Assessing the Distributional Effects of Housing Taxation in Italy: From the Actual Tax Code to Imputed Rent♣

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Abstract

In this paper we study the actual distributive impact of housing taxation on Italian households and then compare this with an alternative approach of taxation by considering the imputed rent from owner-occupied dwelling as a component of the personal income tax gross income. Our main findings can be summarized as follows. First, both ICI and TARSU show a moderate regressive impact with respect to household disposable gross income, while PIT on dwellings other than the main residence is progressive. Second, all households owning the main residence gain from the 2008 housing taxation reform, but tax cuts are mostly concentrated on the last three deciles of household equivalent disposable gross income, so that the richest benefited most. Finally, by including imputed rent from owner-occupied dwellings as a component of the personal income tax base, we find that overall inequality is reducing; broadening the personal income tax base could lead to a consistent reduction of tax rates.

JEL Codes: C81, H24, R21

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1. Introduction

The analysis of the redistributive impact of public policies has been historically confined to the role of taxation and cash transfers. However, in recent decades, economic literature has started analyzing the redistributive role of non-cash transfers, like the public provision of welfare services such as health or education. But if non-cash transfers are considered as components of net disposable income, then also other in-kind income sources should be included in a more comprehensive definition of income. Among these, one that is of particular quantitative significance is the imputed rent from owner-occupied housing. Indeed, the Canberra Group argues in favour of introducing imputed rent and other non-cash income sources in the measurement of disposable income (Canberra Group, 2001). The main results of the scant literature assessing the impact of imputed rents on income distribution sums to a somewhat mixed evidence (e.g., Yagi and Tachibanaki, 1998, for Japan; Frick and Grabka, 2003, for UK, US, and West Germany; Callan and Keane, 2009, for Ireland).

Considering imputed rent in Italy is probably more important than in other industrialized countries, given recent trends characterizing housing. Four stylized facts emerge from a recent analysis by D'Alessio and Gambacorta (2007) that are worth mentioning. First, the share of owner-occupied housing has increased heavily since 1977, climbing to about 70 percent of households. This characterizes Italy has one of the countries with the highest share of owners-occupiers. Second, market prices of houses rose dramatically in the same period: the average value of the dwelling with respect to household income climbed from 3.5 in 1977 to 5.8 in 2004. Third, also the ratio between average rent and average household income increases sharply in the same period, from 10.1 to 17.9 percent, also as a result of liberalization occurred during the '90s. Finally, public expenditures for housing has been registered to be one of the lowest among industrialized countries: a mere 0.1 percent of welfare expenditures compared with an average 3.5 percent in the EU countries.

Analysis of non-cash transfers are quite rare considering Italian data (e.g., Sonedda and Turati, 2005). Analysis considering imputed rents are even more rare: a almost unique example is D'Ambrosio and Gigliarano (2007). Using Bank of Italy and EU-

SILC data, the authors show that income distribution becomes more equal, with imputed rent favouring the situation of the weaker classes.

However, one point that this literature has only marginally analyzed yet is the role of housing taxation. In this paper, somewhat in the spirit of Yagi and Tachibanaki (1998), we try to fill this gap. We first study the distributive impact of housing taxation on Italian households considering actual legislation, and then compare this with an alternative approach by including imputed rent from owner-occupied dwelling as a component of the personal income tax gross income. The Italian policy makers have been almost silent on housing issues during the last three decades, even if throughout this period the purchase of the main residence has been promoted by tax credits aimed at reducing the main residence mortgage interests expenditure. The last two public budget laws provided consistent tax credits for tenants and the relief from the property tax for all owners of the main residence.

Three are the main goals of this work: first, we simulate the distribution of the 2006 housing taxation on households; second, we evaluate the "winners" from the 2008 housing taxation reform; finally, we highlight the problems and the distributional consequences of this system of taxation with respect to a tax system in which the imputed rent is included in the tax base. Lacking official information on the disposable income distribution and housing properties, the analysis relies on a static microsimulation model that match the Bank of Italy Survey on Household Income and Wealth and the Family Expenditure Survey carried out by the Italian National Statistic Office (ISTAT) and simulate all the most important taxes on income and housing wealth. Our main findings can be summarized as follows. Both the property tax and the waste management service tax show a moderate regressive impact with respect to the household disposable gross income, while direct taxation on income from dwellings other than the main residence is progressive. All households owning the main residence gain from the 2008 housing taxation reform, but tax cuts are mostly concentrated on the last three deciles of household equivalent disposable gross income. By including imputed rent from owner-occupied dwellings as a component of the personal income tax base, we find that overall inequality is reducing; broadening the personal income tax base could lead to a consistent reduction of tax rates.

The remainder of the paper is structured as follows. Section 2 provides essential background information on the housing taxation system in Italy. In Section 3 we discuss the data and present the microsimulation model. Section 4 reports the results of our analysis. Section 5 concludes.

2. Housing Taxation in Italy

Tax revenues from houses and buildings are in Italy about 40 billion of euro (2.7 percent of GDP and 5.9 percent of total tax revenues). There are two groups of taxes on buildings: a) taxes on house ownership or dwelling utilization; b) taxes due when buying or selling as well as restructuring a dwelling or any other kind of building.

The main taxes of the first group are: the taxation of the personal income from houses within the personal income tax (hereafter House-PIT) (about 17 percent of the total revenues from houses), the property taxation (hereafter ICI, from *Imposta Comunale sugli Immobili*, Municipal Tax on Buildings, about 25 percent) and the taxation due for the waste management (hereafter TARSU, from *Tassa per lo Smaltimento dei Rifiuti Solidi Urbani*, Urban Waste Management Tax, about 12 percent). The remaining 46 percent of the revenue comes from taxes of the second group: the Value Added Tax (19 percent), the Registry, the Mortgage and the Land Register tax (21 percent) and other minor forms of taxation (6 percent).

Since we work here on a static microsimulation model, in this paper we focus only on the first group of taxes. We also limit ourselves to households, leaving aside buildings owned by public and private firms. Estimated revenues from the House-PIT are about 7 billion euro in 2007, while those from ICI are about 5.2 billion euro (that dropped to 2.4 billion after the 2008 ICI reform); the revenue from TARSU are about 3 billion euro. As for the House-PIT, our estimates are close to figures provided by the Ministry of Finance. On the other hand, aggregate information on actual revenues from both ICI and TARSU paid by households are not available, but according to practitioners should be approximately half of total revenues as in our estimates.

House-PIT. The Italian Personal Income Tax (hereafter PIT) considers six classes of incomes: a) income from wages, salaries and pensions; b) income from self-employment; c) income from business activity; d) income from buildings or lands; e) financial capital incomes; f) plus a residual class of other incomes. Since many income sources are taxed under a separate regime (e.g., income from capital assets) and some others are highly under-estimated (e.g., income from buildings or lands), the Italian PIT is not a comprehensive income tax despite the array of income categories included in the tax base.

Incomes from dwellings are determined in different ways according to the kind of use, and they are imputed to each owner or occupier in usufruct according to her percentage of ownership. Current rules in the Tax Code identify income for the taxpayer dwelling as the cadastral income, i.e. a hypothetical rent based on the property description and valuation listed in the local Land Register (the so-called *Catasto Fabbricati*), which was last revised in 1939. Income from unoccupied or holiday homes is equal to cadastral income augmented by one third. Finally, income from rented dwellings is equal to 85 percent of the actual rent.

The income from the main residence is considered as part of the PIT gross tax base, but it can be fully deducted starting from 2001. Hence, the main residence is basically exempted from PIT. On the contrary, income from other dwellings is included in the PIT tax base according to the rules described above, and no deductions are available.

As in other countries, the main residence is favoured also along other dimensions. Indeed, some expenditures in purchasing or in restructuring the main residence allow the owner a tax credit. A tax credit equal to 19 percent of yearly paid interests (up to 687 euro) is allowed when funding the purchase through a mortgage. A tax credit is available also for restructuring expenditures: the total expenditure (up to 48,000 euro from 2003 and up to about 77 thousand euro before 2003) has to be split in 10 years; every year a 41 percent (or 36 percent depending on the year the expenditure was incurred) tax credit is allowed. Up to the last year no tax credits were allowed for renters of the main residence. At present a tax credit related to personal income of the renter (up to about 30,000 euro) is allowed; it is higher for renters younger than 30 years old.

There are at least two important problems arising from the current housing taxation: on the one hand, the difference between the actual tax base and the actual market values; on the other hand, the correlation between dwelling income taxation and dwelling wealth taxation (see below on ICI). With respect to main residence, actual tax base and actual market values are very different: according to our estimates, the mean value of the main residence cadastral income is about 6 percent of the yearly rent the household could charge assuming it wanted to rent the dwelling; the same situation occurs by considering other types of dwellings. Moreover, income from buildings is also characterized by a high level of tax evasion (e.g., Reviglio, 1998): at least half of cashed rents are not included in the tax base by landlords, so that tax cheaters are taxed only on the cadastral income.

ICI. At present, there is not a tax on the *overall* value of the household wealth in Italy. However, since 1993 a property tax (ICI) on each dwelling has been introduced. Tax revenues accrue directly to each Municipality where the buildings are located, and represent their major source of revenues. In theory, the ICI Tax Base should be the market value of the dwelling. In practice, this is not the case: according to our estimates, the overall ICI tax base is about 23 percent of the overall market value of dwellings. The Land Register value of the dwelling is evaluated by simply multiplying cadastral income by 100, so that the value of the dwelling is practically equal to the perpetual annuity of the cadastral income with a 1 percent discount rate. Each Municipality can choose the tax rate in a range between a minimum of 4 per thousand and a maximum of 7. The mean average tax rate is about 5-6 per thousand, so that ICI tax debt is effectively equal to 50-60 percent of the cadastral income. Up to 2007, a tax allowance on the main residence was available. Starting from 2008, no ICI is due on the main residence.

TARSU. Waste management services are financed by a Municipal tax. The taxpayers are the households living in the dwellings regardless of their tenure status, and the owners of unoccupied or holiday homes. Contrary to what one could expect, the tax debt is not related to the amount of waste produced by each household, but the size

of the house. In particular, tax debt is determined by multiplying a tariff per square meter by the total square meters of the dwelling. Some tax reductions are allowed for people living alone, unoccupied dwellings, and poor households.

3. Data and Microsimulation Model

3.1. Data

Together with the IT-SILC Survey, the Bank of Italy Survey of Household Income and Wealth (hereafter SHIW-BI) is the most important Italian source of information for the analysis of the characteristics and the evolution of the Italian society. It is carried out every two years. Thirty-one surveys are available up to now, but panel data has only been available since 1989. The sample is selected first of all by choosing the Municipalities with a strata method, and then the Households with a random method (Brandolini, 1999). The latest available survey - published in 2008 – contains information on Household Income and Wealth in the year 2006, covering 7,768 households, and 19,848 individuals. The sample is representative of the Italian population, composed by 23,5 millions households and 60 millions individuals. According to definition in the survey, "*a household is a group of persons living together, whether related by kinship or not, who fulfill their needs by pooling all or part of the income earned by the members*"; …"*the head of the household is defined as the person earning the highest income (excluding property income)*" (Bank of Italy, 2008).

Relevant information in the SHIW-BI include: net income, net wealth, financial assets (bank deposits, government bonds, other securities and trade credits), real assets (real estate, business equity, valuables), and financial liabilities (liabilities towards banks, trade liabilities, liabilities towards other households). Income is defined on personal basis. Interests, dividends, financial assets and real estates information are available only at the household level. However, by exploiting information on the ownership shares, it is possible to evaluate the value of real estates also at the individual level.

3.2. The Microsimulation Model

The microsimulation model used in this paper estimates all the most important taxes and contributions characterizing the Italian fiscal system: PIT, ICI, TARSU, IRAP (a regional tax on business), taxes on financial rents, plus social contributions. In order to estimate expenditures for utility services (light, power, heating) used to evaluate the *net* imputed rent, we match the SHIW-BI dataset and the ISTAT Survey on consumption[1].

The SHIW-BI definition of each individual *net* income (Y) is different from the Tax Code definition of net income: the microsimulation model considers all incomes included in taxation, incomes exempt from taxes and incomes taxed under a separate regime in order to evaluate net and gross incomes earned by each person. The simulation of the PIT gross income distribution is given in the appendix; results are very close to the Ministry of Finance official statistics.

Once each individual incomes have been simulated, we evaluate the disposable net and gross income of each household. The gross disposable income is equal to the sum of gross PIT income, family benefits (the so-called *Assegni al Nucleo Familiare,* a small cash transfer characterizing the Italian Welfare State, varying with the number of children and income), incomes exempt from taxation, gross incomes from financial assets, gross incomes taxed under a separate regime. From this result, we subtract the mortgage interests. The net disposable income is equal to the gross disposable income net of all taxes considered in the model: PIT, taxes on financial assets, taxes due on income taxed under a separate regime, ICI, TARSU, and IRAP. We subtract the mortgage interests to the result. In the following analysis, we consider all the households in the dataset; in particular, we do not drop households with zero household disposable income in order to obtain results on a homogeneous sample. Finally, in order to obtain the equivalent disposable income we adopt the Cutler Scale (CS), defined as:

$$CS = \left(N_A + .5N_C\right)^{.65}$$

where N_A and N_C are respectively the number of adults and children within each household.

[1] Notice that the microsimulation model is able to estimate also VAT. Since we are focusing on housing in a static model, we excluded here this tax.

The cadastral income is equal to the cadastral value of the dwelling divided by 100. The problem is the estimation of the cadastral value of each dwelling. The National Land Agency estimates the number and the composition, as well as the overall cadastral value of dwellings (i.e. the overall ICI tax base). The SHIW-BI dataset contains information on the current market value of each dwelling own by households. We compare these two aggregate values in order to obtain the average underestimation of overall cadastral values with respect to overall market values. Then, we imputed the same percentage of underestimation to the real value of each dwelling declared by each interviewed. By dividing the result obtained by 100, and using the percentage of ownership of each person within the household, we obtain the cadastral income included in the definition of PIT gross income. As ICI is a Municipal tax, the simulation of the ICI tax paid by each taxpayer considers the mean value of the tax rate and the mean value of the tax credit on the regional basis. All these estimates related to individuals are presented in the Appendix.

4. Results

4.1. Some preliminary statistics on household dwellings

The National Land Agency estimates the total number of buildings to be 60.8 million. The number of residence dwellings is 30.8 million: 26.2 million (85 percent) are owned by households, while the remaining 4.6 million (15 percent) are owned by public and private firms.

Italian households are 23.5 million (Table 1): 16.8 million (71.7 percent) are the owner-occupiers of their main residence, or occupiers in usufruct; 5 million (21.3 percent) rent or occupy it under redemption agreement (the so-called "*a riscatto*"); 1.6 million (7.0 percent) are rent-free tenants (and in 92 percent of the cases, the dwelling is owned by relatives or friends). Almost 70 percent of tenants rent the house from other households; 25.7 percent of tenants rent from public bodies, like the *Istituto Autonomo Case Popolari* (a locally funded Institute providing housing to the poor), but also Regions, Provinces, Municipalities; and 4 percent from private firms. Almost all the

owner-occupiers (88.7 percent) are not burdened with a mortgage, while only a small percentage (11.3 percent) have a mortgage[2].

Table 1: Households composition by tenure status

Tenure Status	Number of households	Composition
Owner occupiers without mortgage or in usufruct	**14,944,066**	**63.6**
Owner occupiers with mortgage	**1,900,215**	**8.1**
Tenants or occupiers under redemption agreement	**4,999,697**	**21.3**
Rent-free tenants	**1,638,022**	**7.0**
Total	**23,481,999**	**100.0**

Source: Own calculations based on SHIW.

As in Great Britain and US, the share of the households living in owner-occupied dwellings is about 70 percent in Italy (about 45 percent in Germany), while renters (including rent-free tenants) are about 30 percent (a half in Germany). The composition of owner-occupied dwellings is different: the share of Italian households without mortgage is three times bigger than that in Great Britain, Germany and US (Frick and Grabka, 2003); Italian households with mortgage are only 8.1 percent in Italy and about 25 percent in Germany and 50 percent in Great Britain and US.

Another relevant difference between Italy and other countries is related to social housing: only 4.2 percent of households (one million tenants, about one fifth of total tenants) rent a council house at a subsidized rate. Very few countries (e.g., Germany and Portugal, with figures of 6.5 and 3.3 percent respectively) share this situation. On the contrary, most other EU countries have considerable higher percentages of households living in council houses: examples include Netherlands (34.6 percent), Sweden and Great Britain (21 percent), and Denmark (20 percent) (D'Ambrosio and Gigliarano, 2007).

Looking at the distribution of households by deciles of equivalent disposable net income, the higher the decile, the higher the percentage of owner occupier within each decile (Table 2). Since 71.7 per cent of household own their main residence, the gap between the first and the last decile is relatively small (59.1 percent to 76.1 for

[2] Gale et al. (2007) suggest that mortgage interest deduction seem to have a small impact on homeownership.

household without mortgage and 5.3 percent to 10.1 for households with mortgage). As expected, the percentage of tenants within each decile is decreasing: it is 26.7 percent in the first decile and 10 percent in the last. The same picture is observed for rent-free tenants.

Table 2: Distribution of Households by decile of equivalent disposable net income

	Tenure status				
Decile	**Owner occupiers without mortgage or in usufruct**	**Owner occupiers with mortgage**	**Tenants or occupiers under redemption agreement**	**Rent-free tenants**	**Total**
1	**59.1**	**5.3**	**26.7**	**8.9**	**100.0**
2	**59.6**	**4.1**	**27.2**	**9.1**	**100.0**
3	**59.3**	**7.1**	**24.0**	**9.7**	**100.0**
4	**62.1**	**7.1**	**22.2**	**8.6**	**100.0**
5	**60.3**	**7.6**	**25.4**	**6.7**	**100.0**
6	**65.9**	**9.1**	**19.4**	**5.6**	**100.0**
7	**64.1**	**9.1**	**20.8**	**6.0**	**100.0**
8	**63.2**	**11.9**	**19.7**	**5.2**	**100.0**
9	**67.6**	**10.1**	**16.5**	**5.8**	**100.0**
10	**76.1**	**10.1**	**10.0**	**3.8**	**100.0**
Total	**63.6**	**8.1**	**21.3**	**7.0**	**100.0**

Source: Own calculations based on SHIW.

Not surprisingly, the share of households still paying off their mortgage is decreasing when looking at households by the age of the head, while the opposite occurs considering owner-occupiers without a mortgage. Moreover, the first three age class have a considerable high percentage of tenants, while it is only 15 percent for household in which the head is older than 75 (Table 3).

Excluding owner occupied dwellings (about 16.8 million), the number of other dwellings owned by families is about 9.3 million: 3.5 million are rented to other families, 1.5 millions are offered free of charge, while the unoccupied dwelling and holiday homes are 4.3 million.

Table 3: Distribution of Households by age class

	Tenure status				
Age class	**Owner occupiers without mortgage or in usufruct**	**Owner occupiers with mortgage**	**Tenants or occupiers under redemption agreement**	**Rent-free tenants**	**Total**
≤ 25	**44.5**	**8.0**	**37.0**	**10.5**	**100.0**
>25 & ≤ 35	**35.5**	**16.0**	**36.6**	**12.0**	**100.0**
>35 & ≤ 45	**49.3**	**15.7**	**24.4**	**10.6**	**100.0**
>45 & ≤ 55	**62.2**	**9.1**	**21.2**	**7.5**	**100.0**
>55 & ≤ 65	**73.8**	**5.4**	**17.2**	**3.6**	**100.0**
>65 & ≤ 75	**77.7**	**1.5**	**16.8**	**4.0**	**100.0**
>75	**80.4**	**0.3**	**15.1**	**4.3**	**100.0**
Total	**63.6**	**8.1**	**21.3**	**7.0**	**100.0**

Source: Own calculations based on SHIW.

4.2. The 2006 Distribution of Housing Taxation

About 16.8 millions of households own the house where they live. 50 percent of main residences have only one individual as owner, while the other 50 percent have two or more owners. The PIT taxpayers with a positive main residence cadastral income are about 24.3 million (40.5 percent of the population). Estimates related to individuals are presented in the Appendix. As discussed above, the cadastral income is very low with respect to actual market values. The mean value of the main residence cadastral income is 524 euro. It increases with respect to income deciles, but not as much as could be expected: it is 366 euro in the first decile and only 904 euro (about 2.5 times) in the last one (Table 4). Moreover, the ratio between the main residence cadastral income and the household disposable income is decreasing with income: it is 5 per cent in the first decile and only 1.9 percent in the last. For these reasons, as long as the main residence ICI tax base is 100 times the main residence cadastral income, the ICI tax is not clearly expected to be progressive with respect to household disposable income.

Table 4: Value of main residence cadastral income by decile of household equivalent disposable income

Decile	Percentage of household with positive main residence cadastral income	Mean value of main residence cadastral income (euro)	Mean value of main residence cadastral income / household income
1	64.4	366.4	5.0
2	63.7	362.0	2.9
3	66.4	367.3	2.3
4	69.2	406.4	2.3
5	67.9	494.3	2.5
6	74.9	483.8	2.0
7	73.2	508.6	1.8
8	75.1	570.4	1.8
9	77.7	668.0	1.7
10	86.2	903.9	1.3
Total	71.7	524.0	1.9

Source: Own calculations based on SHIW.

Table 5 reports the distribution of PIT households income from dwellings other than the main residence by deciles. Estimates related to individuals are presented in the Appendix. Notice that income from other dwellings owned by households is the cadastral income for unoccupied dwellings or holiday houses, as well as rented dwellings for which actual rent has not been included in the tax base; it is the actual rent for rented and declared dwellings. About one fourth of the households possesses at least one dwelling in addition to the main residence: the percentage is only 13.3 in the first decile and 53.1 in the last one. The richer the household, the higher the income from dwelling other than the main residence: it is only 964 euro for poorest households and about 14 thousands euro for the richest ones.

Once the distribution of cadastral incomes has been evaluated, we are able to turn to the simulation of the distribution of House-PIT, ICI and TARSU taxes by decile of household equivalent disposable gross income. As we highlight above, income from the main residence is not taxed. Notice that given the huge difference with respect to market values, hence the small values excluded, even if it were taxed no relevant changes with respect to the actual situation will emerge. To get some clues on this point, Figure 1

reports the difference of 2006 household equivalent net disposable income and the one that would have emerged by eliminating the main residence tax allowance, by considering only owner occupier households. This difference has then been divided by the household equivalent gross disposable income. Taxes would increase from .15 to .6 percent up to the third decile; then they would be decreasing. A simple explanation of this finding is that, in the first deciles there are many taxpayers with zero tax debts: by considering the cadastral income in the tax base, many of them would shift from zero to a positive tax debt. Then a moderate regressive effect is registered: this depends on the decreasing percentage of the main cadastral income with respect to the household disposable gross income.

Figure 2 report the incidence of the taxation on other dwellings owned by households. Only households with at least one dwelling other than the main residence are considered. Here the incidence is increasing: it is about .5 percent for household belonging to the first decile and 6 percent for households belonging to the last one.

Table 5: Value of other housing income by decile of household equivalent disposable income

Decile	Percentage of household with positive other housing income	Mean value of other housing income (euro)	Mean value of other housing income / household income
1	**13.3**	**964.2**	**11.6**
2	**14.7**	**1,709.6**	**12.9**
3	**18.0**	**1,847.2**	**11.3**
4	**19.6**	**1,652.2**	**8.6**
5	**21.6**	**2,402.1**	**11.7**
6	**27.7**	**2,124.4**	**8.3**
7	**21.9**	**2,526.6**	**8.5**
8	**31.1**	**2,758.1**	**8.1**
9	**40.9**	**4,922.8**	**12.0**
10	**53.1**	**13,733.8**	**20.3**
Total	**26.0**	**4,862.8**	**14.1**

Source: Own calculations based on SHIW.

Figure 1: Percentage variation in PIT taxation if the main residence cadastral income were considered in the PIT tax base

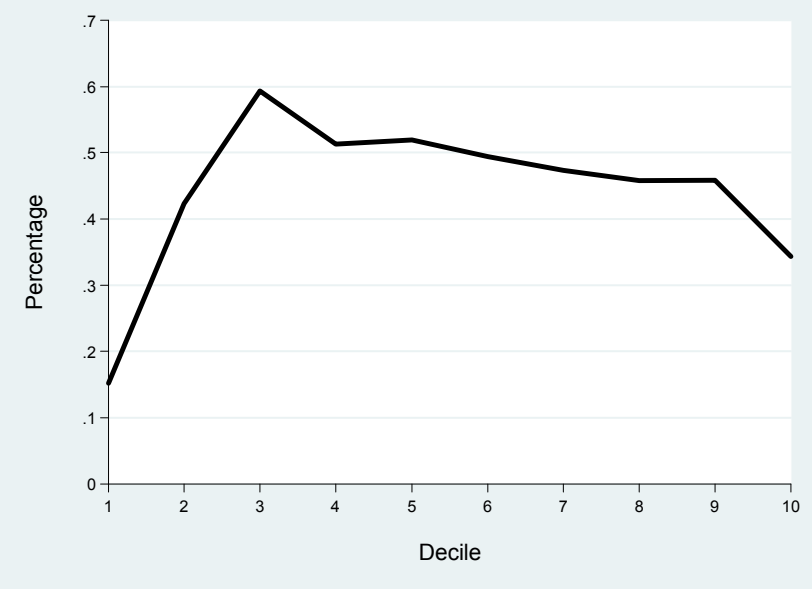
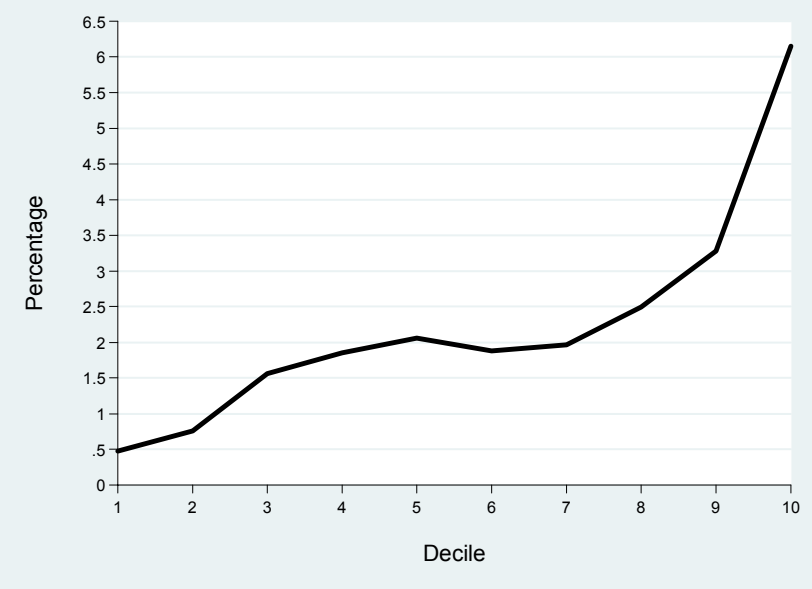


Figure 2: Incidence of the taxation on other dwellings owned by households



Both ICI and TARSU show a moderate regressive impact with respect to the household disposable gross income (only households with positive ICI and TARSU are considered, respectively): ICI paid on the main residence is 1.2 percent for the fist

decile and .4 percent for the last one (Figure 1); the same picture emerges considering the distribution of ICI on other dwellings (Figure 2), the main residence TARSU (Figure 3) and TARSU paid on other dwellings (Figure 4).

Figure 3: Incidence of ICI on the main residence

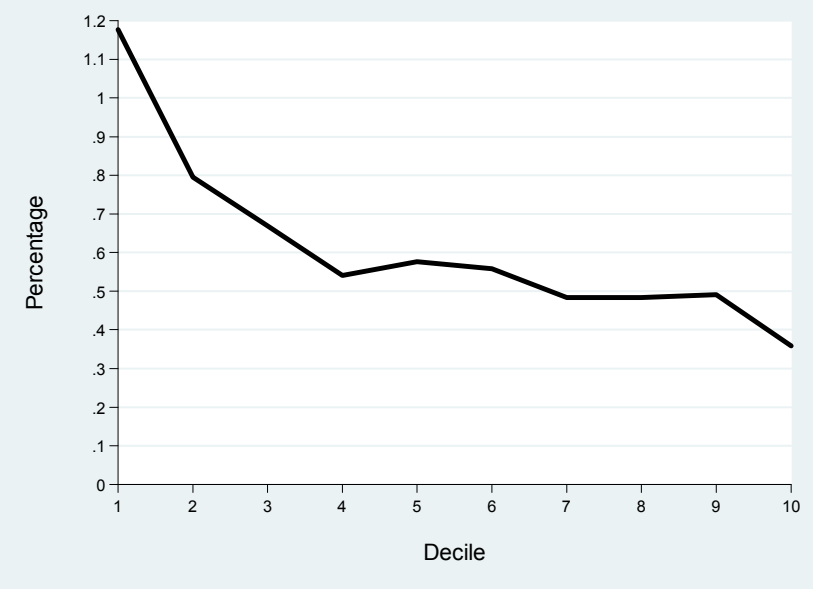


Figure 4: Incidence of ICI on other dwellings

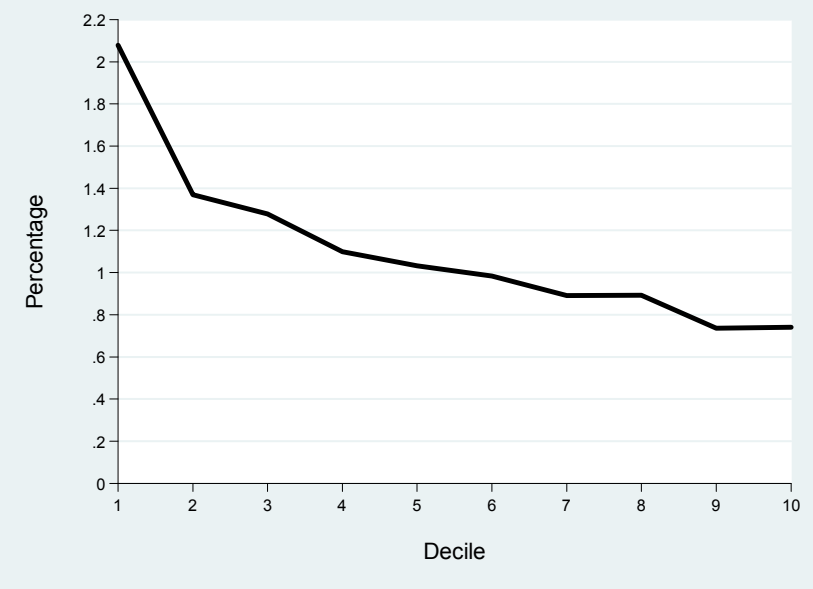


Figure 5: Incidence of TARSU on the main residence

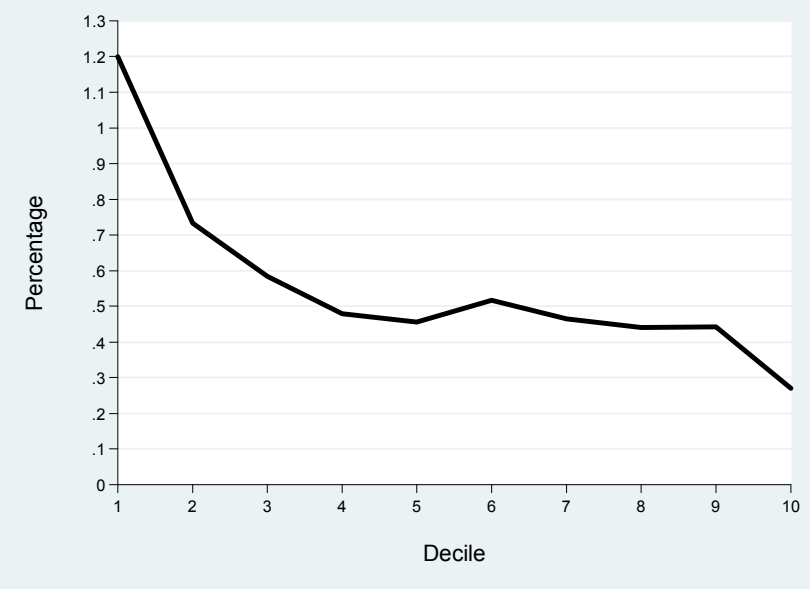
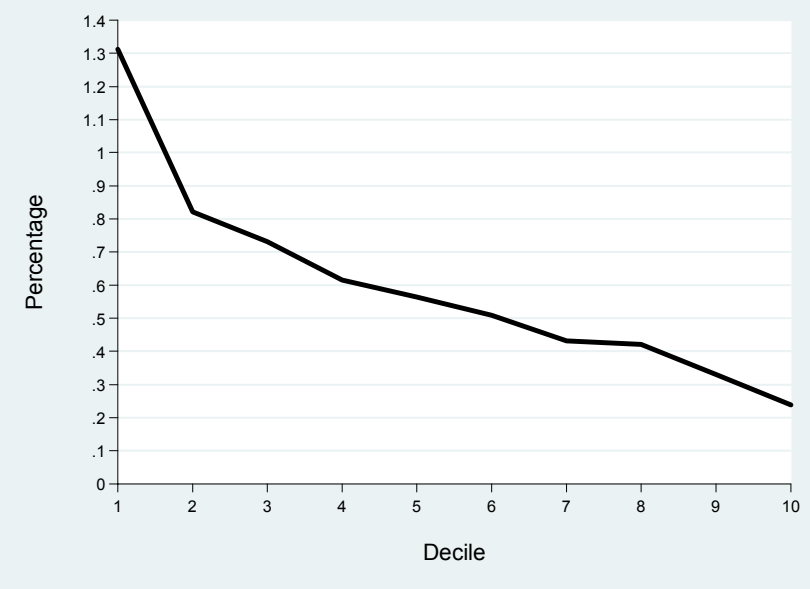


Figure 6: Incidence of TARSU on other dwellings



This is not surprising: a proportional property tax could be progressive with respect to income whenever housing wealth is increasing with respect to income. But ICI do not consider real market values of dwellings, and the cadastral values are highly underestimated. A similar situation is experienced by the TARSU: tax debt is

determined by multiplying a tariff per square meter by the total square meters of the dwelling. As long as income increases, the dimension of the dwelling does not increase proportionally.

4.3. The distributive impact of the 2008 housing taxation reform

Despite all these problems and the moderate regressive impact of housing taxation, no reforms of cadastral income evaluation have been proposed in the last decades. Moreover, the purchase of the main residence has been promoted through tax expenditures aimed at reducing the main residence mortgage interest expenditure. Finally, from 2008 ownership of the main residence is exempt from taxation not only with respect to income taxation, but also with respect to property taxation. There are two main concerns about this reform: on the one hand, ICI is the most important local tax, so that revenues accruing to Municipalities decreased from about 11 billion euro in 2006 to about 8 billion euro in 2008, with the difference being covered by state transfers that limit the local government responsibility; on the other hand, as long as the ownership of the main residence increases the taxpayer ability to pay, the 2008 tax cuts go in the direction of lowering the progressive impact of the tax system as a whole.

Before this reform, 16 percent of household with a positive ICI tax base (11.6 percent of all households) had to pay no ICI. Most of these households belonged to the lower part of the income distribution: their tax credit were bigger than the gross ICI. From 2008 no owner occupier has to pay ICI. The distribution of the tax cuts are increasing within the deciles, and mostly concentrated on the three top deciles of the income distribution: the last decile benefits one fourth of the overall tax cuts, while the share is 15 percent on the ninth and 11.7 on the eighth; on the other hand, the first decile gains only 4.7 percent, the second 4.8 percent and the third 5.3 (Table 6).

Table 6: Tax cuts distribution of the 2008 housing taxation reform

Households with positive ICI							
	2006			2008			
Decile	Main residence	Other dwellings	Total	Main residence	Other dwellings	Total	Distribution of the tax cuts between 2006 and 2008
1	43.0	18.8	49.4	0.0	18.8	18.8	4.7
2	44.2	22.3	53.8	0.0	22.3	22.3	4.8
3	48.6	24.7	57.0	0.0	24.7	24.7	5.3
4	52.1	24.7	59.0	0.0	24.7	24.7	6.3
5	57.9	25.6	63.2	0.0	25.6	25.6	8.6
6	64.0	32.1	72.1	0.0	32.1	32.1	8.9
7	65.6	26.1	70.9	0.0	26.1	26.1	9.5
8	69.3	33.9	73.8	0.0	33.9	33.9	11.7
9	74.2	44.0	80.5	0.0	44.0	44.0	15.0
10	83.9	55.5	89.6	0.0	55.5	55.5	25.0
Total	59.9	30.6	66.6	0.0	30.6	30.6	100.0

Source: Own calculations based on SHIW.

4.4. The imputed rent approach

As discussed above, one major problem with the actual taxation of housing income in Italy is the discrepancy between cadastral income and market values. What will happen to income distribution if we consider market values in place of cadastral income (i.e., if we update cadastral income to current market values)? Notice that this type of policy is almost equivalent to consider imputed rent - determined according to the market-value approach - in the PIT tax base[3]. According to most of the literature, excluding imputed rent amount to a subsidy for owner-occupation, and it is likely to favor highest income group (e.g., Aaron, 1970; Rosen, 1985). Including imputed rent in the tax base should then be equality enhancing.

Somewhat in the spirit of Yagi and Tachibanaki (1998), that simulate an analogous policy of including imputed rent in taxable income on Japanese data, we define both

[3] Frick and Grabka (2003) recall three different methodologies to compute imputed rent: the market-value approach, the capital market approach, and the opportunity cost approach.

gross and net imputed rent (hereafter IR). As for gross IR we consider the value interviewees indicated answering to the following question: "Assuming you wanted to rent this dwelling, what monthly rent do you or your household think could be charged?". As for net IR, we subtract the following costs to the gross IR: main residence ICI, main residence TARSU, mortgage interests and expenditures for utility services. Then we add the PIT tax credits on mortgage interests and on restructuring expenditures, i.e. the "subsidies" defined in the Tax Code. Notice that considering these tax credits, the net IR for some individuals is greater than the gross one: in all these (very few) cases, we impute the net IR equal to the gross one.

We consider four groups of households by their tenure status: owner occupiers without mortgage or occupiers in usufruct (group 1); owner occupiers with mortgage (group 2); tenants or occupiers under redemption agreement (group 3); rent-free tenants (group 4). According to the actual Tax Code, only households belonging to group 1 and 2 have a positive main residence cadastral income. We imputed the IR not only to these groups, but also to households belonging to group 4: they do not have the ownership of the dwelling, but they surely could gain a significant advantage in not paying the rent.

Let the overall household average income be 100, the actual mean gross income is about 113.8 for owner occupiers with mortgage, and 106.3 for owner occupiers without mortgage; on the contrary, it is considerable lower for tenants (82.6) and for rent-free tenants (79.4) (Table 7). The relative positions are very different whenever the (gross or net) IR from owner-occupied dwelling is considered as a component of the personal income tax gross income (Table 8 and 9): with the net IR definition, values are 109, 114.4, 72.8 and 84, respectively. The inclusion of IR yields a considerable reducing effect on income inequality, as already observed in other works (Frick and Grabka, 2003; D'Ambrosio and Gigliarano, 2007): Gini coefficient for equivalent household disposable gross income is .3823 with the reference model and decreases to .3632 and .3666 with the gross and net definition of IR. In order to evaluate changes in the between and within inequality by groups we also employ the mean logarithmic deviation (hereafter MLD), which allows the overall inequality to be perfectly decomposed in within and between group inequality (Tables 10, 11 and 12). Including IR we observe an increasing income inequality between groups and a decreasing income

inequality within groups. Similar comments emerges also when decomposing population by age groups and tenure status, both for the changes in relative positions, and the between/within component of inequality (Tables 13 to 18). In general, no clear pattern seems to emerge with respect to relative positions within each tenure status group, even though middle-aged appear to rank almost always among richest individuals.

The inclusion of both gross and net IR from owner-occupied dwelling as a component of the personal income tax gross income leaves the PIT redistributive effect almost constant (Table 19): this is due to the high share of households with a positive IR (all households but the tenants). Revenues will increases by about 2 percent of GDP. Given the broadening in the tax base following the inclusion of IR, one can also fix tax revenues at the actual level, and ask what reduction of tax rates this will allow. Not surprisingly, the reduction in the level of marginal tax rates would be consistent (Table 20, 21 and 22): with the net IR definition it could be possible to reduce the marginal tax rates by 5 percentage points on the first two brackets, by 1 percentage point on the third bracket and by 3 percentage points on the last one. Some reductions can be observed with the gross IR definition. Renters (which are also the poorest ones) could benefit the most from this marginal tax rate modification since they will have the same tax base as before.

Table 7: Relative income positions with 2006 definition of PIT gross income by tenure status

Tenure Status	Comp.	Gross disposable income	Net disposable income	Gini coefficient for gross disposable income	Gini coefficient for net disposable income
Owner occupiers without mortgage or in usufruct	63.6	106.3	105.4	0.3913	0.3389
Owner occupiers with mortgage	8.1	113.8	110.0	0.3392	0.3026
Tenants or occupiers under redemption agreement	21.3	82.6	85.8	0.3514	0.3042
Rent-free tenants	7.0	79.4	82.7	0.3584	0.3148
Total	100.0	100.0	100.0	0.3823	0.3316

Source: Own calculations based on SHIW.

Table 8: Relative income positions with gross IR by tenure status

Tenure Status	Comp.	Gross disposable income	Net disposable income	Gini coefficient for gross disposable income	Gini coefficient for net disposable income
Owner occupiers without mortgage or in usufruct	63.6	108.9	107.7	0.3599	0.3091
Owner occupiers with mortgage	8.1	120.1	115.5	0.3026	0.2637
Tenants or occupiers under redemption agreement	21.3	71.0	75.3	0.3514	0.3042
Rent-free tenants	7.0	84.0	86.8	0.3272	0.2866
Total	100.0	100.0	100.0	0.3632	0.3128

Source: Own calculations based on SHIW.

Table 9: Relative income positions with net IR by tenure status

Tenure Status	Comp.	Gross disposable income	Net disposable income	Gini coefficient for gross disposable income	Gini coefficient for net disposable income
Owner occupiers without mortgage or in usufruct	63.6	109.0	107.8	0.3652	0.3139
Owner occupiers with mortgage	8.1	114.4	110.6	0.3177	0.2796
Tenants or occupiers under redemption agreement	21.3	72.8	76.9	0.3514	0.3042
Rent-free tenants	7.0	84.0	86.8	0.3311	0.2899
Total	100.0	100.0	100.0	0.3666	0.3161

Source: Own calculations based on SHIW.

Table 10: Inequality decomposition with 2006 definition of PIT gross income by tenure status

	MLD	Within group MLD	Between group MLD	Within group (% of MLD)	Between group (% of MLD)
Gross disposable incombe	**0.3467**	**0.3394**	**0.0073**	**97.9**	**2.1**
Net disposable incombe	**0.3064**	**0.3015**	**0.0048**	**98.4**	**1.6**

Source: Own calculations based on SHIW.

Table 11: Inequality decomposition with gross IR by tenure status

	MLD	Within group MLD	Between group MLD	Within group (% of MLD)	Between group (% of MLD)
Gross disposable incombe	**0.2902**	**0.2742**	**0.0160**	**94.5**	**5.5**
Net disposable incombe	**0.2441**	**0.2329**	**0.0112**	**95.4**	**4.6**

Source: Own calculations based on SHIW.

Table 12: Inequality decomposition with net IR by tenure status

	MLD	Within group MLD	Between group MLD	Within group (% of MLD)	Between group (% of MLD)
Gross disposable incombe	**0.2992**	**0.2853**	**0.0139**	**95.4**	**4.6**
Net disposable incombe	**0.2496**	**0.2399**	**0.0097**	**96.1**	**3.9**

Source: Own calculations based on SHIW.

Table 13: Relative income positions with 2006 definition of PIT gross income by age class

Tenure status	Age class	Comp.	Gross disposable income	Net disposable income	Gini coefficient for gross disposable income	Gini coefficient for net disposable income
Owner occupiers without mortgage or in usufruct	≤ 25	0.4	108.1	111.7	0.3594	0.3407
	>25 & ≤ 35	3.5	91.1	93.3	0.3350	0.2998
	>35 & ≤ 45	11.2	109.5	106.3	0.4202	0.3629
	>45 & ≤ 55	11.5	114.2	110.8	0.4155	0.3661
	>55 & ≤ 65	12.4	121.0	118.4	0.3635	0.3200
	>65 & ≤ 75	13.0	106.8	106.8	0.3763	0.3214
	>75	11.6	83.6	86.9	0.3591	0.3011
Owner occupiers with mortgage	≤ 25	0.1	126.2	123.9	0.0322	0.0141
	>25 & ≤ 35	1.6	97.0	95.8	0.2600	0.2309
	>35 & ≤ 45	3.6	106.3	103.0	0.3512	0.3254
	>45 & ≤ 55	1.7	136.7	128.0	0.3922	0.3317
	>55 & ≤ 65	0.9	130.5	127.4	0.2867	0.2499
	>65 & ≤ 75	0.2	101.8	103.3	0.1952	0.1803
	>75	0.0	172.7	164.5	0.3204	0.2697
Tenants or occupiers under redemption agreement	≤ 25	0.3	76.2	79.1	0.3710	0.3237
	>25 & ≤ 35	3.6	82.8	86.6	0.2851	0.2498
	>35 & ≤ 45	5.6	84.1	87.7	0.3161	0.2826
	>45 & ≤ 55	3.9	87.6	89.2	0.3601	0.3114
	>55 & ≤ 65	2.9	103.4	101.7	0.4803	0.4163
	>65 & ≤ 75	2.8	67.6	73.7	0.2982	0.2577
	>75	2.2	62.1	68.6	0.2818	0.2339
Rent-free tenants	≤ 25	0.1	49.2	58.1	0.3482	0.3164
	>25 & ≤ 35	1.2	77.5	81.3	0.3543	0.3183
	>35 & ≤ 45	2.4	79.1	82.3	0.3516	0.3126
	>45 & ≤ 55	1.4	90.2	92.5	0.3058	0.2655
	>55 & ≤ 65	0.6	76.4	79.4	0.3534	0.3191
	>65 & ≤ 75	0.7	71.5	75.8	0.3817	0.3271
	>75	0.6	75.6	79.1	0.4158	0.3488
Total	Total	100.0	100.0	100.0	0.3823	0.3316

Source: Own calculations based on SHIW.

Table 14: Relative income positions with gross IR by age class

Tenure status	Age class	Comp.	Gross disposable income	Net disposable income	Gini coefficient for gross disposable income	Gini coefficient for net disposable income
Owner occupiers without mortgage or in usufruct	≤ 25	0.4	114.5	117.1	0.3530	0.3280
	>25 & ≤ 35	3.5	95.7	97.3	0.3029	0.2663
	>35 & ≤ 45	11.2	110.5	107.6	0.3856	0.3290
	>45 & ≤ 55	11.5	114.1	111.0	0.3895	0.3399
	>55 & ≤ 65	12.4	121.1	118.6	0.3391	0.2962
	>65 & ≤ 75	13.0	111.7	111.0	0.3452	0.2936
	>75	11.6	89.5	92.1	0.3275	0.2732
Owner occupiers with mortgage	≤ 25	0.1	131.4	127.7	0.0602	0.0387
	>25 & ≤ 35	1.6	103.8	101.7	0.2282	0.1960
	>35 & ≤ 45	3.6	117.0	112.3	0.3138	0.2784
	>45 & ≤ 55	1.7	135.9	127.6	0.3563	0.3020
	>55 & ≤ 65	0.9	130.7	127.6	0.2555	0.2200
	>65 & ≤ 75	0.2	113.2	112.8	0.2005	0.1780
	>75	0.0	163.5	156.5	0.2867	0.2413
Tenants or occupiers under redemption agreement	≤ 25	0.3	65.5	69.5	0.3710	0.3237
	>25 & ≤ 35	3.6	71.2	76.1	0.2851	0.2498
	>35 & ≤ 45	5.6	72.3	77.0	0.3161	0.2826
	>45 & ≤ 55	3.9	75.3	78.3	0.3601	0.3114
	>55 & ≤ 65	2.9	88.9	89.2	0.4803	0.4163
	>65 & ≤ 75	2.8	58.1	64.7	0.2982	0.2577
	>75	2.2	53.4	60.2	0.2818	0.2339
Rent-free tenants	≤ 25	0.1	54.0	63.1	0.3066	0.2651
	>25 & ≤ 35	1.2	80.2	83.7	0.3260	0.2951
	>35 & ≤ 45	2.4	84.1	86.6	0.3225	0.2847
	>45 & ≤ 55	1.4	91.7	93.6	0.2961	0.2556
	>55 & ≤ 65	0.6	84.3	87.0	0.2954	0.2632
	>65 & ≤ 75	0.7	81.3	84.3	0.3343	0.2865
	>75	0.6	80.9	84.0	0.3804	0.3211
Total	Total	100.0	100.0	100.0	0.3632	0.3128

Source: Own calculations based on SHIW.

Table 15: Relative income positions with net IR by age class

Tenure status	Age class	Comp.	Gross disposable income	Net disposable income	Gini coefficient for gross disposable income	Gini coefficient for net disposable income
Owner occupiers without mortgage or in usufruct	≤ 25	0.4	114.6	117.3	0.3578	0.3323
	>25 & ≤ 35	3.5	95.6	97.2	0.3071	0.2705
	>35 & ≤ 45	11.2	111.0	107.9	0.3909	0.3341
	>45 & ≤ 55	11.5	114.6	111.4	0.3944	0.3446
	>55 & ≤ 65	12.4	121.6	119.0	0.3435	0.3003
	>65 & ≤ 75	13.0	111.7	111.0	0.3506	0.2983
	>75	11.6	88.9	91.5	0.3328	0.2775
Owner occupiers with mortgage	≤ 25	0.1	125.0	122.3	0.0724	0.0497
	>25 & ≤ 35	1.6	97.8	96.4	0.2409	0.2098
	>35 & ≤ 45	3.6	109.8	106.0	0.3287	0.2971
	>45 & ≤ 55	1.7	132.3	124.5	0.3744	0.3169
	>55 & ≤ 65	0.9	127.5	124.8	0.2618	0.2262
	>65 & ≤ 75	0.2	109.2	109.2	0.2103	0.1895
	>75	0.0	161.2	154.7	0.3055	0.2577
Tenants or occupiers under redemption agreement	≤ 25	0.3	67.1	71.0	0.3710	0.3237
	>25 & ≤ 35	3.6	72.9	77.7	0.2851	0.2498
	>35 & ≤ 45	5.6	74.1	78.7	0.3161	0.2826
	>45 & ≤ 55	3.9	77.2	80.0	0.3601	0.3114
	>55 & ≤ 65	2.9	91.1	91.2	0.4803	0.4163
	>65 & ≤ 75	2.8	59.6	66.1	0.2982	0.2577
	>75	2.2	54.7	61.5	0.2818	0.2339
Rent-free tenants	≤ 25	0.1	53.6	62.7	0.3145	0.2727
	>25 & ≤ 35	1.2	80.1	83.6	0.3286	0.2973
	>35 & ≤ 45	2.4	84.0	86.6	0.3269	0.2887
	>45 & ≤ 55	1.4	91.8	93.7	0.3007	0.2596
	>55 & ≤ 65	0.6	84.0	86.8	0.2976	0.2650
	>65 & ≤ 75	0.7	81.6	84.5	0.3378	0.2894
	>75	0.6	80.4	83.6	0.3848	0.3243
Total	Total	100.0	100.0	100.0	0.3666	0.3161

Source: Own calculations based on SHIW.

Table 16: Inequality decomposition with 2006 definition of PIT gross income by age class

	MLD	Within group MLD	Between group MLD	Within group (% of MLD)	Between group (% of MLD)
Gross disposable income	**0.3467**	**0.3313**	**0.0154**	**95.6**	**4.4**
Net disposable income	**0.3064**	**0.2962**	**0.0102**	**96.7**	**3.3**

Source: Own calculations based on SHIW.

Table 17: Inequality decomposition with gross IR by age class

	MLD	Within group MLD	Between group MLD	Within group (% of MLD)	Between group (% of MLD)
Gross disposable income	**0.2902**	**0.2682**	**0.0220**	**92.4**	**7.6**
Net disposable income	**0.2441**	**0.2290**	**0.0151**	**93.8**	**6.2**

Source: Own calculations based on SHIW.

Table 18: Inequality decomposition with net IR by age class

	MLD	Within group MLD	Between group MLD	Within group (% of MLD)	Between group (% of MLD)
Gross disposable income	**0.2992**	**0.2789**	**0.0203**	**93.2**	**6.8**
Net disposable income	**0.2496**	**0.2357**	**0.0139**	**94.4**	**5.6**

Source: Own calculations based on SHIW.

Table 19: Inequality indices for households

Households	2006	2006 with gross IR	2006 with net IR
Gini coefficient for gross equivalent disposable income	**0.3823**	**0.3632**	**0.3666**
Gini coefficient for net equivalent disposable income	**0.3316**	**0.3128**	**0.3161**
Redistributive effect	**0.0507**	**0.0504**	**0.0505**

Source: Own calculations based on SHIW.

Table 20: Tax brackets and marginal tax rates in the actual tax code

Tax base (euro)		Marginal tax rate (%)
Up to	**26.000**	**23**
26.000	**33.500**	**33**
33.500	**100.000**	**39**
Above 100.000		**43**

Source: Ministry of Finance, 2005

Table 21: Revision of marginal tax rates if gross IR were considered

Tax base (euro)		Marginal tax rate (%)
Up to	**26.000**	**16.5**
26.000	**33.500**	**27**
33.500	**100.000**	**37**
Above 100.000		**40**

Source: Own calculations based on SHIW.

Table 22: Revision of marginal tax rates if net IR were considered

Tax base (euro)		Marginal tax rate (%)
Up to	**26.000**	**17.5**
26.000	**33.500**	**28**
33.500	**100.000**	**38**
Above 100.000		**40**

Source: Own calculations based on SHIW.

5. Concluding Remarks

In this paper we study the actual distributive impact of housing taxation on Italian households, and then compare this with an alternative approach of taxation by considering the imputed rent from owner-occupied dwelling as a component of the personal income tax gross income. The analysis is based on a static microsimulation model that match the SHIW-BI dataset and the Family Expenditure Survey carried out by the Italian National Statistic Office (ISTAT). The model simulate all the most important taxes on income and housing wealth. In particular, we first simulate the distribution of the 2006 housing taxation on households. We then evaluate who benefited most from the 2008 housing taxation reform; finally. We then highlight the problems and the distributional consequences of this system of taxation with respect to a tax system in which the imputed rent is included in the tax base.

Our main findings can be summarized as follows. First, both ICI and TARSU show a moderate regressive impact with respect to household disposable gross income, while PIT on dwellings other than the main residence is progressive. Second, all households owning the main residence gain from the 2008 housing taxation reform, but tax cuts are mostly concentrated on the last three deciles of household equivalent disposable gross income, so that the richest benefited most. Finally, by including imputed rent from owner-occupied dwellings as a component of the personal income tax base, we find that overall inequality is reducing; broadening the personal income tax base could lead to a consistent reduction of tax rates.

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APPENDIX

Table 1: Composition of PIT taxpayers by work status (year 2006)

Work status	Number of taxpayers	Composition	Mean gross income (euro)
Employee	**19,790,570**	**47.7**	**21,121**
Pensioner	**15,282,140**	**36.8**	**15,717**
Self-employed	**4,165,622**	**10.0**	**18,768**
Other taxpayer	**2,255,637**	**5.4**	**2,063**
Total	**41,493,969**	**100.0**	**17,858**

Source: Own calculations based on SHIW.

Table 2: Inequality indices for PIT taxpayers (year 2006)

PIT Taxpayers	2006
Average tax rate	**19.72**
Gini coefficient for the PIT gross income	**0.4414**
Gini coefficient for the PIT net income	**0.3879**
Gini coefficient for the tax	**0.6712**
Redistributive effect	**0.0535**
Concentration index for the PIT net income	**0.3871**
Concentration index for the tax	**0.6623**
Kakwani index	**0.2209**
Reynolds-Smolensky index	**0.0543**

Source: Own calculations based on SHIW.

Table 3: Distribution of PIT gross income by income class (year 2006)

Income class (euro)	Number of taxpayers	Composition	Mean value (euro)
0-1,000	2,826,209	6.8	344
1,000-3,000	1,522,446	3.7	2,000
3,000-5,000	1,529,008	3.7	4,065
5,000-8,000	4,846,146	11.7	6,243
8,000-10,000	2,865,566	6.9	9,037
10,000-15,000	7,424,178	17.9	12,543
15,000-20,000	8,534,250	20.6	17,363
20,000-25,000	4,662,340	11.2	22,466
25,000-30,000	2,404,599	5.8	27,047
30,000-40,000	2,398,128	5.8	34,201
40,000-50,000	854,334	2.1	44,076
50,000-70,000	904,539	2.2	58,374
70,000-100,000	453,923	1.1	82,539
100,000-150,000	151,301	0.4	123,343
oltre 150,000	117,006	0.3	298,685
Total	41,493,972	100.0	17,858

Source: Own calculations based on SHIW.

Table 4: Distribution of main residence cadastral income for PIT taxpayers (year 2006)

Income class (euro)	Number of taxpayers	Composition	Mean value (euro)
0-1,000	2,360,512	9.7	219
1,000-3,000	960,061	3.9	299
3,000-5,000	718,536	3.0	252
5,000-8,000	2,486,587	10.2	266
8,000-10,000	1,527,523	6.3	345
10,000-15,000	3,902,722	16.0	322
15,000-20,000	4,619,326	19.0	354
20,000-25,000	2,812,871	11.6	403
25,000-30,000	1,548,392	6.4	432
30,000-40,000	1,596,368	6.6	463
40,000-50,000	560,488	2.3	590
50,000-70,000	677,185	2.8	646
70,000-100,000	359,242	1.5	744
100,000-150,000	92,048	0.4	920
oltre 150,000	97,906	0.4	1,010
Totale	24,319,766	100.0	363

Source: Own calculations based on SHIW.

Table 5: Distribution of total income from dwellings (main residence and other dwellings) for PIT taxpayers (year 2006)

Income class (euro)	Number of taxpayers	Composition	Mean value (euro)
0-1,000	2,600,651	9.8	276
1,000-3,000	1,081,928	4.1	586
3,000-5,000	775,441	2.9	708
5,000-8,000	2,633,554	10.0	541
8,000-10,000	1,638,806	6.2	784
10,000-15,000	4,127,922	15.6	724
15,000-20,000	4,901,026	18.5	784
20,000-25,000	3,087,330	11.7	1,305
25,000-30,000	1,727,723	6.5	1,702
30,000-40,000	1,801,307	6.8	2,645
40,000-50,000	670,111	2.5	3,745
50,000-70,000	768,690	2.9	6,031
70,000-100,000	397,771	1.5	10,816
100,000-150,000	125,397	0.5	21,733
oltre 150,000	109,287	0.4	10,315
Totale	26,446,945	100.0	1,455

Source: Own calculations based on SHIW.

Table 6: Distribution of main residence ICI tax for PIT taxpayers (year 2006)

Income class (euro)	PIT taxpayers with positive ICI tax base (1)	PIT taxpayers with positive ICI tax (2)	(2) / (1)	Composition of taxpayers with positive ICI tax	ICI mean value (euro)
0-1,000	**2,360,512**	**1,738,679**	**73.7**	**8.4**	**70**
1,000-3,000	**960,061**	**819,360**	**85.3**	**4.0**	**105**
3,000-5,000	**718,536**	**555,171**	**77.3**	**2.7**	**83**
5,000-8,000	**2,486,587**	**1,705,582**	**68.6**	**8.2**	**100**
8,000-10,000	**1,527,523**	**1,198,051**	**78.4**	**5.8**	**137**
10,000-15,000	**3,902,722**	**3,145,002**	**80.6**	**15.2**	**117**
15,000-20,000	**4,619,326**	**4,178,372**	**90.5**	**20.2**	**119**
20,000-25,000	**2,812,871**	**2,620,480**	**93.2**	**12.7**	**141**
25,000-30,000	**1,548,392**	**1,449,699**	**93.6**	**7.0**	**157**
30,000-40,000	**1,596,368**	**1,540,920**	**96.5**	**7.4**	**166**
40,000-50,000	**560,488**	**546,858**	**97.6**	**2.6**	**234**
50,000-70,000	**677,185**	**661,139**	**97.6**	**3.2**	**263**
70,000-100,000	**359,242**	**347,641**	**96.8**	**1.7**	**315**
100,000-150,000	**92,048**	**90,425**	**98.2**	**0.4**	**393**
oltre 150,000	**97,906**	**96,469**	**98.5**	**0.5**	**450**
Totale	**24,319,766**	**20,693,848**	**85.1**	**100.0**	**135**

Source: Own calculations based on SHIW.

Table 7: Distribution of other dwellings ICI tax for PIT taxpayers (year 2006)

Income class	PIT taxpayers with positive ICI tax	Composition of taxpayers with positive ICI	ICI mean value (euro)
0-1,000	611,480	6.0	69
1,000-3,000	415,390	4.1	151
3,000-5,000	281,765	2.8	258
5,000-8,000	987,116	9.7	135
8,000-10,000	493,609	4.9	183
10,000-15,000	1,442,766	14.2	147
15,000-20,000	1,587,606	15.7	189
20,000-25,000	1,334,674	13.2	253
25,000-30,000	770,729	7.6	265
30,000-40,000	959,094	9.5	280
40,000-50,000	388,456	3.8	333
50,000-70,000	422,912	4.2	395
70,000-100,000	289,104	2.9	545
100,000-150,000	87,433	0.9	1,105
oltre 150,000	55,122	0.5	1,038
Totale	10,127,253	100.0	230

Source: Own calculations based on SHIW.