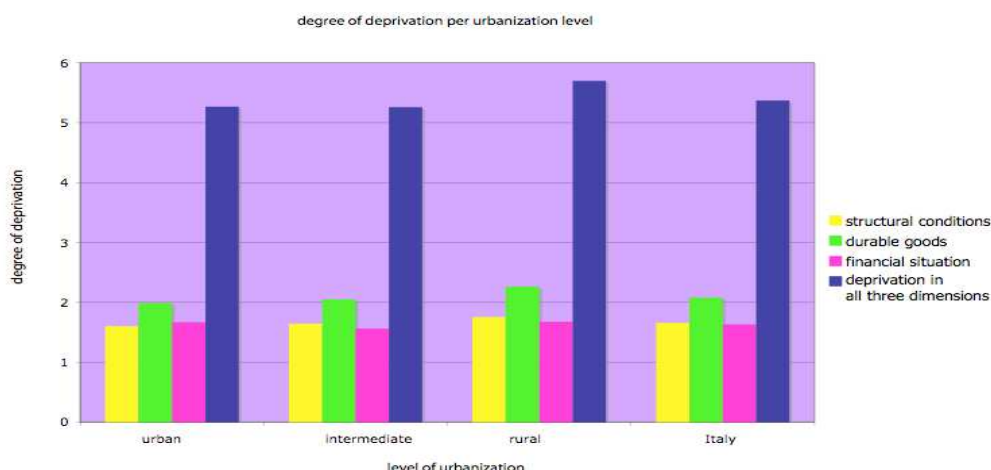
⁴ These authors perform empirical measurements for poverty both in Italy and in Poland, employing as proxy variables many goods belonging to a basket considered representative of the society under scrutiny.

absence of some common durable goods and the evaluation of the household financial condition) and consists in the calculation of: 1) a membership indicator for every household to the fuzzy set of deprived households and 2) the aggregation of households for relevant subsets (the region of residence and degree of urbanization in the territory where the household lives).

While a small share of the households does not declare to suffer deprivation in any of the three dimensions, a considerable part of the population expresses a moderate discomfort in relation to the possession of durable goods and the financial situation. The most alarming finding points at the existence of a solid minority of the population expressing strong deprivation in all three dimensions. (Sorana, 2009)

The fuzzy sets methodology was employed to analyze whether the level of deprivation of the Italian households is related to the degree of urbanization. Figure 2 shows a higher level of deprivation in the scarcely populated areas where the total deprivation level is higher than the average national level.

Figure 2. Level of deprivation and urbanisation level



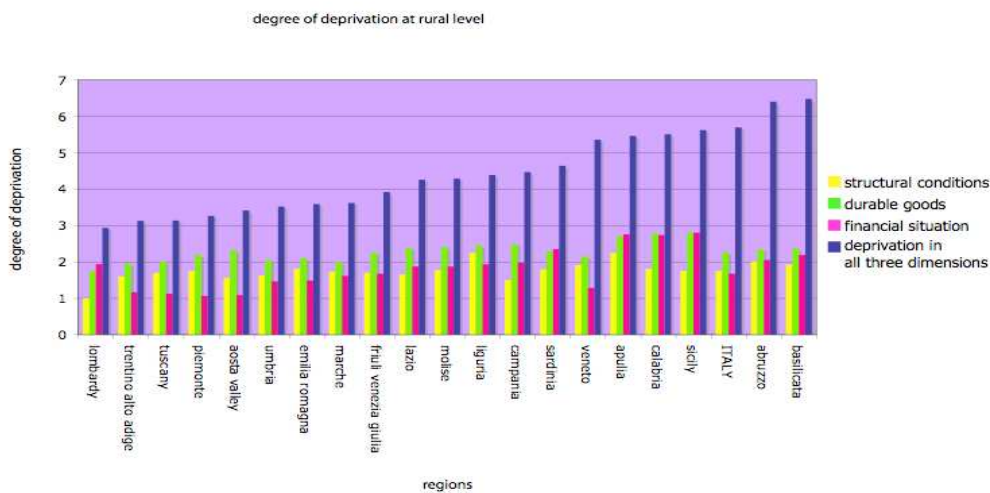
Source: own elaboration on EU-SILC database.

Densely populated area (urban): a contiguous set of local areas, each of which has a density > 500 inhabitants per km², the total population for the set being at least 50,000 inhabitants. Intermediate area: a contiguous set of local areas, not belonging to a densely-populated area, each of which has a density > 100 inhabitants per km² and either with a population in the set of at least 50,000 inhabitants, or adjacent to a densely-populated area. Thinly-populated area (rural): a contiguous set of local areas belonging neither to a densely-populated nor to an intermediate area.

Irrespective of population density, all southern regions have a deprivation level higher than the national average. Only Liguria in the North of Italy has a level of deprivation comparable to that of the South, while Lombardy and Tuscany show the lowest level of deprivation. In the Center, Marche and Umbria have a deprivation level lower than the Italian average.

For every region the deprivation level registered in rural areas is shown in Figure 3 where regions are ranked according to household total deprivation. In the scarcely populated areas, Abruzzi and Basilicata have a total level of deprivation higher than the national level.

Figure 3. Level of deprivation in scarcely populated areas



Source: own elaboration on EU-SILC database

6. CONCLUSIVE REMARKS

The study has highlighted the existence of a specific heterogeneity in rural areas throughout the EU. Looking at declared earnings and wages individuals working in agriculture on average tend to get less than what those working elsewhere, although not always. Considering equivalent disposable income distribution, in several countries households with agricultural workers are more likely to be found in the poorest decile, although they are not completely absent in the others; in some countries they were actually more likely to be found in the richest decile. While the first indicator refers to individual economic activity remuneration, the second contemplates households where individuals active in agriculture belong to. The analysis is complicated by the lack of appropriate data relative to the rural areas and by the socio-economic differences between skilled and unskilled agricultural and non-agricultural workers as registered across countries. The evidence collected for earnings and wages shows that almost in all countries (but for managers, for whom evidence is somewhat more mixed) individuals active in agriculture declare earnings and wages inferior than those declared by individuals active in similar occupations and at similar levels. Although an analysis carried out over two years only may be unable to deliver a complete picture, the income performances in agriculture in some EU countries seem to be constantly and significantly worse than elsewhere.

The multidimensional analysis of deprivation conducted on Italian data shows that the highest level of deprivation in all three dimensions (housing structural characteristics, absence of some common durable goods and evaluation of the household financial conditions) is more present in scarcely populated areas (here taken as proxies of rural areas), and in particular in the Southern regions.

The study also highlights the need to have a better understanding of the causes of this spatial mismatch, between and within countries as well as to clarify at the EU level the definition of rural areas so as to have appropriate data to investigate the living condition, the level of social inclusion and rural poverty.

REFERENCES

- Cerioli A. and Zani S. (1990) A Fuzzy Approach To The Measurement of Poverty. In Dagum C. and Zenga S. *Income and Wealth Distribution, Inequality and Poverty*, Springer Verlag , Berlin, 272-284.
- Cheli, B. Lemmi, A. (1995) "Totally Fuzzy and Relative Approach to the Multidimensional Analysis of Poverty" *Economic Notes*, 24 pp. 115-134
- Croci Angelini, E., Farina, F. and Pianta, M. (2009). Innovation and Wage Polarisation in European Industries *International Review of Applied Economics* 3
- Croci Angelini, E. and Farina, F. (2008). Technological choices under institutional constraints: measuring the impact on earnings dispersion. In Betti, G. and Lemmi, A. (eds), *Advances on income inequality and concentration measures. Collected papers in memory of Corrado Gini and Max O. Lorenz*. London: Routledge.
- Croci Angelini, E. and Farina, F. (2007). Wage Inequality in Europe: the Role of Labour Market and Redistributive Institutions. In Acocella, N. And Leoni, R. (eds), *Social Pacts, Employment and Growth: A Reappraisal of Ezio Tarantelli's Thought*. Heidelberg, Physical Verlag
- Robeyns I., (2002) "*Promoting Women's Capabilities: examining Nussbaum's Capabilities Approach*", University of Cambridge.
- Sen A.K., (1999). *Development as freedom*, Oxford: Oxford University Press
- Sen A.K. (2000). *Social exclusion: Concept, application and scrutiny*, Social Development Papers No 1, Asian Development Bank, Manila.
- Sen A. K. (1997). *Inequality, unemployment and contemporary Europe*, *International Labour Review* 136, pp.155-172
- Sen A.K., (1992). *On Ethics and Economics*, Oxford UK & Cambridge USA, Blackwell
- Sen A. K. (1985). *Commodities and capabilities*, North Holland, Amsterdam.
- Sen A.K., (1982). Equality of what in "*Choice, Welfare and Measurement*", Basil
- Sorana S., (2009). Multidimensional poverty of the Italian families: an analysis for 2004. Graduate thesis defended at Macerata University
- Zadeh, L.A. (1965) Fuzzy Sets, *Information and Control*, 8: 338-353.