The concentration of personal wealth in Italy
1995-2016

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The relevance of personal wealth in Italy stands out in the rich world

Note: Net wealth to disposable income ratio; Source: Piketty & Zucman (2015)

Yet, there is limited evidence on the concentration of personal wealth in Italy.
Italian wealth topography: The (high) mountains of wealth and the (shallow) sea of debt

Net personal wealth (per-capita). Source: Elaborations on NA data from Bank of Italy and ISTAT

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Wealth topography: Italy vs US

Figure 1: The evolution of personal wealth per-capita: ITA vs USA

More Debt and Financial assets in the US. More housing and less debt in Italy. Source: Elaborations on NA data from Bank of Italy, ISTAT, and WID.world
Objective: Estimating the concentration of personal wealth and its evolution since mid-1990s

- We use confidential inheritance tax register data and the “mortality multiplier” method to study the concentration of current marketable wealth (sum of financial & real assets net of liabilities): only source of information alternative to the Bank of Italy household survey on income and wealth (e.g. no tax on wealth and no full taxation of capital income at the individual level).
- Household surveys are typically less suited to study the high-end wealth groups due to under-sampling of wealthy households and to differential under-reporting and non-response rates. (Vermeulen 2015)
- First systematic empirical application to the Italian data (Gabbuti 2017: application to historical aggregate data 1890-1914)
- Caveat: Results are preliminary and may be subject to revisions. 2016 data are incomplete.
Plan of the talk

INHERITANCE TAX ADMINISTRATION

MAIN RESULTS: NET PERSONAL WEALTH CONCENTRATION
COMPARING RESULTS TO OTHER COUNTRIES
PORTFOLIO and LIFE-CYCLE

THE NATURE OF DATA: ADVANTAGES & DISADVANTAGES
ESTATE MULTIPLIER
ADJUSTMENTS TO WEALTH
ESTIMATING WEALTH OF THE MISSING POPULATION

RESULTS: ALL ESTIMATES

CONCLUSIONS
INHERITANCE TAX ADMINISTRATION
The Graduate Center logotype reflects the urban character of the City University of New York and its location at the intersection of Fifth Avenue and 34th Street. The vertical treatment and use of the name gives the logo a unique and distinct appearance. The word "Graduate" being the tallest "building" in the center speaks to the Graduate Center's unique role as the doctoral dispensing arm, rising from the base of the "City University of New York". "The Graduate Center" in relationship to the "City University of New York" as shown here is the complete wordmark, also referred to simply as the logo.

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**Current inheritance (and gifts) tax legislation**

Death of a person R.I.P.

- **No Filing is required if no real estate is transferred and total estate value if less than 25,000 €)**

- **Filing the inheritance tax form**

- **Tax Revenue Agency computes tax due on inherited shares:**
  - Flat rates depending on the degree of kinship.

- **Pay register, mortgage, and cadastral taxes if real estate is transferred.**

- **Inheritance to Spouse, parents, and children: 4% paid on taxable inherited value above 1 Million €**

- **Inheritance to siblings: 6% paid on taxable inherited value above 100 Thousand €**

- **Inheritance to other relatives or other people, 6% or 8% with no exemption threshold**

- **Inheritance to a person with disability: 1.5 Million € exemption threshold applies.**

- **Inheritance to the State; political parties; religious entities; charities, foundations, and NGOs working on education, scientific research, social assistance etc. : NO Tax applied.**

Note: in 2014 the no-filing threshold was raised to 100 thousand Euros.
From Estate duty to Inheritance tax: All the changes to tax law

1995-1999
• Tax applied on the total estate value & on the inherited shares
• Tax rates from 3 to 33%
• Global exemption: 125,000 € (raised to 175,000 € in 1999)
• Share exemption: full for spouses, parents, and children; 50,000 € for siblings; 5,000 € for others.

2000 reform
• From Estate to Inheritance Duty: Tax only on inherited share
• Flat rates only above 175,000 € of inheritance received (4%, 6%, or 8%)

2001-2006
• Inheritance and gift tax abolished
• Tax return filing still compulsory in most cases

Since Oct 2006
• Inheritance and gift tax reintroduced
• Same flat tax rates & exemption thresholds substantially increased for direct ascendants and descendants.

Note: Rules also apply to donations and inter-vivos gifts
MAIN RESULTS: NET PERSONAL WEALTH CONCENTRATION
Top 1% up & Bottom 90% down

Top1% and Bottom 90% in Italy : 1995 -2016

Relative changes $\approx 30\%$. 

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Concentration of net personal wealth from tax records: range of values

Wealth Concentration - Top1% in Italy: 1995-2016

- Acquisti, Alvaredo, & Morelli The concentration of personal wealth in Italy - Slide 12/81
Top1% from tax records and household survey

Wealth Concentration - Top1% in Italy : 1995 -2016

Source: Brandolini (2014) from household survey (SHIW): net equivalent wealth. Note: External totals refer to the total personal wealth from the NA and the total adult population (20+) from ISTAT.
COMPARING RESULTS TO OTHER COUNTRIES
Comparison with the UK, France, and the US

Sources: WID.world - Alvaredo, Atkinson, and Morelli (2016) for the UK; Saez and Zucman (2016) for the US; Garbinti, Goupille-Lepret, and Piketty (2016) for France.
PORTFOLIO and LIFE-CYCLE
Wealth portfolio across wealth distribution: 2014
Per-capita wealth over the life-cycle

Wealth inequality or wealth accumulation over the life-cycle? Substantial heterogeneity of mean wealth across age groups, but...

![Graph showing mean gross wealth across different age groups and years.](image-url)
Wealth for each age group identified from tax form

... net wealth is unequally distributed (to a very similar degree) within all age groups!
Explaining the age distribution of large wealth holders: the role of gifts and inheritance

...and very wealthy individuals are not overwhelmingly ‘old’. Bequests and inter-vivos gifts can explain very wealthy children. Atkinson (1971)
THE NATURE OF DATA
Inheritance tax data: advantages

1. Substantial coverage of total population of decedents: above 50-60%.
2. Better coverage of total wealth in the right tail (compared to household survey)
3. We used very detailed tabulations (based on the full set of micro data) by net wealth classes, asset types, age classes, gender and geographic area;
4. The estimation of the geographical and demographic dimensions of wealth distribution can be robustly explored.
5. Fully unified system of gifts and inheritance taxation (less incentive to use gifts as inheritance tax avoidance scheme);
6. All donations done during lifetime need to be reported (at a capitalized value) and are used to define the exemption threshold. Also, assets sold within 6 months from death need to be recorded (up to 2000);
7. Tax liability and tax forms are assessed and approved by tax authority officials; Legal proof of assets valuation and assets ownership are often required (e.g. bank statements and other financial institution certificates, balance sheets of firms, cadastral records etc.).
Substantial coverage of total population of decedents: above 50-60%
Better coverage of total wealth in the right tail (compared to household survey)

2014 unadjusted data matched on observables (Age, gender, wealth ranges, asset type, geographical macro area).
More individuals appear in the right tail (compared to household survey)

Figure 2: Number of individuals in tax data and Household survey by wealth ranges

(a) Below 1 mln Euro
Unadjusted Tax data show more people than survey populating the top of the distribution.

(b) Above 1 mln Euro
Unadjusted Tax data show less people than survey populating the bottom of the distribution (due to "non-filers"). Household survey is fundamental to complement tax data if we want to discuss the whole distribution! (the two sources are not substitutes)
Inheritance tax data: disadvantages

1. Data ‘sample’ needs to be re-weighted taking mortality rates into account: the use of estate-multiplier approach;
2. Need to estimate the missing population! Potential problems of data representativity (not at the top).
3. Normally, only taxable assets and deductible liabilities are reported (there are notable exceptions such as government bonds, control shares, family businesses etc.). Adjustments needed
4. Real estate reported at cadastral values: needs adjustments to obtain Market values;
5. Tax evasion and avoidance may affect the nature of information reporting.
6. Information reported in tax forms reflects administrative requirements and changes in tax law;
7. Assets grouped into 4 categories: Real estate; business & companies, bonds, shares and funds; other financial assets (including current/savings accounts and cash) and other assets (including arts, valuables, and jewels); total deductible expenditures and liabilities;
8. Business reported at book value (no adjustment is undertaken)
THE ESTATE MULTIPLIER METHOD
The application of the Estate multiplier method

From the decedent wealth holders to the living wealth holders. Challenge: death does not ”sample” individuals randomly.
The application of the Estate multiplier method

From the decedent wealth holders to the living wealth holders. Challenge: death does not ”sample” individuals randomly. Solution: mortality multipliers.

Age distribution of decedent wealth holders

Age distribution of the living wealth holders

Mortality multipliers

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Full adult population vs. identified wealth holders

Source: ISTAT, total population.
ADJUSTMENTS TO WEALTH
Adjusting real estate cadastral value

Cadastral rents/values are lying well below market values, so a correction has been introduced

- For years 2009-2016 we used the ratio between market values of property held by physical persons recorded by the Revenue Agency/Nomisma in the “Osservatorio del Mercato Immobiliare” and the corresponding cadastral values, in years 2009-2016. (source: “Gli immobili in Italia”)

- For years 1995 to 2008 we recovered the “market values/cadastral values” ratio using BIS direct estimates of nominal growth rate of house prices and the yearly variation of average cadastral values (between 2007 and 2016, the longest time series available for cadastral values).

- We have also taken into account the legislative changes that have affected the cadastral rent multiplier (to obtain the cadastral value)

**Caveat**: aggregate correction factor across cadastral category and geographical location
Aggregate real estate wealth (land + housing)
Imputing non taxable wealth (& liabilities)

Sources: Financial Accounts (Bank of Italy)

**Missing Wealth: approx 900 bln Euros in 2013**

▶ 100% of Pension funds, life insurances and TFR
▶ 90% of cash and coins (100% in 2001-2006)
▶ 50% of Government bonds -not taxed, but have to be reported and deducted-(100% imputed in 2001-2006)

Imputed to the population using the inheritance tax returns distribution of business, stocks, and bonds.

**Missing Debt: approx. 300 bln Euros in 2013**

▶ Difference between mortgages and insurance technical reserves liabilities and the total identified liabilities.

Imputed to the population according to the distribution of liabilities observed in the inheritance records.

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Aggregate net wealth

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No adjustments to the data

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Aggregate net wealth with adjustments

Adjustements: Unaccounted liabilities and non-taxable financial wealth imputed to the population.
ESTIMATING WEALTH OF THE MISSING POPULATION
Imputing wealth of the missing population

Wealth of missing population: approx 200-300 bln Euros in 2013

Exploiting the nature of Italian inheritance tax legislation, the missing population is identified as:

- the heads and spouses in renter households with wealth lower than filing threshold (The value of their per capita assets and liabilities was doubled to account for under-reporting: first step rough adjustment)
- the adults that are neither heads of household or spouses/partners (Zero net wealth imputed)
- all non-adults (Zero net wealth imputed)

Sources: household survey of income and wealth - SHIW (Bank of Italy)
The population gap between tax data and household survey

The population size in the SHIW data is matched by construction to the national official population.

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Correcting the population gap between tax data and household survey

![Graph showing total individuals by age: SHIW vs tax data - 2014](chart.png)
...and including Wealth of missing population

Adjustements: Unaccounted liabilities and non-taxable financial wealth imputed to the population. Allowance for the wealth of the missing population is also taken into account.
RESULTS: ALL ESTIMATES
Top 1% share allowing for non taxable wealth

Wealth Concentration - Top1% in Italy : 1995 -2016

Wealth adjustments are carried out allowing for non-taxable assets and liabilities. NA total is used as denominator.

-Acciari, Alvaredo, & Morelli The concentration of personal wealth in Italy – – Slide 43/81
Top 1% share allowing for non taxable and missing wealth

Wealth adjustments are carried out allowing for non-taxable assets and liabilities as well as for the wealth of the missing population. The internal total wealth used as denominator is derived as the sum of total identified wealth and the estimate of wealth of the missing population (from SHIW data)
Top 1% share DINA estimates: full adjustments to NA

Wealth adjustments are carried out allowing for non-taxable assets and liabilities as well as for the wealth of the missing population. Then, each asset class is matched with the equivalent in the national account and the remaining gap is allocated to the population.

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Top 1% share: DINA + off-shore Wealth

Total off-shore wealth = 2% of personal net wealth in 2007 (allocated within the top 1% group)

Source: Data on off-shore wealth based on Alstadsæter, Johannesen, and Zucman (2017).
Evolution since 1995 assumed in line with changes in overall European off-shore wealth.
Top 1% share without adjustments

Wealth Concentration - Top1% in Italy: 1995-2016

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CONCLUSIONS
Summary of the main results

- The group of the richest half million individuals (1%) in Italy controls between a fifth and a forth of total personal wealth. Wealth concentration has increased by approximately 30% since mid 1990s.
- Concentration is substantially higher than what found using the household survey.
- Personal net wealth is much more concentrated than gross income.
- Similar results in other European countries.
- The concentration of personal net wealth is similar across all age groups suggesting that inheritance may play a strong role.
- Macro-regional wealth concentration series suggest heterogeneity of levels and trends.
- Inclusion of undeclared off-shore wealth shows that concentration can be downward biased. Trend less affected since 1995.
Conclusions

- The novel investigation of inheritance tax data provides fruitful complementary information to official household survey data to shed light on the concentration of personal wealth in Italy.
- The two sources are complements and not substitutes.
- DINA method provides the largest adjustment to data and needs to be better understood.
- PRELIMINARY ESTIMATES

Future steps (*in progress*)

- DINA method at the macro regional level can be extended.
- Growth Incidence Curves across the distribution.
- The application of new mortality coefficients based on education level (ISTAT)
- Elaboration of the additional available evidence on wealthy individuals through the Forbes Rich list.
- More evidence is needed on the relevance of inter-vivos gifts and inheritance for the accumulation of great fortunes.
THANK YOU!

“The available economic statistics are our main windows on economic behavior. In spite of the scratches and persistent fogging, we cannot stop peering through it and trying to understand what is happening”

Wealth concentration is similar in all age and gender groups. Wealth concentration cannot be explained only by a pure by life-cycle accumulation process.

Figure 3: Upper Lorenz curves for different age and gender groups: 2012 all population

(a) Male  
(b) Female

Notes: upper Lorenz of total population. Wealth only refers to tax-data adjusted for missing population and its wealth as the NA adjustment are not done across age and gender factors.
Personal wealth is much more concentrated than income

The evolution of the inheritance tax revenue: 1995-2013

Note: Total tax revenue derived from the EU-Commission publication ”Taxation trends”.

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The evolution of the inheritance tax incidence and coverage: 1995-2013
The average tax coverage across wealth groups and tax regimes
The average tax incidence across wealth groups and tax regimes
The heterogeneity of tax incidence across wealth classes: a detailed look

(c) 1995-1999

(d) 2007-2013

Note: heterogeneity across years, original disaggregated wealth ranges, macro areas, gender, and age groups
Full population coverage: by age groups

Source: ISTAT, population by age groups. Bank of Italy Survey of Household Income and Wealth, population of adult heads and partners living in households owning a property by age groups.
Relative Age distribution 2012: Full population vs. identified wealth holders

Source: ISTAT, population by age groups.
Mean net wealth by age and birth cohorts

![Graph showing mean net wealth by age and birth cohorts](image-url)
Mean Financial and Housing wealth by age and birth cohorts

Figure 4: Estate and wealth tabulations in 3-dimensions

(a) Housing wealth
(b) Financial wealth
Distribution of business, shares, and bonds across wealth classes

The diagram illustrates the distribution of total net estate across different wealth classes for the years 1995 and 2013. The x-axis represents net estate ranges, while the y-axis shows the share of total wealth in percentage. The data is presented for two points in time, 1995 and 2013, with each point showing the distribution across different wealth classes: <0, 1k-10k, 20k-100k, 150k-300k, 400k-700k, 800k-1m, 1.5m-5m, >6m.
Distribution of liabilities across wealth classes

Net estate range

- <0
- 1k-10k
- 20k-100k
- 150k-300k
- 400k-700k
- 800k-1m
- 1.5m-5m
- >6m

share of total - per cent

0 5 10 15 20 25
All imputed and missing wealth and liabilities

![Graph of Missing imputed wealth]

- Imputed non taxable wealth
- Imputed liabilities
- Imputed wealth of the missing population

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Imputed non-taxable wealth and liabilities

![Graph showing imputed non-taxable wealth and liabilities over years](image)

*Source: Acciari, Alvaredo, & Morelli*
Entry net wealth for top 1% and top 0.1% groups

(c) P99 and P999

(d) P99.9 and P99.99
Top 1%, Bottom 90%, and Next 9% shares from adjusted tax records
Top1% DINA estimates across macro-areas

Sources: wealth totals reconstructed from Albareto et al. (2008) up to 2005; then linked to Bank of Italy Regional Economies, Annual reports 2016 thereafter.
Robustness: Taking into account undeclared off-shore wealth

Total off-shore wealth = 2% of personal net wealth in 2007 (allocated within the top 1% group)

Source: Data on off-shore wealth based on Alstadsæter, Johannesen, and Zucman (2017).
Evolution since 1995 assumed in line with changes in overall European off-shore wealth.

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Adjusting SHIW data for wealth gap w.r.t. NA

Wealth Concentration - Top1% in Italy: 1995-2016

Source: data from Blanchet(2016)
Aggregate real estate wealth : comparison with SHIW

![Graph showing the comparison of aggregate real estate wealth between inheritance records, NA, and SHIW over the years from 1996 to 2014. The graph indicates the concentration of personal wealth in Italy.](image-url)

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Aggregate real estate wealth across macro areas

(e) North

(f) Center

(g) South

Albareto et al. (2008) up to 2005; Bank of Italy Regional Economies, Annual reports 2016 thereafter.
Aggregate net personal wealth: comparison with SHIW

Total personal net wealth

SHIW data exclude durables in line with NA definition of net wealth
Wealth adjustments: unaccounted liabilities, financial, real, and other missing assets imputed to the population. Allowance for the wealth of the missing population is also taken into account.
Increasing mortality multipliers by 15% above 1mln Euro

Wealth Concentration - Top1% in Italy : 1995 -2016

% of National Personal Wealth

year

Simulation

Internal total + missing W  multipliers +15% above P99

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Mortality rates in Italy: women

Source: ISTAT mortality tables
Mortality multipliers in Italy: women

Note: Mortality multiplier = 1/(Mortality rate); Source: ISTAT mortality tables
The wealth share of the richest groups: DINA estimates

Top 0.1% and Top 0.01% wealth shares: 1995 - 2016

% of National Personal Wealth

year

Top 0.1%  Top 0.01%
Estate and wealth tabulations in 3-dimensions

How estate tabulations are reshaped with the mortality multipliers

Figure 5: Estate and wealth tabulations in 3-dimensions

(a) Decedents tax filers
(b) Identified living wealth holders

Notes: figures are based on identified unadjusted wealth.