Comparing wealth distribution across rich countries: the Luxembourg Wealth Study project

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Introduction

The study of the distribution and composition of household wealth is a flourishing research field in a rich and aging world. Empirical analysis must, however, cope with considerable weaknesses in the available data. Household surveys of assets and debts, for instance, typically suffer from large sampling errors due to the high skewness of the wealth distribution as well as from serious non-sampling errors. In comparative analysis these problems are compounded by differences in the methods and definitions used in various countries. Indeed, in introducing a collection of essays on household portfolios in five countries, Guiso, Haliassos and Jappelli mention "definitions" as the "initial problem" and warn the reader that "the special features and problems of each survey … should be kept in mind when trying to compare data across countries" (2002: 6-7). Likewise, Davies and Shorrocks conclude their extensive survey on the distribution of wealth by remarking that: "Adoption of a common framework in different countries, along the lines that have been developed for income distributions, would improve the scope for comparative studies" (2000: 666).

These concerns have led researchers and institutions from a number of countries to join forces to launch the Luxembourg Wealth Study (LWS) - an international project to assemble existing micro-data on household wealth into a coherent database. As the experience of the Luxembourg Income Study (LIS) has clearly shown in the study of income distribution, the availability of such database is likely to spur comparative research on household net worth, portfolio composition, and wealth distributions, and to stimulate a process of harmonization of definitions and methodologies. The purpose of this article is to describe the genesis and structure of the project, to summarize the main features of data sources, and to discuss the classification of wealth variables and some comparability issues.

Genesis, goals and participants

The idea of the Luxembourg Wealth Study originated at the 27th General Conference of the International Association for Research in Income and Wealth, held in Djurhamn, Sweden in August 2002. Following the discussion in a session on the size distribution of household wealth, it was recognized that the international comparability of wealth data was far lower

than that of income data. The successful LIS experience, begun almost two decades earlier (Smeeding 2004), suggested the way forward: a cooperative project gathering producers of wealth micro-data aimed at creating a cross-country comparable database. After two more meetings at LIS offices in Luxembourg, in July 2003, and at the Levy Economics Institute in New York, in October 2003, the LWS was officially launched in March 2004 as a joint project of LIS and institutions from nine countries: Canada, Cyprus, Finland, Germany, Italy, Norway, Sweden, the United Kingdom, and the United States. Austria has also joined in spring 2006, making LWS a ten nation enterprise at present.

The primary goal of the project is to assemble and to organize existing micro-data on household wealth into a coherent database, in order to provide a much sounder basis for comparative research on household net worth, portfolio composition, and wealth distributions. The ex post harmonization of existing data is seen as the first stage of the project. The establishment of a network of producers and experts of data on household net worth aims at promoting a process of ex ante standardization of definitions and methodologies. The elaboration of guidelines for the collection of household wealth statistics, as done for income by the Canberra Group (2001), is an important task for the foreseeable future. In light of these goals the first workshop on the "Construction and Usage of Comparable Microdata on Wealth: the Luxembourg Wealth Study" was organized by Banca d'Italia in Perugia, Italy in January, 2005. The outcome of this conference was a series of technical papers available on the LWS website, which provide the basis for future discussions in constructing comparable wealth survey data.

Participants in the LWS project are a varied group. Sponsoring institutions include statistical offices (Statistics Canada, Statistics Norway), central banks (Central Bank of Cyprus, Banca d'Italia, Österreichische Nationalbank), research institutes (Deutsches Institut für Wirt-schaftsforschung-DIW, UK Institute for Social and Economic Research-ISER, through a grant awarded by the Nuffield Foundation), universities (Åbo Akademi University), and research foundations (Finnish Yrjö Jahnsson Foundation, Palkansaajasäätiö-Finnish Labour Foundation, Swedish Council for Working Life and Social Research-FAS, US National Science Foundation). Representatives from several other public institutions (Statistics Sweden, Banco de España, De Nederlandsche Bank, US Federal Reserve Board, US Internal Revenue Service, UK Department for Work and Pensions, Organisation for Economic Co-operation and Development, World Bank) as well as researchers from many universities have taken part in different stages of the project.

The partnership with the LIS is a strong asset, as it allows the LWS project to take advantage of the 20-year LIS experience in harmonizing household survey data and making them accessible to researchers world-wide through an innovative remote access system (see http://www.lisproject.org for further details). The same access rules will be followed by the LWS as it becomes merged with LIS in 2007. The β-version (test version) of the database has been released and is being tested by researchers participating in the project. The comparison of the β-version of the database with the original national sources was the object of the technical conference that took place in December 2006 in Luxembourg. The test phase will lead to the preparation of the final α-version of the database that is expected to be made public sometime in 2007. The release of the α-version to the research community will mark the end of the first stage of the LWS project. Afterwards, the maintenance and updating of the dataset will be part of the regular LIS activities, as decided by the board of LIS country members in July 2005 and to be discussed again in July 2007. As in LIS, participation in the LWS work will be open to any country that has the relevant information and wants to join the project. Future participation in the project has already been discussed with Australia, the Netherlands, New Zealand and Spain.

A sketch of data sources

The data sources included in the LWS database and some of their characteristics are listed in Table 1. (The Austrian survey is covered here for sake of completeness but no further comments will be made in the paper, as the work to include this survey in the LWS database is underway.) Although all countries rely on sample surveys among households or individuals, there are differences in collection methods across surveys. For example, in two Nordic countries the data are supplemented with information from administrative records (mostly wealth tax registers). Some income information is also supplemented by tax registers in Canada and Finland. Sample sizes are widely different, ranging from 895 households in Cyprus to 22,870 units in Norway.

The surveys also differ by purpose and sampling frame (see Sierminska 2005, for further details). Certain surveys have been designed for the specific purpose of collecting wealth data (CA-SFS, CY-SCF, IT-SHIW, US-SCF), whereas others cover different areas and have been supplemented with special wealth modules of longitudinal household panel surveys (GE-SOEP, UK-BHPS, US-PSID). Some surveys over-sample the wealthy and provide a better coverage of the upper tail of the distribution (CA-SFS, CY-SCF, GE-SOEP, US-SCF), but at the cost of higher non-response rates. Others ask only a small number of broad wealth questions, but achieve good response rates (eg, US-PSID). Germany applies a special case of "bottom-coding", because financial assets, durables and collectibles, and non-housing debt are only recorded when their respective values exceed 2,500 euros. Tax registers may contain more precise estimates, but they suffer from underreporting due to tax evasion and tax exemptions, or to valuation criteria based on fiscal or administrative rules rather than market prices (see below).

Definitions are also not uniform across surveys. In general, the *unit of analysis* is the household, but it is the individual in Germany, and the nuclear family (ie a single adult or a couple plus dependent children) in Canada. A household is defined as including all persons living together in the same dwelling, but sharing expenses is an additional requirement in Cyprus, Italy, Finland, Norway, Sweden and the United States. This implies that demographic differences reflect both the definition of the unit of analysis and true differences in the population structure.

The *household's head* is defined as the main income earner in most surveys, but it is defined as the person most knowledgeable and responsible for household finances in Germany, Italy and the United Kingdom. The United States is the only country where the head is taken to be the male in a mixed-sex couple. Multiple household's heads are allowed in Norway wherever the partners in a couple are not married or cohabiting, or adult children are present, since the head is defined with reference to each nuclear family within the household. As in the LWS database the unit is taken to be the household, in these cases the household's head has been identified with the main income earner.

The surveys included in the LWS archive differ in many other respects, and some more closely related to wealth variables are discussed in the next Section. Full documentation of each survey's features will be an important constituent of the LWS archive. The LWS documentation will also report which of these differences in the original surveys were corrected for in the harmonization process, and which were not.

LWS variables and wealth classification

The number and definition of recorded wealth variables vary considerably across surveys. As shown in Table 1, the number of wealth categories ranges from a minimum of 7 in the UK-BHPS to 30 or more in the IT-SHIW, the NO-IDS and the US-SCF. This number compounds with the detail of the questions: in some surveys, there are few simple summary questions; in

other surveys, the very high level of detail leads to a considerable multiplication of the number of separate recorded items. The US-SCF is by far the most detailed wealth survey of those included in the LWS database: checking accounts, for instance, are first separated into primary and secondary accounts, and then distinguished according to the type of bank where they are held.

The great variation in the amount of recorded information makes the construction of comparable wealth aggregates a daunting task. This problem has been approached by defining an ideal set of variables to be included in the LWS database. This starts with a general classification of wealth components, from which totals and subtotals are obtained by aggregation. This set is then integrated with demographic characteristics (including health status) and income and consumption aggregates, plus a group of variables particularly relevant in the study of household wealth: realized lump-sum incomes (eg, capital gains, inheritances, *inter-vivos* transfers) and "behavioural" variables such as motives for savings, perceptions about future events (eg, bequest motivation), attitude towards risk, and so forth.

This ideal list has been pared down after a comparison with the information actually available in the LWS surveys. With regards to wealth, this process has eventually led to identify the following categories:

- *Financial assets*: Transaction and savings accounts, CDs; Total bonds; Stocks; Mutual and investment funds; Life insurance; Pension assets; Other financial assets.

- *Non-financial assets*: Principal residence, Investment real estate; Business equity; Vehicles; Durables and collectibles; Other non-financial assets.

- *Liabilities*: Home secured debt, which is the sum of Principal residence mortgage, Other property mortgage, and Other home secured debt (including lines of credit); Vehicle loans; Instalment debt (including credit card balance); Educational loans; Other loans from financial institutions; Informal debt.

- *Net worth*: Financial assets plus Non-financial assets less Liabilities.

Crossing this classificatory grid with the information available in each LWS survey gives rise to the matrix of Table 2. This Table illustrates the difficulty of transforming the original sources into a harmonized database: coverage and aggregation of wealth items vary widely across surveys. An acceptable degree of comparability can be obtained for four main categories of financial assets: deposit accounts, bonds, stocks, and mutual funds - with the partial exception of Germany which does not record information on checking deposits. The remaining financial components are available only for some countries. For non-financial assets the greatest comparability is obtained for principal residence and investment real estate. Liabilities are present in all surveys, though with a varying degree of detail. Applying the minimum common denominator criterion to this matrix, four LWS aggregates are defined: total financial assets, including deposit accounts, stocks, bonds, and mutual funds; non-financial assets, including principal residence and investment in real estate; total debt; and net worth, ie the sum of financial and non-financial assets net of total debt. Business equity is not available for all nations, but is comparable for at least seven nations. If one is willing to focus on a smaller subset of nations, more complete definitions are possible.

These LWS aggregates are broadly comparable, but fall short of perfect comparability, since underlying definitions and methods vary across surveys. Moreover, these aggregates fail to capture important wealth components, such as business equity and pension assets - two items that are particularly difficult to measure (Bonci et al 2005; Brugiavini, Maser and Sundén 2005). As their importance differs across countries, cross-national comparisons are bound to reflect these omissions. Some indication is provided by the comparison between the LWS definitions and the national definitions of net worth. The LWS database includes the variables which are part of the national concept but are excluded from the LWS definition. This allows users to reconcile the different definitions, as shown in Table 3 for five countries. The first message of Table 3 is reassuring: once the missing items are included back in net

worth, the LWS figures closely approximate those released in official publications. On the other hand, more worryingly, the weight of these omissions is significant and varies considerably across countries: it goes from about a half in the two North-American nations to less than a fourth in the three European nations of Table 3. This evidence is a salutary warning of the high cost of cross-country comparability using current survey practices: until a greater standardization of wealth surveys is achieved ex ante, we have to trade off higher comparability against a somewhat incomplete picture of national wealth.

Valuation criteria, non-response patterns and imputation procedures

Other methodological differences, in addition to those concerning definitions, affect comparability. Some relate to the way assets and liabilities are recorded (as point values, by brackets, or both) and to their accounting period. Wealth values generally refer to the time of the interview, but in four countries end-of-year values are registered (Table 1). Moreover, in half of the surveys included in the LWS database the reference period for income differs from that for wealth. This points at an important difference that needs to be borne in mind: unlike income and earnings surveys which deal with receipts accrued many times during the year, asset or wealth surveys ask the respondents to report their household balance sheet, including the value of assets and liabilities which may not have been marketed for a long period, such as the value of one's owned home or the total value of all financial instruments.

The very same criteria to value assets and liabilities may differ (Atkinson and Harrison 1978: 5-6). In most cases, wealth components are valued on a "realization" basis, or "the value obtained in a sale on the open market at the date in question" (Atkinson and Harrison 1978: 5), as estimated by the respondent. There are important exceptions, the most relevant being the valuation of real property in Sweden and Norway on a taxable basis. Statistics Sweden calculates the ratios of purchase price to tax value for several types of real estate and geographical locations, and then uses them to inflate the tax values registered in the survey. This procedure is however not applied to Norwegian data, although Statistics Norway estimated that in the 1990s the taxable value of houses was less than a third of their market value (Harding, Solheim and Benedictow 2004: 15-6, fn. 10). These diverse choices are likely to affect comparisons between the two Scandinavian countries as well as between them and the other countries relying on valuation at market prices as estimated by respondents.

Lastly, there are different patterns of non-response and different imputation procedures. For instance, the CY-SCF has a rather detailed set of questions, but the number of missing values is very high: only 349 households, out of 895, provided enough information to estimate the LWS net worth concept (Table 4). The overall response rate of the IT-SHIW is rather low, about 36 per cent in the 2002 wave, net of units not found at the available address, but item non-responses are few. LWS net worth cannot be derived for 14 per cent of the households in the UK-BHPS. Banks, Smith and Wakefield (2002) have applied a "conditional hot-deck" imputation method at the benefit unit level to alleviate the missing information problem, but it is still to be determined whether LWS will follow the same methodology. In the US-PSID financial assets as well as housing equity are imputed. Discussions are under way whether this imputation method can be followed to obtain values for the principal residence and mortgages that would reduce the overall proportion of missing values. In the US-SCF item non response is tackled by using a sophisticated multiple imputation program (Kennickell 2000), while in the GE-SOEP it is currently treated by replacing missing values with the overall mean (a multiple imputation procedure will be used in the updated versions of the LWS data).

A synthetic assessment of the information contained in the LWS database is provided by the comparison of LWS-based estimates with their aggregate counterparts in the national

balance sheets of the household sector (which include non-profit institutions serving households and small unincorporated enterprises). This comparison is presented in Table 5, where all variables are transformed into euro at current prices by using the average market exchange rate in the relevant year, and are expressed in per capita terms to adjust for the different household size. The aggregate accounts provide a natural benchmark to assess the quality of the LWS database, but a proper comparison would require a painstaking work of reconciliation of the two sources, as discussed at length by Antoniewicz et al (2005). The aim of Table 5 is more modestly to offer a summary view of how the picture drawn on the basis of the LWS data relate to the one that could be derived from the national balance sheets or the financial accounts. LWS estimates seem to represent non-financial assets and, to a lesser extent, liabilities better than financial assets. In all countries where the aggregate information is available, the LWS wealth data account for between 40 and 60 per cent of the aggregate wealth. Note that these discrepancies should not be attributed to deficiencies of the LWS data, since they reflect not only the under-reporting in the original micro sources, but also the exclusion of some items in the LWS definitions to enhance cross-country comparability as well as the different definitions of micro and macro sources.

To sum up, despite the considerable effort put into standardizing wealth variables, there remain important differences in definitions, valuation criteria and survey quality that cannot be adjusted for at this time. Moreover, the degree to which LWS-based estimates match aggregate figures varies across surveys.

Conclusions

Reliable statistics on the composition and distribution of private wealth is a pre-requisite for the study of the well-being of households and their consumption and financial behaviour. As recently stressed by Campbell, "measurement" is a "challenge" faced by researchers studying household finance, because "… households guard their financial privacy jealously: in fact, it may be more unusual today for people to reveal intimate details of their financial affairs than to reveal details of their intimate affairs" (2006: 3). This challenge is stretched to the limit when we move to comparative analysis, since the difficulties in collecting data on household finances are compounded by the need to standardize these data across countries. Yet, the exercise is worth taking.

First of all, in a number of countries there are enough data which, once they are properly treated, could shed light on cross-national differences in household finances. The detailed work on the single items recorded in each of the surveys included in the LWS database has allowed us to construct a set of variables and wealth aggregates which are broadly comparable across countries. Researchers must be aware that many problems remain and that comparative results must be taken with some caution, but the LWS project shows that cross-national analysis of household wealth holding is indeed feasible.

The second important reason for the LWS endeavour is that comparing micro and macro sources on household wealth across countries is an effective way lo learn about relative weaknesses and methodological differences. It is instrumental in defining an internationally agreed frame for the collection and classification of household wealth at the individual level - as done in the past by LIS for income statistics. Cross-national differences will never be eliminated entirely, and perfect comparability is hardly achievable. But the LWS project provides a starting point for a much needed process of ex ante standardization of methods and definitions. The release of the α-version of the LWS database to the scientific community will allow a considerable progress in substantive research on household wealth on a comparative basis, but it must also be seen as a first step toward the construction of better cross-country comparable wealth data.

Table 1

LWS household wealth surveys

Country	Name	Agency	Wealth year[1]	Income year	Type of source	Over-sampling of the wealthy	Sample size	No of non-missing net worth	No of wealth items
Austria	Survey of Household Financial Wealth (SHFW)	Österreichische Nationalbank	2004	2004	Sample survey	No	2,556	–[2]	10
Canada	Survey of Financial Security (SFS)	Statistics Canada	1999	1998	Sample survey	Yes	15,933	15,933	17
Cyprus	Cyprus Survey of Consumer Finances (SCF)	Central Bank of Cyprus and University of Cyprus	2002	2001	Sample survey	Yes	895	349	24
Finland	Household Wealth Survey (HWS)	Statistics Finland	End of 1998	1998	Sample survey	No	3,893	3,893	23
Germany	Socio-Economic Panel (SOEP)	Deutsches Institut für Wirtschaftsforschung (DIW)	2002	2001	Sample panel survey	Yes	12,692	12,129	9
Italy	Survey of Household Income and Wealth (SHIW)	Bank of Italy	End of 2002	2002	Sample survey (panel section)	No	8,011	8,011	34
Norway	Income Distribution Survey (IDS)	Statistics Norway	End of 2002	2002	Sample survey plus administrative records	No	22,870	22,870	35
Sweden	Wealth Survey (HINK)	Statistics Sweden	End of 2002	2002	Sample survey plus administrative records	No	17,954	17,954	26
United Kingdom	British Household Panel Survey (BHPS)	ESRC	2000	2000	Sample panel survey	No	4,867[3]	4,185	7
United States	Panel Study of Income Dynamics (PSID)	Survey Research Center of the University of Michigan	2001	2000	Sample panel survey	No	7,406	7,071	14
	Survey of Consumer Finances (SCF)	Federal Reserve Board and US Department of Treasury	2001	2000	Sample survey	Yes	4,442[4]	4,442[4]	30

[1] Values refer to the time of the interview unless otherwise indicated.   [2] Net worth cannot be calculated owing to the unavailability of information on non-financial assets.
[3] Original survey sample. Sample size can rise to 8,761 when weights are not used.   [4] Data are stored as five successive replicates of each record that should not be used separately; thus, actual sample size for users is 22,210. The special sample of the wealthy includes 1,532 households.

Source: LWS database.

Table 2

Wealth classification matrix in LWS

Asset or liability	LWS acronym	Canada	Cyprus	Finland	Germany	Italy	Norway	Sweden	United Kingdom	United States	United States
		SFS 1999	SCF 2002	HWS 1998	SOEP 2002	SHIW 2002	IDS 2002	HINK 2002	BHPS 2000	PSID 2001	SCF 2001
FINANCIAL ASSETS											
Total	TFA	Σ	Σ	Σ	Σ	Σ	Σ	Σ	Σ	Σ	Σ
Deposit accounts: transaction, savings, CDs	DA	Y	Y	Y		Y	Y	Y	Y[2]	Y	Y
Total bonds: savings and other bonds	TB	Y	Y	Y	Y[1]	Y		Y			Y
Stocks	ST	Y	Y	Y		Y	Y	Y	Y		Y
Mutual funds and other investment funds	TM	Y	Y	Y		Y	Y	Y		Y	Y
Life insurance	LI	–	Y	Y		–	Y	–	Y[2]	Y[4]	Y
Other financial assets (exc. pension)	OFA	Y	Y	Y	Y[3]	Y	Y	Y[5]	–		Y
Pension assets	PA	Y	Y	Y		–	Y	–	–	Y	Y
NON-FINANCIAL ASSETS											
Total	TNF	Σ	Σ	Σ	Σ	Σ	Σ	Σ	Σ	Σ	Σ
Principal residence	PR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Investment real estate	IR	Y	Y	Y	Y	Y	Y	Y	Y[6]	Y[7]	Y
Business equity	BE	Y	Y	–	Y[6]	Y	Y[6]	Y[6]		Y	Y
Vehicles	VH	Y	Y	Y	Y[8]	Y	Y	–	Y[9]	Y[9]	Y
Durables and collectibles	DRCL	Y	–	Y	Y	Y	Y	–	–	–	Y
Other non-financial assets	ONF		–	–	–	–	–	Y[5]	–	–	Y
LIABILITIES											
Total	TD	Σ	Σ	Σ	Σ	Σ	Y	Y	Σ	Σ	Σ
Home secured debt	HSD	Σ	Σ		Σ		–	Y[10]		Σ	Σ
Principal residence mortgage	MG	Y	Y	Y	Y	Y	Y[11]	–	Y	Y	Y
Other property mortgage	OMG	Y	Y		Y			–		Y[7]	Y
Other home secured debt	OHSD	Y	–		–		Y	–		–	Y

Table 2 (cont)

Wealth classification matrix in LWS

Asset or liability	LWS acronym	Canada	Cyprus	Finland	Germany	Italy	Norway	Sweden	United Kingdom	United States	United States
		SFS 1999	SCF 2002	HWS 1998	SOEP 2002	SHIW 2002	IDS 2002	HINK 2002	BHPS 2000	PSID 2001	SCF 2001
Vehicle loans	VL	Y	Y	Y	Y	Y	Y[11]	Y[10]	Y[9]	Y[9]	Y
Installment debt (incl. credit card balance)	IL	Y	Y			Y			Y[12]		Y
Educational loans	EL	Y	Y	Y		–	Y	Y		Y	Y
Other loans from financial institutions	OL	Y	Y	Y		–	Y	Y			Y
Informal debt	ID		Y	–		Y	–	Y			Y

[1] Excludes checking deposits. [2] DA and LI recorded together. [3] Includes only some pension assets. [4] Includes collectibles and some mutual funds not included in TB. [5] OFA and ONF recorded together. [6] Business assets only. [7] IR recorded net of OMG. [8] As recorded in the 2003 wave. [9] VH recorded net of VL. [10] HSD, VL and IL recorded together. [11] MG, OMG, VL and IL recorded together. [12] Includes also VL, which implies a double-counting.

Source: LWS database, β-version (July 15, 2006). "Y" denotes a recorded item; "–" denotes a not recorded item; "Σ" indicates that the variable is obtained by aggregation of its components.

Table 3

Reconciling the LWS and national net worth concept

Averages in thousands of national currencies

Wealth variable	Canada	Finland	Italy	Sweden	United States
	SFS 1999	HWS 1998	SHIW 2002	HINK 2002	SCF 2001
LWS net worth	102.5	69.3	154.2	537.8	213.1
+ pension assets	83.0	0.6	–	–	74.4
+ other financial assets	2.5	1.6	0.3	24.5	13.1
+ business equity	26.9	–	23.5	80.0[1]	74.7
+ other non-financial assets	28.5	6.5	24.4	17.8	20.6
LWS adjusted net worth	243.4	78.0[2]	202.4	660.1	395.9
LWS coverage ratio[3]	*42.1*	*88.8*	*76.2*	*81.5*	*53.8*
National source net worth	249.3	79.8	204.4	660.0	395.5

[1] Business assets only.   [2] It does not include other debts.   [3] Percentage ratio of LWS net worth to LWS adjusted net worth.

Source: LWS database, β-version (July 15, 2006) and country sources: Statistics Canada (2006a); Finnish data provided by Markus Säylä; Brandolini et al (2006); Statistics Sweden (2004); Aizcorbe, Kennickell and Moore (2003). Household weights are used.

Table 4

Share of missing values in major components of LWS net worth

Per cent

Wealth variable	Canada	Cyprus	Finland	Germany	Italy	Norway	Sweden	United Kingdom	United States	United States
	SFS 1999	**SCF 2002**	**HWS 1998**	**SOEP 2002**	**SHIW 2002**	**IDS 2002**	**HINK 2002**	**BHPS 2000**	**PSID 2001**	**SCF 2001**
Non-financial assets	–	25	–	3	–	–	–	2	2	–
Financial assets	–	21	–	4	–	–	–	9	–	–
Debt	–	43	–	3	–	–	–	7	3	–
Net worth	–	61	–	4	–	–	–	14	5	–
Sample size	15,933	895	3,893	12,692	8,011	22,870	17,954	4,867	7,406	4,442

Source: LWS database, β-version (July 15, 2006).

Table 5

Per capita household wealth in LWS database and national balance sheets

Euros and per cent

Wealth variable	Canada	Cyprus	Finland	Germany	Italy	Norway	Sweden	United Kingdom	United States	United States
	SFS 1999	**SCF 2002**	**HWS 1998**	**SOEP 2002**	**SHIW 2002**	**IDS 2002**	**HINK 2002**	**BHPS 2000**	**PSID 2001**	**SCF 2001**
LWS database										
Non-financial assets	28,237	32,763	31,920	53,507	50,965	14,605	33,132	61,436	63,170	77,686
Financial assets	8,018	6,294	6,181	7,971	8,913	22,066	12,943	11,036	31,332	47,059
Debt	9,577	3,719	6,032	11,202	2,590	29,561	16,159	13,572	20,857	26,707
Net worth	26,678	35,339	32,069	50,276	57,288	7,110	29,916	58,901	73,646	98,037
National balance sheets										
Non-financial assets	32,492	–	–	69,234	78,417	–	–	67,728	66,679	
Financial assets	51,157	38,099	20,317	44,731	48,780	42,268	40,927	87,199	123,768	
Debt	13,813	15,825	7,147	18,750	7,089	33,629	16,577	20,471	31,003	
Net worth	69,836	–	–	95,215	120,108	–	–	134,457	159,444	
Ratio of LWS to NBS										
Non-financial assets	87	–	–	77	65	–	–	91	95	117
Financial assets	16	17	30	18	18	52	32	13	25	38
Debt	69	23	84	60	37	88	97	66	67	86
Net worth	38	–	–	53	48	–	–	44	46	61

Source: LWS database, β-version (July 15, 2006) and country sources: Eurostat (2006) for financial assets and debt of European countries; Deutsche Bundesbank, Brandolini et al (2006) and Office for National Statistics (2006) for non-financial wealth in Germany, Italy and the United Kingdom, respectively; Statistics Canada (2006b); Board of Governors of the Federal Reserve System (2006). LWS figures are given by the ratios between wealth totals and number of persons in each survey; household weights are used. National balance sheets (NBS) figures are obtained by dividing total values for the sector "Households and non-profit institutions serving households" by total population. All values are expressed in euros at current prices by using the average market exchange rate in the relevant year.

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