

Survey Information on Household Assets: Some Irish Lessons

by Brian Nolan*

1. Introduction

Information on asset holdings of individuals and households is of enormous value in seeking to understand, for example, savings behaviour over the life cycle, the extent to which different people make financial provision for retirement, and whether people have resources to fall back on in the face of unforeseen contingencies. It can also provide a basis for attributing both the imputed value of accrued pension rights and of various forms of insurance to individuals and households, and analysing their distribution by a range of characteristics, such as age, income and occupation. Collecting data on assets in household surveys is of course notoriously difficult. This means that researchers often rely where they can on other sources of data, such as estate duty or wealth tax records, when seeking to measure the degree of concentration of wealth or trends in wealth distribution over time. Estate duty records provide the basis for long-term time-series wealth concentration estimates for the U.S. (Smith 1987; Wolff and Marley, 1989) and the U.K. (Atkinson and Harrison, 1978; Shorrocks, 1987) and wealth tax records have been used for Sweden for the same purpose (Spant, 1987).¹

The key problem with such administrative data on wealth is that generally they contain very little information about the characteristics of the individuals to whom they refer, and even less about the families or households in which they live. Since it is very often the interrelationships between wealth and a variety of those characteristics that we wish to analyse, this is a major limitation. With household surveys, on the other hand, the value of data on assets is greatly enhanced by the wide range of other information on individuals and households that can be gathered. Some studies have sought to combine the strengths of the two sources by merging and matching tax data onto household surveys in various forms (Wolff, 1983; Greenwood, 1983), though this too poses particular problems. Here then the focus is on what one can hope to achieve by gathering wealth data in household surveys, discussed in the context of our efforts to do so in Ireland.

The difficulties faced when trying to gather information on assets in a household survey are well known. The information provided by respondents may often be partial and inaccurate, and the upper tail of the wealth distribution, holding much of aggregate wealth, may be significantly under-represented. In some circumstances it may be possible to use stratified samples based on independent information (usually from tax records) to over-sample the rich,

* The Economic and Social Research Institute, 4 Burlington Road, Dublin 4, Ireland. e-mail: brian.nolan@esri.ie

¹ In the case of Ireland, Lyons (1972, 1975) used estate duty records to measure the concentration of wealth in the 1960s, and Sandford and Morrissey (1985) explored the very limited data published from the short-lived Wealth Tax which operated in the early 1970s.

as in the 1983 U.S. Survey of Consumer Finances (Avery, Elliehausen and Kennickel, 1988). Much can be learned from such enhanced samples, although even then response error and non-response rates appear to be particularly high among the wealthy. More often, however, one has to rely on a random sample, and work within the constraints of a general household survey where wealth is only one of a considerable range of topics to be covered. This has certainly been the case in Ireland, where a serious effort to gather data on assets and debts was made in the general household survey carried out by the Economic and Social Research Institute (ESRI) in 1987. The aim of this paper is to draw some general lessons from that experience.

Section 2 describes the 1987 Irish household survey and the questions on wealth it included, and discusses response and coverage. Section 3 looks at the results, in terms of asset-holding patterns. Section 4 illustrates how valuable the wealth data has been, despite its undoubted limitations, in a variety of different contexts. Section 5 takes an initial look at the information produced by a more limited set of wealth questions in a survey carried out in 1994. Section 6 summarizes the main points.

2. Assets information in the 1987 ESRI Survey

In 1987 the ESRI carried out the Survey of Income Distribution, Poverty and Usage of State Services. The sampling frame was the Register of Electors and the survey was designed to provide a national sample from the population resident in private households. Responses were obtained from 3294 households, with a response rate of 64 per cent of valid addresses contacted. The sample has been reweighted to correct for non-response and the individual nature of the sampling frame, on the basis of a cross-tabulation of number of adults in the household, urban/rural location, age and socio-economic group of household head using external information from the much larger Labour Force Survey. The overall representativeness of this sample has been validated by comparison with a variety of external information (from the Census of Population, Labour Force Survey, income tax and social security administrative statistics), and it has been used extensively in research on poverty and tax and social welfare policy in Ireland. (A full description of the survey is in Callan et al., 1989, and an overview of that research is in Nolan and Callan, 1994.)

The survey covered a wide range of topics on respondents and their households, including age, sex, marital status, education, labour force participation and career, income from different sources, attitudes, style of living indicators, social support and psychological distress, and nature of accommodation and tenure type. It also sought information on the following types of property, assets and savings:

- (i) The value of the house in which the household lived, their tenure status, and details of mortgage if any;
- (ii) For the self-employed, the value of the business;
- (iii) For farmers, the value of the farm;
- (iv) The value of any houses, land or other property, apart from the house/land occupied by the household or included in the farm, together with details of any mortgage outstanding on that property;
- (v) Financial assets: a detailed set of questions sought separate information on each of the following:

- the level of balances in bank deposit accounts or credit unions;
- the level of balances in building society accounts;

- the level of balances in Post Office Savings Bank or Trustee Savings Bank accounts;
- the level of savings in (State-backed) Savings Certificates or Index-Linked Savings Bonds;
- the level of savings in National Instalment Savings;
- the value of Prize Bonds owned;
- the value of government stocks owned;
- the value of shares or securities owned;
- the level of savings held in deposit or investment bonds, guaranteed income bonds, growth bonds or other unit linked funds.

The market value of the house was estimated both by a household member and by the interviewer. All the other assets questions were on a personal questionnaire asked of each adult in the household, with the financial assets covered in a separate section at the end of the questionnaire. In asking about deposit accounts, joint accounts with other household members were distinguished. Respondents were asked for their own estimate of the current value of stocks, shares and investments in various types of bonds; where they could not put a value on the latter, details of amounts invested and timing of those investments were sought. While these data provide an opportunity to look at asset-holdings at individual level, here we concentrate on household-level aggregates.

Where some, but incomplete, information was provided by respondents, imputations of asset values were made where possible. For example, some self-employed did not give a value for their business but did give annual profit and/or turnover, and the approximate value of the business could be estimated assuming a profit/value relationship similar to that observed for full-responding cases. Similarly a small number of farmers did not give a value for their farm, but this could be estimated on the basis of acreage, activity, output etc. Out of 3294 households responding to the survey, 102, or 3 per cent, refused to respond to the entire section on financial assets (though most of these did provide house value and, where relevant, value of farm or business).² A further 103, or 3 per cent, did not or could not respond to at least one of the questions on financial assets, although responding to some. Table 1 shows the position of these refusing or non-responding households in the household income distribution.

This shows that those refusing the entire section are disproportionately drawn from the upper income deciles, with about 34 per cent in the top two deciles and 61 per cent in the top half of the distribution, though they are by no means simply concentrated at the top. Those failing to respond fully to the financial assets questions are more evenly distributed throughout the income distribution, with 26 per cent in the top two deciles and 51 per cent in the top half, though 17 per cent are in the second decile from the bottom which has a high proportion of elderly people.

Assessing the reliability and representativeness of the survey responses on property and savings/financial assets is difficult because of the paucity of external information against which it can be validated. Beginning with the data on house values provided by respondents, the percentage of house-owners in the survey is similar to that in other surveys and in the Census of Population – with almost 80 per cent of households owner-occupiers. Comparing

² Where one spouse provided information on financial assets and the other did not, a judgment was made on a household-by-household basis as to whether the information provided could reasonably be taken to represent the position of the household.

*Table 1:
Position in the income distribution of households refusing or failing to
respond to questions on financial assets*

Decile	Refused entire financial assets section	Refused/didn't know on one or more questions
	%	%
Bottom	5.7	3.2
2	10.9	16.6
3	5.2	8.4
4	6.0	9.5
5	10.9	11.7
6	4.3	8.7
7	11.6	5.4
8	11.7	10.2
9	20.2	10.7
Top	13.5	15.6
All	100.0	100.0
Number of cases	102	103

respondents' valuations with those made by interviewers the two are generally quite close: respondents on average gave estimates which were about 6 per cent higher, but much of this difference was at very high values where respondents should be better informed than interviewers. For farm land, the distribution of farms by size in the sample can be compared with external information from a national farm survey and is very close. Table 2 shows, however, that the very largest farms are however under-represented in the survey, with only 0.5 per cent of sample farms being over 100 hectares compared with 1.5 per cent in the national statistics. No external information exists against which the value of non-farm businesses can be assessed.

*Table 2:
Distribution of farms by size, ESRI 1987 sample and
national*

Size (hectares)	1987 ESRI sample	National
	%	%
< 10	20.1	18.4
10 < 20	26.0	28.0
20 < 30	18.0	16.3
30 < 50	14.5	13.6
50 < 100	6.7	6.9
> 100	0.5	1.4
Hill farms	14.1	15.3
All	100.0	100.0

Turning to financial assets, external information on total household holdings is available only for bank deposits. Central Bank statistics show that 40 per cent of bank deposits are held by the personal sector, most of which will be households. It is believed that a higher proportion of deposits in building societies and the Post Office and Trustee Savings banks are personal rather than corporate sector. On the basis of published data on aggregate deposits, taking 40 per cent of bank deposits and making assumptions about the proportion of other deposits attributable to households, a figure of about IR£5000 million appears to represent a reasonable estimate of total personal deposits at the time of the survey. Grossing up the sample responses to the implied totals for all households produces a figure of IR£2060 million, about 41 per cent of the external total as shown in Table 3. There may be some imprecision in the definition of personal versus business accounts, but even taking such factors into account the sample appears to cover less than half of all household savings in the form of bank or building society deposits.

External totals are published for amounts in government savings schemes, namely Savings Certificates, Index-linked Savings Bonds, National Instalment Savings and Prize Bonds, most of which are likely to be held by the personal sector. As Table 3 shows, grossed-up sample totals represent a smaller fraction of these savings than they did of bank deposits. The only other asset type which can be validated in this way is government securities. Published data give the breakdown of total domestic holdings of gilts by sector, and, as Table 3 shows, the grossed-up sample figure for the value of gilts held by households is about 28 per cent of total personal sector holdings. No such published data is available on the value of personal sector holdings of stocks and shares, or of investments by the personal sector in unit-linked funds and similar savings media. Some downward bias in sample respondents' valuations could be expected, due to failure to take accrued interest or increases in values over time into account. However, the fact that the data has been obtained through a general household survey is clearly the primary reason for the low coverage, and it is not particularly surprising in the light of experience elsewhere.

Without attempting an in-depth survey, some comparative figures from experience internationally help to illustrate the point. Avery et al. (1988) document that in the 1983 U.S.

*Table 3:
Comparison of grossed-up 1987 ESRI sample survey aggregates for holdings of financial assets with external totals*

Financial asset type	Grossed-up sample total £m	External total £m	Sample as percentage of external
Bank, building society, Post Office and Trustee Savings Bank deposits	2060	5000	41
Savings Certificates and Index-linked Savings Bonds	200	901	22
National Instalment Savings	38	108	35
Prize Bonds	25	78	32
Government securities	94	340	28
Total	2417	6427	38

Note: shares and investment bonds, etc. not included.

Survey of Consumer Finances, when carried out as a standard general household survey, grossed-up sample totals for deposits in savings accounts came to 44 per cent of independent totals, stocks and shares to 47 per cent, and government Savings Bonds and other government bonds to 31 per cent of independent totals. Similar findings were produced by surveys of asset-holdings in the U.S. and U.K. during the 1950s (see Ferber, 1966; Hill, Klein and Shaw, 1955; Lydall and Tipping, 1969; Atkinson and Harrison, 1978). For example, the 1953 Oxford Savings Survey produced grossed-up estimates of bank and Post Office deposits which came to 52 per cent of external totals, building society deposits came to only 24 per cent, and National Savings Certificates came to 50 per cent of external totals.

This under-representation comes about first because of the concentration of wealth, particularly certain forms of wealth, in the hands of a very small number right at the top of the distribution. A general sample survey will have difficulty adequately representing any small group. Secondly, non-response appears to be relatively high among the self-employed, the retired and the wealthy, compounding the problem of adequately capturing the upper wealth groups. There is also considerable evidence of under-statement and mis-statement of wealth holdings by those who do respond. This may arise from a deliberate desire to withhold information, or from genuine difficulties which arise in remembering accurately and making an accurate valuation. Ferber (1966) compared survey responses with external information on the households surveyed, and found that failure to report holdings entirely was a much more significant problem than understatement or errors by those who do report holdings of particular asset types.

The study by Avery et al. (1988) was able to shed valuable light on the factors leading to under-representation of wealth holdings in household surveys by over-sampling in the 1983 Survey of Consumer Finances those at the very top of the distribution, on the basis of data from income tax files. The resulting sample was then reweighted so that those high-income households were attributed their appropriate weight in the population as a whole, and the wealth holdings of this enhanced sample compared with the standard survey without enhancement. The results showed that the enhanced sample captured a substantially greater proportion of external totals for those assets concentrated towards the top. Enhanced and standard samples gave very similar estimates of the total value of housing wealth which actually exceeded external totals, and the enhanced sample continued to under-represent deposits very substantially. However, the enhanced sample provided an estimate of total household holdings of stocks and shares which was 70 per cent higher than the standard sample and quite close to the external total. Holdings of government stock were 38 per cent higher in the enhanced sample, and State and local government bond holdings were over twice as high as in the standard sample. A slightly higher proportion of the value of businesses of the self-employed was captured in the enhanced sample, though here much of the problem appears to be the inherent difficulty in valuing such businesses and distinguishing personal from business assets. Avery et al. conclude that their survey with enhancement at the top of the distribution generates adequately representative totals and distributions of household wealth, but that without such enhancement the survey would seriously underestimate total wealth and give a misleading picture of its distribution, significantly underestimating its concentration at the top.

This evidence needs to be kept to the forefront in using and interpreting wealth data from a general survey such as the 1987 ESRI one, which did not have any over-sampling at the top. Information on some types of asset data will be more reliable and these assets will be more adequately represented in the survey than others, with housing and land a good deal more reliable than financial assets, and with the substantial proportion of aggregate wealth held by

those at the very top very seriously underestimated. With this in mind we now discuss briefly the asset-holding patterns shown by the 1987 survey.

3. Asset holdings in the 1987 ESRI Survey

Table 4 shows first the composition of the wealth holdings reported by households in the 1987 survey, and the percentage of households reporting holdings of each asset type. The value of housing wealth is calculated net of outstanding mortgage, with that debt estimated on the basis of details provided about the amount originally borrowed, repayments and term. With almost 80 per cent of Irish households purchasing rather than renting, the value of investment in their principal residence comprises 55 per cent of total wealth reported in the survey. Farm land is held by 15 per cent and constitutes 26 per cent of total reported wealth. About 5 per cent of households had a self-employed member with a business, and the reported value of these businesses comprised 7 per cent of total reported wealth. Other property, such as housing other than the principal residence, and land other than that being farmed by the household, was reported by 5 per cent of households and comprised 4 per cent of the total value.

Financial assets in total came to 8 per cent of total reported wealth. Just over half of all households reported having bank or other deposits, and 43 per cent reported some form of state-backed savings scheme but with the average amount held being much lower than the average deposit. Less than 2 per cent of all households reported holding gilts, 4 per cent reported holding equities, and 2 per cent reported having investment bonds, etc. Despite having relatively high mean value for holders compared with deposits, stocks, shares and investment bonds etc. accounted for only 2 per cent of total reported wealth in the survey. Overall, just under 90 per cent of sample households reported some form of asset holding.

*Table 4:
Composition of reported wealth and percentage of households reporting holdings, by asset type, 1987 ESRI sample*

Asset type	Households reporting holding %	Mean value for those reporting IR£	Percentage of total reported wealth
Property			
Principal residence	78.5	26,221	55.0
Business	5.2	50,520	7.0
Farm land	15.2	63,154	25.7
Other property	5.5	28,074	4.1
Financial assets	53.2	3,838	
deposits	42.7	605	5.4
government savings	1.7	5,035	0.7
gilts	4.2	8,301	0.2
equities	2.0	15,654	0.9
investment bonds, etc.	5.0	930	0.8
Total	88.5	42,310	100.0

Differences across datasets and studies in definition, nature of sources and coverage make cross-country comparisons hazardous, but it may be worth providing some comparative context for these Irish results on the composition of household assets. The share of housing and farm land in total wealth is likely to be exaggerated in the survey because these forms of wealth holding are captured more fully than financial wealth. Nonetheless, housing and farm land appear to account for a higher proportion of total wealth in the Irish case than in other industrialized countries. Even if less than half of all financial wealth is captured in the survey, housing would still account for about 50 per cent of total wealth, compared with for example a figure of about one-third for the U.S. presented by Avery et al. (1988). This reflects both exceptionally high levels of owner-occupancy in the Irish case and the relatively restricted extent of financial asset holding.

Table 5 shows the way in which wealth holdings differed across the income distribution, categorizing households by disposable income decile (without any adjustment for household size, etc., via equivalence scales). The absence of an upward trend in the share of total wealth held as one moves up the income distribution, at least until the third decile from the top, is striking. The lowest share of total wealth, 5 per cent, is held by the third decile from the bottom, with the bottom two deciles having as great a share as the fourth and fifth deciles. The top decile does, however, hold 22 per cent of total wealth.

The table also shows the composition of the wealth held by the different deciles. Housing (i.e., principal residence) is the most important form of wealth holding for all the deciles, and accounts for over half the total wealth of the decile for all except the top. Farm land is the next most important form of wealth holding throughout the distribution, but accounts for a larger share of the wealth of the bottom decile than any other. Taken together, owner-occupied housing and farm land account for 93 per cent of the wealth held by the bottom decile and 80 per cent or more of that held by each of deciles 2–8. For the top two deciles these forms of wealth holding, though dominant, account for only 76 per cent and 65 per cent of total reported wealth.

*Table 5:
Distribution of reported wealth and its composition by income decile, 1987 ESRI sample*

Income decile	Mean wealth IR£	Percentage of total wealth	Composition of decile's wealth: %				
			home	business	farm	deposits, gov't. savings	gilts, equities
Bottom	32,484	8.7	54.5	3.1	38.3	3.0	0.1
2	29,983	8.0	57.0	0.5	27.5	7.5	0.6
3	20,066	5.4	65.3	1.2	23.3	4.9	0.9
4	25,575	6.8	58.2	0.9	32.7	5.8	0.2
5	31,699	8.5	53.1	6.4	31.2	5.4	1.9
6	35,371	9.4	57.4	3.8	23.1	5.7	2.0
7	32,922	8.8	66.4	4.4	20.3	5.6	0.8
8	39,983	10.7	60.1	3.3	25.5	6.6	1.7
9	46,155	12.3	58.5	5.9	17.9	8.4	4.6
top	81,713	21.8	41.0	19.6	23.8	6.7	3.4
all	37,441	100.0	55.0	7.0	25.7	6.1	1.9

Wealth held in the form of businesses is most important at the top, accounting for almost 20 per cent of the wealth of the top decile. Savings in the form of bank and other deposits or government small savings media account for 5 to 8 per cent of total wealth throughout most of the income distribution. Gilts, equities and investment-linked funds are more important in the top two deciles than elsewhere, but even there account for only 3.5 to 4.5 per cent of total reported wealth.

The weakness of the income/wealth relationship may be surprising. Income here is being measured over the past week or month, except for income from self-employment and investments where the average over a year is taken. Wealth holdings will be influenced by many other factors over a long period, and the implications of the observed income/wealth relationship for current living standards are among the issues discussed in the next section. First, though, it is useful to look at the pattern of wealth holding by age and social class, and at the overall concentration of reported wealth.

Table 6 shows mean wealth rising sharply with the age of the household head, peaking in the 45–64 age groups, and then declining sharply. As a result, households with a head aged between 45 and 74 have 60 per cent of reported wealth though they account for half of all households. In terms of composition by asset type, housing makes up about 55 per cent of wealth for all age groups except 75 and over, where it accounts for more than two-thirds of reported wealth. Farm land is least important for that elderly group, wealth in the form of businesses is most important for the 25–54 age range, and financial assets are most important for the older age ranges.

As far as the relationship between wealth and social class is concerned, Table 7 shows the pattern with the six-category social class schema adopted by the Irish Central Statistics

*Table 6:
Distribution of reported wealth and its composition by age group, 1987 ESRI sample*

Age category	Mean wealth IR£	Percentage of total wealth (% of sample in brackets)	Composition of decile's wealth: %				
			home	business	farm	deposits, govt. savings	gilts, equities
under 25	12,024	0.6 (2.0)	55.6	–	25.7	7.8	–
25–34	23,333	13.9 (22.3)	52.2	10.3	23.7	5.7	1.0
35–44	39,790	19.7 (18.5)	52.7	8.8	27.9	4.7	2.4
45–54	47,314	21.1 (16.7)	55.4	8.4	25.2	4.3	1.1
55–64	46,687	22.2 (17.8)	54.7	6.6	27.2	7.1	2.0
65–74	42,053	17.2 (15.3)	55.7	3.0	25.0	8.6	3.7
75 or over	26,651	5.2 (7.3)	67.8	1.3	20.0	8.0	1.3
All	37,441	100.0	55.0	7.0	25.7	6.1	1.9

Table 7:
Distribution of reported wealth and its composition by social class, 1987 ESRI sample

Social class	Mean wealth IR£	Percentage of total wealth (% of sample in brackets)	Composition of decile's wealth: %				
			home	business	farm	deposits, govt. savings	gilts, equities
Unskilled manual	15,949	6.8 (16.1)	84.3	1.4	5.6	4.4	0.7
Semi-skilled manual	22,980	12.5 (20.5)	66.8	6.8	18.4	5.7	0.9
Skilled manual	29,582	18.7 (23.8)	62.3	7.0	21.8	5.7	0.4
Intermediate non- manual	48,308	22.7 (17.7)	47.3	1.8	40.2	5.6	1.3
Lower professional	60,928	19.5 (12.0)	44.9	4.8	38.2	6.5	2.2
Higher professional	75,347	19.8 (9.9)	48.0	18.4	14.3	6.5	5.6
all	37,441	100.0	55.0	7.0	25.7	6.1	1.9

Office.³ Mean wealth rises steadily as one proceeds up the class hierarchy, with the highest class having about five times the mean wealth of the lowest one. The semi-skilled and unskilled manual classes do have significant reported wealth, but the top two classes, with 22 per cent of sample households, hold 40 per cent of the reported wealth. The table also shows substantial differences in the composition of wealth holdings across classes. Wealth in the form of housing forms 84 per cent of the wealth of the unskilled manual class and 62–67 per cent for the semi-skilled and skilled manual classes, but only about 46 per cent for the top three classes. Businesses make up a much higher proportion of the wealth of the highest class than any others, and gilts and equities are also most important for that class. Farm land is most important for the lower professional and intermediate non-manual classes. (This reflects the way farmers are classified by social class on the basis of farm size, with only farmers owning over 200 acres placed in the highest class.)

We will not attempt to summarize here the results of detailed analysis of the inter-relationships between wealth and income, age and class, and of the patterns by asset type (see Nolan, 1991). It is of interest, though, to look at the overall distribution of wealth in the sample. When households are ranked by level of reported wealth, Table 8 shows that the bottom 70 per cent of households hold 28 per cent of total wealth, the next 20 per cent hold 12 per cent, and the top decile by wealth holds 42 per cent of all reported wealth. Looking within the top decile to the top 1 per cent of wealth-holders, these have 10 per cent of total wealth. The composition of wealth varies very substantially with level of wealth itself, as the table also

³ Very similar results are seen with the class schema developed by Erikson and Goldthorpe (1992) and widely used in cross-country comparative class analysis.

Table 8:
Distribution of reported wealth and its composition by wealth quantile, 1987 ESRI sample

Wealth decile	Percentage of total wealth	Composition of group's wealth: %				
		home	business	farm	deposits, govt. savings	gilts, equities
bottom 7 deciles	28.5	86.7	1.1	3.9	6.2	0.5
deciles 8 and 9	11.9	64.5	4.2	18.7	7.4	1.3
top 10%	42.3	27.0	12.9	45.2	5.3	3.5
top 1%	10.4	15.5	23.0	45.9	2.9	5.6

shows. For the bottom 70 per cent of households their house accounts for 87 per cent of total wealth. For the top decile, by contrast, only 27 per cent of wealth is in the form of owner-occupied housing, with farm land significantly more important at 45 per cent. For the top 1 per cent of wealth holders, the net value of their house accounts for only 16 per cent of total wealth, farm land still makes up 46 per cent, but businesses now account for 23 per cent. Even for these top wealth holders in the sample, reported financial assets only make up about 9 per cent of total wealth.

In terms of the degree of concentration of different asset types, this means that the top 1 per cent of wealth holders hold 19 per cent of all sample wealth in the form of farm land, 33 per cent of business assets, and 29 per cent of gilts, equities and investment bonds, etc., only 5 per cent of total reported deposits and 3 per cent of wealth in the form of housing.

It is clear both from experience elsewhere and the validation of the 1987 survey against external aggregates (where possible) that the distribution of wealth in the survey cannot be relied on, but it could perhaps serve as a point of departure in assessing the likely degree of concentration of wealth. One can for example make extreme assumptions about the missing wealth, on the basis of the limited information available. Suppose, for example, that the survey was reasonably accurate in measuring wealth held in the form of housing and farm land and their distribution, and that it missed one-third of the value of businesses, half of total deposits, and two-thirds of government-backed savings schemes, gilts, equities and investment bonds. If all this missing wealth was held by the top 10 per cent, then the share of that group in total wealth would rise from 42 per cent to about 50 per cent. If it was all (less realistically) attributed to the top 1 per cent, the share of that group would rise from 10 per cent to about 20 per cent. If on the other hand one assumes that the "extra" wealth of each asset type is no more concentrated than the observed wealth of that type in the sample, then the share of the top 10 per cent still rises to about 18 per cent, because this group already hold a high proportion of the asset types which are most heavily under-represented. The share of the top 1 per cent, on the other hand, now rises to only 14 per cent. Although the share of the top 10 per cent is not very sensitive to the assumption about where the "missed" wealth is attributed, it does vary with the scale of that "missed" total, which is based on extremely patchy evidence. It would also be sensitive to the possibility that some wealth in the form of housing and farm land right at the top has been missed.

This highly speculative exercise leaves the share of the top 10 per cent in Ireland at about 50 per cent, and the share of the top 1 per cent in the range 15 to over 20 per cent. It is extremely

difficult to make meaningful comparisons with results for other countries, because of differences in concepts, coverage, etc., but some household-based estimates may serve some purpose in providing a broad background. Avery et al.'s estimates for the distribution of gross assets minus principal residence debt – closest to the wealth concept measured in the Irish survey – among U.S. households in 1983 show the top 10 per cent with 65 per cent of total wealth and the top 1 per cent with about 30 per cent. Kessler and Masson (1987) show the top 1 per cent of French households in 1977 holding 13–19 per cent of net worth. They also quote figures for the share of the top 1 per cent of households in the early 1970s as 32% for the U.K., 28% for Belgium and Germany, 25% in Denmark, 20% in Canada and 16% in Sweden. Wolff (1991) quotes other estimates for the same period as 24% for the U.K., 29% for the U.S., and 21% for Sweden, and notes that the share of the top 1 per cent appeared to stabilize or rise in those countries from then to the early 1980s, with rising stock markets a contributory factor. Apart from anything else, differences in timing can therefore be important.

While the illustrative figures on wealth distribution do not look wildly implausible, then, the survey evidence clearly does not provide a firm basis in itself for assessing Ireland's degree of concentration in comparative terms. Although a topic of great interest, that is of course not the only purpose for which wealth data can be employed, and it was not the objective we had in mind in seeking to measure household wealth holdings in the ESRI survey. In the next section we describe some of the areas of research where the survey information on wealth holdings, with all its limitations, has proved very valuable.

4. Using the wealth data

In this section we give three examples of uses to which the wealth data gathered in the 1987 ESRI survey has been put. The first is in studying portfolio choice, the second is in looking at property tax options, and the third is in analysing household living standards and deprivation levels.

Modelling portfolio choice

The wealth data in the 1987 survey was used to analyse the structure of Irish household portfolios and how this varies with household characteristics in Honohan and Nolan (1994). Basing such analysis on a single cross-section has limitations, of course, in particular in being unable to incorporate the impact of changing asset prices. The household characteristics included as potential explanatory variables were total wealth, income, age, urban/rural location, sex, socio-economic group and labour force status. The allocation between financial and non-financial wealth, the allocation within financial assets between deposits and “sophisticated” or risky assets, and within “sophisticated” assets between equities and other assets were all studied.

A Tobit equation explaining the share of financial assets in total wealth suggested that share declines as total wealth increases, and is positively related to income, urban location, and membership of the higher socio-economic groups. The apparent effect of income was however related to tax effects; when the marginal income tax rate was entered, income itself became insignificant, with higher tax rates associated with a higher share of financial assets.

As far as the share of “sophisticated” assets in total financial assets was concerned, similar Tobit results suggested that share declines with wealth but rises as the size of the total financial assets holding increases. Older households tend to have relatively more “un-sophisticated” deposits, controlling for other characteristics, as do the self-employed.

Total portfolio size was also found to influence the share of equities in sophisticated assets, with a larger portfolio of financial assets associated with a lower share of equities except for very large portfolios where the effect was reversed. Total wealth was found to have an independent effect, with wealthier households tending to have a lower equity-to-other-sophisticated-assets share, and the same was true of younger households and the professional and managerial group. The highest marginal tax rate was associated with a higher share of equities in financial assets.

Property tax

The issue of how best to tax property has been a live one in Ireland in recent years. “Rates” raised by local authorities on domestic dwellings were abolished in 1977 (though commercial property remained liable). In 1983 a Residential Property Tax (RPT) was introduced, but throughout its life it had what Callan (1991) calls a “high controversy to revenue ratio”, and has recently been abolished entirely. The RPT was levied as a percentage of (self-assessed) house value, applying only to the amount over a ceiling, and with an additional income exemption limit. The tax raised very little revenue – only £11 million at its peak in 1996 – because not many people have houses valued in excess of the ceiling, a significant proportion of those are below the income limit, and even those with a liability paid only on the amount over the ceiling. Despite this, it generated enormous resistance and the parameters were altered on a number of occasions in response prior to outright abolition.

The data on house values gathered in the 1987 ESRI survey allowed Callan (1991) to carry out a microsimulation analysis of the operation of the RPT and options for a property tax. Using respondents’ own valuations, or interviewers’ valuations where respondents gave none, he looked first at the relationship between (gross) house values and current reported incomes. This showed for example that only 13 per cent out of the top 20 per cent of households in terms of house value were in the top two quintiles by gross household income. A range of options were then simulated, including taxation of imputed income from owner-occupation, a tax on the value of all residential property with no exemptions, allowances or waivers, and a tax on that value, but with an income exemption limit.

As illustrated in Table 9, the results showed that taxing imputed rent as part of income would raise substantial revenue, very little of which would come from the lowest income groups. A straight tax on house property raising about the same revenue, on the other hand, would impact much more on the lowest income groups. Introducing a low income exemption limit at the same point as the one operating in the income tax code sharply reduces the proportion of revenue coming from the lower income groups but also cuts total revenue by one-third. All these options raise substantial revenue, but the study goes on to demonstrate why having a house value allowance cum exemption limit, with tax levied only on the excess – which is how the RPT actually operated – so greatly reduces the tax take. It also shows how revenue from a serious property tax could be used to reduce income tax rates – a reform regularly advocated by economists in Ireland as elsewhere – and who the gainers and losers would be from such a shift from taxing income to taxing property. In the illustration chosen, a reduction in the standard and top income tax rates of five to six percentage points could be financed, with the upper middle parts of the income distribution losing on average, but the top decile gaining. This is a good example of the added value of having information on asset values together with income and other household characteristics.

*Table 9:
Simulated effects of alternative residential property taxes using 1987 ESRI survey*

Revenue coming from decile (%)			
Decile	Imputed income in income tax base	Simple property tax	Property tax with income exemption limit
Bottom	0.8	6.2	0.2
2	2.8	6.9	1.0
3	3.5	6.5	1.7
4	4.3	7.6	3.3
5	6.9	8.4	7.3
6	11.0	10.9	10.9
7	11.7	11.5	14.5
8	14.3	11.9	15.9
9	19.4	14.0	20.4
Top	25.3	16.1	24.9
Total revenue IR£ million per annum	392	372	235

Source: Calculated from Callan (1991) Tables 5.1, 5.2 and 5.3.

Measuring and understanding deprivation and poverty

Poverty in industrialized countries is most commonly measured using income poverty lines, but there are a number of well-known problems with the use of income alone for this purpose. Poverty is now widely conceptualized in terms of exclusion from the life of society due to lack of resources, and being “excluded” in this context is generally taken to mean experiencing various forms of what that society regards as serious deprivation, material and social. It cannot be simply taken for granted that those falling below a specified income poverty line are experiencing such deprivation, and a programme of research based on the 1987 survey has looked in some depth at the relationship between current income and non-monetary indicators of deprivation (see especially Callan, Nolan and Whelan, 1993; Nolan and Whelan, 1996b).

Although current income turns out to play a substantial role, it falls very far short of exhausting our ability to predict deprivation scores. Measures of wider resources add significantly to predictive power, as do variables related to permanent income and background. In particular, the level of deposits and the net value of owner-occupied housing are highly significant, even when one controls for current income and a variety of other factors. When a wide range of explanatory variables are included with income, the surprise is how much, rather than how little, of the variance in deprivation scores can be explained. It is therefore important that current income not be taken as the sole indicator of current living standards and/or command over resources in measuring poverty. Rather than discarding it entirely, it is possible to combine income and direct measures of deprivation to improve the way poverty is measured, as demonstrated in Callan et al. (1993) and Nolan and Whelan (1996b).

To see how the data on deposits and wealth in the form of owner-occupied housing again help in understanding the current position of households, one can look at households below a relative income poverty line in the 1987 survey, and distinguish between those experiencing and those not experiencing basic deprivation. One finds that those not experiencing basic deprivation have net housing value almost twice as high, and deposits almost six times as high, as those at similar income levels but reporting basic deprivation.

6. Some cautionary tales

Having discussed in some detail the value of the wealth information obtained in the 1987 ESRI general household survey, despite all the caveats about wealth data obtained in that way, we may conclude with two cautionary tales. The first relates to information on inheritance also obtained in the 1987 survey, and the second relates to efforts to obtain wealth data “on the cheap” in the most recent 1994 survey also carried out by the ESRI.

Inheritance

In the 1987 survey, along with the series of questions on financial assets respondents were also asked whether they had ever inherited or received a gift of a house or other property, or all or part of a business or farm; those who said they had were then asked when, and what the market value of the inheritance was at that time (see Annex 1, question 7.10). Nolan (1992) found that 15.5 per cent of sample households contained an individual who said they had received such an inheritance, and analysed the characteristics of these individuals, such as age when interviewed and when the inheritance was received. However, a separate household questionnaire was also completed by one respondent for each household, and included a question to owner-occupiers as to whether they had the accommodation built specially, purchased it, or came to own it “without purchasing it (e.g., inheritance or gift)”. A further 10 per cent of households, not containing an individual reporting receipt of a house, farm or business by gift or inheritance, were seen by the responses to this question to have come by their house without building it or purchasing it.

This could reflect deliberate mis-reporting or non-reporting of inheritances, or misunderstanding of the questions. It could be, for example, that in farm households (which account for a substantial proportion of the 10 per cent) the farm and house have been in the family for many years, perhaps effectively passed on from one generation to another prior to the death of the owner, and respondents may not necessarily consider this relevant when asked about gifts or inheritances. Whatever the explanation, the responses to the direct individual question about gifts and inheritances alone clearly do not provide a complete picture of the extent of such transfers. This is of interest in that some studies have relied on such direct questions about inheritance in surveys – for example Hamnett (1991) in analysing patterns of housing transfer in the U.K. He found only 9 per cent of households reporting receipt of an inheritance of over 1,000 which included house property, and notes that this was considerably lower than the percentage one would expect on the basis of Inland Revenue figures on estates assessed at death and containing residential property. At a minimum, a question focusing specifically on how the current dwelling came to be owned may be needed to complement one directed at inheritance.

The experience with the 1987 ESRI Survey suggests that may not be sufficient, however, since there were also some curious features of the inheritance pattern shown by combining both direct responses and houses apparently obtained via gift or inheritance. For example,

households in the lowest two social classes had the highest probability of having received a house through gifts or inheritance, although rates of owner-occupation are lowest for those classes. It is possible that house property in the higher social classes may more often be sold at time of death and the proceeds passed on as inheritance, and thus may be missed by questions about a house *per se*. But this would need to be confirmed before one could place much weight on the pattern of house inheritance shown.

Wealth data in the ESRI's 1994 Survey

The second cautionary tale relates to the efforts made in a more recent household survey carried out by the ESRI in 1994 to obtain assets data but in a much more summary fashion than in the 1987 survey. The 1994 survey, the Living in Ireland survey, was the first wave of the Irish element of the European Community Household Panel introduced by Eurostat. The ECHP itself (in that or subsequent waves) contains no questions about levels of financial assets, but additional questions on a range of topics were included in the Irish survey, including financial assets. These were necessarily much more restricted than in 1987, comprising simply one question about the total balance “in the bank, Post Office, the Savings Bank etc. or in the savings certificates, savings bonds or in prize bonds”, and one about the amount “currently invested in stocks, shares, in investment bonds or in other linked funds”. Respondents were also asked whether these were jointly held with another household member.

The average reported holding of savings in the form of deposits, etc., in the 1994 survey is similar to that in the 1987 survey. Since external aggregates indicate that the total savings held in these forms by the personal sector approximately doubled over the period, this represents a sharp fall in the coverage of these deposits between the 1987 and 1994 surveys. As far as stocks, shares and investment bonds, etc., are concerned, the mean reported holding in the 1994 survey was up about 40 per cent: there are no reliable external totals against which to compare this rate of growth, but it may well have been more rapid. The evidence on deposits, etc., certainly suggests that the prospects of capturing those financial assets in a general household survey are even poorer when a single summary question, rather than a detailed series of questions, is employed: the more you ask, the more you get.

6. Conclusions

This paper has described the data on wealth obtained in a general household survey carried out by the ESRI in 1987, and the uses to which it has been put. The results show the familiar limitations of such surveys if the aim is to accurately measure the distribution of wealth and the extent to which it is concentrated at the very top. However, the data has proved very valuable in a number of different contexts, in particular as a complement to income in analysing and understanding household living standards. Some examples of problems which can arise with data on assets and inheritance obtained from simple summary questions in such a household survey were given. If useful information on wealth and wealth transfers is to be obtained in a general household survey, it takes more than a few extra questions. Given the fact that the European Community Household Panel is on-going, perhaps the most pressing issue is what can be achieved by questions included in successive waves, or in a once-off module, aimed at obtaining useful information on wealth and wealth transfers but without jeopardizing response rates.

REFERENCES

- ATKINSON, A.B. and HARRISON, A.J., 1978, *The Distribution of Personal Wealth in Britain*, Cambridge University Press.
- EVERY, R.B., ELLIEHAUSEN, G.E. and KENNICKELL, A.B., 1988, "Measuring Wealth with Survey Data: An Evaluation of the 1983 Survey of Consumer Finances", *Review of Income and Wealth*, 34, pp. 339–369.
- CALLAN, T., 1991, *Property Tax: Principles and Policy Options*, Policy Research Series Paper No. 12, The Economic and Social Research Institute, Dublin.
- CALLAN, T. and NOLAN, B., 1991, "Concepts of Poverty and the Poverty Line: A Critical Survey of Approaches to Measuring Poverty", *Journal of Economic Surveys*, 5, pp. 243–262.
- CALLAN, T., NOLAN, B. and WHELAN, C.T., 1993, "Resources, Deprivation and the Measurement of Poverty", *Journal of Social Policy*, 22, pp. 141–172.
- CALLAN, T., NOLAN, B., WHELAN, B.J., HANNAN, D.H. and CREIGHTON, S., 1989, *Poverty, Income and Welfare in Ireland*, General Research Series Paper 146, The Economic and Social Research Institute, Dublin.
- DESAI, M. and SHAH, A., 1988, "An Econometric Approach to the Measurement of Poverty", *Oxford Economic Papers*, 40, pp. 505–522.
- ERIKSON, R. and GOLDTHORPE, J.H., 1992, *The Constant Flux: A Study of Class Mobility in Industrial Societies*, Clarendon Press, Oxford.
- FELDSTEIN, M., 1976, "Personal Taxation and Portfolio Composition: An Econometric Analysis", *Econometrica*, 44, pp. 631–650.
- FERBER, R., 1966, "The Reliability of Consumer Surveys of Financial Holdings: Time Deposits", *Journal of the American Statistical Association*, 60, pp. 148–163.
- FRIEND, I. and BLUME, M., 1975, "The Demand for Risky Assets", *American Economic Review*, 65, pp. 900–922.
- GREENWOOD, D., 1983, "An Estimation of US Family Wealth and its Distribution from Microdata, 1973", *Review of Income and Wealth*, 29, pp. 23–43.
- HAMNETT, C., 1991, "A Nation of Inheritors? Housing Inheritance, Wealth and Inequality in Britain", *Journal of Social Policy*, 20, pp. 509–535.
- HILL, T.P., KLEIN, L.R. and SHAW, K.H., 1955, "The Savings Survey 1953: Response Rates and Reliability of Data", *Bulletin of the Oxford University Institute of Statistics*, 17, pp. 89–126.
- HONOHAN, P. and NOLAN, B., 1993, *The Financial Assets of Households in Ireland*, General Research Series Paper 162, The Economic and Social Research Institute, Dublin.
- KESSLER, D. and MASSON, A., 1987, "Personal Wealth Distribution in France: Cross-Section Evidence and Extensions", in E. Wolff (1987), pp. 141–176.
- LYDALL, H.F. and TIPPING, D.G., 1969, "The Distribution of Personal Wealth in Britain", *Bulletin of the Oxford Institute of Economics and Statistics*, 23, pp. 83–104.
- LYONS, P.M., 1972, "The Distribution of Personal Wealth in Ireland", in J.A. Bristow and A.A. Tait (eds.), *Ireland: Some Problems of a Developing Economy*, Gill and Macmillan, Dublin.
- LYONS, P., 1975, "Estate Duty, Wealth Estimates and the Mortality Multiplier", *Economic and Social Review*, 6, pp. 337–352.
- MACK, J. and LANSLEY, S., 1985, *Poor Britain*, Allen and Unwin, London.
- MAYER, J. and JENKS, C., 1988, "Poverty and the Distribution of Material Hardship", *Journal of Human Resources*, 24, pp. 88–113.
- NOLAN, B., 1991, *The Wealth of Irish Households*, Combat Poverty Agency, Dublin.
- NOLAN, B., 1992, *The Pattern of Inheritance in Ireland: Household Survey Evidence*, Working Paper 35, The Economic and Social Research Institute, Dublin.
- NOLAN, B. and CALLAN, T., 1994, *Poverty and Policy in Ireland*, Gill and Macmillan, Dublin.
- NOLAN, B. and WHELAN, C.T., 1996a, "The Relationship Between Income and Deprivation: A Dynamic Perspective", *Revue Economique*, 3, pp. 15–39.
- NOLAN, B. and WHELAN, C.T., 1996b, *Resources, Deprivation and the Measurement of Poverty*, Clarendon Press, Oxford.
- SANDFORD, C. and MORRISSEY, O., 1985, *The Irish Wealth Tax: A Case Study in Economics and Politics*, General Research Series Paper 123, The Economic and Social Research Institute, Dublin.
- SHORROCKS, A.F., 1982, "The Portfolio Composition of Asset Holdings in the United Kingdom", *Economic Journal*, 92, pp. 268–284.
- SHORROCKS, A.F., 1987, "U.K. Wealth Distribution: Current Evidence and Future Prospects", in E. Wolff (1987), pp. 29–50.
- SMITH, J., 1987, "Recent Trends in the Distribution of Wealth in the USA: Data, Research Problems and Prospects", in E. Wolff (1987), pp. 72–89.

- SPANT, R., 1987, "Wealth Distribution in Sweden: 1920-1983", in E. Wolff (1987), pp. 51–71.
- TOWNSEND, P., 1979, *Poverty in the United Kingdom*, Penguin, Harmondsworth.
- UHLER, R.S. and CRAGG, J.A., 1971, "The Structure of the Asset Portfolios of Households", *Review of Economic Studies*, pp. 241–257.
- WOLFF, E., 1983, "The Size Distribution of Household Disposable Wealth in the United States", *Review of Income and Wealth*, 29, pp. 125–146.
- WOLFF, E., 1987, *International Comparisons of the Distribution of Household Wealth*, Oxford University Press, New York.
- WOLFF, E., 1991, "The Distribution of Household Wealth: Methodological Issues. Time Trends and Cross-Sectional Comparisons", in L. Osberg (ed.), *Economic Inequality and Poverty: International Perspectives*, Sharpe, New York.
- WOLFF, E., 1994, "Trends in Household Wealth in the United States, 1962–83 and 1983–89", *Review of Income and Wealth*, 40, pp. 143–174.
- WOLFF, E. and MARLEY, M., 1989, "Long-Term Trends in US Wealth Inequality: Methodological Issues and Results", in R.E. Lipsey and H. Tice (eds.), *The Measurement of Saving, Investment and Wealth*, Studies in Income and Wealth, vol. 52, Chicago University Press, Chicago.