Implementing a guaranteed minimum income in Italy:*

An empirical analysis of costs and political feasibility

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Abstract

In this paper we analyse a hypothetical welfare reform that would introduce a Guaranteed Minimum Income (GMI) in Italy, the only country of the pre-enlargement EU-15 where a programme of this type does not exist. First we compute the overall cost of a GMI under different assumptions about its generosity and adjustments for differences in the cost of living. Then, we discuss alternative options to finance the additional resources needed to implement the programme. Finally, we present an analysis of winners and losers from such reform and we discuss the type of preferences for redistribution that would be required to obtain political support for a GMI from the majority of the voting population.

1 Introduction

Italy is the only country of the pre-enlargement EU-15 where a guaranteed minimum income programme does not exist. And anti-poverty schemes of this type are very common also among the countries of the recent enlargement.

In the lack of a coherent national scheme, many local administrations have independently created anti-poverty programmes, offering some form of economic assistance to the poor. However, the features of such programmes differ substantially across the country, thus generating inequality of treatment for citizens in similar socio-economic conditions. Starting with the mid-1990's there have been several proposals to introduce a national minimum income scheme in Italy but, despite the heated debates that surrounded each and all of them, none has ever led to a concrete policy.

Perhaps the most factual progress was made in 1998, when a minimum income programme was implemented on an experimental basis and only in some municipalities (the so-called Reddito Minimo d'Inserimento or RMI). Even in this occasion, however, the experiment did not evolve into a permanent national policy and was terminated without a proper scientific evaluation (Boeri and Perotti, 2002; IRS et al., 2001).

In this paper we present an empirical analysis of an hypothetical Guaranteed Minimum Income (GMI) programme in Italy, under different assumptions about its generosity and financing. We do so by using the 2006 release of the European Union Survey on Income and Living Conditions (EU-SILC), a study that collects microdata on income, poverty, social exclusion and living conditions in 27 European countries. In Italy, the 2006 EU-SILC survey covers 21.499 households (54.512 individuals), leading to a sample size representative both at national and regional level [1].

Our results show that a reasonably generous version of the GMI would be financially viable, especially if the nominal value of the monetary transfer is allowed to vary according to differences in the cost of living across the country. Moreover, a GMI should in principle replace many of the anti-poverty measures that characterize the Italian welfare system and whose redistributive properties have already been shown to be poor (Baldini, Bosi and Toso, 2000). Furthermore, the available evidence both from the 1998 RMI experiment and the more recent local experiences indicates that it is relatively easy to design a GMI that minimizes disincentives to work and frauds (Boeri et al. 2007).

Why, then, none of the many proposals that have been put forward in the past two decades led to any concrete policy? To answer this question, in the last part of the paper (Section 4) we analyze two important and interrelated issues: the degree of geographical redistribution induced by a GMI and its political feasibility. We show that a national GMI would imply a substantial transfer of resources from the north to the south of the country. Such redistribution, however, depends crucially on how the programme will be financed, namely how many resources will be collected locally and how much will come from the central government.

The financing options, in turn, heavily affect the political support for the GMI. Using

[1] See Appendix A.1 for further details

recent microdata, we identify those households that would gain from an hypothetical reform that replaces a wide array of existing welfare schemes with a simple GMI and collects the additional resources either locally or centrally. We then explore the potential political support for such a reform assuming either that individuals exclusively care about the post-taxes-and-transfers incomes of their households or that they have some more sophisticated preferences over redistribution.

The paper is organised as follows. In Section 2 we present our estimates of the cost of a GMI. Section 3 focuses on different financing options and on the degree of geographical redistribution introduced by the program. In section 4 we look at the political feasibility of a GMI. Section 5 concludes.

2 The cost of a Guaranteed Minimum Income in Italy

In this section we estimate the cost of introducing a guaranteed minimum income in Italy. To preview the main results, our preferred estimates suggest a yearly total cost for the measure of about 7.1 billion Euros, with 8 per cent of Italian households involved into the program. Such an estimate implies an income threshold for a single person equal to 400 Euros per month (about 70 per cent of the poverty line for singles estimated by Istat[2]) and a definition of household income that includes all types of individual incomes, public transfers, mortgage repayments or the cost of renting.

In the entirety of our analysis we are going to set aside any behavioural response to the hypothetical introduction of this new programme. The potential endogenous reactions to the GMI can range widely from labour supply (Aaberge et al., 2000; Colombino and Del Boca, 1990; Colombino, 2009) to fertility (Del Boca et al. 2006), from family

[2]Istat (2007).

composition (Chiuri and Del Boca, 2007) to the take-up of welfare benefits (Ashenfelter, 1983). All of these are potentially important and would require a specific study for themselves.

Perhaps, the most of important effects for the purposes of our analysis are those on labour supply and program participation. Aaberge et al. (2000) and Colombino and Del Boca (1990) look at tax reforms while Colombino (2009) considers more specifically alternative versions of a minimum income scheme. The findings in this latter study suggest that the introduction of a universal minimum income scheme would reduce hours worked by about 10% for men and almost 20% for women. These estimates can be taken as upper bounds of the labour supply response to the hypothetical reform that we consider. In fact, Colombino (2009) studies minimum income schemes that are introduced holding the overall budget constraint constant, whereas we allow both for the possibility to raise taxes and for the replacement of several existing schemes with the new GMI.

The definition of GMI that we adopt here is a universal and means-tested assistance scheme involving a transfer to all household whose income falls below a predefined threshold. The transfer is not a fixed amount of money but a top-up scheme, that complements household income up to the threshold.

Formally, the total cost (TC) of such hypothetical GMI can be computed as follows:

$$TC = \sum_{h=1}^{H} (GMI_h - y_h) w_h \text{ subject to } y_h < GMI_h \tag{1}$$

where GMI_h is the specific threshold for household h (suitably adjusted, see below), y_h the household income, w_h sample weights and H the total number of households in the Italian sample of the EU-SILC database.

The income threshold GMI_h that determines eligibility to the program is adjusted by an "equivalence scale" that takes into account both household composition and size. Out of the many equivalence scales that have been proposed in the literature, we use the one that is officially adopted by the OECD.[3] As an additional adjustment, we also try to take into account differences in the cost of living across Italian regions. This is a particularly important issue, since Italy is traditionally characterized by strong differentials in per capita income, labour market conditions and purchasing power.

Formally, the income threshold for a generic household h is defined as follows:

$$GMI_h = e_h \times ppp_h \times x \tag{2}$$

where x is the standard GMI threshold for a single person, e_h represents the household equivalence scale and ppp_h the adjustment by purchasing power.

We also compute the total cost of a GMI under different assumptions about the definitions of household income. Specifically, we consider the following fours alternatives:

Def.1 = Sum of individual net income of all family members - education related allowances - net transfers from relatives,

Def.2 = Def.1 - social exclusion transfers and housing allowances;

Def.3 = Def.2 - mortgage repayments or the cost of renting (max 5.000 euro);

Def.4 = Def.3 - 15%(self-employed revenues) - 5%(employees' revenues)

[3]The coefficient for equivalised household size is defined as:

$e_h = 1+0.5\times$[(of household members aged 14 and over)-1]$+0.3\times$(number of household members aged less than 14)

For example, if the threshold for a single person is 400 Euros per month, then the threshold will become 600 Euros for a couple and 840 for a couple with two children below 14 of age.

All definitions are based on information provided by the EU-SILC database, that includes very detailed information on different income items both at household and personal level (See Appendix A.1). The first definition (Def.1) is a simple sum of net income from all family members aged more that 14. In the second definition (Def.2) we subtract housing allowances and current transfers from assistance programs fighting social exclusion. Housing allowances refer to interventions by public authorities to help households meet the cost of housing. It includes means-tested transfers granted by a public authority to tenants, temporarily or on a long-term basis, to help with rent costs or to owner-occupiers to help them with paying mortgages and/or interest. Social exclusion transfers are defined as a residual category including all programs intended for "those at risk of social exclusion". It includes periodic payments to people with insufficient resources or other cash benefits for destitute and vulnerable persons to help alleviate poverty or assist in difficult situations. Conditions for entitlement may be related not only to the personal resources but also to nationality, residence, age, availability for work and family status. The benefits may have a limited or an unlimited duration; they may be paid to the individual or to the family, and provided by central or local government (Eurostat, 2006). The definition of social exclusion transfers is therefore very limited and does not include some of the most important redistributive measures currently implemented in Italy, like family benefits (*Assegni familiari*) and social pensions (*Pensioni sociali*). Definition 3 (Def.3) further deducts housing related expenses, such as rents, mortgage repayments and housing benefits from total income. Finally, the last definition of household income (Def.4) that we consider is meant to take into account the effect of tax evasion. We deduct 15 per cent of self-employment incomes and 5 per cent of standard employment earnings from each household's total income under the assumption that these amounts are undeclared to fiscal authorities and hence also to

the institution that would administer the GMI. The assumption here is that individuals who decide to evade tax payments may be more willing to declare their true income (or at least a closer approximation to their true income) to an interviewer who grants anonymity, while they will under report they taxable income to tax authorities. For that reason survey data like the EU-SILC, that tends to guarantee anonymity to increase participation rates and truthful declarations, should in principle capture undeclared income as well (see Fiorio and D'Amuri, 2006).[4]

In Table 1 we present estimates of TC based on three different levels of GMI (300, 400 or 500 Euro per month for a single person with no income) and four different definitions of household income. As the estimates in Table 1 clearly suggest, the relationship between the thresholds and the total cost of the measure is highly non-linear. Namely, moving from 300 up to 400 and then to 500 Euros leads to more than proportional increases in total cost since the mass of inframarginal households increases as one approaches the mean of the distribution.

Adjusting the household threshold to reflect differences in the cost of living across and within Italian regions is very difficult given that complete regional PPP indices are not available in Italy. Only recently Istat introduced a new set of indexes on an experimental basis, estimating the purchasing power parity (PPP) index for 20 regional capital cities in Italy (Istat, 2008). The basic approach of these indexes to compute regional price level differences is to measure the cost of purchasing a common basket of three categories of consumption goods (food, clothes and furniture) that all together

[4]The hypothesis is confirmed by comparing the survey-based EU-SILC data to the data published by the Italian Ministry of Finance on Italian fiscal declarations. In both data sources the total number of people with at least some taxable income is about 40 millions. However, the average total income ("reddito complessivo") of actual taxpayers is 18.320 Euro per year, while the estimated total income from the EU-SILC data is about 22.100 Euro, that is 21 per cent higher than in actual tax declarations. If we look at different Italian regions, this difference is always present, ranging from +14 per cent in Liguria to +36 per cent in Calabria.

represent, on average, about one third of the total household expenditure in Italy. The indexes however do not include important components of household expenditure such as, for example, housing costs for rents or mortgages. Moreover, since only regional capital cities are represented, the indexes do not take into account within-region variations of the cost of living. Therefore, for our calculations we relay on a recent work by Cannari and Iuzzolino (2009), that provides a more general index on the magnitude of price-level differentials among Italian regions, supplementing the data collected by Istat with information on house prices and rentals collected by Agenzia del Territorio and by the Bank of Italy and with estimates from other sources. Moreover, the index includes within-region price information and therefore local factors tend to contribute more in determining average regional price differentials.[5]

Once we apply our PPP-adjustment, the total cost of the GMI tends to decrease. In fact, most GMI recipients live in the Southern regions, where the cost of living is typically lower than in the rest of the country. In the South, correcting GMI thresholds by the local purchasing power tends to reduce household thresholds (see Table 2) and, therefore, the total number of beneficiaries as well as the income gaps to be filled. Thus, the total spending for Southern regions is reduced.

As far as the different definitions of household income are concerned, the second column in Table 1 shows that subtracting current transfers from social assistance programs has little effect on the total cost of the GMI. This is the joint result of both low levels and poor targeting proprieties of the current expenditure for social assistance in Italy. On the other hand, including items such as rents, mortgage repayments and social transfers may lead to very different estimates of the program costs. In particular,

[5]Their results show that prices are lower in southern Italy than in other areas. For example, the most reliable estimate gives a differential of 16-17 per cent between the two areas. A more detailed description of the Cannari-Iuzzolino PPP index is provided in Table A.1 in the appendix.

deducting housing costs from household income considerably increases the total cost of the measure (Def. 3). Importantly, since housing costs significantly vary across geographical areas, including these items in the computation of income is another way to consider differentials in the cost of living between Italian regions (but also within them).

Finally, the estimates in column 4 of Table 1 show that also the percentage of tax evasion is a serious issue in estimating the total cost of the measure, potentially increasing public expenditure for this kind of programs. Our choice of the percentage of income disregard due to tax evasion (5% for dependent employment and 15% for self-employment incomes) are conservative estimates that are consistent with the most recent evidence for Italy (see Fiorio and D'Amuri, 2005 and 2006 and references therein). Such evidence also suggest that the extent of tax evasion may vary considerably across geographical areas of the country as well as along the income distribution. For simplicity, in our analysis we keep the same percentage of income disregard for all households, regardless of their place of residence but, in principle, this type of variation could be introduced.

The widespread diffusion of tax evasion practices is sometimes advocated as one of reasons that makes it difficult to introduce means tested benefits in Italy. On the other hand, however, one may also argue that a rigorous system of means testing may also have the effect of reducing tax evasion. Unfortunately, to our knowledge, there are no studies on the effect of welfare generosity on tax evasion, either in Italy or elsewhere. This is a topic that certainly deserves more attention and further research.

2.1 Beneficiaries

In Table 3 we present comparisons between households who would potentially be eligible to our hypothetical GMI scheme and households who currently receive social assistance benefits with comparable policy objectives, namely social exclusion transfers and housing allowances. For simplicity, we will call this second group "SA beneficiaries".

For brevity, we will now restrict our attention only to the GMI with an income threshold set at 400 euros monthly for a single person. This approximates to the PPP-adjusted mean of the minimum incomes adopted in the 15 pre-enlargement European countries (see De Giorgi and Pellizzari, 2006).

Perhaps, the most striking result concerns targeting proprieties of the two programs. Although existing welfare assistance schemes in Italy have, by and large, the same anti-poverty objectives of the GMI, only 27 per cent of SA recipients are actually below the poverty line.[6] On the contrary, 91 per cent of GMI beneficiaries have income below the poverty threshold. The poor targeting properties of the Italian welfare system are well-know and our results simply confirm previous findings (Baldini, Bosi and Toso, 2000).

In Table 3, we also observe that SA beneficiaries are relatively large households, with 42 per cent of them being couples with one or more children, while GMI beneficiaries are relatively small households, among which single persons and single parents are over-represented.

GMI household are also more frequently female-headed (about 53 per cent of our sample, versus 38 per cent of SA recipients) and less educated. Immigrants are also over-represented. Foreign born household heads represent 11 per cent of GMI benefi-

[6] In the EU-SILC database the poverty lines is defined as the 60 per cent of the median household equivalised disposable income. See Eurostat (2008)

ciaries (13 per cent of SA recipients), although they account for only 5 per cent of all Italian households. This is hardly surprising, since immigrants are generally concentrated in the lowest part of the income distribution and therefore more likely to receive social assistance benefits.

GMI beneficiaries seem to be very different from other welfare recipients in terms of occupational status. While the household head of SA recipients is often an employee with a permanent contract (43 per cent), the household heads of families qualifying for receiving the GMI are mostly inactive people (52 per cent), unemployed (15 per cent versus 6 per cent of SA beneficiaries) or employees on temporary contracts (8 per cent). In order to stress the difference in occupational status between the two groups of welfare recipients, we use a "work intensity indicator" which takes values between 1 (zero months in employment during the income reference period) and 4 (all available months are spent in employment).[7] The indicator, reported in Table 3, shows that GMI beneficiaries tend to work considerably less than SA beneficiaries or the average Italian household.

3 Financing

In the previous section we have shown that a guaranteed minimum income paying a reasonable amount could cost around 7.1 billion Euros per year, approximately 0.5 percentage points of the Italian GDP. How should these resources be collected?

Before addressing this question directly, we first look at the average expenditure for

[7]The index is provided within the EU-SILC database. It computes the number of months actually worked over the number of "workable" months during the income reference period by all working-age members of the same household. The index equals 1 when the work intensity is zero (zero months spent in employment); it takes the maximum value of 4 when all members of the household spent in employment all months of the income reference period. See Eurostat (2008).

social assistance programs in Europe, comparing Italy with other European countries. We then focus on current spending in Italy for social exclusion transfers and housing allowances (about 887 million Euros), and we simulate a reallocation of these resources based on GMI eligibility criteria. The simulation keeps total spending unchanged and replaces these existing programmes with a GMI, which will necessarily be characterised by a very low eligibility threshold (93 Euros/month).

A more reasonable GMI at 400 Euros per month for a single person would then require additional resources. In Section 3.1 we compare such additional resources with what is currently spent for social assistance at the national and local level.

Finally, in order to answer our main question (how should resources be collected), in Section 3.2 we explore the type of geographical transfers that a GMI program might generate. We consider two different scenarios for the financing of the GMI. In the fist case, each region collects the tax revenue to finance the new scheme internally from its residents. In the alternative scenario, resources are collected centrally from all households, independently from their region of residence.

Once again, we focus on these two polar alternatives for simplicity and tractability. It should be noted, however, that Italy has experienced a long and lively debate on reforming the Italian tax system towards a more decentralised federal structure for about 10 years now. Most proposals, including the most recent one (dated May 2009), involve some kind of redistribution across regions, together with stronger fiscal autonomy of most local authorities, and regions in particular. In this sense, the system that seems most likely to arise from such long debate is one that can be positioned somewhat in between the two extremes that we consider. Nevertheless, we believe that the analysis of such extremes can be very informative.

Our analysis in this section resembles closely that in De Giorgi and Pellizzari (2006),

who discuss the hypothetical introduction of a European-wide GMI.

3.1 Current expenditure for social assistance and housing allowances

Using microdata from the 2006 EU-SILC it is possible to compute the total amount spent in each European country for welfare programs by simply adding up the amounts received by each household in the survey and applying the appropriate sample weights. We focus specifically on current expenditure for social benefits that may be replaced by a GMI, i.e. social exclusion transfers and housing allowances. The choice of considering only these two categories of benefits is due to the fact that in most countries other categorical benefits usually coexist with minimum income programs, while housing and social assistance have similar objectives and they are often administered together. In Italy, these two categories of benefits have indeed comparable policy objectives and potential beneficiaries but - as we already observed in previous paragraphs - worse targeting properties. Moreover, we would like to stress the idea that a new measure like a GMI is not meant to simply join the list of existing programs, but in principle it should be considered as a substitute for some of them.

Figure 1 reports expenditure for housing allowances and social assistance as a percentage of national GDP and shows that Italy ranks last. Using EU-SILC data we estimate that current expenditure for these items in Italy is about 887 million Euros[8], with 2 per cent of Italian households receiving some form of assistance. The percentage of beneficiaries goes up to 5 per cent in relatively rich regions (like Trentino and Friuli-Venezia Giulia), which implement more generous programmes as compared to

[8]The estimated amount of 887 million Euros, drawn form the EU-SILC, is consistent with data from the OECD Social Expenditure Database where, for the year 2005, expenditure for public housing programs and "other social policy areas" (a residual category similar to the one adopted here) is equal to 636 million Euros

the poorer regions (1 per cent in Campania, 2 per cent in Calabria).

In Table 4 we compare the current level of spending for social assistance and housing allowances with two different versions of GMI. In the first version, we redistribute current expenditure in the form of a minimum income that keeps total spending unchanged. The resulting threshold for a single person is 93 Euros, only 16 per cent of the poverty line estimated by Istat and about one-fourth of the hypothetical threshold (400 Euros per month) that we consider as a reasonable amount. Redistributing current expenditure is also a way to test targeting proprieties of existing programs. Interestingly, this exercise determines a substantial reallocation of resources and clearly identifies winners and losers among Italian regions. Generally, Southern and Central regions tend to benefit from redistribution, while the majority of Northern regions experience a reduction of social assistance spending (Figure 2). Current Italian expenditure appears not only very low, but also poorly allocated.

In the second simulation, we estimate the cost of a relatively more generous version of GMI, with an income threshold of 400 Euros per month for a single. As a result, in all Italian regions except one (Trentino A. A.) current expenditure is largely behind the level of spending needed to finance the program (Figure 3). While in the Northern regions total expenditure should be increased by 3 or 5 times, in the South total expenditure should grow 10 times larger or more than its current level.

3.2 Central versus regional funding of the GMI

To analyse the extent of geographical redistribution induced by the GMI, we compute the amount of resource that would be needed to finance a GMI in each region of the country, net of what could be recovered through the replacement of existing schemes, as

discussed in Section 3.1. Formally, the total amount to be financed for region j, TbF_j, is computed as follows:

$$TbF_j = TC_j - SA_j \tag{3}$$

where TC_j is the total cost of a GMI in region j and SA_j is - once again - the current expenditure for housing and social exclusion transfers, drawn from the EU-SILC database. Summing over all regions yields the overall additional financial need for the introduction of a GMI in Italy:

$$TbF = \sum_{j=1}^{20} TbF_j \tag{4}$$

Let us emphasise once more that this analysis abstract from endogenous behavioural responses, as we discussed in Section 2.

Table 5 (column 3) shows the amount to be financed for introducing a GMI with an income threshold of 400 Euros per month for a single person with no children, separately for each region. The required resources significantly vary across regions, going from the negative amount of the Trentino A. A. (i.e. the region would reduce current spending for social assistance programs by introducing the GMI) to the 1,158 millions Euros of Campania, where current expenditure would increase by eleven times. In only one region (Friuli-Venezia Giulia) current expenditure is around 70 per cent of the estimated costs, while in all other Italian regions it is at most 20 per cent of the required resources (Figure 4).

How should these additional resources be collected? We consider two alternative ways for the financing of this hypothetical GMI. In the first case, a centrally funded scheme, the entire additional cost of the programme will be financed by increasing taxes

on income of all taxpayers, regardless of where they reside. Hence, two households with the same size and income that live in different regions will have to pay the same amount of additional taxes. In the second case, a locally funded scheme, each region finances its own additional expenditure locally (regionally). Therefore, the same two identical households will pay different amounts depending on where they are located. Obviously, richer regions - with less people below the GMI threshold - will have to collect fewer resources that those with a high share of the population below the poverty line. Moreover, while in the locally funded hypothesis resources are redistributed only within regions, in the centrally funded scheme richer regions pay more into the system that what they receive, generating a considerable redistribution of resources also across regions.

In both scenarios, we hypothesise increasing in the average tax rate on earned income by the same proportion for everybody, so that the overall progressivity of the tax system will remain unchanged.[9] In the locally funded hypothesis, such proportion δ_j is computed in order to exactly cover the additional resources needed by each region to finance the GMI, as stated in the following equation:

$$\underbrace{\left[(1+\delta_j)\sum_{h=1}^{H} w_{jh}t_{jh}yg_{jh}\right]}_{\text{tax revenue after reform}} - \underbrace{\left[\sum_{h=1}^{H_j} w_{jh}t_{jh}yg_{jh}\right]}_{\text{tax revenue pre reform}} = TbF_j \tag{5}$$

where H_j is the total number of households in region j, t_{jh} is the average tax rate for household h in region j, yg_{jh} is gross total earned income for household h in region j and w_{jh} is a sample weight.

In the EU-SILC database gross earnings are not provided, so we have to impute

[9] Obviously, since the structure of the benefits will change the overall progressivity of the entire tax and benefits system will change.

gross incomes and the average tax rates by processing self-reported individual gross earnings according to the tax rules of the 2005 fiscal year. In Figure A.1 in the appendix we plot the distribution of self-reported net incomes, imputed gross and imputed net incomes, both for individuals and for households. Imputed net income is computed by simply applying the tax rules back to imputed gross values in order to check the similarity of imputed and self-reported net incomes. The very close correspondence of the distributions of these two variables testifies the goodness of our imputation procedure.

From equation (5) we can then derive an expression for δ_j:

$$\delta_j = \frac{Tbf_j}{\sum_{h=1}^{H_j} w_{jh} t_{jh} yg_{jh}} \tag{6}$$

Hence, δ_j will generally differ across regions, depending on the distribution of household earnings, current social expenditure, the number of potential GMI beneficiaries, etc.

The centrally funded scheme is based on the same calculations, but computed over the entire country instead of considering specific sub-regions. In this second scenario, all regions transfer their taxes to the central administration that, then, uses those resources to pay GMI transfers to all eligible households. In this case, additional taxes will be collected through a common proportional increase in the household average tax rate. In other words, in the centrally funded scheme δ is constant across regions:

$$\delta = \frac{Tbf}{\sum_{h=1}^{H} w_h t_h yg_h} \tag{7}$$

where H is the total number of Italian households and TbF is the total amount of additional revenue needed to finance the new scheme.

The values of δ for a GMI with an income threshold of 400 Euros/month are reported in Table 5. The financing of the new program requires, on average, a δ of about 2.7 per cent. However, in the locally funded scheme, it could be as high as 7 per cent in poorer regions, such as Campania and Sicilia, or as low as 1 per cent in regions like Friuli-Venezia Giulia, Veneto, Piemonte or Lombardia.

Finally, as a summary indicator, we also show the regional tax rate τ_j by region (that is the amount of taxes paid by the residents of region j as a percentage of the total regional income), before and after the introduction of the GMI, as from the following expressions:

$$\tau_j^{PRE} = \frac{\sum_{h=1}^{H_j} w_{jh} t_{jh} y g_{jh}}{\sum_{h=1}^{H_j} w_{jh} y g_{jh}} \tag{8}$$

$$\tau_j^{AFTER} = \frac{(1+\delta_j) \sum_{h=1}^{H_j} w_{jh} t_{jh} y g_{jh}}{\sum_{h=1}^{H_j} w_{jh} y g_{jh}} \tag{9}$$

A locally funded GMI requires an increase in taxes rate that varies considerably across the country, with the poorest regions experiencing the highest increases. As an example, τj will increase by almost 2 percentage points in Campania, but only by 0.1 in Friuli-Venezia Giulia. With a centrally funded GMI, the average tax rate increases by 0.7 percentage points.

To conclude this section it is perhaps worth clarifying that we focus on taxes on earned income simply because this is the most natural alternative from the modeling standpoint and because it has a long tradition in the economic literature. However, other solutions are technically feasible. In particular, given that in the current Italian system local authorities have very little control over earned income taxation (up to an additional 0.5% over the national tax rate) and a lot more on property taxes and other tolls and dues

(namely payroll and consumption taxes), it might be more natural to choose one of these latter sources of revenue for our locally funded hypothesis.

We do not take a particular stand on this issue as we can see both advantages and disadvantages in the use of various type of taxes. However, to give a sense of how much fiscal autonomy would be required to allow regions to autonomously finance the GMI, it is interesting to note that, while the current tax revenue that is fully under the control of regional government ranges from 2.6% of regional GDP in Sicilia to 4.2% in Lazio, adding the resources required to finance our GMI into such tax revenue brings it to 2.7% of regional GDP in Friuli Venezia Giulia to 4.7% in Lazio.[10]

4 Geographical redistribution and the political feasibility of the GMI

Our previous analysis shows that a GMI set at a reasonable level is financially affordable, especially once compared to programmes that are currently implemented in other European countries. Hence, it seems surprising that Italy has not adopted one yet. And in fact, over the past several years there have been very many proposals but none of them has ever led to a coherent national policy.

In this section we try and highlight what might be the political impediments to introducing a GMI in Italy. First (Section 4.1), we look at "winning" and "losing" households from the introduction of the new scheme. Then (Section 4.2), since support for a redistributive policy like the GMI can only arise in the presence of social preferences for equality, we try and compute the degree of inequality aversion needed to guarantee a

[10]Data on fiscal revenue that is entirely under the control of municipal governments are extremely hard to find, hence these calculation does not consider it, although most of the existing local minimum income schemes are in fact managed and financed by the municipal administrations.

majority support for a GMI.

4.1 Winners and losers

In this section we take a very crude approach and we identify winning and losing households from the reform discussed above on the basis of an exclusively monetary criterion. By comparing changes in benefits and changes in taxes, it is possible to identify winning and losing households on the basis of the net change to their household income:

$$D_h = yn_h^{PRE} - yn_h^{AFTER} + B_h - SA_h \tag{10}$$

where yn_h are net household earnings before and after the reform, B_h the GMI transfer received by the household h and SA_h the amount of social assistance and housing allowances previously received by the household. If $D_h > 0$, than the sum of these components is positive and the household will benefit from the reform (winning household). On the contrary, if $D_h < 0$, the household loses from the reform since it receives less than it pays into the system (losing household).

Then, we compute the fraction of voters who would support the reform. Namely, we count individuals living in winning and losing households who are above the voting age. Assuming that all household members vote in the same way and according exclusively to their monetary returns, all voters in winning households are considered in favour of the measure, while voters in losing households are against it. In Section 4.2 we come back to the issue of voters' preferences.

Table 6 and Table 7 describe the distribution and the characteristics of winning and losing households. In particular, we report the percentages of winning and losing households in each region of Italy under both local and central financing, and the average net

gain or loss (D_h).

Obviously, as Table 6 clearly shows, under both financing systems the percentage of voters in favour of the measure is higher in poorer regions (Campania, Puglia, Calabria and Sicilia). In these regions, the percentage of voters who would support the GMI is between 11 and 15 per cent, three, or even four times higher, than in other areas. However, since for the majority of voters the introduction of a GMI merely represents an increase in their individual tax burden, the fraction of winning voters is everywhere largely below 50 per cent. Clearly, if a purely monetary criterion is adopted - as we do in this section - a measure like a GMI will never be implemented.

At the same time, the percentage of voters who favour the reform does not vary much between the two financing systems, with the interesting exception of the region Trentino Alto Adige, one of the five Italian regions that benefit from a particular regime of financial autonomy. In that region, the level of social expenditure is already higher than the one associated with the hypothetical GMI set at the level of 400 Euros per month to a single person. However, while in the centrally funded scheme the additional tax revenue would be redistributed across other Italian regions leaving almost unchanged the average net gain or loss for resident households (and therefore the percentage of winning households), in the locally funded hypothesis tax revenues for social assistance would only be spent at a regional level, thus reducing the overall tax burden for the majority of resident population and increasing the number of winning household well above 50 per cent. Thus, the apparently different result of Trentino Alto Adige only confirms that, if a purely monetary criterion is adopted, a majority support can only arise by reducing social expenditure.

The case of Trentino Alto Adige may also help understanding that the main difference between local and central funding lies in the different sharing of costs across

regions (see Figure 3). A centrally funded scheme involves geographical redistribution of tax revenues across regions (in particular, from rich to poor ones), while this redistributive mechanism is absent in a locally funded scheme, where tax revenues are used to finance assistance to the poor only at the local level. This is a particularly important mechanism in Italy, given the historical North-South divide. In a centrally funded scheme, Northern regions always pay more into the system than Southern regions, and this is very likely to be one important element in the political economy of redistributive policies in Italy.[11]

Notably, a centrally funded scheme generates both more geographical redistribution across regions and also a more homogeneous distribution of the costs across households. In Table 7 we can see that, although the average negative transfer from losing households does not substantially differ between the two financing systems, the variability of average net losses is much higher in the locally funded scheme than in the centrally funded one. In fact, moving from a centrally to a locally financed scheme increases tax revenues paid by poorest regions (with more GMI beneficiaries) and decreases them in richer ones (with fewer GMI beneficiaries). As an example, the average negative transfer paid by losing households in Campania goes up to 703 Euros per year, while in Veneto it decreases to 131 Euros. Horizontal equality is also an issue in the locally funded scheme, since two identical households living in different regions - perhaps one in the South and one in the North - are likely to face very different tax increases, depending on the financial need of the region where they reside.

The different sharing of costs between the two systems has, of course, important policy implications. Due to the strong geographical differentials, if social assistance

[11] Still, several development aid programmes explicitly targeted to the souther regions have been implemented in the past (e.g. *Cassa per il Mezzogiorno*).

is locally funded, opposition to GMI is more likely to be overcome in rich Northern regions, where poverty rates are relatively low and the cost of the measure is spread on a large majority of the population. Southern regions, on the contrary, will face higher costs, to be shared among fewer (losing) households. For that reason, under a locally funded scheme, a measure such a GMI is more likely to meet strong opposition exactly where most people suffer from poverty and the need for social assistance is stronger.

We are also aware of the fact that a more decentralized tax and funding system may have several advantages, such as a more efficient monitoring on tax evasion and more precise estimation of within region price differentials. However, given the more homogeneous distribution of costs across households, the centrally funded scheme seems to be a better solution from an equity point of view. Moreover, this is probably the only financing scheme going in the direction of reducing regional differentials in the provision of social assistance instead of widening existing gaps. In the following paragraph we discuss the political feasibility of such scheme in presence of social preferences for redistribution.

4.2 Political support with social preferences

In the previous section, we have documented that interpreting citizens' preferences through a purely monetary criterion will always lead to a relatively strong majority of voters who oppose the introduction of a GMI. In fact, this is likely to be true for most, if not all, redistributive policies, which typically benefit a minority of disadvantaged persons at the expenses of the many who are relatively better off. Political support for such policies can only arise in the presence of some degree of preferences for redistribution

or inequality aversion.[12]

In this section we present an attempt to compute the degree of inequality aversion needed to guarantee a majority support for the implementation of a centrally financed GMI. Obviously, this exercise rests crucially on the specific functional form assumption that allow us to introduce the overall income dispersion into the individual utility function. Our approach consists in choosing an arbitrary but reasonable specification which depends on a limited set of parameters. We will then experiment with different values of such parameters, thus covering a relatively wide range of possible specifications. Moreover, to put our results into perspective, we will also compare the degree of inequality aversion required to obtain a majority in support of an hypothetical GMI reform with the degree of inequality required to sustain existing redistributive programmes.

Let us start by defining the individual utility function, which is a function of both personal income and some measure of income dispersion in the country:

$$U_i = y_i^{1-\alpha} \left[1 - \beta \mathbf{I(y)}\right] \tag{11}$$

where y_i is the equivalised income of individual i and **I(y)** is an indicator of the dispersion of the vector **y** of all equivalised incomes for the entire population. The specific indicator that we adopt in our exercise is the coefficient of variation, for the simple reason that it is invariant to changes in the mean of the distribution. Our results, however, are robust to the choice of alternative indicators, like the Gini coefficient or the Theil index.

Two parameters appear in the utility function (11). The first is $\alpha \in [0, 1]$, which measures the degree of concavity of the function with respect to individual income:

[12] An alternative, and observationally indistinguishable, rationale for redistribution would be risk aversion and our analysis in this section can also be interpreted with this particular angle.

the higher α the more rapidly the marginal utility of individual income decreases. The second is β, which is a direct measure of preferences against inequality: the higher β the more people dislike income dispersion.

We have chosen this particular utility function because it is very parsimonious and it still satisfies a series of reasonable assumptions:[13]

1. it is increasing and concave in y_i;

2. it is decreasing in **I(y)** (although only linearly);

3. when all incomes are identical, i.e. **I(y)**=0, it only depends on individual income;

4. the marginal utility of income decreases with inequality, $\frac{\partial U_i}{\partial y_i \partial \mathbf{I(y)}} = -\beta \frac{\partial u_i}{\partial y_i}$.

This last property can be interpreted as in Atkinson (1997), where the marginal utility of each additional unit of income is discounted by the level of inequality.

On top of satisfying these reasonable properties, the utility function (11) also offers a parsimonious setting to explore the role of decreasing marginal utility of income and preferences for equality in determining the feasibility of redistributive policies. The more concave the utility function, i.e. the higher α, the easier it is to convince rich people to pay for the benefits of the poor. At the same time, and rather obviously, the stronger the preference for equality, i.e. the higher β, the more support for redistribution.

Using our analysis from the previous sections, we are able to compute individual utility according to equation (11) under the current situation and under the hypothesised GMI reform. For this exercise we choose our preferred specification with a GMI set at the level of 400 euros/month for a single person and adjusted by equivalized family size and the local price level.

[13] Assuming that the population is large enough, we are ignoring the effect of changes in individual income on the inequality index: $\frac{\partial \mathbf{I(y)}}{\partial y_i} \approx 0$.

In the first column of Table 8 we report the minimum values of β that would be required to obtain a majority of just above 50% of voters (i.e. citizens at or above 18 years of age) whose utility is higher after the GMI reform than under the current situation and that would hence support the reform. We compute such threshold value of β under different values of α, which are shown by row in the table. At the top of the row we also report the absolute change that the introduction of the GMI would induce in our measure of dispersion.

The GMI reform that we consider would reduce the coefficient of variation by about 0.02 points. With a constant marginal utility of personal income ($\alpha = 0$), the minimum level of β required to obtain support from the majority of voters is 0.294. The following rows in Table 8 document the importance of the concavity of the utility function. The higher α the lower the minimum required β.

To facilitate the interpretation of these results, we perform similar calculations for other existing welfare programmes. The idea being that if these programmes are actually in place it must be that voters have preferences for redistribution (or decreasing marginal utility of personal income) that support them. Hence, in columns 2 and 3 of Table 8 we consider the two most important redistributive programme that are currently implemented in Italy. The first is family benefits (*Assegni familiari*), which, unlike in many other countries, in Italy are means tested and income related. The second programme that we consider is social pensions (*Pensioni sociali*), which is essentially a GMI for people above 65 years of age. For each of these two programmes we compute hypothetical equivalised incomes under the assumption that the programme were removed and the resulting savings were redistributed to the entire population via a proportional reduction in the average tax rate, analogously to how we computed incomes resulting from the implementation of the GMI.

The results are mixed. Only for some values of α it appears that existing programmes are consistent with preferences that would also support the GMI. Figures 5, 6 and 7 provide further insights into these results by reporting the distribution of utility gains (in percentage terms and by deciles of the distribution of equivalised income) associated with each of the three social programmes that we consider in Table 8.

Overall, it is probably fair to say that the degree of inequality aversion required to obtain political support for a GMI is in the same neighborhood of what would be consistent with existing redistributive policies.

5 Conclusions

In this paper we estimate that a guaranteed minimum income that pays a reasonable amount to poor households would cost around 7.1 billion Euros per year, approximately 0.5 percentage points of the Italian GDP. Technical details in the definition of eligibility criteria, household income and equivalence scale are important in determining the exact amount. For example, adjusting benefits for differences in the local price levels tends to reduce the total cost of the programme.

We also discuss alternative options for financing such an hypothetical GMI. The first source of financial resources should come from the replacement of some existing welfare transfers. The remaining additional requirements can be obtained by increasing average tax rates, either on a regional or national base. These two alternatives have important implications for redistribution across as well as within regions. In particular, we believe that the implicit North-South redistribution mechanism induced by a GMI is likely to be an important impediment to the introduction of a national minimum income in Italy.

To further investigate the political economy of the GMI, we compute the minimum degree of inequality aversion required to gain a majority of consensus for the GMI reform and we compare it with the same calculations performed for existing redistributive programmes. Our results indicate that, by and large, the GMI reform that we hypothesise would obtain a majority support under preferences for redistribution compatible with already existing programmes, such as family benefits (*Assegni sociali*) or social pensions (*Pensioni Sociali*).

These calculations are likely to be rather conservative. For example, on July 2008 due to the intricacies of the Italian politics, a proposed bill included the abolition of the *Pensioni sociali*, essentially a GMI for old people. Fierce opposition to such proposal arose from all sides of the political spectrum as well as from unions and other social organizations and, as a consequence, the proposal was withdrawn. We take this anecdote as an indication that the preferences for redistribution are likely to be well above what we calculated in Section 4.2 as the minimum required to support such programme.

Eventually, our analysis suggests that a GMI at a reasonable level is financially feasible and it is also likely to obtain the consensus of a relative majority of voters. Hence, the impediments to its implementation must lie in the actual politics of redistributive transfers and in the peculiarities of the Italian setting, such as the large regional disparities.

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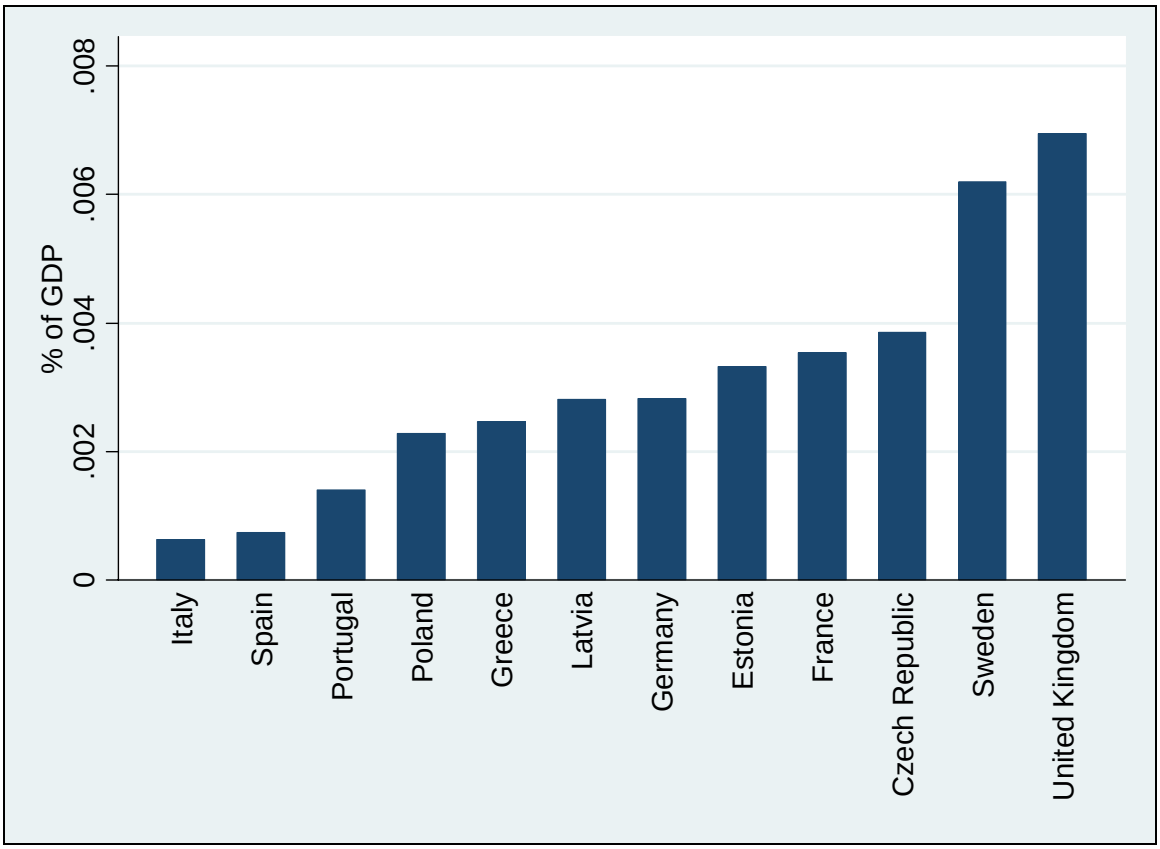
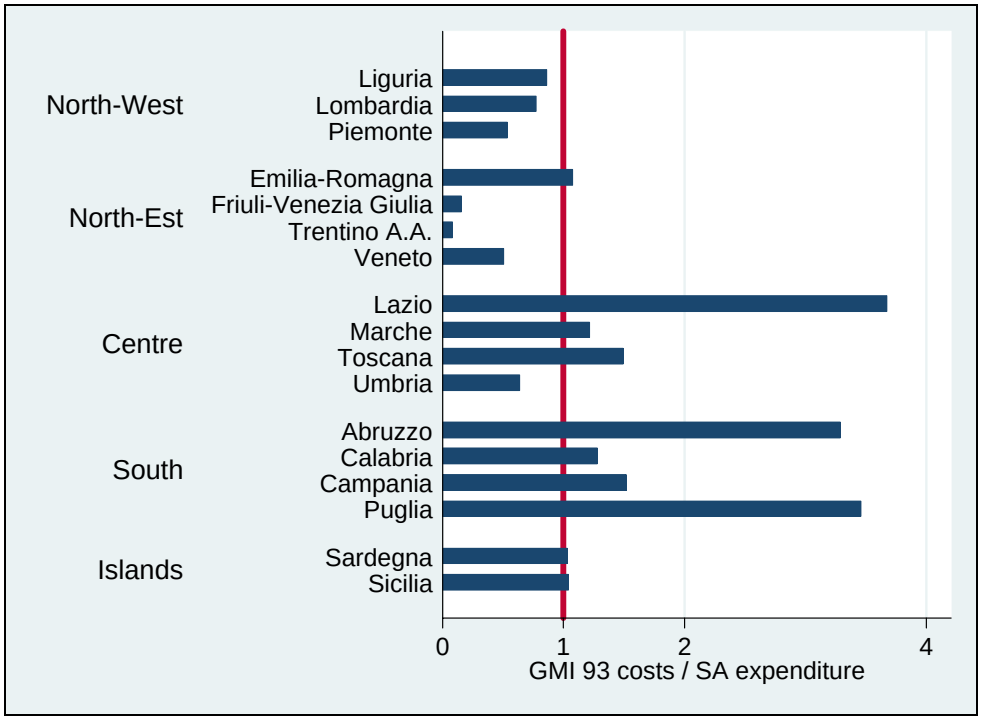
Figure 1 – Expenditure for housing allowances and social exclusion in Europe



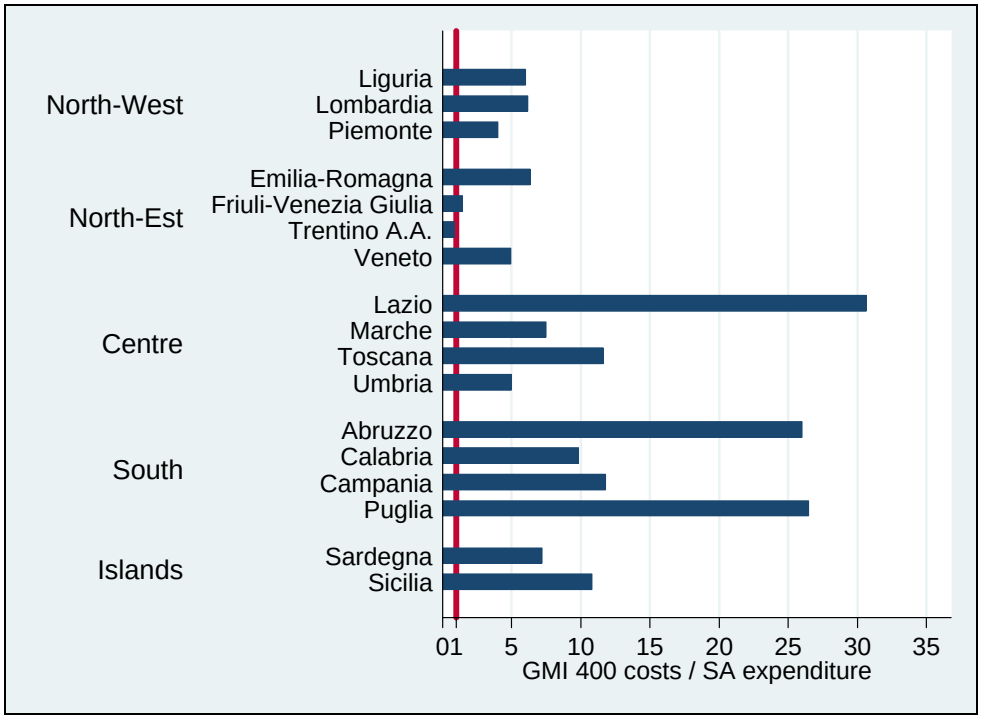
Source: own elaborations on the EU-SILC database (2006), Istat

Figure 2 – GMI 93 compared to current social expenditure



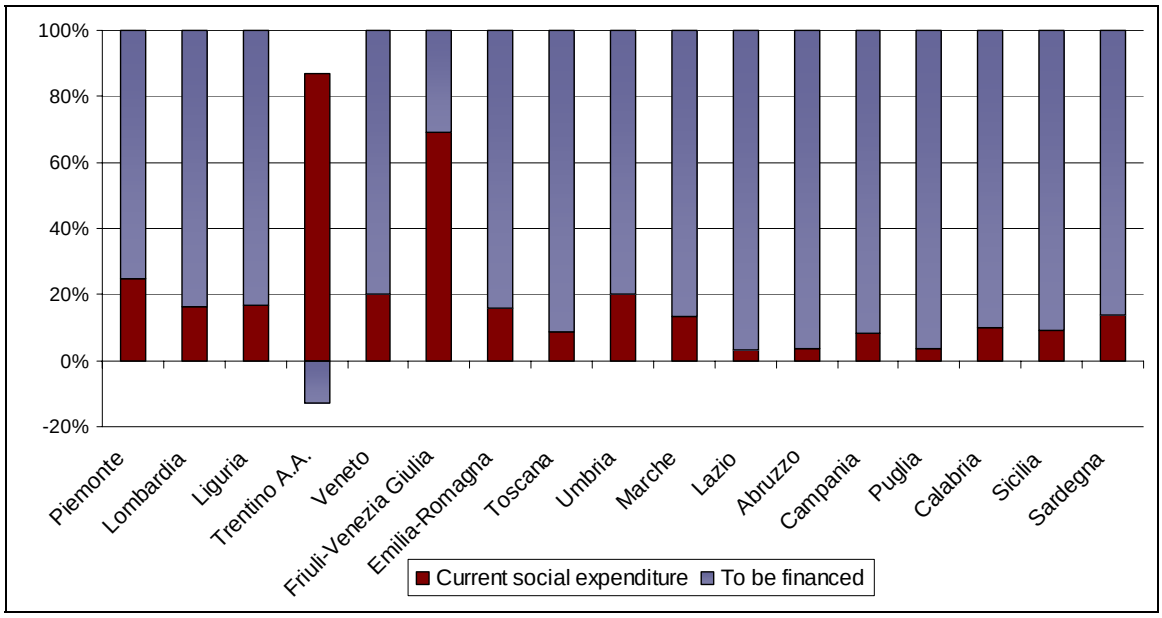
Source: own elaborations on the EU-SILC database (2006), Istat

Figure 3 – GMI 400 compared to current social expenditure



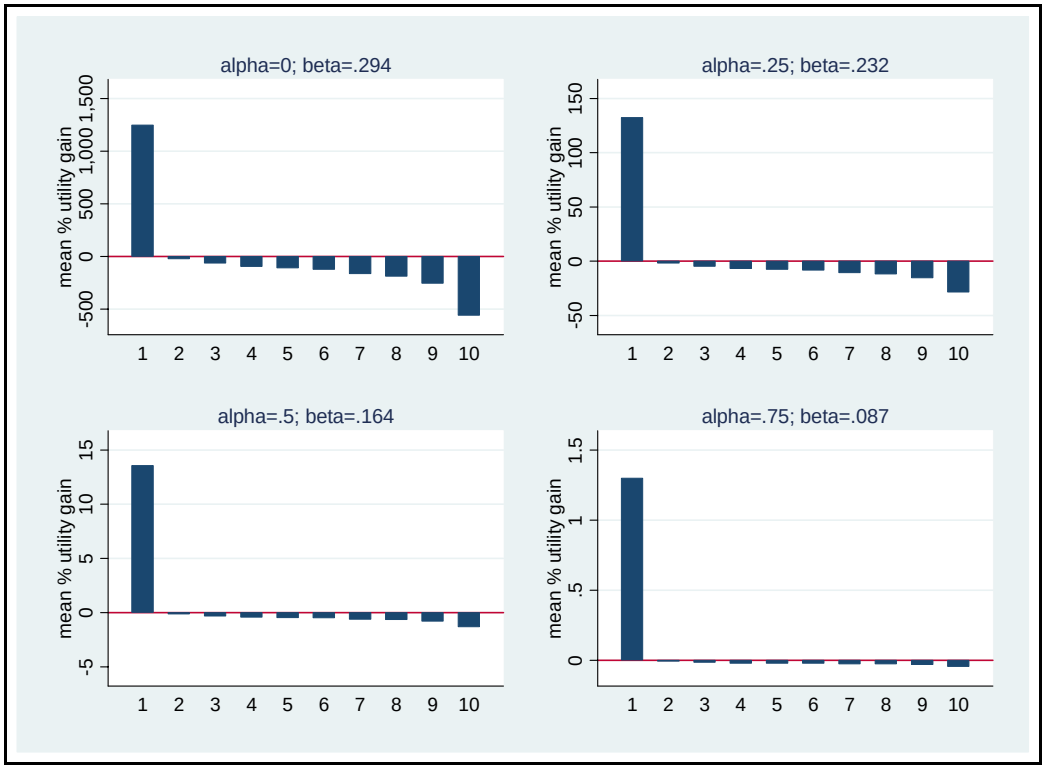
Source: own elaborations on the EU-SILC database (2006), Istat

Figure 4 – Financing a GMI: current expenditure as a percentage of total costs



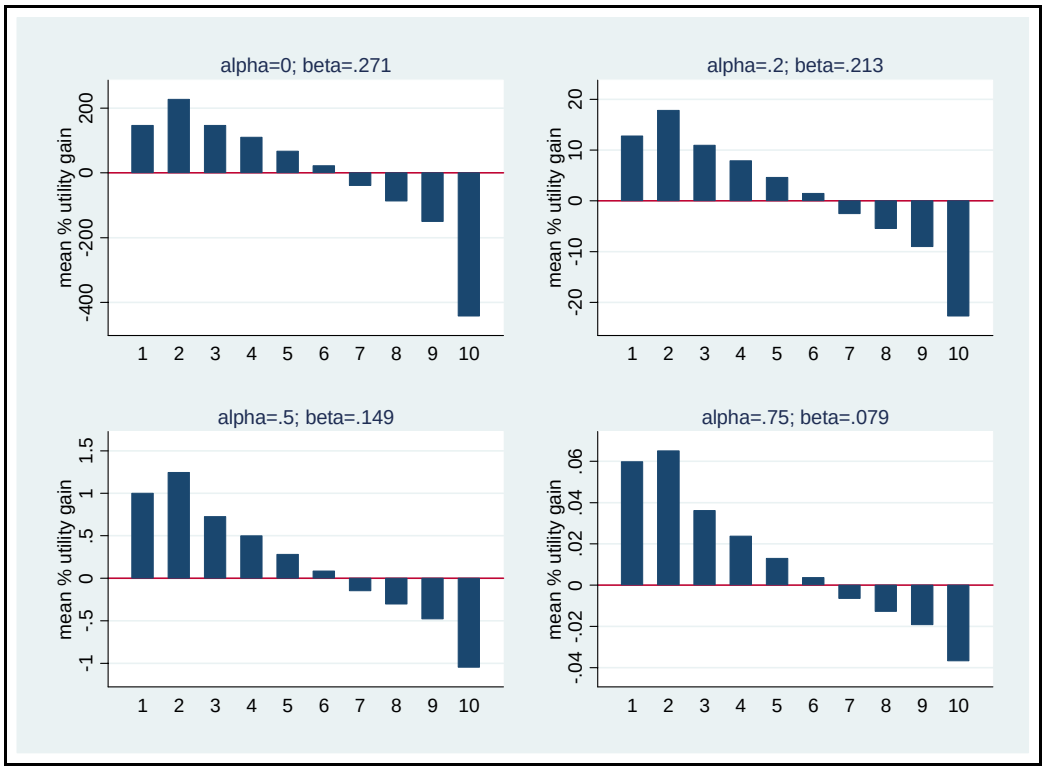
Source: own elaborations on the EU-SILC database (2006), Istat

Figure 5 – Redistributive properties of the GMI



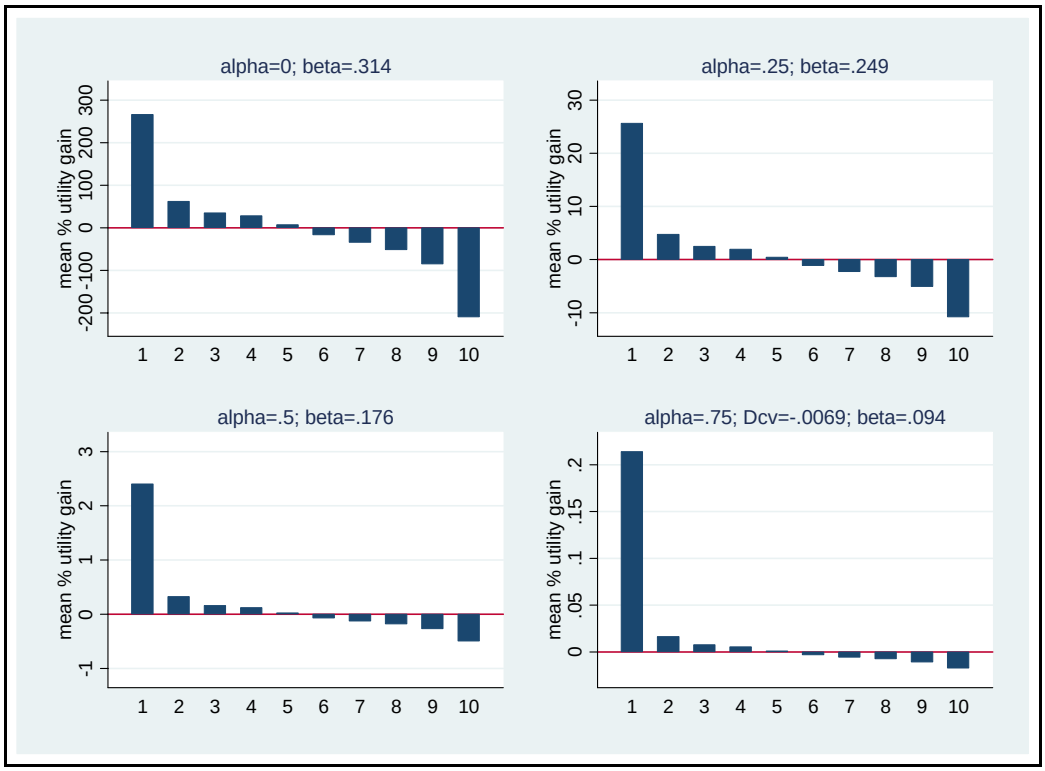
Source: own elaborations on the EU-SILC database (2006), Istat

Figure 6 – Redistributive properties of the *Assegni familiari*



Source: own elaborations on the EU-SILC database (2006), Istat

Figure 7 – Redistributive properties of the *Pensioni sociali*



Source: own elaborations on the EU-SILC database (2006), Istat

Table 1 – The total costs of a GMI in Italy (millions of Euro)

GMI threshold for a single	Threshold's correction	Annual costs by definition of household income (milions of Euro) Def.1	Def.2	Def.3	Def.4
300	by household dimension	3.213	3.328	4.276	4.530
	c.i.	[3,205-3,220]	[3,320-3,336]	[4,268-4,285]	[4,521-4,539]
	% household beneficiaries	4%	4%	5%	6%
	by household dimension and PPP	3.113	3.232	4.231	4.464
	c.i.	[3,106-3,121]	[3,225-3,240]	[4,222-4,239]	[4,455-4,472]
	% household beneficiaries	4%	4%	5%	6%
400	by household dimension	5.344	5.501	7.189	7.737
	c.i.	[5,333-5,355]	[5,490-5,512]	[7,176-7,201]	[7,724-7,749]
	% household beneficiaries	6%	6%	8%	8%
	by household dimension and PPP	5.160	5.323	7.057	7.612
	c.i.	[5,149-5,170]	[5,312-5,334]	[7,044-7,069]	[7,600-7,625]
	% household beneficiaries	6%	6%	8%	9%
500	by household dimension	8.527	8.734	11.385	12.428
	c.i.	[8,512-8,542]	[8,719-8,749]	[11,368-11,402]	[12,410-12,446]
	% household beneficiaries	8%	8%	11%	12%
	by household dimension and PPP	8.194	8.415	11.243	12.321
	c.i.	[8,180-8,209]	[8,401-8,430]	[11,227-11,260]	[12,304-12,339]
	% household beneficiaries	8%	8%	11%	12%

Notes: income definitions:
- Def.1 = Sum of individual net income of all family memebers - education related allowances
- Def.2 = Def.1 - social assistance and housing allowances
- Def.3 = Def.2 - mortgage repayments or the cost of renting (max 5.000 euro)
- Def.4 = Def.3 - 15%(self-employed revenues) - 5%(employees' revenues)

95% confidence intervals (c.i.) in square brackets.

Source: own elaborations on the EU-SILC database (2006), Istat.

Table 2 – GMI thresholds by household composition and geographical distribution

Macroarea	Region	Single person	2 Adults	2 Adults + 1 child (<14)	2 Adults + 2 children (<14)
corrected by household size					
Italy		*400*	*600*	*720*	*840*
corrected by household size and PPP					
North-West	Piemonte	420	631	757	883
	Valle d'Aosta	426	638	766	894
	Lombardia	456	685	822	958
	Liguria	452	677	813	948
North-Est	Trentino Alto Adige	449	674	809	943
	Veneto	404	606	727	848
	Friuli-Venezia Giulia	428	641	770	898
	Emilia-Romagna	436	653	784	915
Centre	Toscana	447	671	805	939
	Umbria	426	639	767	895
	Marche	388	581	698	814
	Lazio	450	674	809	944
South	Abruzzo	370	556	667	778
	Molise	340	511	613	715
	Campania	366	549	659	769
	Puglia	368	551	662	772
	Basilicata	340	511	613	715
	Calabria	341	511	613	716
Islands	Sicilia	371	557	668	780
	Sardegna	363	544	653	762
Italy (weighted average)		411	605	716	815

Source: own elaborations on EU-SILC database (2006), Istat.

Table 3 – Descriptive statistics: GMI versus social assistance beneficiaries

Mean	GMI beneficiaries	SA beneficiaries	Total population
Household size	2,3	2,7	2,5
Household type			
single person	47%	33%	32%
2 adults	16%	17%	34%
single parent	10%	9%	4%
2 adults + 1 child	10%	15%	13%
2 adults + 2 or more chidren	17%	27%	17%
	100%	100%	100%
Household head:			
age	49	49	54
female	53%	38%	34%
foreign	10%	13%	5%
education			
primary, pre-primary or none	35%	31%	29%
secondary	55%	56%	54%
post-secondary or tertiary	10%	13%	17%
	100%	*100%*	*100%*
Employment status			
no occupation	52%	34%	42%
employee, permanent	11%	43%	36%
employee, temp	8%	7%	4%
self-employed	14%	10%	15%
unemployed	15%	6%	2%
	100%	*100%*	*100%*
Work intensity*	1,9	2,8	2,9
Poverty index*	91%	27%	19%
Average benefits received	325	165	-
GMI threshold	622	-	-

Notes:

* Index provided in the EU-SILC database (2006).

** Index provided in the EU-SILC database (2006). Poverty line = 60% of the median household equivalised disposable income

Source: own elaborations on EU-SILC database (2006), Istat

Table 4 – Expenditure for social programs in Italy (2006)

		SA expenditure[2]		GMI 93 (equal-cost)			GMI 400		
Area	**Region[1]**	*annual costs* (milions)	*household beneficiaries* (%)	*annual costs* (milions)	*household beneficiaries* (%)	*costs divided by SA expenditure*	*annual costs* (milions)	*household beneficiaries* (%)	*costs divided by SA expenditure*
North-West	Piemonte	88 [87-90]	2%	47 [47-48]	2%	0,5	355 [353-358]	6%	4,0
	Lombardia	131 [129-133]	2%	102 [101-102]	2%	0,8	813 [809-817]	6%	6,2
	Liguria	45 [44-46]	2%	39 [38-39]	4%	0,9	269 [267-272]	9%	6,0
North-Est	Trentino A.A.	52 [51-53]	5%	4 [4-5]	1%	0,1	44 [43-45]	3%	0,9
	Veneto	49 [48-49]	2%	25 [24-25]	1%	0,5	239 [237-241]	4%	4,9
	Friuli-Venezia Giulia	52 [51-53]	5%	8 [8-9]	1%	0,2	75 [74-77]	4%	1,4
	Emilia-Romagna	67 [66-68]	2%	72 [71-73]	3%	1,1	425 [422-429]	5%	6,4
Centre	Toscana	29 [29-30]	2%	44 [43-44]	2%	1,5	340 [338-343]	6%	11,6
	Umbria	17 [16-17]	2%	11 [11-11]	2%	0,6	84 [83-85]	6%	5,0
	Marche	14 [13-14]	2%	16 [16-17]	2%	1,2	102 [100-103]	5%	7,5
	Lazio	28 [28-29]	1%	103 [102-104]	4%	3,7	861 [856-865]	9%	30,7
South	Abruzzo	3 [3-3]	1%	10 [10-10]	2%	3,3	77 [76-78]	6%	26,0
	Campania	107 [105-109]	1%	163 [162-164]	5%	1,5	1.266 [1,260-1,271]	14%	11,8
	Puglia	21 [21-22]	2%	74 [73-75]	4%	3,5	566 [563-569]	11%	26,5
	Calabria	34 [34-35]	2%	44 [44-45]	5%	1,3	339 [337-342]	13%	9,8
Islands	Sicilia	88 [86-89]	2%	92 [91-92]	5%	1,0	947 [943-952]	14%	10,8
	Sardegna	22 [21-23]	2%	23 [22-23]	3%	1,0	159 [157-161]	7%	7,2
Italy		*887* [882-892]	*2%*	*887* [882-892]	*2%*	*1,0*	7.057 [7,044-7,069]	8%	*8,0*

Notes:
GMI costs are estimated by using the third definition of household income (Def. 3) and the PPP adjustment
[1] Three regions (Valle D'Aosta, Molise and Basilicata) are not reported due to small sample size (< 500 households)
[2] only social expenditure for housing allownaces and social exclusion transfers is considered
Source: own elaborations on EU-SILC database (2006), Istat.

Table 5 – Centrally versus locally funded GMI

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Area	**Region[1]**	**Current social expenditure[2] (milions)**	**Total costs GMI 400 (milions)**	**To be financed (2)-(1) (milions)**	**δ factor**	**Average tax rate (local funding)**		**D tax rate (6)-(5)**
						pre-RMI	***post-RMI***	
North-West	Piemonte	88	355	267	1,3%	27%	27%	0,4%
	Lombardia	131	813	682	1,4%	28%	28%	0,4%
	Liguria	45	269	224	3,4%	26%	27%	0,9%
North-Est	Trentino A.A.	52	44	-8	-0,2%	26%	26%	0,0%
	Veneto	49	239	191	1,0%	26%	26%	0,3%
	Friuli-Venezia Giulia	52	75	23	0,5%	25%	25%	0,1%
	Emilia-Romagna	67	425	358	1,7%	27%	28%	0,5%
Centre	Toscana	29	340	311	1,9%	26%	27%	0,5%
	Umbria	17	84	67	1,9%	26%	27%	0,5%
	Marche	14	102	88	1,4%	26%	27%	0,4%
	Lazio	28	861	833	3,4%	28%	29%	0,9%
South	Abruzzo	3	77	74	1,6%	26%	26%	0,4%
	Campania	107	1.266	1.158	7,7%	24%	26%	1,9%
	Puglia	21	566	544	5,4%	23%	24%	1,2%
	Calabria	34	339	305	5,6%	24%	26%	1,4%
Islands	Sicilia	88	947	860	7,0%	23%	25%	1,6%
	Sardegna	22	159	137	2,5%	25%	25%	0,6%
Italy (central funding)		*887*	7.057	*6.169*	2,7%	26%	27%	0,7%

Notes:

[1] three regions (Valle D'Aosta, Molise and Basilicata) are not reported due to small sample size (< 500 households)

[2] only social expenditure for housing allownaces and social exclusion transfers is considered

Source: own elaborations on EU-SILC database (2006), Istat.

Table 6 – Central versus local funding: winning households

		Winning households				
		centrally funded		locally funded		*%D transfer moving from central to local funding*
Area	**Region**[1]	*voters in favour (%)*	*average transfer received (D>0)*	*voters in favour (%)*	*average transfer received (D>0)*	
North-West	Piemonte	5%	3.309	5%	3.319	0%
	Lombardia	5%	3.655	5%	3.633	-1%
	Liguria	8%	3.568	8%	3.564	0%
North-Est	Trentino A.A.	3%	3.311	95%	117	-96%
	Veneto	4%	3.070	4%	3.081	0%
	Friuli-Venezia Giulia	4%	3.270	4%	3.281	0%
	Emilia-Romagna	4%	4.882	4%	4.890	0%
Centre	Toscana	5%	4.080	5%	4.031	-1%
	Umbria	6%	3.856	6%	3.792	-2%
	Marche	5%	3.238	5%	3.246	0%
	Lazio	8%	4.246	8%	4.241	0%
South	Abruzzo	5%	3.035	5%	3.039	0%
	Campania	12%	4.509	12%	4.479	-1%
	Puglia	11%	3.713	11%	3.699	0%
	Calabria	12%	3.969	12%	3.956	0%
Islands	Sicilia	15%	3.708	15%	3.703	0%
	Sardegna	6%	3.968	6%	3.968	0%
Italy (weighted average)		6%	3.822	10%	2.413	-37%

Note: [1] three regions (Valle D'Aosta, Molise and Basilicata) are not reported due to small sample size (< 500 households)

Source: own elaborations on the EU-SILC database (2006), Istat.

Table 7 – Central versus local funding: losing households

		Losing households				
		centrally funded		locally funded		*%D transfer moving from central to local funding*
Area	**Region**[1]	*voters against (%)*	*average transfer paid (D<0)*	*voters against (%)*	*average transfer paid (D<0)*	
North-West	Piemonte	95%	-320	95%	-171	-46%
	Lombardia	95%	-380	95%	-212	-44%
	Liguria	92%	-303	92%	-374	24%
North-Est	Trentino A.A.	97%	-446	5%	-1.983	344%
	Veneto	96%	-323	96%	-131	-59%
	Friuli-Venezia Giulia	96%	-342	96%	-122	-64%
	Emilia-Romagna	96%	-382	96%	-252	-34%
Centre	Toscana	95%	-331	95%	-243	-26%
	Umbria	94%	-303	94%	-221	-27%
	Marche	95%	-308	95%	-166	-46%
	Lazio	92%	-310	92%	-399	29%
South	Abruzzo	95%	-255	95%	-152	-40%
	Campania	88%	-254	88%	-703	177%
	Puglia	89%	-216	89%	-426	97%
	Calabria	88%	-232	88%	-462	99%
Islands	Sicilia	85%	-249	85%	-575	130%
	Sardegna	94%	-264	94%	-254	-4%
Italy (weighted average)		93%	-316	90%	-288	-9%

Note: [1] three regions (Valle D'Aosta, Molise and Basilicata) are not reported due to small sample size (< 500 households)

Source: own elaborations on the EU-SILC database (2006), Istat.

Table 8 – Political support with inequality aversion

	GMI	**Family benefits**	**Social pensions**
$\Delta I(y)^*$	*-0.020*	*-0.013*	*-0.007*
α	[1]	[2]	[3]
0	0.294	0.271	0.314
0.25	0.232	0.213	0.249
0.5	0.164	0.179	0.176
0.75	0.087	0.043	0.094

Notes:
**Absolute change in the coefficient of variation of equivalised incomes induced by the programme.*

Source: own elaborations on the EU-SILC database (2006), Istat

A Appendix: The EU-SILC database

The European Union Statistics on Income and Living Conditions (EU-SILC) is an instrument aiming at collecting timely and comparable cross-sectional and longitudinal multidimensional microdata on income, poverty, social exclusion and living conditions (Eurostat, 2006). It was formally launched in 2004 for the EU-15 (with the exception of Germany, the Netherlands and the United Kingdom, which had derogations until 2005), as well as for Estonia, Norway and Iceland. The 10 new Member States with the exception of Estonia started in 2005. The survey has also been implemented in Bulgaria, Romania, Turkey and Switzerland starting from 2007.

The EU-SILC survey includes a wide range of variables on income, poverty, social exclusion and other living conditions. Information on social exclusion and housing condition is collected at household level while personal details on labour, education and health are obtained for persons aged 16 and over.

In Italy, the survey is carried out by Istat since 2004. Although the EU agreements only required the data to be representative at the national level, the Italian survey was designed to be representative also at the regional level. The reference population of EU-SILC is all private households and their current members residing in the Italian territory at the time of data collection. A sample of households had been drawn according to a stratified two-stage selection:

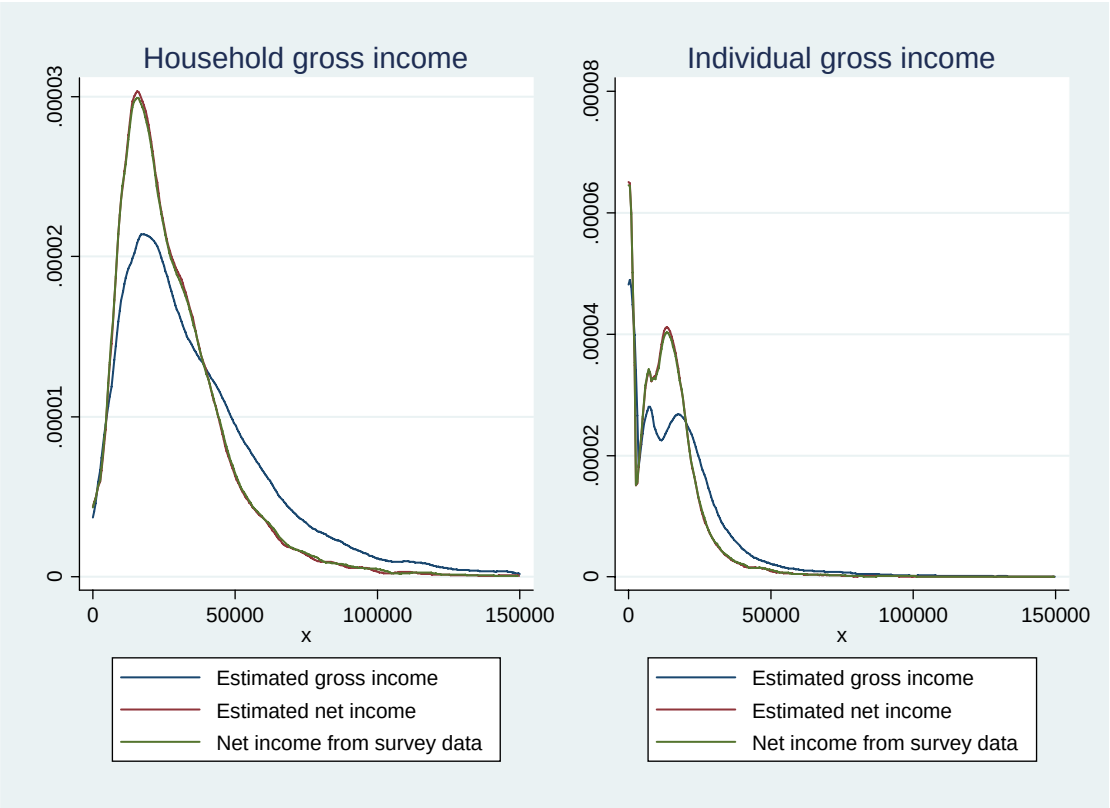
- Stratification of municipalities by administrative region and number of residents;
- Selection of four municipalities with probability proportional to the number of residents (first stage);
- Systematic selection of households within each municipality. All persons living

in the selected households are then eligible for interview (second stage).

The 2006 sample includes 21.499 households (and about 54.512 individuals) over 800 different municipalities.

Income data are a key part of the data collection. Information is usually very accurate and includes detailed income items such as gross monthly earnings for employees and self-employed, unemployment benefits, sickness, disability, old-age and survivor' benefits, education-related allowances, housing and social exclusion allowances, inter-household cash transfer received and paid, etc. This information is mainly collected at individual level, while few components are included in the household part of the survey. In Section 2 of this paper we consider four different definitions of household income. All definitions are entirely based on information provided in the 2006 wave of the Italian SILC survey released by Istat.

Figure A. 1 - Estimated gross income (reference year: 2005)



Source: own elaborations on the EU-SILC database (2006), Istat

Table A. 1 – Regional PPP index in Italy

Area	Region	PPP index
North-West	Piemonte	105
	Valle d'Aosta	106
	Lombardia	114
	Liguria	113
North-Est	Trentino Alto Adige	112
	Veneto	101
	Friuli Venezia Giulia	107
	Emilia-Romagna	109
Centre	Toscana	112
	Umbria	107
	Marche	97
	Lazio	112
South	Abruzzo	93
	Molise	85
	Campania	92
	Puglia	92
	Basilicata	85
	Calabria	85
Islands	Sicilia	93
	Sardegna	91
Italy		100

Source: Cannari and Iuzzolino (2009)