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Living in the countryside of Tuscany: are they really better off?

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ABSTRACT

Rural Tuscany is commonly considered as a delightful place characterized by natural and cultural amenities and widespread wellbeing. However, the possible differences at sub-regional level in terms of socio-economic conditions, available opportunities and access to services have not been enough investigated so far. Moreover, the changing picture of the countryside in Tuscany – decreasing agricultural areas and number of farms, depopulation, ageing – might have affected the standards of living of population and the motivations for staying there. This paper is a first attempt to assess the state of wellbeing in the different rural areas of Tuscany from a multidimensional perspective. The results of this study show that large differences still persist among different areas of the same region. First of all, a process of convergence between rural and urban areas is still far to come. In some rural areas, in particular the more agriculturalintensive, the rates of growth of income are positive and the distribution is fair; however, there are other rural areas where incomes have been decreasing over time together with a deterioration of the distribution. Moreover, job opportunities are scarce and the provision of public services is still insufficient. This further fuels dynamics of social exclusion, which might be triggered by the possible process of re-centralization of public services because of budget constraints.

Keywords: wellbeing, rural development, small areas, Tuscany

PAPER

1. Introduction

Rural Tuscany is commonly considered as a delightful place characterized by natural and cultural amenities and widespread wellbeing. Per-capita income in Tuscany is above the national average, the same as the per-capita expenditure on social services (ISTAT, 2012). However, the possible differences at sub-regional level in terms of socio-economic conditions, available opportunities and access to services – in other words, in terms of wellbeing - have not been enough investigated so far. Moreover, the changing picture of the countryside in Tuscany – decreasing agricultural areas and number of farms, depopulation, ageing – might have affected the standards of living of population and the motivations for staying there.

The definition and evaluation of wellbeing is the subject of a large debate among the social scientists (CNEL-ISTAT, 2012; Giovannini e Rondinella, 2011; Stiglitz et al., 2009; Alkire, 2008; Atkinson et al., 2008) and policy makers. Since 2012 the Italian National Institute of Statistics (ISTAT) issued the report about the conditions of fair and sustainable wellbeing in Italy, with the aim of combining the traditional economic measures, based on income and consumption, with some social and environmental indicators (ISTAT-CNEL, 2013). Traditionally, economists have measured the overall level of the standard of living in terms of accumulation of either resources or the utility that can be drawn from it. As stressed by Sabine Alkire (2008), "Many resources are not intrinsically valuable; they are instrumental to other objectives, yet the quality of life arguably depends not on the mere existence of resources but on what they enable people to do and be".

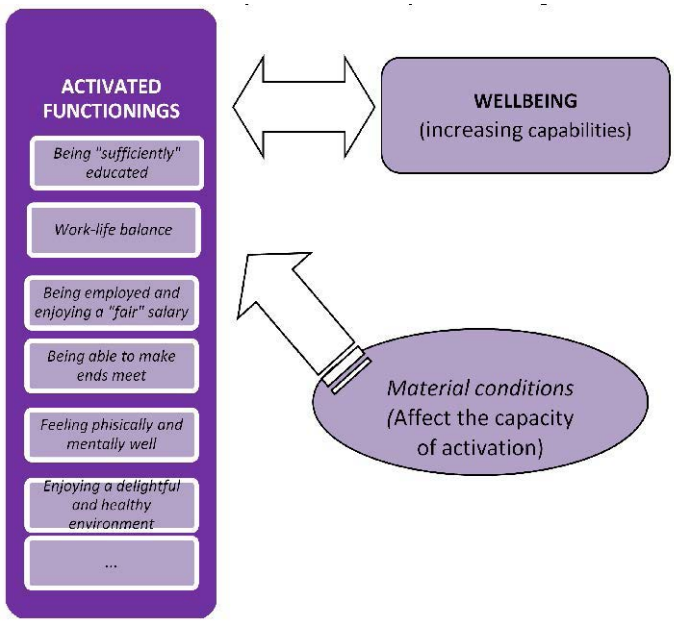
Therefore, the potentials for the conversion of these resources into wellbeing differ across individuals, their own personal characteristics and history and they are inevitably affected by the institutional surrounding. As shown by Stiglitz, Sen, & Fitoussi (2009), the factors shaping the wellbeing of people often depend on circumstances and they are not the product of a rational process based on individual preferences. As a result, perceptions about his or her state of living might be very different from an objective evaluation of it.

The aim of this paper is to assess the state of wellbeing in Tuscany from a multidimensional perspective. Wellbeing is conceived in terms of increasing capabilities, which can be defined as the ability of a person to widen its own available opportunities (functionings) depending on the socio- economic and political conditions of the context (see Sen 1998). Since the political dimension is excluded from the

overall analysis[1], the paper focuses on the activated functionings, which are the set of life conditions truly achieved and observable.

As shown in fig. 1, a definitive list of the activated functionings cannot be easily defined and it is widely data-driven. However, the figure reports some examples and highlights that material conditions (as might be described using the standard economic indicators on incomes, inequality and poverty) positively affect the ability of activation of a person or a household but per se they do not improve wellbeing.

Figure 1 – Theoretical framework of wellbeing



Source: Author's own elaboration

In the following paragraphs, wellbeing in the rural Tuscany will be described in terms of both material conditions (section 3) and quality of life aspects (section 4). The latter refer to employment opportunities, with a focus on gender-driven asymmetries (section 4.1), education (section 4.2) and health and environmental conditions (section 4.3).

The analysis is carried out at the small area level (municipality), comparing five groups of municipalities with different level of urbanisation and variable features of the rural context (section 2). The empirical analysis is mainly based on the European Union Statistics on Income and Living Conditions (EU-SILC), which is a database of both cross-sectional and longitudinal multidimensional microdata on income, poverty, social exclusion and living conditions. It replaced the European Community Household Panel (ECHP) in 2004, because of the need for a more harmonized sample design among the Member States. The sub-regional focus adopted in the present study is supported by the use of proper statistical methodologies (section 2) yielding results which show an acceptable degree of reliability. Furthermore, with the aim of extending and supporting the results of our analysis, the evidence from the EU-SILC dataset has been compared with other primary and secondary sources of information on well-being available at the sub-regional level (e.g. administrative records on provision of education and health services, section 4).

The combination of the use of microeconomic information on wellbeing with the small territorial scale of the analysis is the main contribution of this study from a methodological point of view. Indeed, the smaller the territorial scale of the analysis, the greater the relevance of a multidimensional concept of wellbeing for policy design. The link between the features of rurality and the level of wellbeing is a further original aspect of the study. The practical relevance of the analysis is closely connected to the next 2014-2020 European Rural Development Policy, which, among other things, should provide measures to support "social inclusion, poverty reduction and economic development in rural areas". By extension, the study suggests a possible research path in applied socio-economic analysis supporting policy decision making at the small area level.

1 The political dimension has to do with the degree of available freedom, which allows for a larger set of capabilities. Since the territorial level of analysis is sub-regional, it would be very difficult to assess the differences in terms of freedom, which is reasonable to say that mostly depend on the socio-economic conditions of the territories rather than different political ones.

2. Data and methods

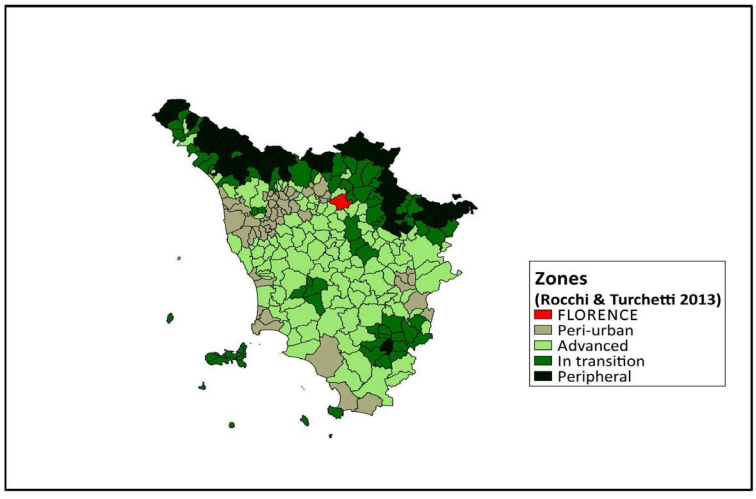
Measuring wellbeing at sub-regional level involves several methodological problems relating to data availability, characterization of territories on the basis of cross-cutting factors (zoning) and identification of relevant variables for quasi-symbiotic small areas. In this study rural and urban areas have been previously classified in a study carried out at the level of municipality (Rocchi & Turchetti, 2013) and clustered on the basis of four main dimensions:

- Urban function, which refers to the relative importance of residential vs. productive use of space.
- Territorial vocation, which highlights the role played by the agricultural sector and the limits imposed by the natural and human constraints;
- Demographic dynamics and commuting, which have an impact upon the use of space and, at the same time, are affected by the economic activities carried out on a territory;
- Productive specialization, which refers to the distribution of productive activities by sector of both employment and produced value added.

The classification of 287 Tuscan municipalities has been done by implementing a cluster k-means analysis, which allowed to a-priori choose the number of areas.[2] As shown in the map below, there are five different zones. Florence and the peri-urban areas are concentrated at north, along the route which carries to the sea. They are characterised by high urban functions and widespread tertiarization. The characteristic attractiveness of peri-urban areas, because of the cheaper housing especially for younger households, and the resulting widespread ageing and depopulation of Florence, are the main differences between Florence and the peri-urban areas.

The other three zones are characterised by low urban functions and, in general, widespread ageing. However, the advanced rural, which accounts for the highest number of municipalities, shows a more modern and stable agricultural sector, with a higher level of entrepreneurship[3]. The high level of entrepreneurship in agriculture depicts the rural in transition too, which is also characterised by a pervasive non-agricultural use of non-urban soil, the presence of several industrial districts and touristic and cultural amenities. Finally, the municipalities of the peripheral area are characterised mainly by natural constraints and high environmental protection (natural parks and protected areas) since they are located nearby the Apennine Mountains. Because of the shortage of productive activities and employment opportunities, apart from some well-developed rural touristic activities and traditional agriculture, ageing and depopulation are widespread.

Figure 2 – Classification of municipalities



Source: Rocchi & Turchetti 2013

Even if the classification satisfactorily discriminates for the functions of each territory, it does not say anything about the wellbeing of people. In order to evaluate it, we use as the main data source EU-SILC. EU-SILC survey is composed of four questionnaires, two at household's level (so called "primary sampling units", PSU) and two at individual level (so called "secondary sampling units", SSU). The units are selected on the basis of a national representative design, which assigns them "a known and non-zero probability of selection" (Eurostat, 2009, p. 22) for both the cross-sectional and the longitudinal data. For Italy the minimum effective sample size is 7250 households (5500 for the longitudinal component) and 15550 individuals (11750 for the longitudinal component).

[2] The number of areas has been a-priori chosen because the mentioned study updates and develops a previous analysis carried out by Rocchi and Caselli (2006).

[3] The entrepreneurship index used in the analysis is an updated and simplified version of the index proposed in (Rocchi and Stefani, 2005).

EU-SILC sample is designed for comparisons between states or administrative regions and not between areas at sub-regional level. However, the sub-regional focus might suggest valuable uses of data whether measures of interest are estimated by using proper weights and they vary within acceptable ranges.

There have been attempts of oversampling at the sub-regional level (Province of Pisa) with the aim of estimating more reliable indices of wellbeing (Pratesi & Coli, 2009) as well as attempts of estimating the variables of interest from covariate information from census of population (Giusti, Pratesi, & Salvati, 2009). Given the limited number of areas considered in this study and the difficult search for reliable covariates, we followed a different approach, based on the direct estimation of the measures of interest by post-stratifying the observations into the areas. In order to report the sample units to the universe, a proper weight has been calculated as:

$$Wnew = \frac{db090}{\sum_{i=1}^{5} db090} \sum_{i=1}^{5} HH$$

Whereas db090 is the EU-SILC household cross-sectional weight (db090) and $\sum_{i=1}^{5} HH$ is the total number of households by area (source: *Demostat*). As shown in the

Tab. 1, some areas are overrepresented –the rural and peripheral and in-transition areas – while Florence is underrepresented. Despite these differences, the distribution of the sample along the five zones is quite similar to the actual one:

Table 1: Total number of households by area, 2009

	Total number of households	%	Total number of households sampled	%
Florence	181944	11,36	135	9,32
Peri-urban	428852	26,78	369	25,48
Advanced	636961	39,78	547	37,78
In transition	283324	17,69	287	19,82
Peripheral	70312	4,39	110	7,60
TUSCANY	1601393	100	1448	100

Source: Author's own elaboration from Demostat and EU-SILC

The Tab. 2 reports the number of households sampled by area over the available years of the survey:

Table 2: Number of households sampled by areas, 2004-2009

	2004	2005	2006	2007	2008	2009
Florence	178	116	125	119	140	135
Peri-urban	477	414	409	381	389	369
Advanced	701	648	636	626	556	547
In transition	333	318	293	279	307	287
Peripheral	62	64	62	84	103	110
TUSCANY	1751	1560	1525	1489	1495	1448

Source: Author's own elaboration from EU-SILC

In order to assess the reliability of results, we have calculated the standard error of estimates through a bootstrap procedure. This procedure allows to "resample" with replacement from the sample data at hand thus "artificially" broadening the represented population in order to better approximate the distribution of a statistic and obtain proper standard errors (bootstrap SE; see Singh & Xie, 2009). Some of the estimated bootstrap SE are reported in the following sections, showing an acceptable degree of reliability of results.

3. The material conditions of rural areas

As shown by Amartya Sen, the economic dimension of wellbeing is not a goal per se but it should be assumed as a mean to enlarge the available set of opportunities (see fig. 1). The exploitation of these

opportunities and the increase in the level of wellbeing depend on both exogenous (environmental factors) and endogenous conditions (personal characteristics and choices) affecting the more general quality of life. In a market-based economy the importance of the income level is supposed to be higher given the relevance of the private sector in providing goods and services.

The 2009 EU-SILC data show that, overall, more than two thirds of people say to difficultly meet their monthly needs. The situation is considerably worse in both the peripheral and the rural advanced areas, where the share of people in trouble amounts, respectively, to 81% and 78%. Conversely, in Florence they are only half of the total population. The Tab. 3 somehow confirms these picture but with some variations when considering different kind of purchases. For example, people living in both the advanced rural and the peripheral areas show major difficulties to pay for basic services such as school and health, which might suggest that the provision of public services to marginal areas is somehow troublesome.

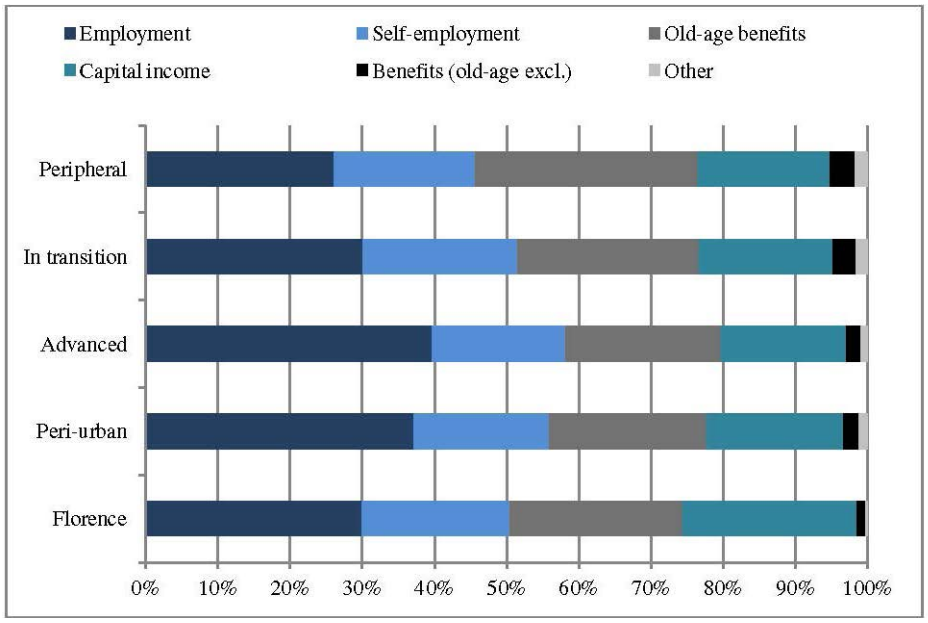
Table 3: Share of households who responded not to have enough money for the listed expenses, 2009

In the last 12 months, there have been any moments when your family did not have enough money to purchase:	Florence	Periurban	Advanced	In transition	Peripheral
CLOTHES	11,09	11,15	14,20	11,30	15,36
FOOD	6,54	4,33	6,02	4,71	1,88
HEALTH	9,14	8,97	10,30	7,11	4,39
SCHOOL	2,85	4,93	4,30	5,72	11,18
TRANSPORTS	8,50	6,47	8,06	5,08	3,63
TAXES	9,08	11,73	9,77	7,43	3,63

Source: Author's own elaboration from EU-SILC

The main sources of income in each area in 2009 are reported in Figure 3. As expected, income from employment is the first source of income almost everywhere, except for the peripheral area where about one third of the overall income is represented by the old-age benefits. The situation is similar in the rural in transition, where 30% of income comes from employment and 25% of income from old-age benefits. At the opposite side, there are the cases of both the peri-urban area and the rural advanced, where income from employment is almost 40% of the total income, while the oldage benefits are remarkably low (about 21%). Capital income is a relevant source of income only in Florence, where it represents about one-fourth of the total income.

Figure 3 – Main sources of income, 2009



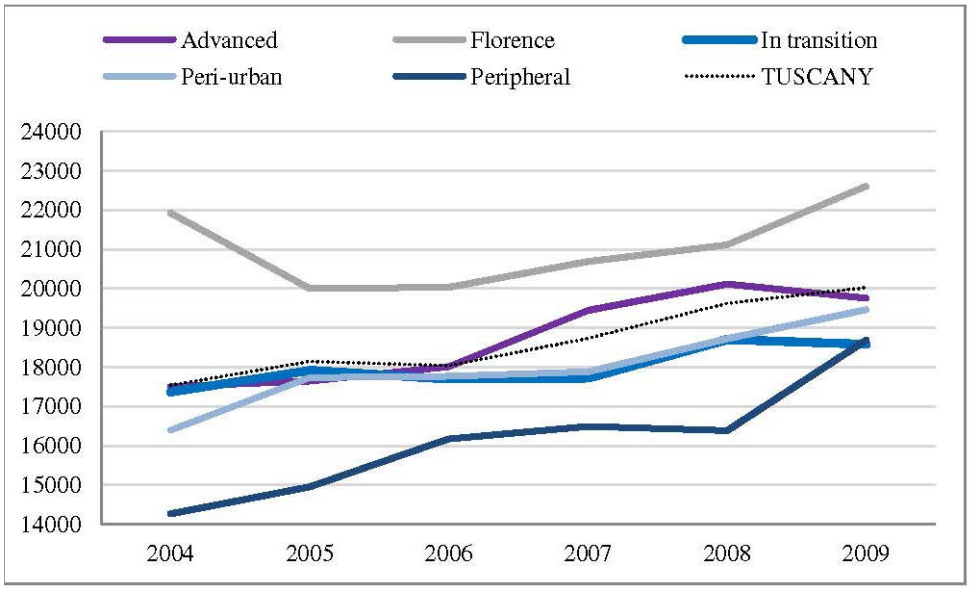
Source: Author's own elaboration from EU-SILC

The EU-SILC survey reports the disposable incomes of households including employee and self-employee incomes, pensions, social benefits and other cash transfers and any kind of other incomes, such as capital incomes (Atkinson & Marlier, 2010). The disposable income is indeed corrected by a within household non-response inflation factor and the household size[4] thus returning the equalized disposable income (EDI) which has been used for the next analysis:

EDI= (total disposable HH income* within HH non-response inflation factor)/HH size

The trend of EDI by area over the years 2004-2009 is shown in the Figure . On absolute terms, the municipality of Florence is the richest ever, even if over time the slope of the curve tends to flat. Both the peripheral and the peri-urban areas show the highest rates of growth (31% and 19%, respectively); while the trend of the rural in transition is almost steady, with no relevant increase over the years. As a consequence, in 2009 the rural in transition turns to be the poorest area of the region.

Figure 4 – Trend of EDI, 2004/2009



Source: Author's own elaboration from EU-SILC

In general, the bootstrap SE of estimates is always higher in Florence and in the peripheral area, because they are, respectively, under and over-represented. However, in the case of Florence this must be due also to the large variability of income because of a more uneven distribution.

Table 4: Average EDI and bootstrap SE, 2004/2009

	Florence	Peri-urban	Advanced	In transition	Peripheral	TUSCANY
2009	22609	19462	19757	18584	18687	20025
Bootstrap SE	1310,08	693,79	585,69	765,26	927,44	404,32
2008	21111	18728	20114	18701	16384	19625
Bootstrap SE	1420,36	547,70	580,32	646,59	957,40	382,99
2007	20689	17881	19443	17721	16489	18729
Bootstrap SE	1342,61	558,97	532,63	555,62	836,58	317,85
2006	20036	17763	18014	17695	16174	18040
Bootstrap SE	1137,74	638,98	498,56	734,77	1333,18	324,44
2005	20000	17736	17647	17915	14946	18143
Bootstrap SE	1158,27	576,10	407,09	730,60	1170,07	334,94
2004	21927	16393	17505	17366	14266	17538
Bootstrap SE	1194,13	467,86	773,42	690,31	1061,96	384,16

Source: Author's own elaboration from EU-SILC

The best combination between a good level of income and a fair distribution occurs in the rural advanced, where the mean EDI is on the regional average and the distribution of income is quite even. On the contrary, the rural in transition and Florence show the highest levels of inequality (Gini index =

[4] In term of equivalent adult members, according to a proper equivalence scale. Both household size and non-response inflation factor are provided by Istat together with the sample.

0.31, above the value of the index calculated for the whole region)[5].

Finally, we set the same poverty line[6] for all areas (60% of the median EDI of Tuscany: 10692€ in order to estimate some poverty indicators. As shown in the Tab. 5, the rural in transition is by far the poorest area with 21% of people below the poverty line, followed by the peripheral area (19%)[7] and the peri-urban area (18%). The poverty gap index (FGT1) measures the distance between the incomes of the poor and the poverty line and it is the minimum cost of eliminating poverty (as a share of the poverty line). This index is particularly useful from a policy perspective because it returns the exact amount of benefits which should be provided on average to each households lying below the poverty line. Therefore, in Tuscany each household should receive about 444€in order to fill the poverty gap, even if they ought to be differently distributed among areas. Since the rural in transition accounts for the largest share of the poor, each household should receive about 637€, followed by those living in the peri-urban area (514€.

As stressed by the World Bank (2005), the design of the policy targeting is the preliminary condition to any strategy of poverty reduction. The main problem with the poverty gap index is that it does not account for the inequality level among the poor; therefore, if the income of a household with a small poverty gap improves, then the poverty gap index improves proportionally even if inequality among the poor has increased. The poverty severity gap index (FGT2) weights more the incomes falling far below the poverty line so as to account for the inequality among the poor. Once again, the rural in transition shows the most severe gap, thus confirming that most of inequality is concentrated in the lower-middle tail of the income distribution; conversely, the rural advanced still shows the best condition (low incidence of poverty and low inequality).

Table 5: Poverty indexes, 2009 (%)

	Florence	Peri-urban	Advanced	In transition	Peripheral	TUSCANY
Headcount index (FGT0)	15.716	18.443	14.550	21.119	19.417	16.888
Bootstrap SE	1.834	2.385	1.939	2.487	4.674	1.220
Poverty gap index (FGT1)	3.814	5.143	3.517	6.367	4.773	4.444
Bootstrap SE	1.025	0.926	0.567	1.025	1.313	0.397
Poverty severity index (FGT2)	1.208	2.571	1.344	3.099	2.003	1.854
Bootstrap SE	0.384	0.656	0.320	0.683	0.790	0.239

Source: Author's own elaboration from EU-SILC

3.1. The quality of life in the rural areas

In this section the focus moves from material conditions to some "activated functionings". Social scientists and institutions often disagree upon what qualitative dimensions should be chosen, especially because they are always context and time-specific; moreover, the set of indicators measuring them are very often data-driven.

The next analysis is largely descriptive and tries to introduce further inputs to complete the analysis of the economic dimension of wellbeing. In particular, the following quality of life dimensions have been considered:

- Employment and gender perspective

- Education

- Health and Environment

3.2. Employment and gender perspective

Employment is a major component of wellbeing not only as a source of income but also as a central factor of psychological health and overall satisfaction with life. Conversely, it can be also a source of uncertainty and stress, especially whether temporary and almost unpaid. Eventually, even in case of permanent, satisfactory and well-paid job, it might turn to be difficult to reconcile the labour time with other life activities. This is particularly true for women, who are generally the main household's caretakers. Their unpaid work is often a substitution for an inefficient public provision of social services targeted to children and elderly people. Hence, the gender perspective is a crucial and cross-cutting

[5] The Gini index expresses the distance from a perfectly even distribution of income of the actual one. The index varies from 0 (corresponding to perfect equity, i.e., equal per capita income throughout the whole population) to 1.

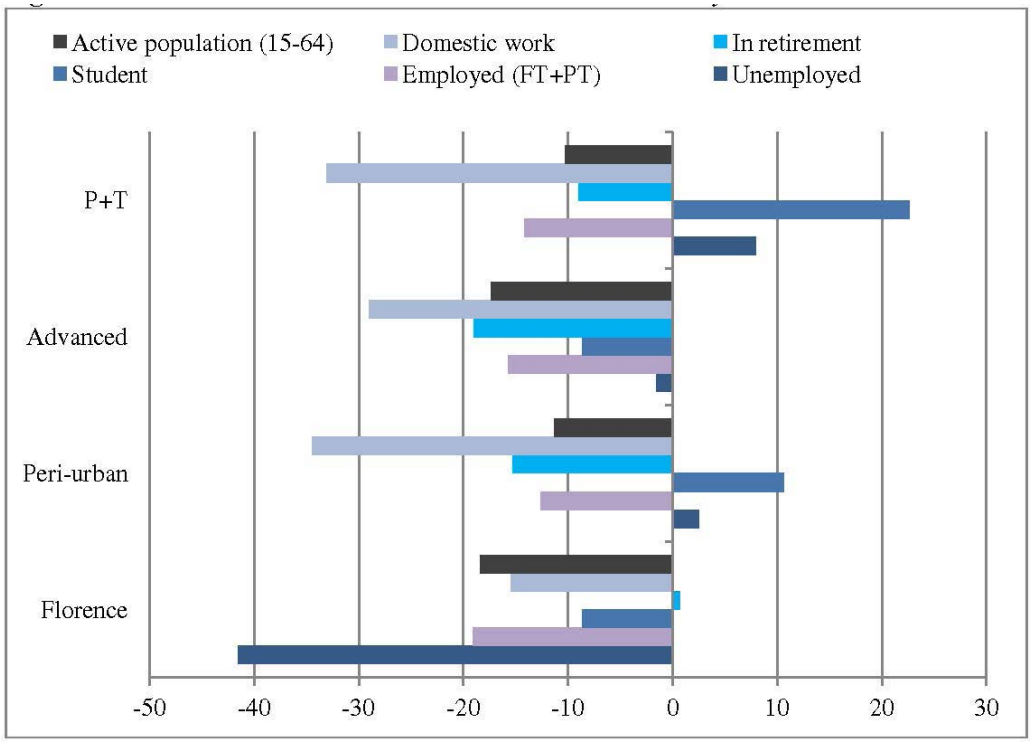
[6] Poverty line can be defined as the threshold which identifies the group of people "in poverty", thus not having enough command over resources, in terms of either income or consumption (World Bank, 2005).

[7] It must be noted that the standard error for the peripheral area is particularly high, so that the reliability of the estimation is quite low.

dimension for the description of the state of wellbeing relating to employment.

The Figure shows the percentage variations in the employment status.[8] Overall, the number of people employed decreases everywhere, with no significant differences by area. Unemployed people, instead, decline only in Florence and in the advanced rural, while increasing in both the peri-urban and the other rural areas. Such negative variations can be explained not only by improved conditions of the labour market but also by the decreasing share of economically active population. From this point of view, the situation in the rural areas is quite clear, since the number of both employed and active population decrease. Moreover, the increase in the number of students in both the peri-urban and the rural areas might be a further sign of the worsening of the economic conditions inducing young people to delay their exit from home.

Figure 5 – % Triennial variations in basic labor statistics by area, 2004/06-2007/09[9]



Source: Author's own elaboration from EU-SILC

Everywhere domestic work decreased over time. Nonetheless, it is not substituted by an increasing number of women at work and, in general, it remains a female job. In fact, the rate of employment of women decreases everywhere, except in Florence, where probably most of the active female population work (see **Errore. L'origine riferimento non è stata trovata.**6). A further difference with men is represented by one-fifth of women that are part-time employed in front of less than 4% of men. Part-time job may help women to better reconcile family needs and working time. However, it is also the heritage of the traditional division of labour within the households and the result of the lack of an adequate provision of nurseries and working hour's flexibility, factors pushing women outside the labour markets.

Table 6: Rate of employment of women by area (%), 2004/06-2007/09

	2004/06	2007/09
Florence	60,82	60,43
Peri-urban	61,32	56,55
Advanced	63,59	57,29
T+P	64,74	50,50

Source: Author's own elaboration from EU-SILC

[8] In order to obtain more robust statistics, the variations have been calculated between the mean values of two three- year periods.

[9] Because of the limited number of observations in the peripheral area, due to the large share of people in retirement, in this section the rural in transition and the peripheral area are considered together (T+P).

Hence, part-time jobs cannot be the univocal response of policy to increase the participation of women to the labour market. In Tuscany the number of public provided nurseries slightly decreased over time (-3,2% over the years 2007/11) in front of a large increase of the private services (+46%) (Regione Toscana, 2013). Even if public grants are provided in order to help households to pay for private services, they are strongly dependent on the yearly budget capacity of the local governments and on the political priorities. Moreover, the ability to pay for of each household inevitably affects the trade-off of women between extending the maternity leave (with consequent salary reductions) or further waiting for searching for a new job – thus decreasing the likelihood of re-entering the labour market – and paying for the nursery. In Florence in 2010 about one-third of kids in the 0/2 age class have been enrolled in a nursery in front of 16% laying into the waiting lists. On the other hand, kids enrolled in the peripheral area are only 10% but with a very short waiting list (1%). On average, both the rural in transition, the rural advanced and the peri-urban area show a coverage of more than 20%, but with the peri-urban area presenting a longer waiting list (7,30%).

3.3. Education

Education is one of the most important dimensions of wellbeing since it broadens the set of available opportunities by allowing people to access well-paid and less risky jobs and fostering social mobility. In developed countries the primary education is guaranteed to everybody and the differences at local level are more related to the distribution or quality of services provided and not to different policies. Moreover, in terms of job opportunities, what really makes the difference is the access to higher (secondary and tertiary) education and to what extent it meets the demand for skilled workers on the local job market.

The Tab. 7 shows that people with secondary education in 2009 survey are 40% of the sample, while people with tertiary education are nearly 20%. There are no relevant differences among areas in the distribution of secondary education, while most of graduates live in Florence and only few of them in the countryside. This explains why the largest share of farmers are not graduated (more than 90% of farmers, according with the last census of agriculture) thus highly reducing the development opportunities of the rural areas. Since their number is small, the share of graduate people in the 30/40 age class who define themselves as employed is quite higher in the rural areas.

Table 7: Secondary and post-secondary education by area (%)

	Florence	Peri-urban	Advanced	P+T	TOS
Share of active population with diploma	37,27	38,49	43,22	42,45	41,32
Share of active population with post-secondary and tertiary education	39,75	18,42	18,19	15,63	19,22
Share of people 30/40 with post-secondary and tertiary education employed	68,42	67,74	74,63	86,67	74,83

Source: Author's own elaboration from EU-SILC

The capacity of people to access higher education depends on the supply side too. While it is common that most of the universities are concentrated in urban centers and it might be desirable that people move from the place of origin to attend their courses elsewhere, when secondary schools at the territorial level are poorly supplied it is less likely that people will continue to study. For example, the number of classes out of 1000 people of the 14/20 age class is much lower in the rural areas, especially in the advanced rural and the periphery.

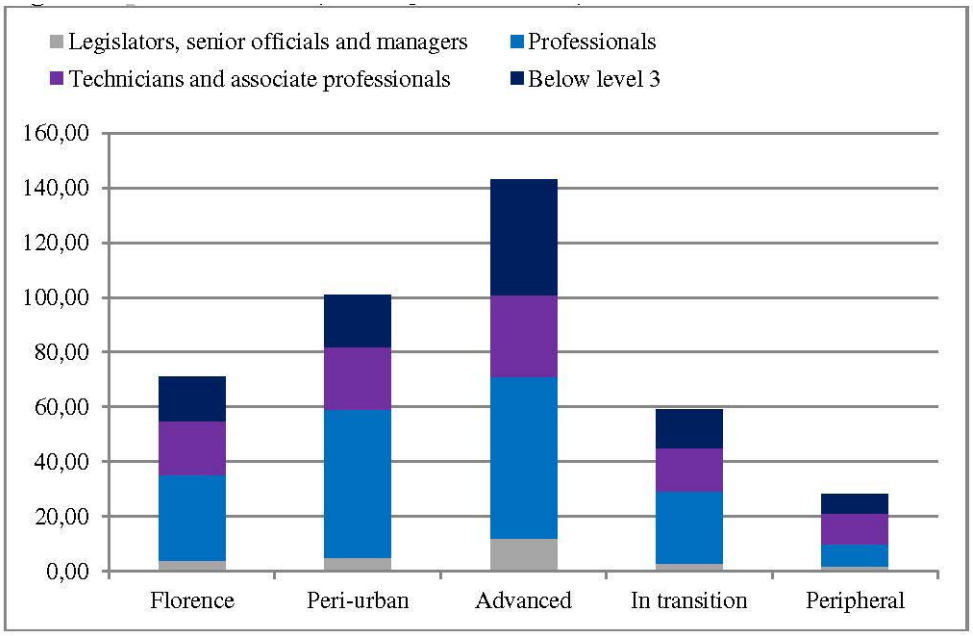
Finally, to what extent graduates find a job fitting with their educational qualifications? First (Fig. 6), one out of five of graduates claim to be unemployed. Among employed graduates, most of them are professionals (44%), followed by technicians (25%) and legislators, senior officials and managers (7%); the rest of them (about 25%) is hired as more unskilled workers fitting also undergraduates' profiles. Summing up, almost half of graduates do not find a suitable position, although there are significant differences by area. The share of professionals living in rural areas is very low since most of the services are provided in urban areas, so it is reasonable that they choose to live there. At the same time, it seems that graduates living in rural areas tend to accept more easily jobs not fitting their level of education: in rural areas the share of people doing a job which requires a lower degree of qualification (below-level 3) is higher with respect to urban areas.

3.4. Feeling good, the access to health services and the environmental conditions

A good state of health is the pre-condition to the overall wellbeing and the ability to live an active life. In 2007[10] more than two third of the sample declare to enjoy a very good or good state of health even

[10] Since 2008 the EU-SILC health module is no longer available.

Figure 6 – ISCO*ISCED by area (post-secondary education)



Source: Author's own elaboration from EU-SILC

if men are more satisfied than women; this datum is almost the same in any area, while most of the differences concern the share of people not feeling good. Overall, approximately 10% of people claim to be in a very bad or bad state of health. The largest share of them lives in Florence (16%), followed by the advanced rural (10%) and the peripheral area (9%), while both the residential area and the rural in transition show the lower shares (8% and 7%, respectively). However, the distribution of responses by sex is more uneven in all the rural areas: for instance, in the rural in transition 10% of women claim not to feel good in front of 4% of men.

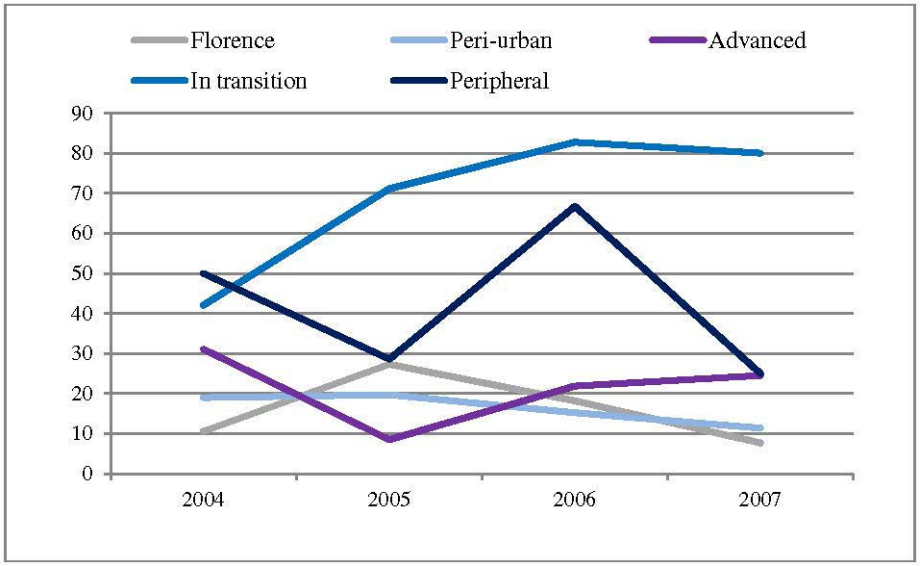
The state of health of a person depends on personal characteristics, especially age, so it is not surprising that areas with younger population claim to feel better. However, there are some other factors affecting health, namely the access to health services and the conditions of the environment where people live. Available data about health services (data source: Minister of Economic Development) confirm that both the peripheral area and the rural advanced have more difficult access to health services because of the limited number of places into the hospital with respect to the population. While in Florence they are 8,38/1000 inhabitants, in the peripheral area they are only 1,74 and in the advanced rural they are 2,86. Both the rural in transition and the peri-urban areas are in the middle. Moreover, the access to more advanced health services might be further hindered by poor infrastructures.

In order to understand to what extent people are really bounded in accessing health services, we provide some trends from the 2004-2007 EU-SILC health modules (Fig. 7). In 2007 people who responded not to have met the need for a medical examination or treatment are 198, about 5% of the whole sample; this share remains quite stable along the yearly surveys. 38% of them live in the rural in transition, followed by the peri-urban area (27%) and the rural advanced (25%). The main reasons why they did not meet the medical examinations or treatments concern either the long waiting lists (41%) or the inability to afford it (31%). Figure 7 shows the trend of the shares of people not meeting their medical needs because of the long waiting lists. In 2007 the number of people reporting this answer in the rural in transition is three times higher than 2004; elsewhere, it remains quite steady, except for the peripheral area where the trend is rough, with slight decreases in both the urban areas.

The picture changes when it comes to consider the ability to pay, which seems to be perceived as a problem especially in the urban areas, where about half of the total urban population report this answer (Fig. 8). However, since waiting lists are not reported as a problem, as well as the supply of health services, it is suggested that these answers have more to do with much specialized treatments not covered by public health services.

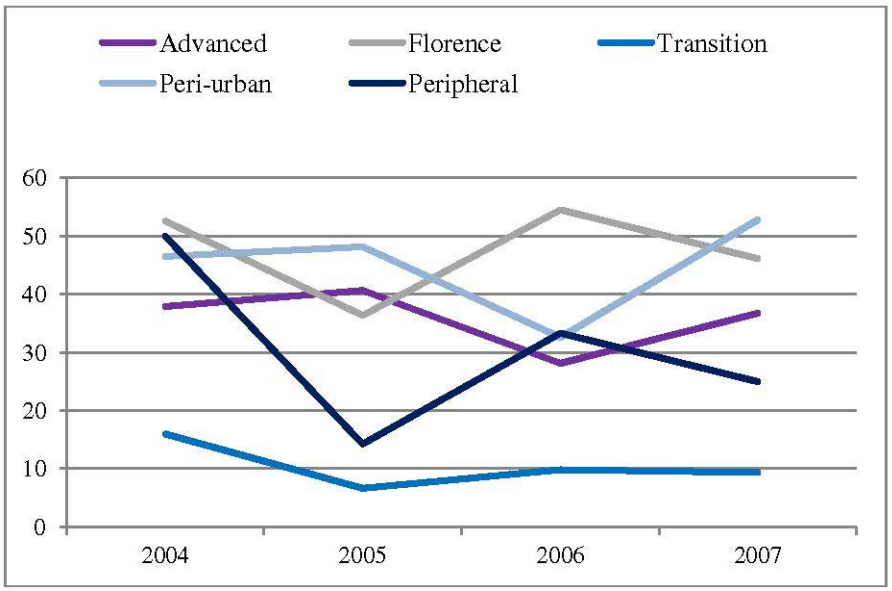
This suggestion would need further studies to be confirmed. We show some data about the distribution of the Avoidable Mortality Rate (AMR) by area, provided by the Regional Agency for Health of Tuscany (Agenzia Regionale di Sanità della Toscana – ARS). The AMR can be defined as the share of "unnecessary, untimely deaths" (Rutstein et al.,1976) which can be avoided through primary prevention, early diagnosis and hygiene & health care. While there are no significant differences in terms of diagnosis and only limited differences for hygiene and health care, the AMR due to scant prevention is higher in both peripheral and peri-urban areas and less in the rural in transition (Fig. 9). Differences by sex

Figure 7 – Share of people not meeting medical examination/treatment because of the LONG WAITING LISTS



Source: Author's own elaboration from EU-SILC

Figure 8 – Share of people not meeting medical examination/treatment because of the LONG WAITING LISTS



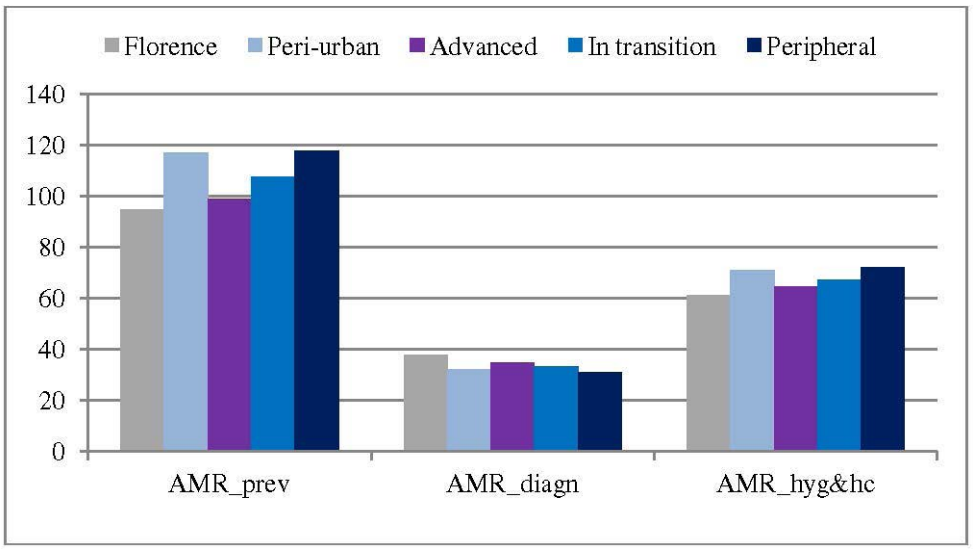
Source: Author's own elaboration from EU-SILC

are even more remarkable, since especially the feminine AMR due to both prevention and hygiene and health care are much higher in all the rural and peri- urban areas.

Hence, it can be suggested that while people living in the peri-urban area are more unable to pay for prevention, the difficult access to health services in the rural in transition is not specific but it is related to all the three aspects. With respect to the peripheral area, even if the number of health services is limited, probably they are well-targeted or in any case sufficient to respond to the needs of the residents.

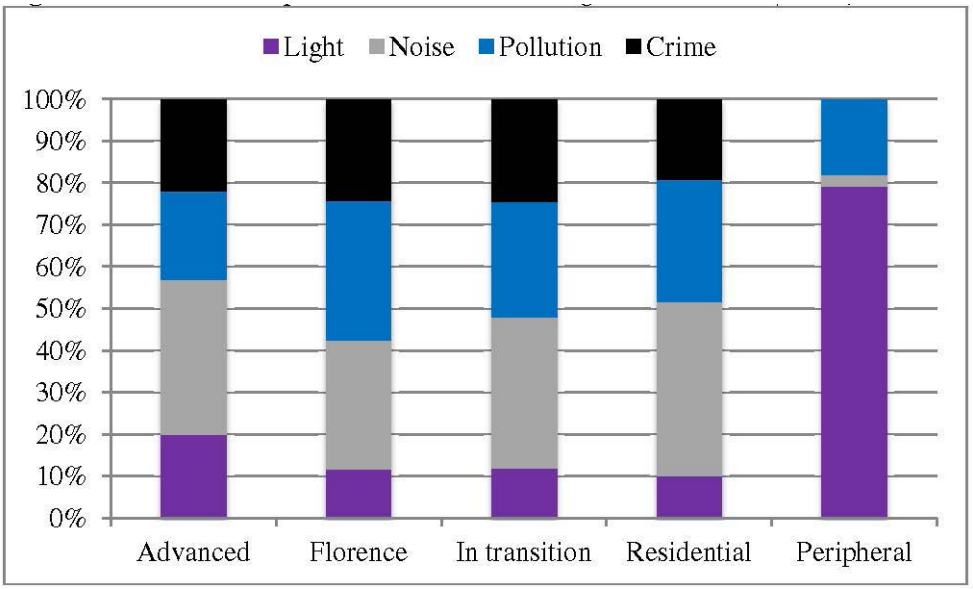
Another factor affecting the state of health is the quality of surrounding environment (Fig. 10). Even if environmental data at municipal level are not available, we show some data from the EU- SILC survey about the perceived main problems reported by the respondents. Not surprisingly, the lack of sufficient light is troublesome especially in the peripheral area, where this is the most remarkable problem, but also in the advanced rural. Crime and pollution are perceived as more troublesome in Florence, while noise in both the peri-urban and in the rural in transition.

Figure 9 – Avoidable mortality rates by area, 2006/2009 (average)



Source: Author's own elaboration from EU-SILC

Figure 10 – Perceived problems with the living environment (2009)



Source: Author's own elaboration from EU-SILC

4. Concluding remarks

This paper is an attempt to assess of the state of wellbeing in the rural areas of Tuscany from a multidimensional perspective. Following the capability approach proposed by Sen, the concept of wellbeing adopted in this study goes beyond economic grounds, including subjective and objective indicators of people's activated functionings in a set of wellbeing dimensions (labor, gender equality, education, health, quality of surrounding environment). The results show that large differences still persist at territorial sub-regional level. The Tab. 8 recaps the main differences among five sub-regional areas which have been identified in the earlier sections.

Even if Tuscany is a region of a developed country where the standards of living are quite high, the results of this study highlight that large differences at sub-regional level still persist. First of all, a process of economic convergence between rural and urban areas is still far to come. In some rural areas, in particular the more agricultural-intensive, the rates of growth of income are positive and the distribution is fair; however, there are other rural areas where income decreased over time together with a deterioration of the distribution. For example, the municipalities included in the "rural advanced" group show positive growth rates over time and a fair distribution of income; moreover, this area can enjoy a good milieu for entrepreneurship, including a modern and well- developed agricultural sector (Rocchi & Turchetti, 2013). However, when it comes to consider other dimensions of wellbeing, the picture changes because job opportunities are scarce and the provision of services still insufficient.

Table 8: Differences by area along the dimensions

	Florence	Peri-urban	Advanced rural	Rural in transition	Peripheral Rural
Material conditions	Highest income but steady growth and unfair distribution	Stagnant trend of income growth but fair distribution	Balance between income growth and fair distribution	Low income growth and unfair distribution	Positive growth of income and fair distribution
Employment and gender	Both unemployment and employment decrease	Unemployment increases and employment decreases, especially among women. Long waiting lists for nurseries	Both unemployment and employment decrease, especially among women	Unemployment increases and employment decreases, especially among women. Scarce demand for the provision of nurseries	
Education			Poor provision of secondary schools. Tendency to more easily accept unskilled jobs with respect to qualification	Lower share of people in the 30/40 age class with post-secondary/tertiary education. A large share of them is employed. Tendency to more easily accept more unskilled jobs with respect to qualification.	
Health	Large share of people saying not feeling good, although the best provision of services in the region	Inability to pay, especially for prevention	Poor provision of services	Poor provision of services, long waiting lists	Poor provision of services, but well-targeted

Source: Author's own elaboration

The situation is even worse in the "rural in transition" and the "rural peripheral" areas, where incomes are lower and, in the case of the former, poverty and inequality are widespread and increasing. Differences in the quantity and quality of public services for education and health likely affect the well-being of people living in areas with prevalent rural features. In the rural areas "in transition" and "peripheral" this disadvantage is combined with controversial trends in economic conditions, resulting in an increasing lag from the rest of Tuscany.

From a methodological point of view, this study shows the relevance of EU-SILC Survey for the analysis of well-being and the opportunity to adopt it for sub-regional studies by using proper techniques of post-stratification. The results show an acceptable degree of statistical reliability, suggesting a wide range of possible analysis based on available micro-economic information. We also attempted to gather some concluding remarks by comparing information about both subjective and objective wellbeing from EU-SILC database with information from other primary and secondary data sources about the supply of local public services. We are convinced that this research path should be further pursued. Indeed, the relevance of a multidimensional concept of well-being, such as the one adopted in this study, for policy design increases moving from larger to smaller territorial scales. Empirical evidence on territory-specific lags in one or more dimensions of well-being might suggest a better targeting of policy measures, improving the efficiency in the use of public resources.

This is the case of regional rural development policy. The ongoing revision of the Rural Development Programme in Tuscany is an opportunity to address some of the issues highlighted above. The case of rural Tuscany shows how "social inclusion, poverty reduction and economic development" should be more clearly considered as a fundamental part of the policy design for rural areas, also in terms of budget allocation. Indeed, the thread for a re-orientation of policy towards the consideration of regional differences turns to be extremely urgent whether also well-developed regions like Tuscany cannot grant to everyone the same access to well-being because of the diverse provision of public services and/or economic opportunities.

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