MATERIAL DEPRIVATION AMONG FOREIGNERS IN ITALY

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Abstract

In all European countries, migrant populations have worse living conditions than natives; this is particularly true for those born outside the EU. This paper proposes a new way to look at the relative living conditions of foreigners by looking at non-monetary (or 'direct') indicators of material deprivation in Italy-a country characterized by the presence of a wide range of nationalities. To examine differences in economic integration of foreigners, the paper documents deprivation differentials across groups of foreigners. In particular, we measure differences in material deprivation between groups of foreigners once we control for the demographic and socioeconomic characteristics of each group using a flexible standardization methodology. Our results show that, in Italy, foreigners from African and Mediterranean countries and to a lesser extent from South Asia are most deprived and that the construction of the counterfactual distributions (considering age, gender, household composition, education, labor market position, household income, tenancy status and integration) only marginally explain the gap between different foreigner groups.

Keywords: material deprivation, immigrant, deprivation gap

1. An overview on foreigners in Italy

At 1st January 2013 Italy has a consistent presence of foreign population 4,387,721 (Istat, 2013b).[1] Their presence increased strongly in the last decade (around +2.3% respect to 2003) and in particular in the last years (+334 thousand more than at 1/1/2012, that is to +8.2% in a year). Also the share of foreign citizens on the total residents (Italians and foreigners) continues to increase: from 6.8% at 1/1/2012 to 7.4% at 1/1/2013.

Households where there is at least one foreign member amounted to 2 million and 74 thousand, i.e. 8.3% of the total families (Source: 2009 EU-SILC Survey on families with immigrants).

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[1] The calculation of the foreign resident population has been restarted as of the 2011 census, adding to the population census to 9th October 2011, the registration movements of the period 9th October to 31st December 2011 and the year 2012.

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Moreover, among households with at least one foreign member, the proportion of mixed families (made up of both Italians and foreigners) was 22.6%.

Italy started to become a country of immigration only from the '70s with an increasing pace since the '90s. Indeed foreigners in Italy belong to a wide variety of nationalities (almost 190) with the first 10 that represent only 63.8% of the overall foreign population. In particular at the end of 2010[2] the largest foreign groups were from Romania (21.2%), Albania (10.6%), Morocco (9.9%), China (4.6%) and Ukraine (4.4%).

In all European countries the migrant population tends to have worst living conditions: higher at risk of poverty rates, severe material and housing deprivation, very low work intensity (Lelkes and Zólyomi, 2011). In particular migrants from outside the European Union are more exposed to disadvantages than the native population and even than other migrant groups. Indeed EU and non-EU migrants constitute two rather distinct groups in most countries in terms of their exposure to detrimental outcomes. The disadvantage of non-EU migrants tends to be larger also in relative terms: in all EU countries the difference between the local population and non-EU migrants is wider than that respect the EU migrants.

The situation of foreigners living in Italy does not contradict this general evidence. According to Istat (2011a) one out of three households with foreigners lives a situation of material deprivation (34.5%) compared with 13.9% of families with only Italian members. This deprivation gap is more relevant in Northern and Central regions than in the Southern ones (D'Ambrosio *et al.* 2009). Moreover the intensity of material deprivation is stronger among households with foreigners: 53.4% of deprived households is "strongly deprived" versus 43.2% among Italian deprived households (Istat, 2011a e 2011b). This general evidence conceals an extremely heterogeneous situation that changes a lot from one nationality to the other.

The foreign groups living in Italy differ each other a lot in terms of socio-demographic characteristics (Istat, 2013a). The age structures of Moroccans and Ukrainians living in Italy are a clear example of these differences (see Fig. 1). The Moroccan population structure has a high prevalence of men, with more presences in the younger ages; whereas Ukrainian population structure stands out for its high prevalence of females and the weight of the older age component. In general terms foreigners have lower socio-economic achievements than natives (Caritas italiana and Fondazione Zancan, 2001, Istat 2011a). Considering this situation, in order to compare the living conditions of foreigner groups living in Italy, it is important to standardize for the demographic and socio-economic characteristics of each nationalities.

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[2] Data reported are from *demo.istat* and refer to the foreign population present before the 2011 census.

The distinctive feature of our approach is that we explore the sources of disparities in living conditions among group of foreigners. In particular we study the deprivation gap that exists among foreigners living in Italy, once we standardize the demographic and socio-economic characteristics of each group with that of the reference group.

Figure 1 - Age pyramid of non-EU citizens legally residing in Italy (in white) compared with those of Morocco and Ukraine citizens. 1st January 2013 (percentual values)

MOROCCO   UKRAINE
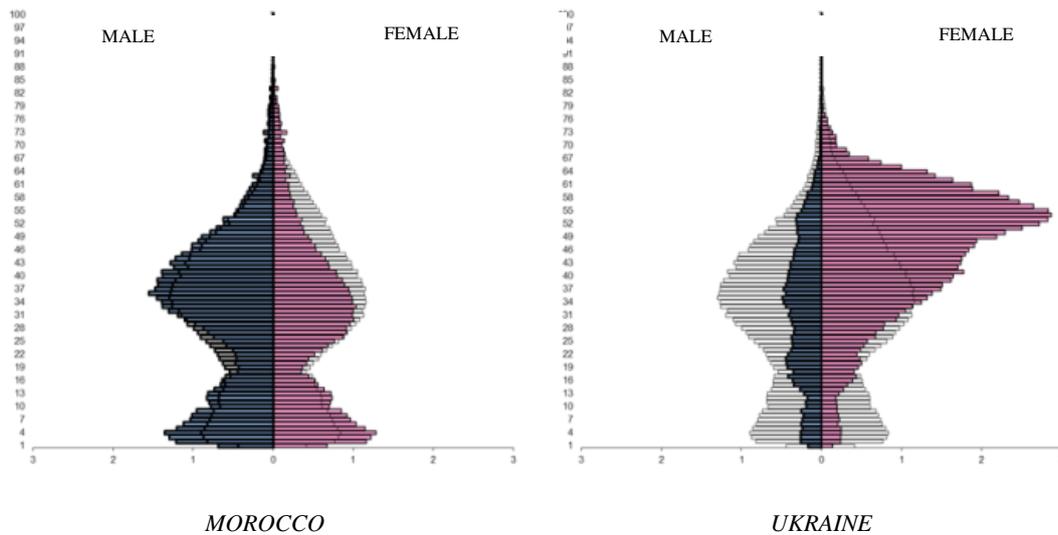
Source: Istat 2013a

Our empirical analyses -performed on a special survey on 'Income and living conditions' (SILC) conducted in 2009 in Italy among families with at least one foreign member- intend to show how deprivation impacts different subpopulations, revealing interesting differences among foreign nationalities (EU and non EU) living in Italy.

2. Data and methodology

Data used for the analysis are drawn from the 2009 special SILC that was conducted by the Italian National Statistical Institute (ISTAT) on a sample of 6,000 households resident in Italy with at least one foreign member.[3]

This survey 'replicates' the nationally representative survey on "Income and living conditions", conducted annually in all European Union countries, that is it uses the same questionnaires, survey techniques, imputation methods and integration of data, etc. In particular we study individuals aged

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[3] For more information on the survey see Istat (2011b).

17-65 years with foreign nationalities of one of these countries[4] (sometimes grouped when the amount of foreigners was too small): Romania; Albania; Former Yugoslavia; Other EU former communist countries; Residual Non EU former soviet; Mediterranean Africa; Other Africa; South and Central America; China; South Asia.[5]

Note that we exclude Philippines from the analysis because as a stand-alone group they are too few and at the same time they are very different from the rest of the South Asian countries.

We estimate material deprivation[6] at the household level on the basis of a range of binary indicators that has now become institutionalized in official EU statistics. The material deprivation rate, adopted by the EU Social Protection Committee, is defined as enforced lack of the following nine items: ability to face unexpected expenses; ability to pay for one week annual holiday away from home; existence of arrears (mortgage or rent payments, utility bills, or hire purchase installments or other loan payments); capacity to have a meal with meat, chicken or fish every second day; capacity to keep home adequately warm; possession of a washing machine; possession of a color TV; possession of a telephone (including a mobile phone); possession of a personal car.

While arguably relatively arbitrary, this choice weasel out of the large debate on the proper selection of items that have been at the center of scholars debate in the last years (for a brief review of the literature on this topic see Guio *et al.*, 2012).

Reponses on these K=9 household deprivation items (d_{ij}), with 1 if the item is lacking, meaning deprivation, and 0 otherwise, are aggregated in a score

$$s_i = \sum_{i=1}^{K} w_j d_{ij} \qquad (1)$$

Hence for each respondent *i*, equation (1) is the linear combination of the deprivations where each item is weighted by w_j and the sum of weights is equal to one.

The choice of items and of the weighting scheme are important decisions in this analysis. While we rely on official European statistics to select the relevant items, we adopt an alternative weighting scheme. The issue of item weighting has been broadly considered in the literature and many

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[4] We considered as Italians individuals having a both Italian and foreign citizenship.

[5] "*Former Yugoslavia*" group includes Bosnia and Herzegovina, Croatia, Kosovo, Former Yugoslavia Republic of Macedonia, Montenegro, Republic of Serbia, Slovenia; "*EU other former communist*" countries are Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Poland, Slovakia and Hungary; "*residual non-EU former soviet*" includes Belarus, Moldova, Russian Federation, Ukraine; "*Mediterranean countries*" are Algeria, Egypt, Libya, Morocco, Mauritania, Tunisia; "*Other Africa*" category includes all African countries excluding Egypt and the Maghreb; "*South and Central America*" consist of all American countries excluding United States of America and Canada); "*South Asia*" includes India, Pakistan, Bangladesh, Sri Lanka.

[6] Material deprivation is defined as the inability "to afford those consumption goods and activities that are typical in a society at a given point in time, irrespective of people's preferences with respect to these items" (OECD, 2012).

alternative solutions have been proposed (D'Ambrosio *et al.*, 2009; Guio, 2009). For a detailed review on the issue see the recent contribution of Decancq and Lugo (2013). Here we adopt the scheme proposed by Betti and Verma (1998):

$$w_j^{bv} = \left(w_j^{CZ} \times w_j^b \right)$$

(2)

where w_j^{cz} are 'frequency-based' weights proposed by Cerioli and Zani (1990), where item weights are inversely proportional to the prevalence of the deprivation item in the population:

$$\omega_k^{cz} \propto \log \left(\frac{1}{\bar{d}_k} \right)$$

(3)

and d_k is the mean of item responses in our sample. Then

$$w_j^b = \left(1 + \sum_{m=1}^{M} \rho_{jm} I(\rho_{jm} < \rho_H) \right)^{-1} \left(\sum_{m=1}^{M} \rho_{jm} I(\rho_{jm} \geq \rho_H) \right)^{-1}$$

(4)

where ρ_{jm} is the correlation between any two deprivation items and I(.) is an indicator variable giving value 1 if the condition inside the brackets is true, otherwise 0. In equation (4), note that in the first term among brackets, the sum is taken over all indicators whose correlation is lower than a certain value ρ (determined, for instance, by dividing the ordered set of correlation values at the point of the largest gap). As highlighted by the authors (Betti and Verma, 1998): "The motivation for this model is that (i) is not affected by the introduction of variables entirely uncorrelated with *m*; (ii) only marginally affected by small correlations; but (iii) is reduced in proportion to the number of highly correlated *items* present".

Then, in order to study the differences between foreigner groups we compute an aggregate material deprivation index within each foreigner group *g*:

$$S^g = \frac{1}{N^g} \sum_{i=1}^{N^g} s_i$$

(5)

where N^g is the number of households in a given foreigner group *g*. Then we compare the aggregate index for all foreigner groups with a reference population *r*. We refer to the difference (S^g-S^r) as the "deprivation gap" of group *g* against reference *r*. Of course, the average score S^g potentially hides variations in the patterns of deprivation within each subgroup. For a given value of S^g, say $\bar{S}$, two

extreme cases are conceivable: *all* members of the group are deprived in exactly $\bar{S}$ items (or more precisely their household-level score is equal to $\bar{S}$), or a fraction S^g of the subgroup members is deprived in all items (in this case their household-level score is equal to 1 by construction). These two extremes describe very different patterns of deprivation and integration.

To provide a refined description of this structure in our data we follow Hildebrand *et al.* (2012) and use a graphical tool similar to the inverse generalized Lorenz curve (*IGL*) introduced in Jenkins and Lambert (1997) in the context of income poverty measurement. The *IGL* curve plots the cumulative share of the subgroup households against the sum of household-level deprivation scores which is accumulated by the fraction of the subgroup with the highest degree of deprivation:

$$IGL(p) = \frac{1}{N} \sum_{j=1}^{Ng} s_{(j)} \qquad (6)$$

where $s_{(1)}$, $s_{(2)}$,…, $s_{(Ng)}$ denote the household-level deprivation scores in national group g ordered in descending order. These curves provide a synthetic graphical simultaneous representation of both incidence, intensity and inequality of the distribution of the individual deprivation gap.

Figure 2 – IGL curve for the material deprivation index
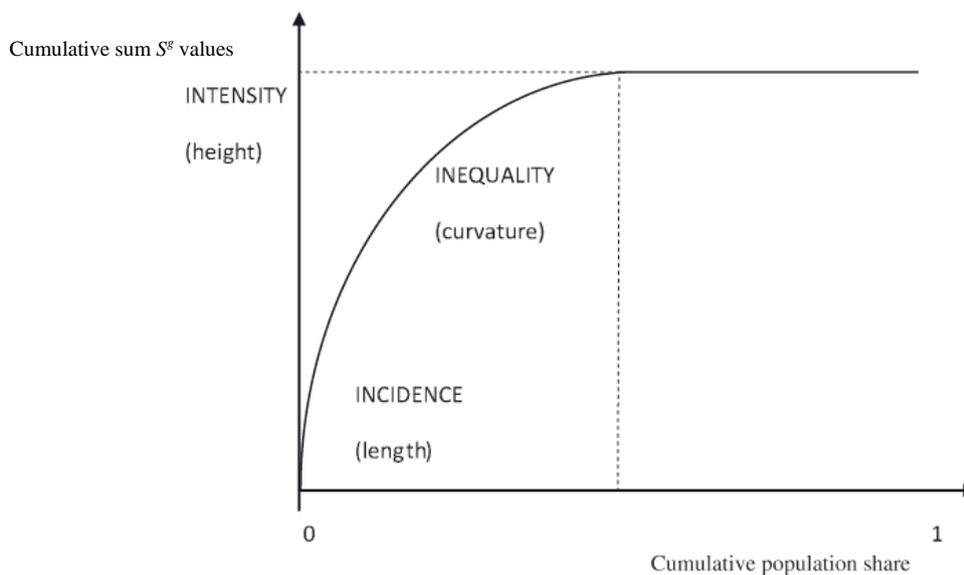
The value on the *y*-axis of at which the curve becomes flat gives the aggregate score S^g, the value on the *x*-axis at this point gives the proportion of the population which has a positive household-level deprivation score and finally, the degree of curvature of the line indicates how much deprivation is concentrated on a few households (the second extreme in the scenario described

above). For a given aggregate level S^g, the curve will be strongly bowed if deprivation is concentrated on a few households and it would be a straight line from (0,0) to (S^g ,1) if all households had the same level of deprivation.

As explained above, a raw comparison of aggregate indices of material deprivation is not overly informative. We need to standardize the foreigner sub-populations to some common reference in order to control for potential distortions due to variations across foreigner groups in some relevant socio-economic characteristics which may impact their economic condition. As reference group for this procedure we decide to compare each foreign nationality with the foreigner group that gets the lowest value of material deprivation index S (see eq. 1), namely the Romanians. Note that we are comparing material deprivation across foreigner groups. We do not take Italians as reference population since the characteristics of many foreigner groups is hardly comparable to the Italian population. This renders any standardization exercise highly hazardous.

Our standardization exercise proceeds by generating counterfactual populations from the observed data for each foreigner group. The counterfactual populations are constructed in such a way that the distribution of some (or all) of a set of observed characteristics are made identical to those in the reference group. In particular the characteristics considered are: 1) Age & Gender; 2) Household composition (9-level typology); 3) Education (in 3 levels); 4) Labour market position (individual and of household[7]); 5) Household income (categorized in decile groups in regional equivalized household income); 6) Tenancy status of the house; 7) Co-residence with an Italian citizen; and 8) years since migration (grouped in 7 classes). Counterfactual distributions are constructed in sequence. A first counterfactual aligns the distribution of age and gender from all subgroups to the distribution of age and gender found in the reference group. The second counterfactual aligns the distribution of age and gender *and* of household composition: the proportion of people from each age group and each gender is made equal to that in the reference group, as well as the proportion of the population in each of nine household types. Note that we focus on aligning the marginal distributions of each of the eight factors –it is not guaranteed that the *joint* distribution of age, gender and household type is made identical in the subgroups and in the reference groups. While such a restriction could be lifted when dealing with a small set of covariates (as in Hildebrand *et al.*, 2012), it is imposed on us here by the relatively large set of characteristics we want to align. Subsequent counterfactuals additionally align education levels, labour market position, etc., using the same hierarchical and marginal logic.

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[7] The household labour market position is evaluated through the number of active member participating in the labour market. To this end, we create three indicator variables (1) households without any active member, (2) households with one active member, and (3) households with two or more active members.

For each counterfactual, household-level weights are generated in such a way that when multiplied to the sampling weights and used in a weighted calculation of the frequency distribution of covariates, the resulting frequency distribution is identical to the one observed in the reference group. At each stage of introduction of additional covariates, the household-level reweighting factors are adjusted to align the distribution of the additional covariate. Calculations rely on a straightforward application of Bayes' rule and fitting a sequence of standard binary response models. See, e.g., Di Nardo *et al.* (1996), Barsky *et al.* (2002) or Hildebrand *et al.* (2012) for technical details.

3. Preliminary results and comments

Figure 3 shows *IGL* curves, one for each foreigner group, according to the classification introduced above. Romanian living in Italy fare significantly better than other foreigners groups on all deprivation indicators considered. As mentioned before, this is why we assume the Romanian group as the reference group for standardization.

Looking at Figure 3 it emerges the progressive effect of including controls for standardization (i.e. the effect of building the counterfactual population), adding step by step a new variable as control. Reading plots (from left to right and row by row) we can notice the reduction of the distance among curves due to having corrected the population structure according to age and gender (Fig. 3, panel 1), then adding also household composition (Fig. 3, panel 2), and so on, in the order described above.
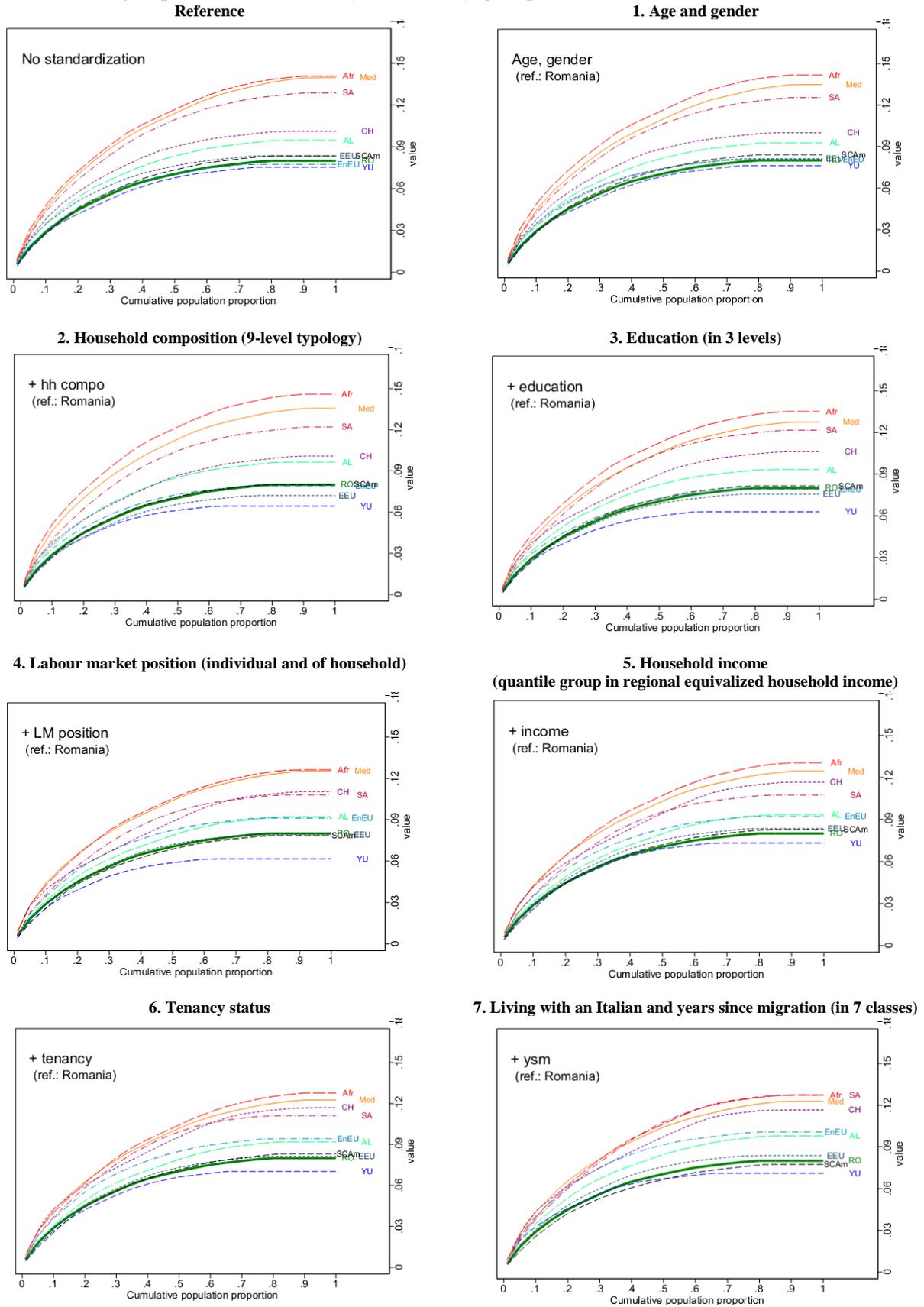
Foreign population are also very different (e.g., less/more young, lower/higher educated…) so that reweighting methods became very effective to control for these differences. But accounting for differences in population factors, using the counterfactual deprivation distributions, makes little difference. Also controlling for the main classical drivers of deprivation, such as income or years since migration, a large share of the deprivation gap remains inexplicable. The effect of age and gender is marginal and often not significantly different from zero. This is unexpected in light of the large age differences among foreigner groups. As the standardization proceeds, the first visible effect is when we standardize for the labour market position of individuals and households then it follows a little explicative power of income. This last could be probably due to the fact that there is a strong similarity of income among foreigners, given the labour market position.

These analyses point out some interesting results but some technical issues remain still open. Is official 'EU set' relevant? Should housing deprivation items be included in the analysis of

deprivation? Why does standardization reduce inter-group differences so little? Is the standardization approach ineffective due to the many covariates considered? Or should we considered some other relevant factors such as cultural differences?

Nevertheless, due to not negligible presence of a large unexplained gap, it is evident that policies should takes into account the peculiarities of each foreigners group. These results will be a useful starting point for deeper analyses.

Figure 3. *IGLs of deprivation scores* by nationality group*

Reference

1. Age and gender

2. Household composition (9-level typology)

3. Education (in 3 levels)

4. Labour market position (individual and of household)

5. Household income (quantile group in regional equivalized household income)

6. Tenancy status

7. Living with an Italian and years since migration (in 7 classes)

*Betti and Verma index with item weights at macro-region level (North-Center-South of Italy)

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