

Ignazio Visco: The Bank of Italy's analysis of household finances

Concluding remarks by Mr Ignazio Visco, Governor of the Bank of Italy, at the conference "The Bank of Italy's Analysis of Household Finances – Fifty years of The Survey on Household Income and Wealth and the Financial Accounts", Rome, 4 December 2015.

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Andrea Brandolini contributed widely to these remarks with perceptive suggestions and insights.

It is a great pleasure to close this conference celebrating 50 years of the Bank of Italy's Survey on Household Income and Wealth (SHIW) – and 51 of Financial Accounts. Over half a century, both the micro-data of the former and the aggregate estimates of the latter have provided essential information for the economic and statistical analyses carried out at the Bank of Italy, informing and influencing its policy-making process. There is also a personal note, however. Throughout my long professional life at the Bank, I often relied on these data. I hope that you will forgive me if, in these concluding remarks, I shall indulge in some personal memories.

Prologue: the survey forerunners

Household budgets have long attracted the attention of social scientists. Since the mid-19th century many researchers have gathered detailed information on expenses and revenues of individual households. These budget data stimulated studies on the consumption behaviour of families of farmers, manual workers and clerks, and contributed to the detection of empirical regularities such as Engel's law. Italian economists and statisticians played a crucial role in formalising these results. In his classical article on "The Early History of Empirical Studies of Consumer Behavior", George Stigler refers to Rodolfo Benini and Corrado Gini as the authors of the first modern statistical demand studies, and to Gustavo Del Vecchio as the first to estimate, in 1912, a (food) consumption function. Using budget data for a number of countries, Del Vecchio calculated an income elasticity comprised between 0.4 and 0.8, with an average of about 0.6.¹ The paper presented to this conference by Neri, Rondinelli and Scoccianti implies an income elasticity of about 0.66, although for total expenditure rather than for food alone.² A surprising regularity, a century later!

However useful to study consumer behaviour, individual budgets cannot tell us much about the distribution of income or expenditure. In June 1947, the Italian Minister of the Budget Luigi Einaudi – who was still formally the Governor of the Bank of Italy, before being later elected President of the Italian Republic – advocated at a meeting of the Constituent Assembly the need to produce a report on "the standard of living of Italian citizens, their incomes, the social categories into which they are divided". Thereafter, Einaudi, Del Vecchio, then serving as the Treasury Minister, and Giuseppe Pella, the Finance Minister, commissioned a sample survey on household incomes with the purpose of providing a sound basis for economic policies. The survey was conducted by Istituto Doxa, a private agency for

¹ G.J. Stigler, "The Early History of Empirical Studies of Consumer Behavior", *Journal of Political Economy* 62, 1954, 95–113; G. Del Vecchio, "Relazioni fra entrata e consumo", *Giornale degli economisti* 54 (n.s.), 1912, 111–142, 228–254, 389–439. Del Vecchio did not use Italian data, because individual budgets were relatively scarcer for Italy than for France or Germany. However, Giovanni Vecchi has recently dug out as many as 11,500 individual budgets for the period 1855–1911, plus another 9,500 for the years until 1965. See S. Chianese e G. Vecchi, "Bilanci di famiglia", in G. Vecchi, *In ricchezza e in povertà. Il benessere degli italiani dall'Unità a oggi*, Bologna, Il Mulino, 2011, 355–389.

² A. Neri, C. Rondinelli and F. Scoccianti, "The marginal propensity to consume out of a tax rebate: the case of Italy", Bank of Italy, mimeo, 2015.

the analysis of public opinion founded and directed by Pierpaolo Luzzatto Fegiz.³ It cost 16 million lire, approximately 400,000 euros at today's prices.

A second (smaller) survey was conducted and published by Doxa in 1951. By digging through the Bank of Italy's archives, it was recently found out that this survey was not only eventually paid for in full by the Bank, but was also designed with the help of economists in its Research Department. Its Director, and the Bank's Governor 25 years later, Paolo Baffi, set in a letter to Luzzatto Fegiz that the main purpose of the survey was "ascertaining the prevalent opinions on the allocation of a given income rise... between consumption and saving, after distinguishing the former into current expenses and durable goods and the latter into direct investment (real estates and businesses), financial assets and other savings".⁴ For some unknown reason the Bank's primary role in this survey was not publicised, but it testifies to the involvement of the Bank of Italy in the first attempts to measure the income and the consumption behaviour of Italian households.

This involvement is remarkable as it reveals the early support of the Bank for the use of representative probability sampling. Official sample surveys were still in their infancy: they had become accepted by statistical agencies in the United States only in the 1940s with the start of the Current Population Survey.⁵ The Bank's position is even more significant when seen against the background of an environment which was not necessarily favourable to this statistical tool.⁶

The readiness to engage in these new statistical techniques is an example of the Bank's attitude towards paying attention to and taking advantage of developments at the frontier of research. The Survey has continued to be a source of innovation. This has happened, for instance, as regards the dissemination of its results: first, in the 1980s, with the release of anonymised micro-data to academic researchers; then, with the participation since the 1990s in the Luxembourg Income Study, an international cooperative project for the assembly and standardisation of income data at a household level.

The integration of use and production of statistical data

The Bank's involvement in the (second) Doxa survey is also noteworthy since it shows that the statistical collection was conceived as closely connected with the needs of economic analysis from the outset. This is not to be taken for granted. Still in 1985, Zvi Griliches observed that "while economists have increased their use of surveys in recent years and have even begun designing and commissioning special purpose surveys of their own, in general, the data collection and thus the responsibility for the quality of the collected material is still largely delegated to census bureaus, survey research centers, and similar institutions, and is divorced from the direct supervision and responsibility of the analyzing team".⁷ The history of the Bank of Italy's SHIW is not one of "divorce" between producers and users but

³ The citation from Einaudi's speech and the subsequent information are drawn from P. Luzzatto Fegiz, "La distribuzione del reddito nazionale", *Giornale degli economisti e Annali di economia* 9 (n.s.), 1950, 341–354.

⁴ A. Baffigi, A. Brandolini, L. Cannari, G. D'Alessio, "L'indagine sui bilanci delle famiglie italiane. Metodi, confronti, qualità dei dati", Bank of Italy, mimeo, 2015.

⁵ See C.F. Citro, "From multiple modes for surveys to multiple data sources for estimates", *Survey Methodology* 40, 2014, 137–161.

⁶ See A. Baffigi, "All'origine dell'indagine sui bilanci delle famiglie della Banca d'Italia", Bank of Italy, mimeo, 2015. On the usefulness, but also on several limitations attributed to the use of the "representative method", an influential opinion was that expressed by Corrado Gini in an article co-authored with Luigi Galvani. See C. Gini and L. Galvani, "Di una applicazione del metodo rappresentativo all'ultimo censimento italiano della popolazione (1° dicembre 1921)", *Annali di Statistica*, series 6, 4, 1929, 1–107.

⁷ Z. Griliches, "Data and Econometricians—The Uneasy Alliance", *American Economic Review Papers and Proceedings* 75, 1985, 196–200.

rather of intense, if at times thorny, dialogue. In the early 1990s, I remember Governor Carlo Azeglio Ciampi's reluctance to accept my proposal to create a Statistical Division within the Research Department on the grounds that the Bank's economists were those who knew best which statistics were needed, and therefore were also best suited, as potential users, to being involved in their production.

A good example of the need for dialogue between data producers and economic analysts is credit rationing. In order to estimate the extent to which households have no access to credit, we require a complex set of interrelated questions, first asking respondents whether they had thought about applying for a loan, then whether they actually made the application, and finally whether they got it. Credit-rationed borrowers are the households which were denied a loan, or not granted the entire amount requested. On the basis of a long time series that starts in 1989, credit conditions are confirmed to have eased in Italy in 2014 from the peak reached in 2012, although we are not yet back to the pre-crisis situation. The rich formulation of the questionnaire also allows for the monitoring of a broader concept of borrowing constraints, which considers what we once called in an article on borrowing constraints "discouraged borrowers", that is the households which refrain from asking for a loan because they anticipate that their application will be turned down.⁸ Likewise, the assessment of financial vulnerability and over-indebtedness relies on detailed information and analysis that combine data on income, debt service payments and liabilities. This is shown by the papers by D'Alessio and Iezzi, and Bartiloro, Michelangeli and Rampazzi discussed in this conference,⁹ as well as by the regular use of the SHIW data in the regular analysis of macroeconomic developments and financial stability.¹⁰

The anticipations of economic agents, whether consumers or businessmen, play a central role in the decisions they make, but their measurement is far from straightforward.¹¹ Unsurprisingly, household expectations have been a recurrent topic in the Survey. As shown by Alfonso Rosolia, households were asked already in the first Surveys in the mid-1960s whether they anticipated an income increase or reduction a year ahead, and how they would allocate any income gain between saving and various consumption items. The eagerness of the Bank's researchers turned this question into a far more sophisticated exercise in the Survey for 1989, when respondents were confronted with a full probabilistic format about the prospects of their labour or pension earnings in the next year that has now become, in a simplified formulation, part of the core section of the questionnaire.

The attention to household expectations is important to shed light on consumer behaviour. For instance, in the early 1990s it was used to quantify the impact of subjective earnings uncertainty on precautionary saving.¹² The paper presented by Olympia Bover finds that the subjective expectations on house prices matter for predicting the spending behaviour of

⁸ L. Maccan, N. Rossi and I. Visco, "Saving and borrowing constraints", in A. Ando, L. Guiso and I. Visco (eds), *Saving and the Accumulation of Wealth. Essays on Italian Household and Government Saving Behavior*, 273–304, Cambridge, Cambridge University Press, 1994.

⁹ G. D'Alessio and S. Iezzi, "Over-indebtedness in Italy: how widespread and persistent is it?", Bank of Italy, mimeo, 2015, and L. Bartiloro, V. Michelangeli and C. Rampazzi "The vulnerability of indebted households during the crisis: some evidence from the euro area", Bank of Italy, mimeo, 2015.

¹⁰ See, for instance, the *Financial Stability Report* or research documents such as that by S. Magri and R. Pico, "The household credit market after five years of crisis and recession: evidence from the survey on household income and wealth", Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers) 241, 2014.

¹¹ I extensively discussed the problems in measuring inflation expectations in my Ph.D. dissertation, later published as *Price Expectations in Rising Inflation*, Amsterdam, North-Holland, 1984.

¹² L. Guiso, T. Jappelli and D. Terlizzese, "Earnings uncertainty and precautionary saving", in A. Ando, L. Guiso and I. Visco (eds), *Saving and the Accumulation of Wealth. Essays on Italian Household and Government Saving Behavior*, 214–245, Cambridge, Cambridge University Press, 1994.

Spanish households.¹³ Yet we should not overlook the difficulties that respondents face in answering probabilistic questions. In the Survey for 1989, 57 per cent of households anticipated a rise in income, by 6.5 per cent on average, but as many as one out of five households did not answer. In the last wave of the Survey the proportion of households which failed to provide an answer fell to below 5 per cent, but the overwhelming majority, 83 per cent, predicted no income change one year ahead. This might be reasonable given the recent income dynamics, but may also signal their difficulty to account for uncertain outcomes.

There is a need for further research, but experimenting on measuring expectations is a worthy exercise. It has undoubtedly enhanced the Survey's reputation. Indeed, Charles Manski included it among the few "major platforms for methodological exploration and substantive research" on the use of probabilistic formats to elicit expectations.¹⁴ Manski also mentioned only one survey of firms using probabilistic questioning to elicit business expectations: the Italian Survey of Investment in Manufacturing. This has also been carried out by the Bank of Italy since the mid-1980s and is a good example of cross-fertilisation among different research areas.

Micro-data as a necessary complement to macro-data

Eliciting expectations or measuring complex economic concepts is not the only accomplishment of the SHIW. Its main contribution has been to allow us to account for the heterogeneity of household characteristics and behaviour in the analysis of the Italian economy.

When it started in the mid-1960s, the Bank of Italy's Survey provided virtually the first detailed information on the budgets of Italian households since the Doxa survey of 1948. Its information proved extremely valuable. Drawing again from my own personal experience, I remember using the Survey data in the mid-1970s to calculate the dispersion of earnings among income earners, and its decomposition into the within- and between-sector components, possibly one of the first "official" applications of the exact inequality decomposition proposed by Henry Theil.¹⁵ For a few years, these calculations were published in the chapter on the labour market of the Bank's *Annual Report*, integrating the aggregate information on productivity and wage dynamics, and the SHIW main results are still regularly published in the *Annual Report*.

The availability of a relatively long span of estimates on the distributions of earnings, income and, for a shorter period, wealth in Italy has allowed for the documentation of the decline of income inequality among Italian households until the mid-1980s and its subsequent increase. The extent of the rise in the last decades is smaller than that observed in many other advanced countries – the United States and the United Kingdom mostly in the 1980s, Sweden and Finland in the 1990s – but the level of income concentration in Italy is still relatively high when compared at an international level.¹⁶ These inequality series have been widely used by external researchers, and are included in many international compilations

¹³ O. Bover, "New results on household subjective probabilities of future house prices", Banco de España, mimeo, 2015.

¹⁴ C.F. Manski, "Measuring Expectations", *Econometrica* 72, 2004, 1329–1376; the citation is at pp. 1341–2.

¹⁵ H. Theil, *Economics and Information Theory*, Amsterdam, North-Holland, 1967.

¹⁶ See A. Brandolini and T.M. Smeeding, "Income Inequality in Richer and OECD Countries", in W. Salverda, B. Nolan and T. M. Smeeding (eds), *The Oxford Handbook of Economic Inequality*, 71–100, Oxford, Oxford University Press, 2009.

used for research in social sciences, assembled at the World Bank, the UNU-WIDER, the OECD or by academic researchers.¹⁷

My first approach to the Survey had occurred even earlier, when Francesco Frasca, Ezio Tarantelli, Carlo Tresoldi and I used its data for 1971–73 to provide additional microeconomic evidence on the consumption function.¹⁸ As we had no access to micro-data at the time, our assessment was based on comparing cell mean values from cross tabulations of the kind shown in this conference by Alfonso Rosolia. Yet these “granular” data were crucial to study, however crudely, demographic and life-cycle effects, something which was not possible with the aggregate time series. In particular, we could not find, for Italy, the dissaving at old ages observed for other countries, and attributed this result to the system of social security and the family structure prevailing in the country. The Survey’s micro-data have later become a precious source to investigate consumption and saving. An important example of this strand of research is the volume *Saving and the Accumulation of Wealth. Essays on Italian Household and Government Saving Behavior*, edited in 1994 with Albert Ando and Luigi Guiso from a conference held in January 1992. It includes contributions from quite a few participants in this conference.

Reconciling micro and macro

During its long life, the SHIW has undergone several changes aimed at improving its quality. Some of them have created discontinuities, which have to be taken carefully into consideration when using results from different waves to construct time series. In order to overcome some of the definition problems, the historical archive now allows researchers to access micro-data from different waves in a common format. Today’s celebration has provided the opportunity to release an entirely revised historical archive as well as to upload selected time series on the Bank’s website.

A major overhaul of the Survey took place in 1986–87, following a conference held in Perugia in February 1985. Albert Ando, a close personal friend of many of us and for many years an invaluable consultant of the Bank, played a crucial role in that restructuring. Albert made two important points. First, he argued that it was necessary to increase the size of the sample, possibly reducing its frequency to offset the cost increase, in order to capture the behaviour of small demographic groups (he had in mind distinguishing an old person living alone from an old person living with a younger person). Second, he stressed the inability of the Survey to measure financial assets and liabilities, implicitly suggesting that some serious effort was necessary to cover these variables satisfactorily – although he admitted to having no special insight into how to do so, because this inability appeared to be a “peculiarly Italian problem”.¹⁹

Both Albert’s suggestions were implemented: the sample size was doubled to around 8,000 units in 1986, and since 1987 the Survey has been carried out every two years and contains detailed questions on all wealth holdings. Information has considerably improved,

¹⁷ See Deininger and Squire’s *Measuring Income Inequality Database* (<http://go.worldbank.org/UVPO9KSJJ0>), Milanovic’s *All the Ginis Dataset* (<http://go.worldbank.org/9VCQW66LA0>), the *World Income Inequality Database* (<https://www.wider.unu.edu/project/wiid-world-income-inequality-database>), the *Social and Welfare Statistics Database* (http://stats.oecd.org/BrandedView.aspx?oecl_by_id=socwel-data-en&doi=data-00654-en), Atkinson and Morelli’s *Chartbook of Economic Inequality* (<http://www.chartbookofeconomicinequality.com/>).

¹⁸ F. Frasca, E. Tarantelli, C. Tresoldi and I. Visco, “La funzione del consumo. Analisi su serie trimestrali e su dati cross-section”, in Banca d’Italia, *Modello econometrico dell’economia italiana* (2^a ed.), “La funzione del consumo in Italia (stesura provvisoria)”, 32–102, Roma, 1979.

¹⁹ A. Ando, “Le indagini campionarie sui bilanci familiari: l’esperienza estera”, in Banca d’Italia, *Le indagini campionarie sui bilanci delle famiglie italiane: Perugia, 8–9 febbraio 1985*, Numero speciale dei Contributi all’analisi economica, 139–149, Roma.

but not all measurement problems have been sorted out, as observed by Gambacorta and Neri.²⁰ In particular, as is well known, the measurement of financial assets still fall short of the corresponding aggregate in the financial accounts: a serious problem of consistency between micro and macro evidence.²¹

The financial accounts are also one of the Bank's statistical products. After the Second World War, Paolo Baffi strongly encouraged the collection of aggregate statistics on assets and liabilities of the institutional sectors, and in 1949 the Bank's *Annual Report* published a table of flows, called the "national monetary balance sheet", broken down into public and private sectors. This accounting scheme was the embryo of the financial accounts that first appeared in the *Annual Report* for 1964, thanks to the work of Franco Cotula and others.²² Financial accounts have been published regularly by the Bank ever since.

The completion of financial accounts was an important accomplishment, but it still fell short of producing a fully integrated set of sectoral balance sheets. Over time, the Bank has frequently engaged in the estimation of the value of real assets, with a particular focus on households. I contributed to this effort in a paper with Carlo Tresoldi, where we used the Survey data to compute the value of dwellings.²³ This exercise was occasionally repeated, for instance in an Appendix to the volume *Saving and the Accumulation of Wealth* prepared by Pino Marotta, Patrizia Pagliano and Nicola Rossi,²⁴ until 2007 when the Bank first published the *Supplement to the Statistical Bulletin* on "Household Wealth in Italy". With the recent publication by Istat, the Italian statistical office, of the stock of non-financial assets by institutional sector, we are now in a position to estimate for the first time the full balance sheets for the Italian economy.

Producing Italy's integrated wealth accounts is a challenge that Istat and the Bank cannot avoid facing. It is not the only one. I already mentioned the consistency issues for the micro and macro evidence for wealth, but similar problems arise for income. Moreover, flows and stocks need to be reconciled, both at the micro and macro level. Extending the scope of the data we collect definitely enriches our information set, but also calls for a much greater effort to reconcile the indications that diverse sources may provide.

Not only flows: the importance of household wealth

This long-standing concern for household wealth does not stem from mere academic curiosity. At the opening of the final conference of the Luxembourg Wealth Study held here in Rome in July 2007 at a time when we had not yet any hint of the incoming global financial crisis,²⁵ I observed that "I still have the definite impression that in the last fifteen years there has been a substantial rise in wealth-to-income ratios in the developed countries. This has been especially the case for housing wealth. According to the Survey of Consumer Finances,

²⁰ R. Gambacorta and A. Neri, "Wealth and its returns: economic inequality in Italy, 1995–2014", Bank of Italy, mimeo, 2015.

²¹ R. Bonci, G. Marchese and A. Neri, "Financial wealth in Italy's financial accounts and survey of household income and wealth", in *Financial Accounts: History, Methods, the Case of Italy and International Comparisons*, Banca d'Italia, Roma, 2008.

²² See R. De Bonis and A. Gigliobianco, "The origins of financial accounts in the United States and Italy: Copeland, Baffi and the institutions", in R. De Bonis and A.F. Pozzolo (eds), *The Financial Systems of Industrial Countries. Evidence from Financial Accounts*, Berlin, Springer, 2012.

²³ C. Tresoldi and I. Visco, "Un tentativo di stima della ricchezza delle famiglie (1963–1973)", *Rivista di diritto finanziario e scienza delle finanze* 34, 1975, 516–524.

²⁴ See G. Marotta, P. Pagliano and N. Rossi, "Income and Saving in Italy: a Reconstruction", Banca d'Italia, Temi di discussione 169, for details.

²⁵ I. Visco, "The Luxembourg Wealth Study: Enhancing Comparative Research on Household Finance", 2007, https://www.bancaditalia.it/pubblicazioni/interventi-direttorio/int-dir-2007/visco_050707.pdf?language_id=1.

the ratio of real assets to household disposable income in the United States rose from 3.7 in 1992 to 4.8 in 2004; in Italy, according to the SHIW, from 5.3 in 1993 to 6.4 in 2004. This is clearly a pattern shared by many other countries. On the other hand, net financial assets show a much more moderate trend. Overall, there seems to be little question that over this long period wealth has increased at higher rates, for many countries much higher rates, than household disposable income”.

The work by Thomas Piketty has shown that these trends began even earlier, in the 1970s,²⁶ although the global financial crises may have somewhat modified them. In the United States the ratio of real assets to household disposable income fell back to 4.2 in 2013, although in Italy it still stood at 6.6 in 2014. The increase in wealth may reflect the accumulation of personal savings or changes in asset values. But saving rates do not seem to show marked increases; if anything, in some countries they have been on a declining trend. So, much of the substantial rise in wealth-to-income ratios was due to asset prices. This raises several questions, that matter from analytical as well as policy perspectives. Why have we been observing such a long-term trend in asset prices? What is it that made for such a significant change in the prices of real, and perhaps to a lesser extent, financial assets relative to consumer goods and services? The financialisation of economies, the growing role of stock exchanges, the privatisation of State-owned firms, the expansion of household insurance technical reserves (due to the crisis of public pension schemes) can go some way towards explaining the rise in the ratio of financial wealth to GDP.²⁷

In particular, there may be merit in considering the changes in shelter costs for owner-occupied housing as part of general consumer price changes. In this case, one should conclude that the prices of housing services went up substantially compared to other consumer goods and services. Yet, in part housing expenditure is clearly of a capital-good nature. One should also conclude that house owners were able to extract substantial rent from their accumulated real estate.²⁸ As I observed in the July 2007 conference of the Luxembourg Wealth Study, “in the first case we have an issue of relevance for monetary stability, in the second for financial stability, especially as house prices have been moving faster in relatively short periods of time and the larger house values have been used as collateral in financial deals”.

Conclusions: lessons from the past and challenges for the future

These remarks on the Bank of Italy’s SHIW and the financial accounts are drawn from my own memories, but I hope to have also illustrated some important lessons that we can all draw from the experience at the Bank. Let me briefly recapitulate them here:

1. Undertaking research means being receptive to innovation and to exploring new statistical and analytical techniques;
2. The production and use of statistical data must be seen as fully integrated activities;
3. Micro-data are a necessary complement to macro-data: they are both essential to forming a comprehensive view of the functioning of the economy for policy-making purposes;

²⁶ T. Piketty, *Capital in the Twenty-First Century*, Cambridge, Harvard University Press, 2014.

²⁷ R. De Bonis, D. Fano and T. Sbano, “Household aggregate wealth in the main OECD countries from 1980 to 2011: what do the data tell us?”, Banca d’Italia, *Questioni di Economia e Finanza (Occasional Papers)* 160, 2013.

²⁸ Using Survey data, it is possible to show that capital gains on housing have a positive effect on consumption for homeowners, but a negative one for renters. See L. Guiso, M. Paiella and I. Visco, “Do capital gains affect consumption? Estimates of wealth effects from Italian households’ behavior”, in L.R. Klein (ed.), *Long-run growth and short-run stabilization: essays in memory of Albert Ando*, 46–82, Cheltenham, Elgar, 2006.

4. The joint consideration of micro and macro evidence for the same phenomena, and of related stocks and flows, raises important issues of consistency, an old problem made more evident today by the richness of available statistics; indeed, the micro/macro and stocks/flows reconciliation are a challenge for all statistical bodies;
5. And, obviously, there is a need to pay attention to both stocks and flows.

These observations hold for economic and statistical research at the Bank in general. They are evidence of the Bank of Italy's long-standing effort to stimulate cross-fertilisation and dialogue among different research areas, avoiding what is sometimes called the "silos culture". I believe that this attitude, which is not necessarily shared elsewhere, is very important and should be preserved.

The scientific community is now wondering about the future of household surveys. Bruce Meyer, Wallace Mok and James Sullivan have recently noted that "large and nationally representative surveys are arguably among the most important innovations in social science research of the last century", but have extensively dealt with the problems plaguing household surveys and weakening their capacity to describe economic and social phenomena.²⁹ There are new powerful statistical methods that can be used to improve them, such as the integration with administrative archives and web surveys to reach a more mobile and digital population. There are new rich and only partly explored sources of information, the "Big Data" residing on the internet. As has been mentioned by Federico Signorini in his opening remarks, Bank researchers are also exploring these new territories, confirming our attitude towards innovation. Yet, I think that the SHIW, possibly transformed, will be with us for many more years to come.

To conclude, I wish to thank the many people who have made it possible for our Survey to reach its venerable age: the economists and the statisticians in the Bank of Italy, the interviewers and the staff of the agencies that have conducted the Survey in the field, the many academics and external users that have used it for their research and have helped us to improve it. Our deepest gratitude obviously goes to the 154,000 thousand households that have voluntarily accepted to be interrogated, some of them many times, on the difficult and confidential issues investigated by the Bank of Italy's Survey.

²⁹ B.D. Meyer, W.K.C. Mok and J.X. Sullivan, "Household Surveys in Crisis", *Journal of Economic Perspectives* 29, 2015, 199–226. See also C.F. Citro, "From multiple modes", *op. cit.*