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# Compiling distributional accounts: the Italian experience

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# Introduction

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## The Italian experience:

- Istat and Banca d'Italia are both involved in the production of distributional accounts
- Complementary fields of expertise
  - ISTAT: Flows
  - Banca d'Italia: Stocks
- Strong collaboration between the two Institutions
  - Joint participation in national and international working groups
  - Common dissemination of Household Balance Sheet since 2019

# COMPILING DISTRIBUTIONAL ACCOUNTS: THE ITALIAN EXPERIENCE AT BANCA D'ITALIA

# Overview

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- Background
- Our experience
- Some results
- Way forward

# Background

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- **Long-standing interest in reconciling micro and macro data on household wealth**
  - Financial Accounts since 1964
  - Survey on Household Income and Wealth (Italian HFCS) since 1965
- **Active participation in the EG-DNA**
- **High relevance for policy use** (i.e. wealth inequality and monetary policy, financial vulnerability)

# Background

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## Household Wealth: Comparing Micro and Macro Data in Canada, Italy and United States

by

Rochelle Antoniewicz (Federal Reserve Board of Governors)<sup>1</sup>, Riccardo Bonci (Banca d'Italia),  
Andrea Generale (Banca d'Italia), Grazia Marchese (Banca d'Italia), Andrea Neri (Banca d'Italia),  
Karen Maser (Statistics Canada), and Patrick O'Hagan (Statistics Canada)

January 18, 2005

### Abstract

The paper compares micro and macro data on the household sector's selected assets and liabilities in Canada, Italy and the United States. The macro data are from the Canadian System of National Accounts (CSNA), the Italian Financial Accounts (BIFA) and the US Flow of Funds Accounts (FFA). The survey-based estimates are obtained from the Survey of Financial Security (SFS), the Survey on Household Income and Wealth (SHIW) and the Survey on Consumer Finances (SCF), for the three countries respectively. The micro and macro data are reconciled as much as possible for sector coverage, conceptually equivalent financial instruments, and consistent valuation methods. Where possible, survey data are corrected for main sources of measurement errors, non-response and under-reporting. The aim of this paper is to provide an additional perspective on the quality of the macro and micro data sources by considering the coherence of the two sets of data. We also view the differences between the macro and micro estimates as a source of valuable information on possible measurement issues in both sets of data.

# Our experience

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- **Main focus so far** : reconciliations of stocks

## **Before access to admin data**

- Main challenge: reconciliation is based on statistical modelling. Different assumptions may lead to different results

## **After access to admin data**

- Main challenge: How to combine administrative records and survey data

# Some results

**TABLE 3**  
**The missing gap: bootstrap results**

| Country | Wealth Shares                |         |         |         |         | Gini    | Tail $\alpha$ | S.r.  |
|---------|------------------------------|---------|---------|---------|---------|---------|---------------|-------|
|         | Top 1%                       | Top 5%  | Top 10% | Top 20% | Bot 50% |         |               |       |
|         | (1)                          | (2)     | (3)     | (4)     | (5)     | (6)     | (7)           | (8)   |
|         | <b>Base Survey</b>           |         |         |         |         |         |               |       |
| IT      | 0.112                        | 0.292   | 0.423   | 0.597   | 0.103   | 0.597   | 1.860         | –     |
|         | (0.074)                      | (0.032) | (0.021) | (0.013) | (0.039) | (0.012) | (0.075)       |       |
|         | <b>Simultaneous approach</b> |         |         |         |         |         |               |       |
| IT      | 0.290                        | 0.465   | 0.580   | 0.716   | 0.074   | 0.701   | 1.475         | 0.996 |
|         | (0.019)                      | (0.017) | (0.016) | (0.013) | (0.005) | (0.011) | (0.019)       |       |

- Source: Cantarella, Neri, Ranalli, 2021. Mind the wealth gap: a new allocation method to match micro and macro statistics for household wealth

# Administrative records

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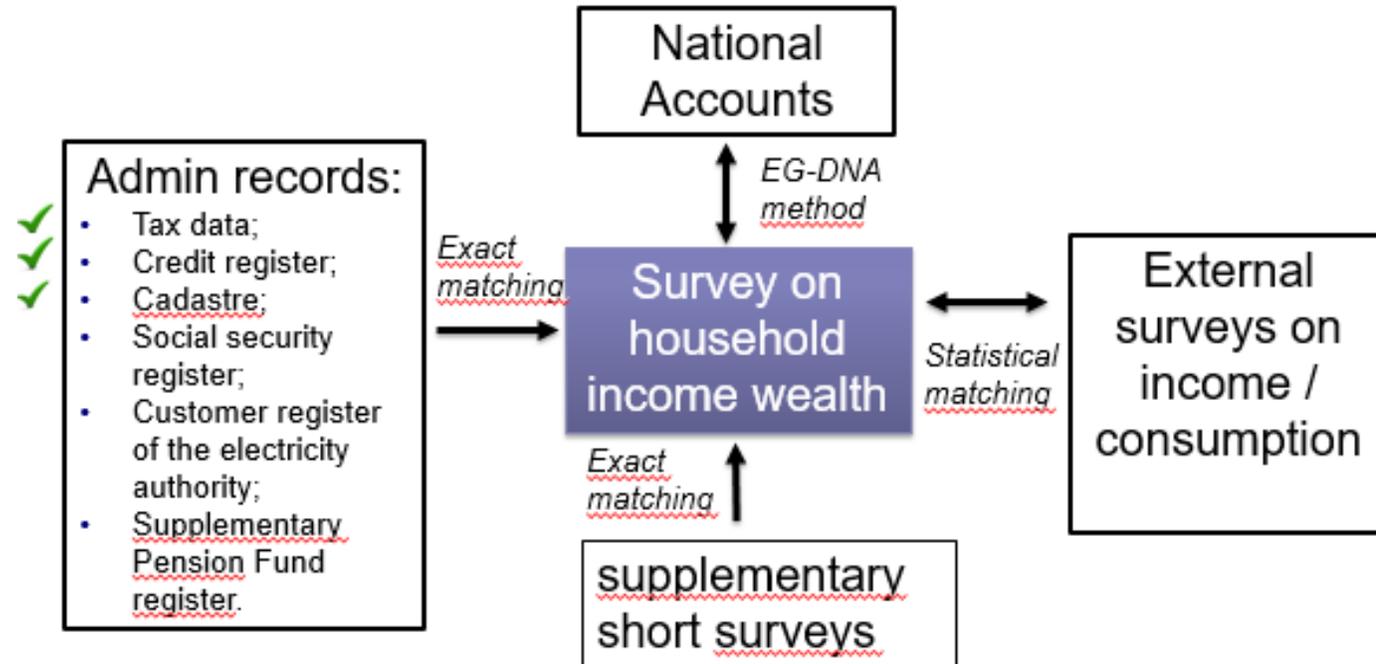
- **The linkage between survey data and administrative records can boost the quality of DWA**

## Main challenges:

- Concepts and definitions (coverage, valuation criteria, unit of analysis).
- Quality issues (tax evasion and tax avoidance, timeliness, measurement errors).

# Way forward

## Moving towards an integrated system of statistics on household income and wealth



# Final remarks

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- **Distributional National Accounts are still work in progress (at least as far as stocks are concerned)**

**Mapping and reconciliation is huge progress**

## **Future work:**

- To better understand how to use survey data and admin records
- To construct fully coherent statistics for income, expenditure and wealth, at both micro and macro level

# COMPILING DISTRIBUTIONAL ACCOUNTS: THE ITALIAN EXPERIENCE AT ISTAT

Joint work with: L. Cavalli, P. Consolini, S. Cuicchio, G. Donatiello  
Italian National Institute of Statistics (Istat)

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# Household income distributional data

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- Participation in the EG on Disparities in National Accounts 3rd exercise (in 2019-2020)
- National estimates of distributional data on household disposable income (and its components) in coherence with the Expert Group Guidelines
  - Years 2015-2017
- Data published as experimental estimates in OECD and Eurostat databases
  - Eurostat: <https://ec.europa.eu/eurostat/web/experimental-statistics/ic-social-surveys-and-national-accounts>
  - OECD: <http://www.oecd.org/sdd/na/household-distributional-results-in-line-with-national-accounts-experimental-statistics.htm> and the data via <https://stats.oecd.org/Index.aspx?DataSetCode=EGDNA> PUBLIC

# Household income distributional data - Method

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- An intense collaboration between NA and micro source (SILC) experts to
  - highlight conceptual and methodological differences between the two sources.
- As a consequence,
  - micro-macro gap allocation at the highest possible level of disaggregation,
  - with a careful choice of method for each income component.

# Household income distributional data – Recent developments

- Revision of methods used to estimate the distribution of some income components, to better reflect the availability of SILC information.
  - Years 2015-2017 + 2018
- Inequality indicators on household disposable income

|              | 2015       | 2016  | 2017  | 2018  |
|--------------|------------|-------|-------|-------|
|              | Q5/Q1      |       |       |       |
| 2020 release | 5.114      | 5.086 | 5.132 |       |
| October 2021 | 5.082      | 4.957 | 4.943 | 4.990 |
|              | Gini index |       |       |       |
| 2020 release | 0.355      | 0.353 | 0.355 |       |
| October 2021 | 0.357      | 0.353 | 0.354 | 0.355 |

# Disposable income components: availability of and comparability with SILC variables

|                                  | Disposable Income       |                         |                         |                         |
|----------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|                                  | Flows received by       |                         | Flows paid by           |                         |
|                                  | Households as Consumers | Households as Producers | Households as Consumers | Households as Producers |
| <b>Operating surplus</b>         |                         |                         |                         |                         |
| Owner occupied dwellings         | High                    |                         | Medium                  |                         |
| Leasing of dwellings             |                         | Medium                  |                         | No                      |
| <i>of which from NOE</i>         |                         |                         |                         |                         |
| <b>Mixed income</b>              |                         |                         |                         |                         |
| Observed production              |                         | High                    |                         |                         |
| Underground production           |                         | High                    |                         |                         |
| Own account production           | High                    | No                      |                         |                         |
| Illegal production               |                         | No                      |                         |                         |
| <b>Compensation of employees</b> | High                    |                         |                         |                         |
| <b>Property income</b>           |                         |                         |                         |                         |
| Interest                         | Low                     | No                      | Medium                  | No                      |
| Dividend                         | Low                     |                         |                         |                         |
| Withdrawals                      | No                      |                         |                         |                         |
| <i>of which from NOE</i>         |                         |                         |                         |                         |
| Investment income                | No                      |                         |                         |                         |
| Rents                            | Medium                  | No                      | No                      | No                      |
| <b>Current taxes</b>             |                         |                         | High                    | No                      |
| <b>Social contributions</b>      |                         | No                      | High                    | No                      |
| Social benefits other than STiK  | High                    |                         |                         | No                      |
| Other current transfers          | Low/No                  |                         | Low/No                  |                         |

# Disposable income components by received/paid, household role and distribution method

|  | Disposable Income       |                         |                         |                         | Total            |
|--|-------------------------|-------------------------|-------------------------|-------------------------|------------------|
|  | Flows received by       |                         | Flows paid by           |                         | Household sector |
|  | Households as Consumers | Households as Producers | Households as Consumers | Households as Producers |                  |
| Micro variable                                       | 81.0                    | 89.7                    | 84.3                    | 0.0                     | 82.5             |
| Proxy micro variable                                 | 2.1                     | 2.2                     | 2.5                     | 65.6                    | 2.5              |
| Other source (macro)                                 | 4.4                     | 0.8                     | 1.7                     | 0.0                     | 3.4              |
| No source, no influence on income distrib.           | 12.5                    | 7.2                     | 11.4                    | 34.4                    | 11.6             |
| Total  | 100.0                   | 99.9                    | 100.0                   | 100.0                   | 100.0            |
| SILC on NA for flows distributed with micro variable |                         |                         |                         |                         |                  |
|  | 96.7                    | 95.7                    | 93.1                    | 0.0                     | 95.8             |
| SILC on total NA flows                               | 78.3                    | 85.9                    | 78.5                    | 0.0                     | 79.0             |

# Household income distributional data – What we have learnt

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- For a large share of total household disposable income SILC can supply good proxy variables to estimate the distribution.
- Some components remain for which
  - differences in definitions or measures between SILC and NA components are relevant or
  - no SILC proxy exists.
- Differences in the shares of income components in NA and SILC generate differences in distribution between SILC and DNA.

# Way forward – On income distribution 1/4

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- On the components for which differences in definitions or measures between SILC and NA components are relevant or no SILC proxy exists:
  - withdrawals from income of quasi-corporations and, for Italy, other distributed income of corporations (observed and non observed components)
    - upcoming integration of SILC microdata with administrative information on business partners
  - received interests and dividends
    - SILC microdata are affected by significant underestimation errors that cannot be corrected through administrative sources
    - integration with work done in the context of the EG on Income, consumption and wealth can improve the reconciliation of estimates in perspective.

# Way forward – On income distribution 2/4

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- STiK
  - education:
    - consumption approach:
      - using administrative information on actual expenditure by Public Administration
      - combined with information on household composition and education attendance in SILC
  - health:
    - consumption approach:
      - using administrative information on actual expenditure by Public Administration by age and gender,
      - combined with household composition information in SILC
- Experimental use of the SILC 2016 module on access to services as an additional source for the identification of the actual beneficiary households.

# Way forward – On income distribution 3/4

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- Integration with the Income Register currently being developed at Istat
  - One record for each resident person
  - All components of disposable income
  - Administrative and survey sources
  - Coherent with NA

# Way forward 4/4

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- Consumption distribution
  - Micro source: Italian household budget survey
  - Integration with work done in the context of the EG on Income, consumption and wealth
- Analysis of interactions between Income, Consumption and Wealth distributions
  - Relevance of continued cooperation between Istat and Bank of Italy

# Some suggestions

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- On the basis of our experience, an intense and continuous collaboration between NA and micro sources experts can:
  - substantially contribute to the quality of the distributional estimates
  - lead to relevant improvements in the quality of the micro sources estimates.
  
- Within the EU, could the joint Eurostat/ECB Expert Group on Sector Accounts be a forum for discussion on technical issues related to DNA?
  - Would it be possible to create a dedicated area where countries may share their practices and discuss the most critical issues?

# Thank you

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