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The Struggle of Being Poor and Claimant: Evidence on the Non-Take-Up of Social Policies in Italy*

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Abstract

Social policies aim to alleviate poverty and income inequality, providing cash benefits and services to households facing economic difficulties. Nonetheless, it is well known that a relevant portion of eligible households do not claim such policies. Through an original methodology based on ISEE (*Indicatore della Situazione Economica Equivalente*) administrative records, this paper offers the first empirical evidence on the non-take-up of social policies in Italy. We show that roughly 1.1 million of poor households did not file the ISEE declaration in 2018, a necessary step to claim most means-tested cash benefits and services. Based on multinomial logit regressions, results show that younger and larger households are more inclined to claim social policies. In contrast, households headed by a female or migrant tend to report severe levels of non-take-up, as do those living in the islands.

Keywords: non-take-up; social policies; poverty; administrative records; welfare system.

JEL Classification: C15; I30; I38.

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1. Introduction

Claiming social benefits may not be as easy as one might at first imagine. In fact, although these types of policies aim to alleviate poverty and income inequality by providing cash benefits and services to households facing economic difficulties, claiming such benefits requires a large amount of time, knowledge of policies, and the ability to deal with bureaucracy.

These requirements are, however, particularly difficult to achieve by poor households as they generally have low literacy levels, language difficulties, a lack of internet access, and a higher propensity to procrastinate (O'Brien et al., 2001; Currie, 2004; Bertrand et al., 2006; Eurofound, 2015; Bruckmeier and Wiemers, 2017; Daigneault and Macé, 2020). Moreover, poor households may decide not to claim social policies because they may be forced to report in-depth information on household incomes and members, exposing themselves to further inspections or tax assessments. Some of these households may indeed be characterized by tax evasion behaviours (e.g. undeclared assets or income from work) or by children experiencing poor health and education conditions (Smith, 2005; Ferguson et al., 2007; Gupta et al., 2007; Williams and Round, 2010; Albarea et al., 2015; Hamad and Rehkopf, 2016). Sen (1995) even underscores a potential loss of individual privacy and autonomy due to extensive disclosures requested in claiming procedures for means-tested social policies. In addition, claiming social benefits generally requires dealing with the 'red tape', thus a number of organizational rules, procedures, and regulations (Hall, 1963; Bozeman, 1993), which involves several constraints, frustration, and holds negative connotations for applicants (Kaufman, 1977; Bozeman and Scott, 1996), along with an overall slowdown and stiffening of public administration work. Finally, households may not claim social benefits despite being eligible because of 'psychological frictions' related to such benefits, such as stigma, inadequate information, cultural processes, low program awareness, or distrust of institutions (Lamont et al., 2014; Bhargava and Manoli, 2015; Eurofound, 2015; Frazier and Marlier, 2016; Li and Walker, 2017). All these pieces of evidence clearly emphasise a relevant paradox regarding welfare systems because social benefits especially target the population in socioeconomic need.

As a consequence, the analysis of non-take-up (NTU) of social policies has become increasingly important and widespread. With the exception of the United Kingdom, where the NTU issue was identified in the 1930s (Warin, 2014), this phenomenon was generally neglected until the early 1990s (van Oorschot, 1991). A first theoretical model for the analysis of factors underlying NTU was proposed by Kerr (1982), according to which the reasons why people do not claim benefits are related to several 'individual beliefs' such as the perceived need, feelings regarding the application procedure, and basic knowledge. However, this model was criticised for its exceedingly 'client-oriented' structure and for not considering the role played by local administration (e.g. quality of communication, political background, labour market conditions) and policy design (e.g. benefit generosity, conditionality, red tape) in NTU (van Oorschot, 1991). As a result, recent studies on the NTU of social policies have adopted a multilevel framework like the one put forward by van Oorschot (1996), where the determinants of this phenomenon rely on three levels: i) the client level; ii) the local administration level; and iii) the policy design level.

Several studies have provided both qualitative and quantitative evidence on the NTU of social policies over the last two decades, with a particular emphasis on the US (Currie, 2004; Campbell et al., 2005; Figlio et al., 2015; Chyn et al., 2019) and other developed countries (Hernanz et al., 2004; Matsaganis et al., 2014; Ferrarini et al., 2015). In most cases, the NTU of social policies was found to be related to red tape or other administrative barriers, such as the request for additional (out-of-context) information or administrative delays (Scott and Pandey, 2000; O'Brien et al., 2001; Hernanz

et al., 2004; Mazet, 2014; Frazier and Marlier, 2016; Daigneault and Macé, 2020). Another important source of NTU lies in social stigma (Moffitt, 1983; Hancock et al., 2004; Baumberg, 2016; Chambers et al., 2016). The NTU of social policies also tends to depend on information and awareness among potentially eligible individuals (Matsaganis et al., 2010; Mazet, 2014; Bhargava and Manoli, 2015; Figlio et al., 2015), as well as on the expected amount and duration of benefits (Riphahn, 2001; Bruckmeier and Wiemers, 2012; Arrighi et al., 2015). In addition to low-educated individuals (Currie, 2004; Hernanz et al., 2004; Fuchs, 2009), several studies have pointed out that females (generally with children) and migrants present the highest rates of NTU, probably due to stigma and language barriers, respectively (Sohrab, 1994; Currie and Grogger, 2002; Grogger and Michalopoulos, 2003). To be noted, as regards the NTU of migrants, Campbell et al. (2005) find opposite effects accordingly the stage of policy implementation: compared to Whites, minorities are more likely to apply for means-tested school vouchers, but less likely to take them when given the opportunity.

Only a few papers, however, present evidence on the NTU of social policies using administrative records. Combining household surveys – where benefit eligibility is simulated through a tax-benefit model – with datasets collecting information on the recipients of two means-tested retirement benefits in Greece and Spain, Matsaganis et al. (2010) found that a large number of intended beneficiaries fail to claim these programmes and that NTU rates are higher among married females. Adopting a similar methodology, Bargain et al. (2012) highlighted that roughly half of the eligible population claimed the Finnish social assistance scheme. According to the authors, important and stable determinants of claiming behaviours are education level, expected unemployment duration, and benefit amounts, as well as variables associated with stigma. Finally, using a large-scale administrative dataset, Vinck et al. (2018) showed that the claiming of supplemental benefits for disabled children in Belgium significantly depends on the disability type (children with autism spectrum disorders report higher NTU rates).

This study provides first empirical evidence on which categories of the poor report a greater level of NTU of social policies in Italy. This country represents an interesting case study because of the peculiar bureaucratic procedure that characterises access to its welfare system. The means-testing of the great majority of social benefits and services in Italy is based on the value of a particular definition of household economic well-being called ISEE (Indicatore della Situazione Economica Equivalente). This is a complex indicator of equivalised economic conditions considering both income and wealth information, and it requires the submission of a specific declaration. In other words, the claiming of social benefits supporting poor households in Italy relies on a two-step bureaucratic procedure: i) filing the ISEE declaration; and ii) filing the application form for the required benefit. The described procedure allows us to draw relevant conclusions on the overall NTU of social policies in Italy by looking at ISEE records. With respect to existing literature, a further novelty of our study consists in analysing the NTU of the whole welfare system rather than focusing on a single benefit.

To define the level of NTU, our analysis relies on an original methodology based on the comparison of sample survey data and administrative records. On one hand, we use data on the whole population of households that filed the ISEE declaration in 2018. Specifically, we focus on households reporting an ISEE value below 6,000 euros to ensure we only consider those facing severe poverty conditions and who are thus in need of a social benefit. By using this ISEE threshold, which coincides with the ISEE eligibility threshold of the universal (but selective) national minimum income scheme, we also make sure that poor households not filing the ISEE declaration are excluded from the welfare system.

On the other hand, using the 2017 European Union Statistics on Income and Living Conditions (EU-SILC) survey for Italy (hereafter IT-SILC), we identify the total number of households whose ISEE value would have been below 6,000 euros if they had filed the ISEE declaration. In other words, the IT-SILC survey data allows us to identify poor households that did not declare their ISEE, despite being entitled to cash benefits and services. We exploit differences in the absolute frequencies of specific household types between the two datasets so as to weight administrative records accordingly to sample survey data. We proxy the risk of being excluded from the overall welfare system (and, more in general, the extent of NTU) by categorising the derived weights into three groups. As a final step in our methodology, we employ weighted administrative records to shed light on NTU determinants by means of multinomial regression analysis.

The remainder of the paper is organised as follows. Section 2 describes the two datasets employed. Section 3 presents the methodology adopted. Section 4 shows the results of the econometric analysis. The last section concludes and discusses policy implications stemming from the analysis.

2. Data

Our analysis relies on two different datasets: 2017 IT-SILC survey data¹ and ISEE records for the year 2018. Despite interviews and declarations refer to different years, the income reference year of these two datasets is the same. In fact, reported incomes refer to the year before the interview in the IT-SILC data, and the ISEE indicator is derived from household-level income and wealth data referring to two years before the moment of declaration.

The IT-SILC dataset represents the Italian component of the European Union Statistics on Income and Living Conditions (EU-SILC) survey, which contains detailed micro-data on income, labour, and socio-demographic characteristics at both the individual and household level. The dataset is provided by the Italian National Institute of Statistics (ISTAT) and comprises information on 48,819 individuals living in 22,226 households and is representative of the whole population.

As for ISEE records, they are part of a large-scale administrative dataset collected by the Italian Social Security Institute (INPS). It gathers all declarations filed by Italian households claiming social benefits. In fact, most of means-tested cash benefits and services in Italy require this further bureaucratic procedure since income eligibility criteria are generally based on the ISEE value.² To develop our analysis, we decided to focus on households reporting an ISEE value below 6,000 euros to ensure we only consider those facing conditions of poverty and thus in need of any social benefits. Our final ISEE dataset counts 1,948,256 households, for a total of 5,630,807 individuals.

The definition of a ‘poverty threshold’ equal to 6,000 euros in ISEE values relies on the fact that this coincides with the income eligibility criterion for the minimum income scheme operating in Italy in 2018 (i.e. the *Reddito di Inclusione*, or REI). As the REI aimed to combat poverty and social exclusion, we can therefore argue that households having an ISEE value below this threshold are very likely to be poor. In addition, the REI follows the European principle of ‘selective universalism’ (Raitano et al., 2018), which means that poor households satisfying the income eligibility criteria are potential recipients. This feature makes the REI the last safety net of the poor and, together with the existence of a considerable number of benefits and access to specific services require the ISEE declaration in the Italian welfare system (e.g. minimum income schemes, new-born benefits,

¹ We use the cross-sectional EU-SILC UDB 2017, September 2017 version.

² Each household can file more than one ISEE declaration in the same year. We thus avoided double counts by focusing solely on the latest declaration filed in 2018.

exemption or reduction of tuition fees, university scholarships, access to homecare support, essential services, and others),³ ensures that the so-defined poor households in Italy were (almost) surely eligible for at least one social policy for which they were required to file the ISEE declaration.

As is usual for this type of administrative records (Connelly et al., 2016), ISEE data are not collected for research purposes and only contain information needed to carry out administrative assessments of eligibility. For this reason, they do not include relevant information that may have represented important variables for our analysis, such as educational level, marital status, or individual incomes. On the other hand, ISEE records contain information on gender, age, citizenship, disability status, employment status, and the municipality of birth and residence for each household member. As far as income and wealth information are concerned, ISEE data do not provide values at the individual level but contain detailed information on the overall ISEE level, total household income (standard or equivalised), and household financial wealth and real estate assets. Furthermore, it collects data on household tenure status and mortgage indebtedness.

2.1. Representativeness issues of ISEE records

Table 1 shows that half of individuals living in households with an ISEE value lower than 6,000 euros in 2018 are female, 77% hold Italian citizenship, and 11% are aged 61 or over, while underage children represent 30% of the ISEE population studied. The majority of individuals in ISEE records (about 56%) live in southern and insular areas. This comes as no surprise since income poverty is more widespread in these areas (Bertolini et al., 2008; Acciari and Mocetti, 2012; Gallo and Pagliacci, 2020). As for household characteristics, Table 1 indicates a U-shaped distribution with increasing household size. In fact, 26% of households consist of single persons; the share decreases to 18% for two-member households and then grows to 35% for households with four or more members. The high frequency of large households in administrative records helps explain why family units with at least one underage child represent 50% of the ISEE population.

To preliminarily assess potential representativeness issues of ISEE records, in Table 1 we provide a comparison with 2017 IT-SILC survey data. Household income information collected in this dataset allows us to focus specifically on poor households, allowing for a more consistent comparison with the ISEE records.

Since ISEE values are not collected by the IT-SILC survey questionnaire, we estimated them by means of a tax-benefit microsimulation model that partially draws on Baldini et al. (2018), Boscolo (2019), and Gallo (2021).⁴ Once the ISEE values were calculated for the whole sample population, we selected observations with an ISEE value lower than 6,000 euros to match the ISEE population – 4,450 individuals living in 2,079 households. Table 1 reports the composition of the selected 2017 IT-SILC sample by individual and household characteristics. Observations were scaled to the country population (e.g. 2,079 households in the sample count as 3,045,031 households in the total population) through sample weights provided by ISTAT.

³ Raitano et al. (2020) provide further details on the access to essential services by low-income people in Italy.

⁴ Such models simulate the tax-benefit system of one or more countries for a given year. This enables one to assess the redistributive impact of current and alternative policy scenarios and sheds light on work incentives induced by policy changes (see, for example, Sutherland and Figari, 2013; Li et al., 2014; Azzolini et al., 2017). The microsimulation model employed in this study represents an author's recent update of the MAPP© model developed by the Center for the Analysis of Public Policies (CAPP) at the University of Modena and Reggio Emilia (Baldini et al., 2015; Boscolo, 2019; Gallo, 2021).

Table 1 – Comparison of characteristics between ISEE records, population registers, and IT-SILC survey data

Individual characteristic	ISEE records		2017 IT-SILC data		Difference	
	obs.	%	obs.	%	in obs.	in shares
Male	2,672,519	47.5	3,563,935	48.4	891,416	1.0
Female	2,958,288	52.5	3,796,401	51.6	838,113	-1.0
Italian	4,332,910	76.9	5,589,853	76.0	1,256,943	-1.0
Foreign	1,297,897	23.1	1,770,483	24.1	472,586	1.0
Aged 0–17	1,708,057	30.3	1,875,166	25.5	167,109	-4.9*
Aged 18–40	1,828,669	32.5	2,234,408	30.4	405,739	-2.1*
Aged 41–60	1,483,058	26.3	2,207,647	30.0	724,589	3.7*
Aged 61 or over	611,023	10.9	1,043,115	14.2	432,092	3.3*
North-West	1,000,125	17.8	1,344,215	18.3	344,090	0.5
North-East	593,525	10.5	622,393	8.5	28,868	-2.1
Centre	893,467	15.9	1,126,533	15.3	233,066	-0.6
South	2,040,440	36.2	2,680,841	36.4	640,401	0.2
Islands	1,103,250	19.6	1,586,354	21.6	483,104	2.0*
Total	5,630,807	100.0	7,360,336	100.0	1,729,529	
Household characteristic	ISEE records		2017 IT-SILC data		Difference	
	obs.	%	obs.	%	in obs.	in shares
1 member	506,696	26.0	1,112,563	36.5	605,867	10.5*
2 members	342,073	17.6	652,441	21.4	310,368	3.9*
3 members	411,827	21.1	532,838	17.5	121,011	-3.6*
4 or more members	687,660	35.3	747,189	24.5	59,529	-10.8*
No underage children	975,645	50.1	1,927,024	63.3	951,379	13.2*
Presence of underage children	972,611	49.9	1,118,007	36.7	145,396	-13.2*
Total	1,948,256	100.0	3,045,031	100.0	1,096,775	

*Note: * Difference in shares is significant at the 1 percent level. Source: Elaboration of the authors on ISEE administrative records for the year 2018 and 2017 IT-SILC survey data.*

As expected, the number of households reporting an ISEE value lower than 6,000 euros is found to be substantially greater than the actual number we observe in administrative data (Table 1). Specifically, about 1.95 (5.63) million households (individuals) present a condition of economic need according to ISEE records, whereas this should amount to roughly 3.05 (7.36) million according to our simulations based on IT-SILC data. This means that more than one million Italian households do not file the ISEE declaration despite facing poverty conditions and thus probably being eligible for some social benefit. The implicit assumption in the estimation of ISEE values on 2017 IT-SILC data is that all households file the declaration and thus deal with the required bureaucratic procedures. Consequently, the observed (absolute) gap between such a hypothetical scenario (i.e. all the poor population claiming social benefits) and administrative data provides evidence on the existence and possible extent of non-take-up of social policies, as well as on representativeness issues of ISEE records.

Differences in population shares between ISEE records and IT-SILC data highlight that administrative data are hardly representative with regard to the age structure of individuals (see Table 1). Underage children in ISEE records represent a much greater relative share of the total population with respect to IT-SILC data, while people aged 61 and over are underrepresented. Still according to ISEE records, there are significantly fewer individuals in poverty conditions in the insular areas (i.e. 19.6% rather than 21.6% of total population reporting an ISEE value lower than 6,000 euros). No significant differences in population shares are reported by gender and citizenship. With regard to household

characteristics, the ISEE population differs substantially from the hypothetical scenario. In fact, households with a low ISEE value should consist of single persons or report the presence of underage children only in about 37% of cases, whereas they amount to 26% and 50% of the ISEE population, respectively.

In conclusion, as the comparison between administrative and IT-SILC data is made ‘at parity of poverty conditions’ of households, estimated differences in observations (absolute terms) and in population characteristics (relative terms) provide some insight into the representativeness issues of administrative records and, more generally, into the level of NTU. In particular, we show that the elderly and people living alone tend to be underrepresented in administrative data (i.e. they are probably more scared of red tape), while the opposite occurs for households with children in economic need. This evidence on ISEE records is probably driven by the historical feature of the Italian welfare system of being particularly categorical (Saraceno, 2006; Natili, 2019). In fact, Italy reported for the first time the introduction of a universal social benefit for the whole population of poor households (i.e., the minimum income scheme REI) in 2018 only (Raitano et al., 2018), thus the same year we refer to in this analysis. Before 2018, the Italian welfare system was especially in favor of households with children, people with disability, and elderly (Baldini et al., 2016). Thanks to the introduction of the REI, the representativeness issues of administrative records are likely to have been reduced in the analysed year with respect to the previous ones, although residual effects of the past categorical welfare system clearly stand yet.⁵ Interestingly, despite the broad extent of coverage that the Italian welfare system has provided to the elderly so far, we observe that they are significantly underrepresented in 2018 administrative records, emphasising the major difficulties suffered by this category of population in accessing the welfare system.

3. Methodology

The weighting procedure proposed here relies on the comparison between IT-SILC data for the year 2017, which are deemed to ensure the overall representativeness of our population of interest, and administrative records for the year 2018.

As for the choice of the variables included in the weighting procedure, we defined a series of socio-demographic and economic dimensions that we believe are among the predictors that best explain the phenomenon of NTU of social benefits in the Italian context. Among many, given the data availability constraint in ISEE records, we identified the following list of variables at the householder level: i) Italian citizenship (binary); presence of underage children (binary); number of household members (categorical, 4 groups: 1 member; 2 members; 3 members; 4 or more members); age class (categorical, 3 groups: aged 18–40; aged 41–60; aged 61 or over); macro-area of residence (categorical, 5 groups: North-West; North-East; Centre; South; Islands); income class as measured by the ISEE indicator (categorical, 4 groups: 0 euros; 1–2,000 euros; 2,001–4,000 euros; 4,001–6,000 euros). In IT-SILC data, the head of household is defined as the individual responsible for the accommodation and is the person filing the ISEE declaration for administrative records. It is worth stressing that the choice of variables was also driven by data comparability between the two data sources employed.

⁵ The introduction of the more generous Citizenship income in 2019 – which has replaced the REI and is therefore the national minimum income scheme in force (Jessoula et al., 2019) – is expected to further reduce the representativeness issues of ISEE records, as well as the number of poor households who remain out from the welfare system.

We then divided both datasets into 840 different household types based on the categorisation described above (keeping in mind that there are no single-member households where the individual is underage in our datasets). For each of these types, we weighted households in administrative records such that their absolute frequencies equal the corresponding (weighted) IT-SILC frequencies.⁶ As a result, the derived weights can be conceptually separated into four categories:

$$[1] w_{A,i} = af_{IT-SILC,i}/af_{A,i}$$

with $w_{A,i}$ being alternatively $\left\{ \begin{array}{l} \text{missing} \\ 0 \\ (0; 1] \\ > 1 \end{array} \right\}$

where $af_{IT-SILC,i}$ is the absolute IT-SILC frequency of the i -th household type and $af_{A,i}$ is the corresponding one in administrative records. When $w_{A,i}$ is *missing*, this means that the i -th household type is not recorded in either of the two samples; with $w_{A,i}$ equal to zero, the selected household type is not included among the households interviewed for the IT-SILC survey, while the opposite ($af_{A,i} = 0$ and $af_{IT-SILC,i} \neq 0$) is never true; as for $w_{A,i}$ being in the interval $(0; 1]$, this indicates that the i -th household type is underrepresented in the IT-SILC data compared to administrative records; finally, $w_{A,i} > 1$ indicates overrepresentation.

Note that the case in which $w_{A,i}$ is zero is of particular relevance for our study. Sample surveys have been shown to lack representativeness when it comes to hard-to-survey populations (Tourangeau et al., 2014; United Nations Economic Commission for Europe, 2019). Given that we are dealing with absolute poor households, we assumed that zero-weight household types cover the whole hard-to-survey population, thereby excluding from such a population household types that are found to be misrepresented ($w_{A,i} \neq 0$). Consistent with this view of identifying hard-to-survey populations, we excluded from administrative records those units with $w_{A,i} = 0$.⁷

3.1. Modelling the extent of NTU

As a result of the weighting procedure and its conceptual implications, we proxied the extent of NTU by means of a categorical variable that takes on the following modalities:

$$[2] NTU = \left\{ \begin{array}{l} 1: 0 < w_A \leq 1 \\ 2: 1 < w_A \leq \text{median}(w_A > 1) \\ 3: \text{median}(w_A > 1) < w_A < \text{max}(w_A > 1) \end{array} \right\}$$

⁶ The econometric results of our analysis, which will be discussed later on, are robust to different weighting strategies. In particular, we tested the generalised raking procedure put forward by Deville and Särndal (1992). We opted for a simple stratified approach rather than raking methods for a twofold reason: i) it allows us to identify hard-to-survey households; ii) it provides higher accuracy in the weighting of specific population subgroups. More details are available upon request to the authors.

⁷ As a robustness check, we replicated the econometric analysis including zero-weight households. The resulting estimates overall confirm the robustness of our findings. However, given the unclear role that hard-to-survey households may play in the weighting procedure of our administrative sample, and thus on our understanding of NTU determinants, we opted for the exclusion of zero-weight households from our analysis. More details are available upon request to the authors.

The first category of our dependent variable comprises households that show low or very low levels of NTU – we label them as ‘*inclined to claim*’; the second category contains households that are ‘*mildly excluded*’ from the welfare system, the weights of which are between the unit and the median weight (i.e. 1.76) as computed on the units with $w_A > 1$; and finally, the third category is made up of households that are ‘*severely excluded*’, which are the units that present the highest weights (therefore the highest ratios between IT-SILC absolute frequencies and administrative ones, and strictly higher than the median weight).

Out of the 840 household types considered, 2 are observed neither in ISEE records nor in IT-SILC data, while 396 typologies are represented in ISEE records but not in IT-SILC data, for a non-weighted total of 186,585 households (9.6% of ISEE records); the latter are what we refer to as hard-to-survey populations or zero-weight households. As for the remaining types, 104 are categorised as inclined to claim social policies, for a total of 600,600 households; 101 fall into the category of mildly excluded, corresponding to 582,752 households; the severely excluded from the welfare system are identified by 237 types, amounting to 578,319 households.

To assess the effect of demographic and socio-economic characteristics on the probability of being mildly or severely excluded from social benefits, we estimate a multinomial logit model (MLM) for the defined NTU levels. The model specification for the NTU level of the i -th household is as follows:

$$[3] NTU_{ij}^* = \beta_j X_i + \gamma_j Z_i + \varepsilon_{ij}$$

$$[4] NTU_i = j \text{ if } NTU_{ij}^* > NTU_{ik}^* \text{ for } k \neq j; j, k = 1, 2, 3$$

$$[5] \varepsilon_{ij} \underset{iid}{\sim} GEV(1), \text{ independent of } X_i, Z_i$$

Here, NTU is one of the j possible (unordered) levels of exclusion from the welfare system (i.e. inclined to claim, mildly excluded, severely excluded), X is the vector of all characteristics we used to weight administrative records (citizenship, age, household size, presence of underage children, macro-area of residence, ISEE class), and Z is a vector of additional covariates that may be relevant in explaining the NTU levels (gender, employment status of household members, tenure status, logarithmic transformation of household financial wealth). The base outcome in the multinomial logit model is the first NTU category (i.e. households inclined to claim social policies).

As a sensitivity analysis, we also estimated the probability of being excluded from social benefits, using the following binary logit model:

$$[5] BNTU_i^* = \beta X_i + \gamma Z_i + u_i$$

$$[6] BNTU_i = 1[BNTU_i^* > 0]; u_i \underset{iid}{\sim} Logistic, \text{ independent of } X_i, Z_i$$

Here, BNTU is a binary version of NTU equal to 1 if the weight $w_A > 1$ and 0 otherwise, while regressors are the same as those in Equation [3].

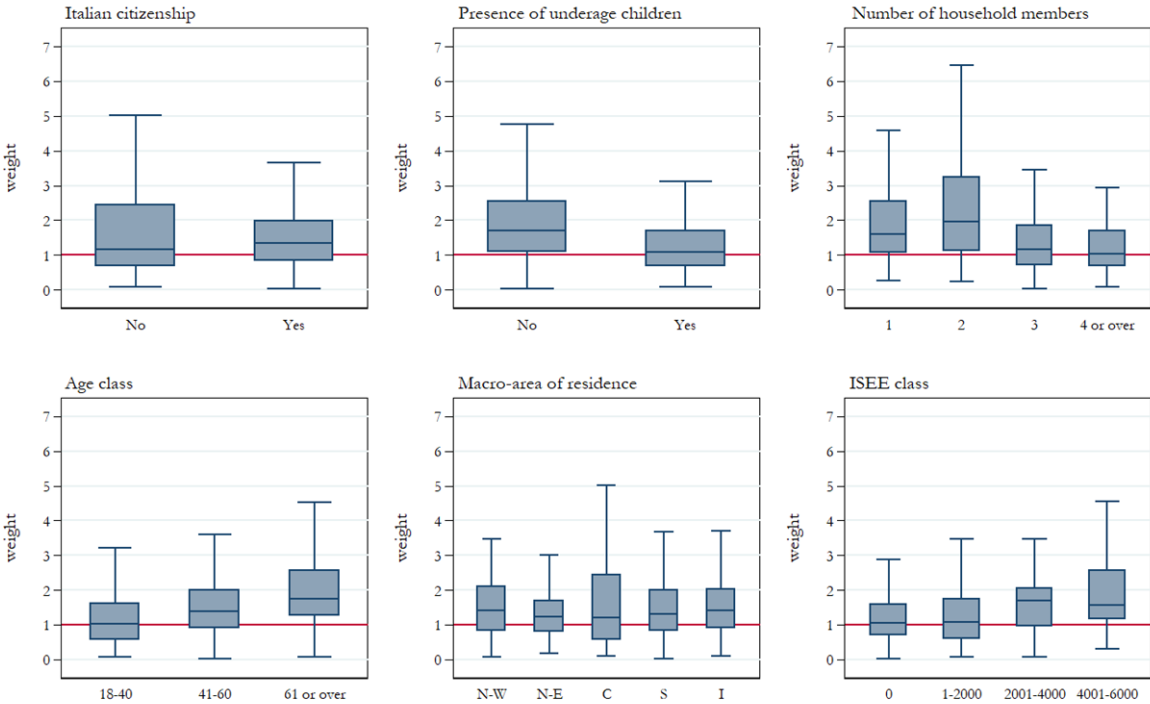
All estimates are based on weighted administrative records. In the case where w_A is strictly higher than zero and lower than the unit, we preserved the representativeness of the household by imputing a value equal to the unit ($w_A = 1$).

4. Results

As preliminary evidence, Figure 1 illustrates the distribution of weight values by groups of poor households. The horizontal red line represents our ‘neutral threshold’ of NTU ($w_A = 1$). If weight values tend to concentrate below 1, then that specific group of households is characterized by a lower level of NTU. In contrast, the more weight values tend to be higher than the unit, the more that group of households turns out to be excluded from the welfare system, as shown by its underrepresentation in ISEE records.

Figure 1 highlights that older and smaller households are, on average, less inclined to claim social benefits. Interestingly, in the latter case, households with two members appear to have an even greater level of NTU than single persons. In line with the higher propensity to claim social benefits reported by larger households, those with underage children are more inclined to file the ISEE declaration. No relevant difference is found when looking at the citizenship of the head of household or at the macro-area of residence. However, migrant households and those living in the central regions of Italy seem to show greater variability in their weight distributions.

Figure 1 – Box plots of the relationship between derived weights and variables included in the weighting procedure



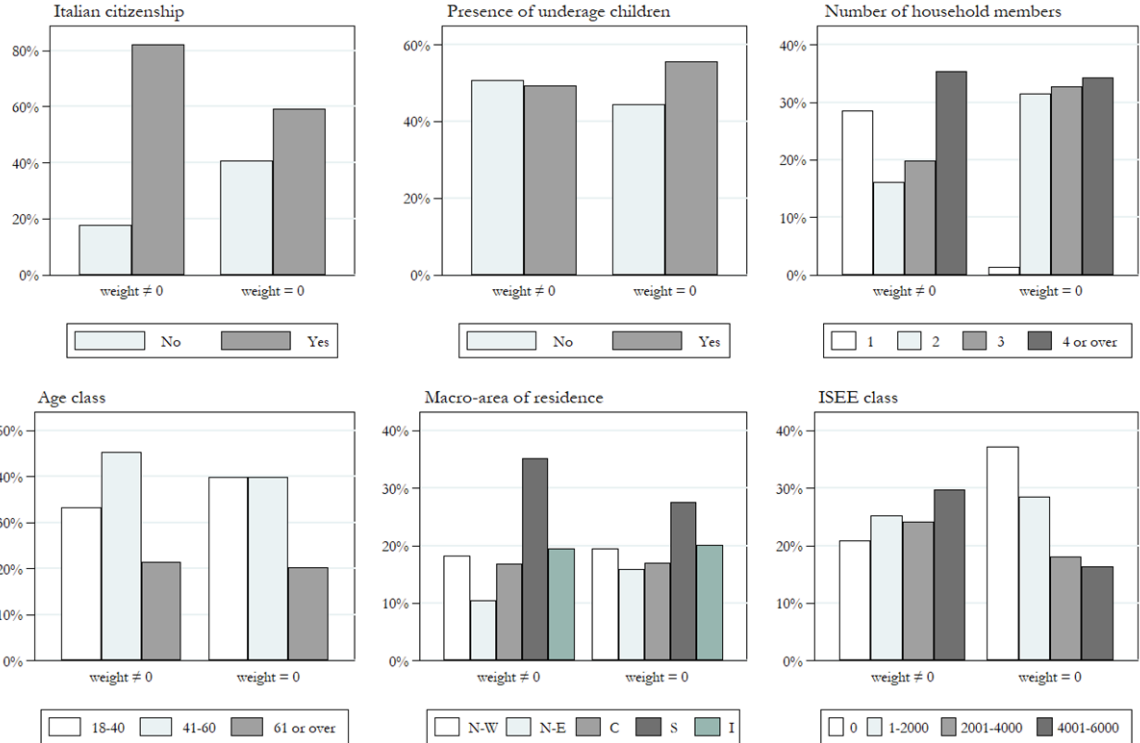
NOTE: excludes outside values; excludes zero-weight households

Source: Elaborations on ISEE administrative records for the year 2018.

Finally, Figure 1 points to a positive relationship between household income and the NTU. This evidence may on the one hand be related to a higher propensity to claim income support when severe economic conditions emerge and, on the other hand, to the expectancy of lower benefit amounts by those with higher ISEE values, which may discourage households from bearing the related administrative costs.

As was made clear earlier, the present study relies on a weighting procedure that allows the identification of hard-to-survey households. Figure 2 focuses on the socio-demographic characteristics of this group of zero-weight households (i.e. 186,585 households) in comparison with non-zero-weight households (i.e. 1,761,671 households). Not surprisingly, the two groups differ substantially in several respects. Foreign households appear to be more common among hard-to-survey households, although their frequency remains lower with respect to that of Italian households. In addition, remarkable differences emerge in the distribution of households by the number of members. Single-member units represent roughly 30% of non-zero-weight households, while they fall to 2% for the hard-to-survey households, followed by an increase in two- and three-member units. To conclude, the comparison shows non-negligible differences also in the distribution of households by ISEE class. Hard-to-survey households decrease their concentration with increasing ISEE class, and the opposite holds for non-zero-weight households.

Figure 2 – Comparison of characteristics between non-zero-weight households and hard-to-survey households



Source: Elaborations on ISEE administrative records for the year 2018.

4.1. Econometric analysis

Table 2 shows the results of our analysis based on a multinomial logit model, confirming the preliminary evidence reported in Figure 1. Households with a head of household aged 41 or over and those with an ISEE value higher than 2,000 euros report, *ceteris paribus*, a significantly greater probability of being severely excluded from the welfare system, whereas the opposite holds for households with many members or underage children. Foreign households show peculiar behaviour in our estimates regarding the NTU. With respect to Italian ones, they are more likely to have a high level of NTU, but not to have an average one (i.e. mildly excluded from social benefits). Moreover, despite the marginal effect being statistically significant at the 1 percent level, households with a foreign head report only a 1.4% lower probability of being inclined to claim. This kind of ‘asymmetric U-shaped’ NTU reported by migrant households is probably related to the within heterogeneity characteristic of this population group and can be explained by looking at their different social networks of reference (Currie, 2004). A similar shape of NTU is found for two-member households (with respect to single persons), households living in the islands (with respect to those living in the North-West of Italy) and – to a smaller extent, however – for those with ISEE values between 1 and 2,000 euros (with respect to households with an ISEE equal to 0). It must be noted that the reasons behind this specific NTU behaviour may differ for each group.

Table 2 – Marginal effects on the level of non-take-up (multinomial logit model)

Variables	Inclined to claim	Mildly excluded	Severely excluded
Foreign	-0.014***	-0.232***	0.247***
Aged 41–60	-0.067***	0.021***	0.045***
Aged 61 or over	-0.065***	0.056***	0.009***
2 members	-0.015***	-0.087***	0.102***
3 members	0.100***	0.000	-0.100***
4 or more members	0.186***	0.091***	-0.277***
Presence of at least one underage member	0.091***	0.051***	-0.142***
North-East	0.139***	0.013***	-0.152***
Centre	0.082***	-0.073***	-0.009***
South	0.032***	-0.032***	-0.001
Islands	-0.020***	-0.074***	0.094***
ISEE = 1–2,000 euros	-0.064***	-0.083***	0.147***
ISEE = 2,001–4,000 euros	-0.248***	-0.089***	0.337***
ISEE = 4,001–6,000 euros	-0.274***	-0.099***	0.373***
Observations	1,761,671	1,761,671	1,761,671
Sum of weights	3,282,968	3,282,968	3,282,968
Pseudo R-squared	0.180	0.180	0.180
Log likelihood	-2,624,000	-2,624,000	-2,624,000

Note: Robust standard errors and calibration weights are considered. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

The previous findings are confirmed when controlling for additional covariates, as illustrated in Table 3. However, this second specification allows us to shed light on further determinants of NTU. First, in line with the existing literature for the Anglo-Saxon countries, Belgium and the Netherlands (Sohrab, 1994; Currie and Grogger, 2002; Grogger and Michalopoulos, 2003), households headed by a female overall show a greater probability of being excluded from the welfare system with respect to those with a male head of household.

Second, NTU seems to be related to the occupational status of household members, but less than expected. The presence of at least one employed, self-employed, or unemployed member in the household leads to similar effects on our dependent variable. Interestingly, despite the less severe economic needs of these households,⁸ when at least one member is employed the probability of being inclined to claim is greater than the households with no employed persons and the level of NTU is overall lower. This may be due to higher literacy/skill levels. In contrast, households with at least one member with a disability appear, all other things being equal, both less inclined to claim and less severely excluded from social benefits. This is probably due to the fact that economic needs, possible stigma, and skill-based drivers work differently in this category of households. Finally, homeowner households (with respect to those living in a rented house or other tenure status) tend to be less inclined to claim and more severely excluded from the welfare system, and the same applies to those with high levels of financial wealth. The latter evidence appears in line with finding reported by Brandolini et al. (2010) which highlight the importance of assessing the actual poverty status of households also looking at their real and financial asset holdings.

Table 3 – Marginal effects with additional covariates (multinomial logit model)

Variables	Inclined to claim	Mildly excluded	Severely excluded
Foreign	-0.018***	-0.231***	0.249***
Aged 41–60	-0.065***	0.020***	0.045***
Aged 61 or over	-0.058***	0.041***	0.016***
2 members	-0.013***	-0.084***	0.097***
3 members	0.101***	0.007***	-0.109***
4 or more members	0.186***	0.101***	-0.286***
Presence of underage children	0.091***	0.051***	-0.142***
North-East	0.140***	0.012***	-0.152***
Centre	0.081***	-0.070***	-0.011***
South	0.030***	-0.027***	-0.003**
Islands	-0.023***	-0.069***	0.092***
ISEE = 1–2,000 euros	-0.063***	-0.081***	0.144***
ISEE = 2,001–4,000 euros	-0.248***	-0.085***	0.333***
ISEE = 4,001–6,000 euros	-0.275***	-0.093***	0.368***
Female	-0.006***	0.002***	0.004***
Presence of at least one employee	0.019***	-0.027***	0.008***
Presence of at least one self-employed worker	0.007***	-0.022***	0.015***
Presence of at least one unemployed member	0.005***	-0.015***	0.010***
Presence of at least one disabled member	-0.004***	0.011***	-0.008***
Rent house	0.002**	0.016***	-0.017***
Other tenure status	0.016***	-0.004***	-0.013***
Log(household financial wealth)	-0.002***	-0.000	0.002***
Constant	-0.018***	-0.231***	0.249***
Observations	1,761,671	1,761,671	1,761,671
Sum of weights	3,282,968	3,282,968	3,282,968
Pseudo R-squared	0.181	0.181	0.181
Log likelihood	-2,621,000	-2,621,000	-2,621,000

*Note: Robust standard errors and calibration weights are considered. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.*

⁸ Further elaborations of the authors highlight that households with at least one employed member report the highest mean ISEE (i.e. €3,418), followed by those with at least one self-employed member (i.e. €3,112), those with at least one member with a disability (i.e. €2,931), and those with at least one unemployed member (i.e. €2,257). The mean ISEE value for the whole sample is €2,709.

The results of our sensitivity analysis based on a binary dependent variable rather than a categorical one overall confirm the previous findings (Table 4). Several studies underscore that cultural and other contextual elements may play a significant role in explaining behavioural responses to NTU of social policies (e.g. van Oorschot, 1991; Hancock et al., 2004; Hernanz et al., 2004; Bertrand et al., 2006). For this reason, as a further robustness check Model 3 replicates Model 2 replacing binary variables for the macro-area of residence with provincial (NUTS-3 level) fixed effects. Even in this case, however, the coefficients show a high degree of consistency with the previous ones.

Table 4 – Marginal effects on the level of non-take-up (logit model)

Variables	Model 1	Model 2	Model 3
Foreign	0.028***	0.031***	0.031***
Aged 41–60	0.066***	0.065***	0.065***
Aged 61 or over	0.063***	0.056***	0.057***
2 members	0.015***	0.013***	0.014***
3 members	-0.101***	-0.103***	-0.101***
4 or more members	-0.185***	-0.185***	-0.182***
Presence of at least one underage member	-0.092***	-0.092***	-0.092***
North-East	-0.142***	-0.143***	
Centre	-0.079***	-0.078***	
South	-0.028***	-0.026***	
Islands	0.020***	0.023***	
ISEE = 1–2,000 euros	0.071***	0.070***	0.069***
ISEE = 2,001–4,000 euros	0.255***	0.254***	0.253***
ISEE = 4,001–6,000 euros	0.280***	0.281***	0.280***
Female		0.007***	0.008***
Presence of at least one employee		-0.020***	-0.020***
Presence of at least one self-employed worker		-0.008***	-0.009***
Presence of at least one unemployed member		-0.004***	-0.005***
Presence of at least one disabled member		0.003***	0.003***
Rent house		0.001	0.001
Other tenure status		-0.015***	-0.015***
Log(household financial wealth)		0.002***	0.002***
Provincial fixed effects	No	No	Yes
Observations	1,761,671	1,761,671	1,761,671
Sum of weights	3,282,968	3,282,968	3,282,968
Pseudo R-squared	0.214	0.215	0.217
Log likelihood	-1,228,000	-1,226,000	-1,224,000

*Note: Robust standard errors and calibration weights are considered. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.*

5. Conclusions

Thanks to the two-step procedure that characterises access to the Italian welfare system, this paper draws new and empirically based conclusions on the overall non-take-up (NTU) of social policies in a European country. In particular, we shed light on which categories of the poor population report a greater level of NTU by comparing administrative records (i.e. ISEE declarations for the year 2018) to sample survey data (i.e. IT-SILC 2017).

By means of tax-benefit microsimulation techniques, which we employ to estimate ISEE values for the whole IT-SILC 2017 sample population, we highlight two important preliminary findings. First, the number of households that would report an ISEE value lower than 6,000 euros (i.e. those who are very likely to be experiencing severe poverty conditions and thus are eligible for at least one social

benefit) is found to be 1.1 million greater than the actual number we observe in administrative data. Second, administrative data appear to be hardly representative of the (hypothetical) poor population, especially with regard to age structure and household composition (e.g. the presence of at least one underage member).

Under the assumption that NTU among the poor and ISEE representativeness issues are strictly related to each other, we analyse the level of NTU of the Italian welfare system by calibrating administrative records to our population of interest. Our descriptive results show that younger and larger households tend to be more inclined to claim social benefits, while the opposite holds for older households, those with underage children, and those who are ‘less poor’ among the poor. The econometric analysis, based on the estimation of logit models, confirms that and highlights further interesting results. First, migrant households and those living in the islands report a peculiar ‘asymmetric U-shaped’ NTU, which may be due to the within heterogeneity characteristic of these population groups. Second, households headed by a female overall reveal a greater probability of being excluded from the welfare system with respect to those headed by a male. Third, NTU seems to be linked to the occupational status of household members, as well as the households’ tenure status and financial wealth.

The results are in line with the existing literature, in which researchers have analysed NTU looking at the UK (Sohrab, 1994), US (Currie and Grogger, 2002; Grogger and Michalopoulos, 2003; Currie, 2004; Campbell et al., 2005; Figlio et al., 2015), and several European countries (Sohrab, 1994; Matsaganis et al., 2010; Bargain et al., 2012; Vinck et al., 2018) at different moments in time. We can therefore draw one important conclusion regarding the analysed phenomenon: it is revealed to be spread further across developed countries and enduring over time, especially among specific categories of the poor population.

The data availability does not allow disentangling between the several reasons for NTU of social policies (e.g. stigma, lack of knowledge about entitlement, fear of red tape, language difficulties). The administrative nature of the data we used, however, probably underscores the role of the fear of red tape as important source of NTU in the Italian welfare system.

We believe that the results of our analysis have relevant policy implications and can serve as the starting point for a more informed discussion about how to reduce NTU among the poor. In general, our findings suggest that a relevant portion of the poor ends up not having access to the welfare system despite being entitled to its benefits. A feasible solution would be to make the receipt of social transfers as automatic as possible (e.g. sending a notification/mail when a household is potentially eligible, as determined by its tax declarations or other administrative records), or at least simplifying the claim procedures. This is particularly crucial in Italy, where red-tape bureaucracy is often considered more common and complex than necessary, and the strategies implemented by national institutions to deal with this issue appear ambiguous.⁹ An automatization of claiming procedures would (at least partially) solve also issues related to stigma and lack of information about benefits and services provided by the welfare system.

⁹ On this regard, the National Social Security Institute (*Istituto Nazionale della Previdenza Sociale*, INPS) has interrupted the notification service offered to pension recipients in 2013. Eligibility for a series of social benefits (e.g. increases to inability, old-age/seniority and survivor pensions; increases to the social allowance; family allowances for pensioners’ households; and others) is therefore no longer notified to potential recipients. However, INPS is committed to play a proactive role in reducing the non-take-up of social benefits (INPS, 2019). Testimony of this is the project launched in 2019 (*Inps per tutti*) with the aim to facilitate the submission process for homeless people.

It must be recalled, however, that a portion of the poor population will always remain excluded because of involvement in the shadow/black economy and greater reluctance to be subject to tax inspection. In particular, our results emphasise the importance of improving the quality of policymakers' communication (e.g. simple language and policy design, clear eligibility criteria, multi-channel advertisement) when introducing a new measure, especially when aiming to combat poverty conditions or focusing on specific categories with high levels of economic vulnerability (e.g. migrant households or the elderly).

Furthermore, our study is particularly significant in the context of the current COVID-19 pandemic. The social distancing and lockdown measures introduced to limit the spread of the virus are indeed expected to result in a dramatic drop in household incomes because of the negative effects on the labour market. The increase in economic needs may reduce the level of NTU among the poor households (the shadow economy has probably been one of the most affected). Nonetheless, the pandemic will probably reveal new categories of poor, such as employees in non-essential sectors or those performing manual labour for which working from home is hardly possible. In both cases – 'previous poor' and new poor households – especially in the current emergency situation, a simplification of claiming procedures (even if temporary) would facilitate the take-up of redistributive policies and boost the speed of access to benefits for households facing severe economic difficulties.

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