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Net worth and the Middle Class: Patterns of Wealth and Debt

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Abstract:

In this paper, we take the opportunity to examine wealth portfolios for the middle class and for various corresponding socio-economic groups. We identify the rich, at the top of the income distribution, the middle class (middle 60 percent) and the poor (bottom 20 percent). Instead of focusing on the whole population or only on the elderly, we examine several household types including, two parents with children and single parents.

We consider comparable net worth, financial assets, home ownership and net home value, and debts. In addition, we will discuss the plausible effects of the financial crisis on selected wealth components and discuss its impact on household indebtedness. We use data for Italy, Luxembourg, Sweden, the US and the UK from the recently created Luxembourg Wealth Study (LWS) - a harmonized cross-national database on household assets and liabilities.

I. Introduction

The literature on the middle class indicates that income alone does not define the middle class. People of this class are more likely to be defined by their values, expectations or aspirations even though income may constrain to some extent the manner in which these can be realized. In this paper, we take the opportunity to examine the joint distribution of income and wealth by focusing our attention on wealth portfolios of the middle class as defined by income. Since differences in wealth accumulation exist not only due to institutional differences, but also due to household structure and household formation we attempt to focus in on differences due to family situations by examining two types of households: lone-parents and couples with children.

In considering wealth portfolios we focus on net worth, financial assets, home ownership and net home value, and debts.. We use data for Italy, Luxembourg, Sweden, the US and the UK from the recently created Luxembourg Wealth Study (LWS).

We find that although financial assets do not play a very large role in wealth portfolios in most countries compared to owned homes, lone-parents are about 20 percentage points less likely to own their home than the rest of the population in all countries except Luxembourg, and they are just as likely or more likely to be in debt as the whole population. Couples with children on the other hand, are just as likely to own financial assets and are more likely to own their home compared to the whole population and therefore be in debt for that home.

In terms of wealth holdings we find that lone-parents hold on average half of what we find for couples with children. The value of one's home is the biggest asset, its value varies across countries, and its affordability varies consistently with home values. The indebtedness across countries is in the range of 2-3 times that of annual income in countries with high indebtedness and is larger in couple families than for lone-parents.

II. Brief Literature Review

We focus our scan of the literature in two areas: the newer cross national literature on wealth holdings including housing wealth especially, and the research on wealth holdings of different household types. In both cases, we concentrate almost solely on cross-national research. We also introduce the affects of asset and debts on single parents as they have not yet been studied in the cross-national literature on wealth

Wealth in Cross-National Perspective

New studies of comparative wealth holdings—many in the form of singular components such as owner occupied housing and pensions are just beginning to emerge over the past 5-7 years (Chiuri and Japelli, 2010; Apgar and Di, 2005; Banks, Blundell and Smith, 2003; Kapteyn and Panis 2003). Many of these have been limited because of unavailability of comparable data, or have been limited to two or three countries where each author harmonizes their own data for purposes of making a particular comparison and therefore errors in data and measurement are likely to be higher than with harmonized wealth survey data.

Housing Wealth

Housing wealth is by far the most studied of these components (Chiuri and Japelli 2010; Apgar and Di 2005; Doling, et al. 2004; Claus and Scobie 2001; Banks et al. 2005). While housing is the most widely held real asset in many countries, its effects on other consumption or on additional wealth accumulations are less generalizable (Apgar and Di 2005). In the United States, reverse annuity mortgages and home equity loans are beginning to be used by 'home rich but cash poor' elders to access their savings. Even then, this access is not terribly widespread, occurring to less than 10 percent of United States elders in the early 2000's (Fisher, et al. 2006; Copeland, 2006; see also Mitchell and Pigot, 2004 on Japan; and Hurst and Stafford 2004, on the United States). At the same time, Apgar and Di (2005) report that low income (bottom 20 percent of elders ranked by income) United States units which own their own homes outright, may still end up spending 25 percent or more on housing due to property taxes, utilities, and upkeep, and they also are likely to have very low next worth in these units (Gornick, et al, 2010). Thus, ownership is not without direct costs even when the mortgage has been paid off and not all elders have large amounts of home equity.

Indeed one could examine housing vs. income poverty and their joint distribution in cross-national context. The effects of housing on other consumption vary (Carroll 2004; Case, et al. 2005) with MPC's of 2-8 percent. Similar amounts are found by Catte, et al. 2004 for a wider range of OECD nations. The effects of housing wealth on consumption are smaller than those of financial wealth in some studies (Barrel and Davis 2004), but the results vary with the methods used (see Sierminska and Takhtamanova 2007, for an overview). Others have made forays on the extent of financial wealth holdings and their effect on consumption, claiming that the propensity to hold stocks in the United States is more widespread than in other rich nations (Dvornak and Kohler 2003) and therefore has a larger effect on spending.

Evidence of home owning and maintenance of housing wealth has been studied by many analysts in specific countries (e.g., Venti and Wise 2004; and Fisher, et al. 2006, for the United States; Crossley and Ostrovsky 2003, for Canada; Ermisch and Jenkins 1999, in the United Kingdom; Tatsiramos 2004 for six European nations; and finally Chiuri and Japelli 2010, more generally using the LIS data). They find that housing is held long into retirement with the exception of two nations (Finland and Canada) where the transition from owning to renting takes place later in life. In most other nations, rules of housing finance, borrowing, and other national idiosyncrasies have large effects on renting vs. owning across the life cycle (e.g., see Chen 2006; Chiuri and Japelli 2003; Ortalo–Magne and Rady 2005; Martins and Villanueva 2006).

Wealth and household structure: Single Parents vs Couples

No one has so far produced a complete study of wealth and its distribution amongst single, divorced and unmarried parents compared to married parents across nations. And none have targeted the middle class (see US Department of Commerce, 2010) Middle class families of all types, including single-parent families; aspire to homeownership, a car, college education for their children, good health insurance and retirement security. Public policy can help with many of these needs, through avenues such as guaranteed health insurance and college education subsidies. Of course some countries, more or less all countries studied here but the United States, provide guaranteed health insurance and affordable university opportunities for qualified students. But the majority of these aspirations remain the responsibility of the family, which must build its own financial security from savings while avoiding

creating unsecured debt. And two parent families are much more likely to meet these standards than are single parent families.

Gender and family wealth gaps for single vs other parents have been studied in the United States (Sedo and Kossoudji, 2004; Schmidt and Sevak 2006; Conley and Ryvicker 2005) and in Germany (Frick and Grabka, 2010). Recent studies of the effect of wealth on marriage and cohabitation in the United States suggest that wealth also has powerful effects on coupling and assertive mating , thus further strengthening the wealth position of more advantaged couples (Schneider, 2009). But cross-national studies on family wealth per se are limited. Recent papers by Lusardi and coauthors assess household financial risk in the United States (Lusardi, Schneider and Tufano, 2009, 2010) and across six countries including US, France, Germany, UK, Canada and Italy, but do not focus on single parents. For the cross national work, they employ a survey of 7240 households in all six nations conducted in summer 2009 regarding their risk exposures, risk-bearing capacity, and coping mechanisms. These studies also do not capture the entire wealth distribution

Bover (2010) studies the effects of wealth inequality and household structure in Spain and the US and finds that household structure is an important determinant of the overall wealth distribution. In other recent work, Sierminska and colleagues have examined gender gaps in wealth in Germany only (Sierminska, Frick, Grabka, 2010), including unmarried parents and cross-national differences in family structure and wealth using independent (dummy) variables for age, education and family forms (Sierminska and Takhtamanova 2007).

Other LWS-based papers have considered the joint distributions of income and wealth across 5 rich countries, but with no differentiation across family types (Jantii, et al, 2009). This paper will be the first study to examine both income and wealth holdings and their joint distributions for various family types using the LWS.

Poverty and Income in Cross-National Perspective among older women and others

Asset ownership amongst older women and asset and income poverty more generally has been studied recently using LWS (Gornick et al. 2009; Brandolini et al. 2010.) In most cross-national research on older person's well-being, income is the main indicator. A number of researchers have used the Luxembourg Income Study

(LIS) data to analyze broader range income disparities amongst elders. Many of these papers examine the income portfolio of elders (men, women and couples), and find a balanced package of private or occupational pensions, retirement savings, earnings and public transfers only at higher income levels. At median and below median income ranges, social retirement pensions or income tested public transfers dominate the income sources of elderly units in every nation. But in all of these studies wealth is rarely mentioned, though Smeeding (2003) capitalizes interest rent and dividend flows to estimate financial wealth, and he differentiates between homeowners and renters in some comparisons. Brandolini et al (2010) do a much broader study for all LWS nations, but without any emphasis on household structure. And there has been very little study of debt in across national context using LWS or any other comparable data.

In summary, there is a large gap to be filled in wealth studies by papers using the LWS data, especially as they address family types and middle class families with children. This paper is therefore just the tip of a large iceberg of research, which will contribute to better understanding the joint effects of income and wealth on well being of vulnerable groups.

III. Data, Variables, Methods, and Measurement Issues.

Data

The empirical work for these analyses is based on data associated with the Luxembourg Income Study (LIS). LIS is a cross-national archive of harmonized cross-sectional micro-datasets from across the industrialized countries. For over twenty years, LIS has collected and harmonized datasets containing income data at the household- and person-level; these datasets also include extensive demographic and labor market data.[1] The data used in this paper are from the Luxembourg Wealth Study (LWS). The LWS database contains harmonized wealth micro-datasets from ten rich countries. These wealth datasets also include comparable income data. We use both components in this paper.

We include six countries: Germany, Italy, Luxembourg[2], Sweden, the United Kingdom and the United States. Our criteria for choosing these countries were the

[1] See www.lisproject.org, for a detailed description of the Luxembourg Income Study (LIS), including both the original LIS datasets and the new LWS datasets. See also the first methodological paper from LWS, Sierminska, et. al. (2006a)

[2] At the time of writing, the data for Luxembourg have not yet been included in the LWS. As a result, we

availability of information on housing and financial wealth. In addition, we chose countries representing varying economic environments in order to highlight differences in wealth allocation patterns in the first decade of the XXI century.

The original datasets the LWS project harmonized and which we use here include; for the United States, the Survey of Consumer Finances (SCF) 2007; for Germany, the Socio-Economic Panel (SOEP) 2001; for Italy, the Survey of Household Income and Wealth (SHIW) 2004; for Luxembourg, PSELL-3/EUSILC 2007; for Sweden, the Wealth Survey 2002; and for the United Kingdom, the British Household Panel Study (BHPS) 2000.

Income and Wealth—The Aggregate Indicators and Their Components

Our main income variable used in the analyses—is household disposable personal income (DPI). DPI is defined as the sum of total revenues from earnings, capital income, private transfers, public transfers (social insurance and public social assistance)—net of taxes and social security contributions. The income definitions and basic results regarding income inequality and poverty in the LWS are very close to those found in LIS, except of course for the fact that LWS also has much more asset information (Niskanen, 2006)

In the LWS data, these income sources are defined as follows. First, *earnings* include wages and salaries, as well as income from self-employment activities. Second, *capital income* includes interests and dividends, rental income, income from savings plans (including annuities from life insurance and private individual retirement accounts), royalties and other property income.[3] Third, *private transfers* include occupational and other pensions (e.g., pensions of unknown type or foreign pensions), alimony, regular transfers from other households/charity/private institutions, and other incomes not elsewhere classifiable.[4] Fourth, *public transfers* include *social insurance* (including some universal benefits such as social retirement pensions, unemployment insurance, disability benefits and family allowances), as

use raw survey data collected in 2008 for the PSELL-3/EUSILC Luxembourg wealth module. The results will be updated once imputed data become available (late 2010).

[3] Capital income does not include capital gains/losses, which are both excluded from the concept of DPI. See Niskanen (2006) on the exact definitions of disposable income in LIS and LWS.

[4] Private transfers do not include irregular incomes such as lottery winnings or any other lump-sums, which are excluded from the concept of DPI.

well as *public social assistance,* which includes income tested and means-tested cash and near-cash public income transfers.[5]

The counterpart of DPI, with respect to wealth, is the concept of net worth, which consists of financial assets and non-financial assets—net of total debt. Financial assets include deposit accounts, stocks, bonds, and mutual funds. Non-financial assets are broken into two parts: (owned) principal residence and other investment real estate. Finally, total debt refers to all outstanding loans, both home-secured and non-home secured. We do not include pension wealth, which has not been realized in the form of a pension flow or converted to accessible financial assets. We also use business assets although they are not available for all countries (see methodological note at the end of the paper and at http://www.lisproject.org/lws.htm).

Analyzing the Economic Well-Being: the Unit of Analysis

In analyzing economic well-being we ignore differentials in holdings amongst individuals within households (e.g., between spouses) because many sources of income and wealth cannot be disaggregated within households. The unit of analysis is the household, or all the individuals within such households. Since assets are recorded on a household level, we implicitly assume full sharing of all resources amongst members of the household. We analyze the whole population and also focus on two types of households: single parents and parent households (See Appendix Table and methodological note for more details.).

Analyzing the Economic Well-Being: Methods for Equivalizing Income and Wealth, and Other Data Adjustments

After providing an overview of portfolios across countries, we focus our analysis on the middle class. We define the middle class as households located in the middle 60 percent of the income distribution. We use DPI and divide the income distribution into 3 parts. The bottom 20% are labeled as “bottom”; the middle 60 percent as “middle”, and the top 20 percent are labeled as “top.”

[5] Our income measure does not include health care benefits in-kind, even we know that they are large (Garfinkel, Rainwater and Smeeding 2006), nor does it contain in-kind housing benefits in the form of imputed rent. It does include the cash value of having allowances, food stamps, and heating allowances.

As is standard in research on income, we "equivalize" the income data—meaning, we adjust each household's income to account for household size. Incomes are equivalized as follows: adjusted income equals unadjusted income divided by the square root of household size. Although there is a large literature on income equivalency scales, there is much less consensus about how to equivalize wealth. The only paper we know of on this topic is Sierminska and Smeeding (2005) and it suggests little difference between the wealth distribution whether eqivalized or not. In our analyses, we do not equivalize the wealth data. Incomes are bottom-coded at 1 percent of the mean equivalized DPI and top-coded at 10 times the median amount. The wealth variables are not bottom-coded or top-coded and as a result wealth variables (net worth in particular) can contain negative and zero values. Because the top and bottom ends of these wealth distributions may differ across countries, depending on the quality of the wealth survey and the sampling practices among the richest portions of the population we also rely on medians in our analysis. All observations with missing or zero disposable income or missing net worth are dropped from the sample. Furthermore, when we report actual currency amounts, all amounts are expressed as United States dollars, adjusted by purchasing power parities (PPPs), using the 2007 OECD individual consumption by households PPPs. Amounts referring to years prior to 2007 are deflated using each country's CPI.

IV. Results

We begin by presenting a set of basic results followed by discussion in section V. Descriptive statistics for the whole population are followed by deeper analyses of wealth across the income distribution. We examine the portfolio composition, wealth packages and financial asset holdings and housing values. Next, we examine housing affordability and indebtedness for lone-parents and households with children. Readers should keep in mind that wealth values e.g., for homes vs. financial wealth, may be sensitive to the year and date at which data are recorded.

Asset Participation and Wealth Holding: the Big Picture

Patterns of asset holding and portfolio composition across these countries differ less in terms of prevalence of assets than in level or composition of those assets (Table 1).[6] Excluding Germany and Luxembourg (due to its bottom code for financial assets), about 80-90 percent of households are likely to hold some form of financial

[6] Simply stated, ownership is one way to consider assets, another is valuation.

assets. Stock and mutual fund ownership is far less prevalent, except for Sweden (74%) and then the United Kingdom (48%) and the United States (34%). In Germany and Luxembourg savings and other type of investments are held by at least half of the population. Except Germany (48%), home ownership is quite uniform across countries with about 2/3 of the population owning their main residence. Owning a business is most prevalent in Italy (22%) and then the United States (14%) with a 6-9 percent ownership in Germany, Luxembourg and Sweden.

Although financial asset holdings are widespread, they account for at most a quarter of total assets only in Sweden and in the United States, where financial wealth is 24 and 27 percent, respectively of the total wealth portfolio (Table 1, Panel C). In the other countries financial holdings are only 8 to 15 percent of total wealth

Non-financial assets and particularly the main residence is the most important part of assets in all countries and particularly in the United Kingdom (76% of total assets) and Italy (71% of total assets). These are also about 65 percent in Germany, Luxembourg and Sweden and less than 55 percent only in the United States. In Luxembourg, about a quarter of the population owns other real estate, a pattern also prevalent in the United States and Italy. Only in the United Kingdom do less than 10 percent of households own other real estate.

Debt is widespread in Sweden (79 percent), the United States (82 percent) and the UK (69 percent), we suspect for tax reasons, but also depends on the availability of home loans. In Luxembourg at most 41% of households have home secured debt (home mortgages) and in Germany and Italy an even smaller share of households (27 and 15 percent, respectively). This suggests that most homeowners in Italy are outright owners.

Wealth levels differ across countries. Cross-nationally in our sample, the United States has the largest levels of investments in financial assets, while Luxembourg is the top country in non-financial assets, mainly due to high real estate prices. Given that this is the main portfolio item in all nations this also yields the highest net-worth levels based on our definition. Luxembourg is followed by the United States and Italy. The home debt levels (for owners who still owe mortgages) hover around $50,000 in Luxembourg, Sweden and the United Kingdom. This constitutes a low 9 percent of total assets in Luxembourg to a high 36 percent in Sweden.

Asset Participation and Wealth Holding: across the Income Distribution

Next, we focus on the joint distribution of income and wealth by examining the probability of owning assets across the income distribution. We distinguish between those at the bottom (bottom 20 percent of the distribution), in the middle (middle 60 percent) and at the top (top 20 percent) of the income distribution for all persons . We focus our analysis on the middle class in a cross-national perspective, but then in comparison to both ends of the distribution

The probability of having financial assets among the middle class remains high (over 0.8) in the United States, Italy, Sweden, and in the United Kingdom, while in Germany and Luxembourg it is about 50-60 percent. The probability of owning ones homes among the middle class remains close to the average with a little over 2/3 homeowners (except Germany). Indebtedness is also high in the United States, Sweden and the United Kingdom and lower in Germany (44 percent) and Italy (28 percent). Home secured debt is most prevalent in Sweden, where 77 percent of households report holding household secured debt, and then it is the US (59 percent) and about half in Luxembourg and the UK. The lowest probability of having home-secured debt is in Germany and Italy (29 and 14 percent respectively, owing mainly to outright home ownership in the latter).

We do observe large differences in asset participation between the bottom and middle of the distribution particularly for homeownership with differences of 20 to 30 percentage points. There are also differences for debt participation, but not as high as for home ownership, indicating that poorer renters sometimes fall in debt to finance their spending. Generally, at the top of the distribution more households own financial assets, homes, investment real estate, their own businesses, but also more of these have debt to finance these purchases-also making them vulnerable in case of unexpected life events.

Asset Participation and Wealth Holding: Lone Parents and Couples with Children

As pointed out in Bover (2010) differences in wealth accumulation across countries not only exist due to institutional differences, but due to household structure and household formation. In order to be able to net out differences due to family

demographics and examine comparable households we focus on two types of households with children: lone-parents and couples with children.[7]

In terms of differences in family demographics across countries we find (see Appendix table) that in Germany and Luxembourg around half of lone-parent households are in the bottom of the distribution and half in the middle of the distribution hence they are relatively poorer than the rest of the population and those in other countries, consistent with other studies of the middle class (US Department of Commerce, 2010). There are very few lone parents in the top of the distribution. Couple families on the other hand, are more evenly distributed except in Sweden where they are more likely to be in the middle of the distribution.

Lone-parents are slightly less likely to own financial assets compared to the rest of the population in Germany, Sweden, the United Kingdom and the United States; and about 20 percentage points less likely to own their home in all countries except Luxembourg (almost no difference). They are just as likely to be in debt as the whole population in Germany, the United Kingdom and the United States and more likely in Italy and Sweden (less likely in Luxembourg). There are very big differences in ownership between lone-parents in the middle and bottom of the distribution. Differences in homeownership, for example are in the range of 20 (in Sweden) to 40 (in the US) percentage points. Differences in financial asset ownership are small in Luxembourg (6 percentage points) and 17 to 25 percentage points in Sweden, the UK and Germany and very high in the United States (34 percentage points) and Italy (41 percentage points). Differences are more striking for home debt (due to differences in homeownership rates) than in other types of debt.

Couples with children are just as likely to own financial assets and are more likely to own their home than the whole population particularly in Germany and Sweden. They are also more likely to be in debt in Germany (17 percentage points), Italy (9 percentage points), Sweden (15 percentage points), the UK (18 percentage points) and the US (7 percentage points). In Luxembourg they are more likely to have a mortgage by 4 percentage points compared to the whole population.

Wealth Packages across the Income Distribution

[7] We do not create a separate category for “other” type of households with children, but focus exclusively on households that include parents and children only.

We compare wealth packages in Table 3, which express financial assets, non-financial assets and debt as a share of total assets. In the middle of the income distribution, the owned home takes up about 75% of the wealth portfolio of lone-parents and couples with children and a slightly larger share in the portfolios of lone parents in Sweden and the United Kingdom. The main home takes up a similar share of the wealth portfolio for those at the bottom of the distribution and the home ownership rate is much lower. In the United States for both, lone parents and couples the share is lower for those at the bottom of the distribution; in Italy for lone-parents; in Germany and Luxembourg it is higher for lone-parents. Debt has the highest value (as a share of total assets) in Sweden (58 percent), the United States (42 percent), the UK (30 percent), Germany (24 percent) and Italy (5 percent) among lone-parents. The same ranking and similar shares are observed among couples with children. Hence, regardless of the household structure debt is most prevalent in Sweden and the United States, while it is least important in Italy. Luxembourg does not contain full information on the indebtedness of the population and home debt represents a rather low share of total assets compared to the other countries.

Financial Assets

Next, we examine in more detail the main components of the wealth portfolio. The patterns of financial wealth holdings are examined in the first panel of Table 4, with mean and median values given for those with positive wealth holdings for lone parents and couples with children. Lone-parents in Italy, Germany and US who own financial assets hold on average $30,000. In Sweden and the UK it is about $10,000 and in Luxembourg lone-parents in the middle of the distribution hold over $100,000.[8] The values are more compressed at the median for Italy, Sweden, the UK and the US (between $2,500-$8,500); and Luxembourg remains an outlier at $22,500. The values are bottom coded for Germany (at $2,500) and not that representative. Values for couples with children are also modest compared to Luxembourg. These parent households in Italy, Sweden, the UK and the United States hold between $6,000-$12,000 financial wealth at the median, twice as much in Luxembourg. At the mean these values are compressed around $20,000-$25,000 (the US is an exception, but it oversamples the very wealthy, which may be driving the results at the mean as can be seen from the "top" column), except for Luxembourg ($45,000).

[8] The result for Luxembourg may be due to inheritances or asset gifts received from parents or grandparents, which will be investigated further. We should also reiterate that in this first version of the paper we are using raw-unimputed data for this country.

Home Ownership and Value

There is not much variation across average home values for lone-parents in Germany, the UK, the United States, and Italy ($209,000 - $270, 000) compared to the two outliers: Sweden (with a mean of $98,000) and Luxembourg (with a mean home value of $535,000). Based on the median there is a shuffling of home values with the lowest in the UK ($165,000), the US ($170,000), Germany ($206,000) and the highest in Italy ($240,000). The two outliers remain: Sweden ($76,500) and Luxembourg ($450,000). For couples with children the home values are higher by about $50,000 in Germany, Sweden and the United States, similar in the UK, and lower or the same in Italy and Luxembourg. In all countries homeownership rates among parents with children are higher than those for lone-parents, except for in Luxembourg where they are the similar.

Home affordability

Owning ones home is one of the key aspirations of the middle class. We treat home affordability as an important characteristic of the housing market and examine it based on the relationship of gross housing values and income. We proxy for affordability, by examining home value-income ratios. We divide the income distribution into bottom, middle and top and within these calculate mean and median home values and incomes for homeowners. The ratios of these values are presented in Table 5. First, as expected, we find that the housing wealth/income ratios diminish for all countries as we move up the income distribution regardless of the household type, except for Sweden. Second, the rankings across countries in terms of the highest home value to income ratios are quite consistent across the income distribution with Luxembourg, Italy and Germany exhibiting the highest ratios (being the least affordable), followed by the UK, the US and Sweden for the whole population and lone-parents, and followed by the US, the UK and Sweden for couples with children. The highest ratios are in countries with the highest home values and relatively low incomes, the lowest where there are lower incomes and low home values. The wealth-income ratios are quite similar in all countries for the top portion of the income distribution although the same rankings prevail. Conventional wisdom suggests that homes are more affordable for couples with children than for lone-parents. Our results indicate that this is not necessarily the case for all countries. The home value-income ratios are higher for lone-parents than for couples

in Italy, Luxembourg and the United Kingdom and lower in Germany and Sweden. The results in the United States vary depending on the statistic used with average home-income ratios being higher for lone-parents and median for couples. At the bottom of the distribution they are higher for couples regardless of the measure used.

Aside from home values we also compare outstanding home debt as compared to annual income (Table 6). Generally, we find that indebtedness of those at the bottom of the distribution is larger than of those at the top. Comparing across countries, the largest indebtedness is in the US, the UK and Sweden (in the range of 2-3 times annual incomes) and the smallest in Italy with Germany and Luxembourg being in the middle (1-2 annual incomes). In all countries except in Sweden the indebtedness ratio is larger for couples with children than for lone-parents. This suggest that once again, two parent families find housing loans more plentiful and much more affordable.

Effects of the Crisis

The great recession of 2008-2010 has played havoc with jobs and income of the middle class and also in many countries with asset values. The income stabilizers in Europe (unemployment insurance mainly) have helped keep most middle class families from ruin. While financial assets have regained about 75 percent of the value lost since the recession as of March 2010, home values remain depressed, especially in the United States where about 16 percent of owners are “under water” meaning they owe more in mortgage debt on this house than the value of the house (Smeeding and Thompson, 2010). Such families tend to be younger and have purchased homes near the peak of the 2000’s housing boom. Similar circumstances are liable to be found in the UK. But housing prices in Europe—Germany, Italy, Luxembourg and Sweden, have fallen little according to the OECD (2009). Moreover, the stricter lending requirements have produced far fewer families who are under water on their main asset, the family home.

V. Conclusion

We find that the home is the most important asset in wealth packages, especially for the middle class, and making up about 75 percent of total assets across the nations studied here. Financial assets do not play a very important role in the wealth portfolio in most nations and especially for the bottom income class.

We find that lone-parents are slightly less likely to own financial assets compared to the rest of the population and about 20 percentage points less likely to own their home in all countries except Luxembourg. They are just as likely to be in debt as the whole population in Germany, the United Kingdom and the United States and more likely in Italy and Sweden (less likely in Luxembourg).Couples with children on the other hand, are just as likely to own financial assets and are more likely to own their home than the whole population particularly in Germany and Sweden. They are also more likely to be in debt, but most of the value of that debt is related to owning a home

In terms of wealth holdings we find that lone-parents hold on average $30,000 in financial assets and less than $10,000 at the median. Luxembourg is a big exception with on average $100,000 and $22,500 at the median for financial assets possibly coming from asset gifts or inheritance. Couples with children have on average $20,000-$25,000 and $6,000-$12,000 at the median. Luxembourg again here is an exception with much larger values. The value of ones home is the biggest asset and its value varies across countries and its affordability varies consistently with home values. The indebtedness across countries is in the range of 2-3 times that of annual income in countries with high indebtedness and is larger in couple families than for lone-parents.

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Methodological notes

Sample: All observations with missing or zero DPI or missing NW1 were dropped from the sample.

Household types:

1. “single-parent “ households are composed of 1-adult and at least 1-child and no one else.
2. “couples with children” households are composed of 2-adults and at least 1-child

Definition of disposable income: disposable income is the LIS-DPI variable of the LWS datasets (i.e. cash and noncash income next or direct taxes, without imputed rents, one-time lump sums and capital gains and losses). In all cases incomes are adjusted by E=0.5 where ADI=unadjusted income (I) divided by household size (S) to the power E .Incomes were bottom coded at 1% of the mean equivalized DPI and top coded at 10 times the median unequivalized DPI.

Definition of net worth income: net worth is the NW1 variable of the LWS datasets (see www.lisproject.org/lws.html). It includes financial assets (deposit accounts, stocks, bonds and mutual funds) and non-financial assets (principal residence and investment real estate). Financial assets exclude life insurance and unrealized pension assets and non-financial assets exclude business assets, business debt, vehicles, durables and/or collectibles. We also use net worth 2 (NW2) in one table, which is net worth (NW1) augmented with business equity. Wealth variables are NOT bottom coded and top coded.

Real dollar values: for income and wealth are expressed in PPP terms using the 2007 OECD individual consumption PPPs (amounts referring to years prior to 2007 were inflated using OECD CPI indices within each country)

Table 1. Characteristics of wealth portfolios.

Household asset participation (percent)

Wealth variable	United States 2007	Germany 2001	Italy 2004	Luxembourg 2007	Sweden 2002	United Kingdom 2000
Financial assets	91	50	84	62	83	81
Stocks/Mutual Funds	34	na	23	na	74	48
Main Residence	71	48	70	70	62	73
Other Residence	20	14	22	27	16	9
Business Assets	14	6	22	7	9	na
Total Debt	82	41	27	na	79	69
Home Debt	54	27	15	41	74	48
Other Debt	72	17	16	na	na	55

Average asset values across countries (2007 USD)

Wealth variable	United States 2007	Germany* 2001	Italy 2004	Luxembourg* 2007	Sweden 2002	United Kingdom 2000
Financial assets	115,210	20,956	27,810	42,205	30,702	35,070
Main Residence	228,052	127,014	183,484	353,331	81,111	174,482
Other Residence	81,319	42,055	48,505	145,401	13,551	20,377
Total Assets	424,581	190,025	259,799	540,937	125,364	229,929
Total Debt	124,624	49,741	10,373	na	50,001	56,288
Home Debt	84,967	27,175	8,806	49,801	44,978	49,870
Net worth	299,957	140,284	249,426	491,136	75,363	173,641
Business Equity	144,083	30,744	47,672	21,833	13,161	na
Net worth 2	444,040	171,028	297,098	512,969	88,524	na

Shares of total assets

Wealth variable	United States 2007	Germany 2001	Italy 2004	Luxembourg 2007	Sweden 2002	United Kingdom 2000
Financial assets	27	11	11	8	24	15
Main Residence	54	67	71	65	65	76
Other Residence	19	22	19	27	11	9
Total Assets	100	100	100	100	100	100
Total Debt	(29)	(26)	(4)	na	(40)	(24)
Home Debt	(20)	(14)	(3)	(9)	(36)	(22)
Net worth	71	74	96	na	60	76

Note: Financial Assets in Germany and Luxembourg refers to saving accounts, bonds, shares and investments and do not include deposit accounts.

Table 2. Portfolio composition across the income distribution by family type

	United States			Germany			Italy			Luxembourg			Sweden			United Kingdom		
	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top
All																		
Fin. Assets	70	95	100	23	53	78	59	89	95	29	64	79	63	85	97	59	82	95
Risky Assets	14	36	75	na	na	na	4	20	47	na	na	na	48	75	93	23	44	74
Home	44	76	94	28	49	70	55	70	82	40	74	81	32	64	85	56	70	92
Other Residence	10	19	53	5	13	37	15	20	37	11	23	51	6	14	34	6	7	15
Business Assets	11	12	37	2	4	19	16	18	40	4	5	14	6	9	12	na	na	na
Total Debt	62	87	84	21	44	61	19	28	33	na	na	na	58	81	93	53	69	82
Home Debt	25	59	72	11	29	43	9	14	23	23	45	43	44	77	90	24	48	67
Other Debt	53	77	52	11	18	20	12	18	15	na	na	na	na	na	na	39	56	62
Lone Parents																		
Financial Assets	52	86	*	7	33	68	50	91	*	55	61	*	59	76	*	47	69	92
Risky	10	24	*	na	na	na	6	18	*	na	na	na	53	69	*	8	32	64
Owned Home	17	56	*	8	35	52	29	58	*	43	78	*	23	44	*	31	52	93
Other real estate	3	13	*	1	9	30	21	20	*	13	14	*	3	8	*	2	4	10
Business Assets	5	7	*	2	1	20	21	7	*	2	7	*	4	3	*	na	na	na
Total Debt	56	89	*	21	42	61	26	37	*	na	na	na	80	90	*	64	72	84
Home debt	14	47	*	5	22	36	14	14	*	24	39	*	69	85	*	17	40	56
Other Debt	53	84	*	17	20	34	20	26	*	na	na	na	na	na	na	58	63	66
Couples with children																		
Financial Assets	74	96	100	20	49	79	63	91	96	22	64	82	63	90	99	55	84	96
Risky	16	39	86	na	na	na	3	22	46	na	na	na	52	84	97	26	44	76
Owned Home	53	79	98	33	58	77	50	72	84	44	76	82	44	77	93	64	77	96
Other real estate	12	20	59	7	14	42	14	21	39	15	23	50	10	13	41	12	8	15
Business Assets	19	15	44	3	5	25	21	26	44	4	6	16	11	10	10	na	na	na
Total Debt	73	94	91	36	61	74	26	37	37	na	na	na	86	96	98	76	87	91
Home debt	39	71	85	21	44	57	12	20	29	29	49	48	80	94	96	42	67	77
Other Debt	61	84	53	17	23	22	16	22	15	na	na	na	na	na	na	51	70	72

Note: (*) US: 66/5 observations; IT: 9 observations; LU:16 observations; SE: 17 observations

Table 3. Wealth packages across the income distribution by family type

	United States			Germany			Italy			Luxembourg			Sweden			UK		
	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top
Whole Population																		
Financial Assets	32	16	43	7	10	13	6	9	13	5	7	10	29	22	28	9	14	18
Owned Home	45	67	35	78	75	52	80	77	61	79	78	46	61	70	57	82	79	71
Other real estate	23	16	23	15	14	35	13	14	25	17	15	44	10	8	16	9	7	11
Total Assets	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(Total Debt)	(23)	(39)	(16)	(22)	(25)	(29)	(4)	(4)	(4)	na	na	na	(45)	(43)	(34)	(16)	(27)	(24)
(Home debt)	(13)	(28)	(10)	(11)	(16)	(12)	(3)	(3)	(3)	(15)	(11)	(6)	(34)	(39)	(32)	(14)	(23)	(21)
Net worth	77	61	84	78	75	71	96	96	96	(26)	(126)	-	55	57	66	84	73	76
Lone Parents																		
Financial Assets	36	12	*	8	11	13	7	12	*	4	11	*	18	13	*	9	8	10
Owned Home	62	72	*	90	77	64	64	72	*	88	77	*	78	81	*	86	88	84
Other real estate	3	17	*	2	13	23	29	16	*	8	11	*	4	5	*	5	4	6
Total Assets	100	100	*	100	100	100	100	100	*	100	100	*	100	100	*	100	100	100
(Total Debt)	(49)	(42)	*	(29)	(24)	(43)	(11)	(5)	*	na	na	na	(76)	(58)	*	(21)	(30)	(26)
(Home debt)	(36)	(31)	*	(13)	(20)	(17)	(7)	(4)	*	(22)	(8)	*	(56)	(50)	*	(19)	(26)	(20)
Net worth	51	58	*	71	76	57	89	95	*	-	-	*	24	42	*	79	70	74
Couples with Childrer																		
Financial Assets	31	12	41	5	7	10	7	9	12	5	6	9	16	15	21	4	9	14
Owned Home	46	72	36	77	79	55	79	78	63	71	80	44	69	78	63	86	82	73
Other real estate	23	17	22	19	14	35	14	13	25	24	14	47	15	6	16	10	9	12
Total Assets	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
(Total Debt)	(29)	(49)	(18)	(36)	(33)	(36)	(5)	(6)	(4)	na	na	na	(70)	(56)	(40)	(24)	(36)	(28)
(Home debt)	(17)	(35)	(11)	(19)	(23)	(16)	(5)	(5)	(4)	(17)	(11)	(7)	(60)	(51)	(38)	(22)	(32)	(25)
Net worth	(71)	(51)	(82)	(64)	(67)	(64)	(95)	(94)	(96)	-	-	-	(30)	(44)	(60)	(76)	(64)	(72)

Note: (*) US: 66/5 observations; IT: 9 observations; LU:16 observations; SE: 17 observations

Table 4. Summary statistics of main wealth components conditional on ownership for lone-parents and couples with children.

Financial Assets

	USA			Germany			Italy			Luxembourg			Sweden			UK	
	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle
Lone Parents																	
Mean	32,547	31,416	*	19,170	31,880	53,624	9,193	27,771	*	11,835	100,835	*	6,732	9,573	*	15,017	14,501
Median	400	3,000	*	9,193	15,278	13,200	5,542	8,674	*	2,263	22,635	*	1,224	2,482	*	145	5,118
%with Asset	52	86	100	7	33	68	50	91	100	55	61	81	59	76	94	47	69
n	71	195	13	20	121	23	24	84	9	24	59	13	169	384	16	50	127
Couple with children																	
Mean	141,599	38,716	1,211,120	20,663	28,373	67,020	12,914	23,550	64,873	37,694	46,041	130,964	18,347	21,803	82,335	12,990	21,509
Median	1,200	6,130	313,000	13,192	17,195	31,730	5,338	11,182	26,688	9,054	22,635	90,539	3,209	8,233	33,521	2,839	5,843
%with Asset	74	96	100	20	49	79	63	91	96	22	64	82	63	90	99	55	84
n	215	859	276	108	1434	750	365	1572	706	76	653	366	279	2660	722	81	715

Principal Residence

	USA			Germany			Italy			Luxembourg			Sweden			UK	
	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle
Lone Parents																	
Mean	171,596	246,290	*	170,408	209,392	363,492	149,122	270,460	*	362,277	535,784	*	75,611	98,798	*	226,639	211,787
Median	72,000	170,000	*	132,210	205,660	376,064	70,456	240,192	*	632,155	452,694	*	59,968	76,469	*	145,033	165,752
%with Asset	17	56	98	8	35	52	29	58	89	43	78	63	23	44	76	31	52
n	23	120	13	27	113	17	11	52	8	31	67	10	75	231	13	34	99
Couple with children																	
Mean	303,232	289,884	1,099,216	214,524	253,785	380,734	188,078	251,283	380,127	294,111	485,073	660,873	114,005	130,366	258,582	221,943	209,914
Median	105,000	230,000	750,000	179,533	235,040	323,180	160,128	200,160	306,912	271,616	452,694	633,771	84,927	106,086	221,461	165,752	171,968
%with Asset	53	79	98	33	58	77	50	72	84	44	76	82	44	77	93	64	77
n	185	715	270	177	1666	738	310	1273	609	80	729	315	187	2234	672	84	653

Table 5. Home value and income ratios by for all homeowners and by household type.

Income		US			Germany			Italy			Luxembourg			Sweden			UK		
quantiles		Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top
All																			
	Mean	32.00	7.93	5.50	20.81	10.71	7.08	20.31	12.84	8.49	22.68	15.75	10.07	7.08	4.72	4.60	21.39	8.44	6.21
	Median	14.71	6.68	4.25	16.84	9.70	6.99	15.52	11.30	8.37	17.22	15.33	10.44	4.76	3.76	4.10	14.26	6.76	5.97
Lone Parents																			
	Mean	19.12	9.38	*	17.99	9.61	8.28	30.96	14.46	*	26.25	18.04	*	6.99	5.17	*	28.01	8.92	5.98
	Median	8.52	7.27	*	13.17	9.93	8.79	18.29	12.62	*	25.13	17.00	*	4.88	4.21	*	14.77	7.54	4.69
Couples with children																			
	Mean	43.84	8.69	7.77	22.74	10.95	7.89	24.67	13.30	9.17	19.41	15.96	10.36	11.91	5.69	6.23	32.83	8.60	7.14
	Median	13.28	7.48	6.04	17.28	10.46	7.71	19.46	10.48	9.14	16.43	15.56	11.23	8.09	4.67	5.91	23.60	6.89	6.28

NOTE: Home value/income

Table 6. Home debt value and income ratios by for all homeowners and by household type.

Income		United States			Germany			Italy			Luxembourg			Sweden			UK		
quantiles		Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top	Bottom	Middle	Top
All																			
	Mean	10.35	3.48	1.80	3.05	2.40	1.74	0.75	0.54	0.46	4.39	2.16	1.41	3.57	2.57	2.63	4.07	2.51	1.98
	Median	1.76	2.91	1.37	0.00	1.07	1.12	0.00	0.00	0.00	1.43	1.07	0.32	0.16	1.98	2.00	0.00	2.14	1.78
Lone Parents																			
	Mean	14.29	3.96	*	2.59	2.48	2.18	*	0.88	*	6.47	1.92	*	3.27	2.82	*	5.80	2.64	1.50
	Median	5.93	3.39	*	0.30	1.31	2.75	*	0.00	*	4.08	0.85	*	1.95	2.33	*	4.85	2.27	1.48
Couples with children																			
	Mean	16.14	4.41	2.52	5.63	3.27	2.40	1.28	0.75	0.52	4.52	2.26	1.60	8.84	0.24	3.74	7.51	3.37	2.45
	Median	4.72	3.86	1.82	2.95	2.65	2.12	0.00	0.00	0.00	1.71	1.31	0.80	4.67	0.27	3.30	4.85	3.13	1.97

NOTE: Home debt value/income

Italy: LP: bottom 11 observations, top 8 observations; Sweden: LP: top 13 observations; LU: LP top 10 obs.

Appendix Table. Sample descriptives.

Share of families by income type.

	United States				Germany				Italy				Luxembourg				Sweden				United Kingdo	
	Bottom	Middle	Top		Bottom	Middle	Top		Bottom	Middle	Top		Bottom	Middle	Top		Bottom	Middle	Top		Bottom	Middle
				Total				Total				Total				Total				Total		
Lone Parents	14	9	1	8	12	4	1	5	3	2	1	2	15	5	3	7	8	5	0	5	15	8
Couples with	27	34	31	32	21	38	40	35	37	36	45	38	48	61	71	60	14	28	20	24	20	37

Share of families across the income distribution.

	United States				Germany				Italy				Luxembourg				Sweden				United Kingdo	
	Bottom	Middle	Top		Bottom	Middle	Top		Bottom	Middle	Top		Bottom	Middle	Top		Bottom	Middle	Top		Bottom	Middle
				Total				Total				Total				Total				Total		
Lone Parents	35	62	4	100	46	49	5	100	31	63	6	100	49	44	7	100	36	62	2	100	33	56
Couples with	17	63	20	100	12	66	22	100	20	57	24	100	17	60	23	100	12	71	17	100	10	64

Sample size by income group and household type.

	United States				Germany				Italy				Luxembourg				Sweden				United Kingdo	
	Bottom	Middle	Top		Bottom	Middle	Top		Bottom	Middle	Top		Bottom	Middle	Top		Bottom	Middle	Top		Bottom	Middle
				Total								Total								Total		
All	4409	13226	4405	22040	12460	37240	11810	61510	1598	4792	1597	7987	713	1923	617	3253	3591	10772	3590	17953	697	2325
Lone Parents	639	1130	66	1835	1470	1550	160	3180	44	91	9	144	108	96	16	220	293	514	17	824	104	177
Couples with	1201	4469	1380	7050	2615	14265	4665	21545	598	1726	725	3049	339	1164	441	1944	505	2999	732	4236	139	859

Note: US and Germany have 5 implicates.