

The use of micro-level data from the Bank of Italy's survey of household income and wealth: a focus on household finance

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1. Micro-level data on household finance

The wide access to financial markets currently enjoyed by residents of developed countries is a double-edged sword: compared with their predecessors, contemporary households face both increased opportunities and increased complexity in the field of savings, investments and consumption. On the one hand, virtually everyone can buy and sell stocks, shares of mutual funds, and advanced derivatives; in the long run the availability of a wider range of assets ensures that the individual can achieve a better trade-off between risk and return than with traditional portfolios composed of just bank deposits and treasuries. On the other hand, people need to learn at least something about finance, so that when faced with technically complex decisions about how to secure their pensions, finance the purchase of a house, or set aside something for a rainy day, they are in a position to make reasonably informed choices and, above all, to understand the risks. In view of the rapid technical advances in finance, both individuals and authorities are continuously challenged to keep up with the changes and adapt their behaviour.

Household finance has, as a consequence, taken centre stage in economic research in the last twenty years or so. First of all, one needs to understand the effects exerted by increased financial activity on consumer welfare. Secondly, the macroeconomic impact of monetary policy is determined by how market institutions and individuals react to measures such as rate changes: central banks in particular must be aware of the mechanisms involved. Finally, financial supervisors are also interested in households' perspective on banking and financial markets. Models inherited from the past may not always be up to the task: information sets, attitudes and scenarios change fast, so that news from the front are continuously required to confirm, calibrate and update theories.

Micro-level data derived from household surveys are the main source of such information; they are a powerful descriptive tool, they can be employed in standard regression analysis, they can be fed into simulation models, and their rich multi-dimensionality makes them extremely useful for those who follow the increasingly popular experimental/behavioural approach to economics. For example, micro data have shown that individuals may vary enormously in their risk aversion and intertemporal preferences. Micro-level models have allowed researchers to study how variables as different as an individual's occupational status, social environment and personal values relate to attitudes towards risky assets. The level of education and the degree of information on financial markets may help in understanding the role played by information costs and (subjective) uncertainty in portfolio choice. Often, rationality-based textbook assumptions about the information and behaviour of agents turn out to be wrong even for the supposedly best equipped individuals: ignorance of financial issues is not confined to the uneducated.

The main source for micro data on household finance in Italy is the Bank of Italy's Survey of Household Income and Wealth (SHIW). The rest of this document gives a brief overview of

¹ The views expressed herein are those of the authors and do not necessarily reflect those of the Bank of Italy.

the survey and a sketch of its institutional and research output, with a focus on themes connected with household finance.

2. The Survey of Household Income and Wealth (SHIW)

The Survey of Household Income and Wealth (SHIW) has been carried out by the Bank of Italy since 1965 for the purpose of collecting information on the economic behaviour of households. It was conducted yearly until 1984, then it became biennial. Micro-level data are publicly available starting from the 1977 wave.

The survey has a two-stage sample design. The primary sampling units are municipalities, stratified by region and demographic size. Within each stratum, all municipalities with a population exceeding 40,000 are selected (self-representing units); a sample of smaller towns is then drawn using a PPS (probability proportional to demographic size) scheme. Finally, the households to be interviewed within each municipality are randomly selected from the official registers of residents.

Until 1987, the survey was conducted with time-independent samples, or cross-sections, of households. In order to facilitate the analysis of changes in the phenomena of interest, since 1989 part of the sample comprises households interviewed in previous surveys, known as panel households. In the most recent waves, the sample consists of 8,000 households living in 300 municipalities, drawn from a population of approximately 20 million households living in 8,000 municipalities; the panel component accounts for 45 per cent of the interviewees. Data are collected from the households by a market research firm during face-to-face interviews, lasting on average one hour; the Computer Assisted Personal Interview technology is widely employed.

The questionnaire has a permanent component, designed to collect core information on income, wealth, savings and payments besides demographic data. Along with the permanent items, the questionnaire contains a variable part combining one-shot sections with irregular-frequency sections focusing on specific phenomena. Recent examples are sections on: capital gains, inheritance, risk aversion, housework, intergenerational mobility, use of public services, social capital, tax evasion, income and employment expectations, retirement expectations, financial choices, new technologies. To lighten the burden of the interview, some of the occasional questions are asked only to a random subset of the sample.

3. Quality concerns

Sample estimates are subject to the usual sampling errors. However, in the surveys on income and wealth the estimates may suffer from more specific quality problems.

It is well known, for example, that different segments of the population have different participation propensities, which may lead to biased estimates. To overcome this problem, we developed and applied appropriate weighting schemes.

Moreover, as income and wealth are often perceived as sensitive topics, estimates may be affected by the reluctance of households to report entirely truthfully their sources of income or the real or financial assets they hold. Although participation is voluntary and respondents are informed at the outset about the content of the survey and about the merely statistical use of the data they provide, several studies have shown that some respondents still under-report. Interviewers are asked at the end of the interview to give a brief assessment of the presumed reliability of responses, basing their judgment on a comparison between the information provided and objective evidence available to them: although the level of reliability is satisfactory on the whole, it is not uniform across the sample. Additional elements to

assess the reliability of respondents' replies are obtained by comparing survey estimates with figures from the national accounts. We have also used statistical matching experiments to analyse the under-reporting behaviour of groups of respondents; this has resulted in the introduction of further methodologies to adjust sample estimates for non- and under-reporting.

4. Use and users of the SHIW micro data

The micro-level data gathered in the SHIW are widely used, both inside and outside the Bank of Italy. Internal users employ them mainly in policy-relevant research projects or as a tool for simulating the impact of policy choices via micro-simulation frameworks. Examples include the channels of transmission of monetary policy, the functioning of the banking markets, the analysis of fiscal issues or pension reform. Micro data are also used in connection with the compilation of financial and wealth accounts.

External users range from the general public to academics, from journalists to decision-makers. Following each SHIW wave, a report containing the main results of the survey is compiled and distributed free of charge; it usually becomes an important reference for the domestic political debate on the economic conditions of households.

Anonymised micro data with full methodological documentation are also available on the Internet to anyone who may be interested, at no charge and with only two provisos: data must be used for research purposes only and the Bank should be informed of every survey-based paper that is published.² This feedback is the basis for a bibliography of SHIW-related work, which is also provided electronically to the public. In March 2006 it contained 536 published documents, written by 367 different authors over 40 years. The share of internal users is relatively low, at 15 per cent; it is 28.4 per cent in terms of papers.³

Figure 1 gives an account of SHIW-based research output published between 1996 and 2006, organized by topic. Unsurprisingly, papers related to income (dynamics and distribution) far outnumber the rest; methodological documents take a distant second place. A large set of papers also looks at the correlations between the demographic structure of households and economic phenomena. Issues relating to fiscal policies, labour market, wealth distribution and saving behaviour also draw interest.

5. Old themes, new themes

The relative importance of research fields changes over time. In the early years, papers mostly concentrated on a few core subjects: income, savings, wealth, fiscal policy. Subsequently, the research has focused on more specific themes, such as uncertainty, poverty, inequality, or retirement plans. Currently, the hottest topics are in household finance: they include (but are not limited to) asset allocation, uncertainty and risk aversion, market structure and imperfections, wealth accumulation, demand for credit, payment technologies,

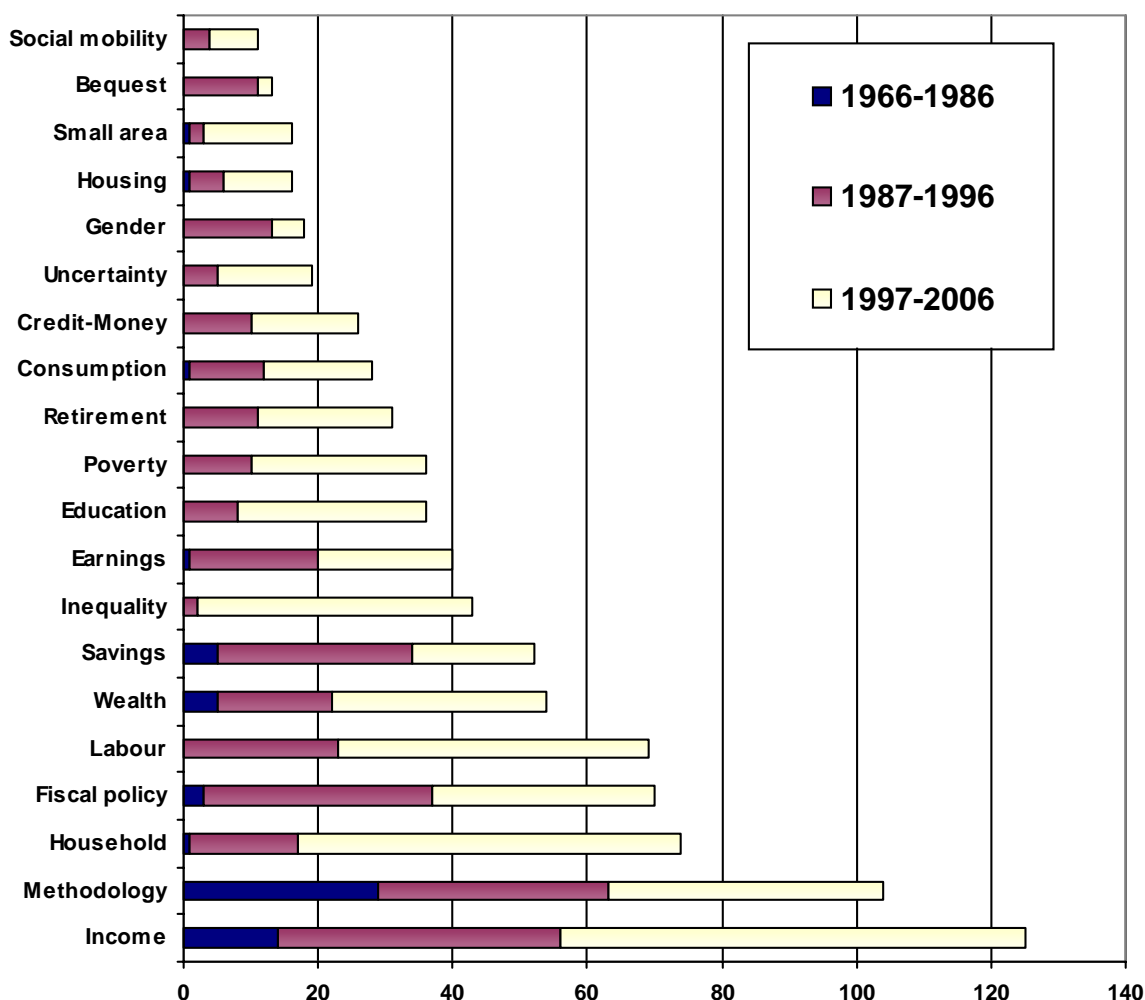
² The Internet site of the Bank of Italy has a section devoted to the SHIW, containing the official reports, papers, the bibliography of SHIW-based papers, downloadable micro data, questionnaires and other documents (www.bancaditalia.it/statistiche/consultazione). Most documents are available in English.

³ This conclusion is stronger if one takes into account the fact that the share attributed the Bank of Italy includes both the reports containing the main results of the survey (30 documents) and several papers documenting the methodological aspects, as opposed to papers that use SHIW data for economic analysis.

and spatial interest rate differentials. The SHIW questionnaire has consistently moved in step with the centrifugal tendency of economic literature. *Ad hoc* sections of the questionnaire have regularly been tailored to the needs of researchers.

Figure 1

Papers based on SHIW data by topic, 1966-2006



6. Some recent research on household finance at the Bank of Italy

The *Temi di Discussione* working paper series, edited by the Bank of Italy and available on the Web at www.bancaditalia.it, routinely features papers that employ SHIW data as a basis for research on household finance.

In recent years, a varied range of topics has been explored. For example, Guiso, Paiella and Visco (2005) investigate whether capital gains affect consumption: they find that homeowners increase consumption when house prices increase, while the renters' response to the higher house cost tends to be that of increased savings.

Brandolini, Cannari, D'Alessio and Faiella (2004) describe the composition and distribution of household wealth in Italy, merging information from aggregate balance sheets with SHIW data in order to provide estimates that are adjusted for non-response, non-reporting and

under-reporting. They find that wealth inequality has risen steadily during the 1990s; the increased concentration of financial wealth was an important factor in determining this path.

Ando and Nicoletti-Altimari (2004) use the SHIW to estimate a number of parameters for a dynamic microsimulation model aimed at studying the evolution of aggregate income, saving and asset accumulation over the period 1994-2100.

Guiso and Paiella (2005) construct a direct measure of absolute risk aversion based on a survey item recording the maximum price that a consumer is willing to pay to buy a risky asset. They find that elicited risk aversion has considerable predictive power for a number of key household decisions such as choice of occupation, portfolio selection, moving decisions and exposure to chronic diseases in ways consistent with theory.

7. Conclusion

In this note we have provided a brief description of the Bank of Italy's Survey of Household Income and Wealth, and outlined how the data collected in the survey are used in the analysis of household finance.

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