

Accounting for cross-country differences in wealth inequality

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Abstract

This paper adopts a counterfactual decomposition analysis to analyse cross-country differences in the size of household wealth and levels of household wealth inequality. The findings of the paper suggest that the biggest share of cross-country differences is not due to differences in the distribution of household demographic and economic characteristics but rather reflect strong unobserved country effects.

Keywords: household wealth, wealth inequality, debt, housing assets, educational loans, age-wealth profiles, decomposition

JEL codes: C81, D31, D63, I24, I31

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1. Introduction

New comparable data suggest that the distribution of household wealth vary substantially across countries. In many instances the wealth inequality ranking of countries is very different from their respective ranking in terms of income inequality (Jäntti et al., 2008). Probably the most striking example is Sweden which despite being one of the most equal countries in terms of income distribution it is ranked as one of the most unequal countries in terms of wealth, even more so than the US. Probably Sweden is the most extreme example but there are several other instances where wealth and income inequality rankings are very different.

Obviously there are several reasons why country rankings in terms of wealth inequality may differ from that in terms of income inequality. Differences in institutional settings and economic environment will have a distinct effect on household wealth accumulation, over and above the impact of income, by affecting households saving motives and saving propensities. Cross-country differences in the importance of past inheritances will exacerbate the impact of the above-mentioned factors. Aside from these influences cross country differences in the distribution of household wealth may (at least to some extent) represent pure cross-country differences in the age composition and the household structure of their populations. Any assessment of cross-country differences in the distribution of household wealth needs to account for these types of factors. Furthermore the cross-country variation in household wealth may reflect country specific personal preferences (shaped by cultural and historical factors) for owning specific types of assets and debts.

In this paper we examine the contribution of cross-country differences in the distribution of a number of economic and demographic characteristics in accounting for cross country differences in the distribution of household wealth. The factors that we consider include age, household structure (i.e. the distribution of different household types), labour market status, educational attainment and income. In addition to investigating the overall effect of all these factors we also investigate the contribution of each of these factors separately. This analysis allows us to pin down the importance of different factors in explaining cross-country differences in households' wealth and their implications in explaining differences in household wealth inequality. The unexplained component (which may vary both across the distribution and across countries) will capture the effect of all unobserved cross-country differences (including for example differences in welfare and tax systems, as well as various market regulations and constraints) which determine how a given population with given characteristics accumulate assets and debts. In order to better understand the importance of different factors in shaping wealth distributions in addition to estimating the overall wealth differences we investigate cross-country differences in the level and the distribution of different wealth components.

2. Data and measurement issues

The data set used in this paper is drawn from the Luxembourg Wealth Study database (LWS), a cross-national database which currently provides harmonised wealth data for 12 industrialised countries. From this database we have selected five countries for our analysis: UK, Italy, Finland, Sweden and the US. The national original datasets are the British Household Panel Survey (BHPS, 2000) for the UK, the Survey of Household Income and Wealth (SHIW, 2002) for Italy, the Household Wealth Survey (1998) for Finland and the Wealth Survey (HINK, 2002) for Sweden. For the US the LWS database includes data from two national surveys: the Survey of Consumer Finances (SCF, 2001) and the Panel Study of Income Distribution (PSID, 2001). The latter is a general household survey with a special focus on income while the former a specialised wealth survey. A critical feature of the SCF is that it over-samples the wealthy and therefore has a better representation of the upper tail of the wealth distribution.¹ In this paper we use data from both the SCF and the PSID to test the sensitivity of our results to survey design features. Although there are quite substantial methodological differences across the national surveys (including differences in sampling framework, survey design and the number and definition of wealth variables recorded in each survey), LWS managed to construct reasonably comparable variables for a number of wealth measures (for details about the database and the harmonization process see Sierminska et al, 2006). However, some comparability issues still remain (related mainly to variations in the underlying definitions, valuation criteria and methods) and these have to be borne in mind when analysing our results. In the final section of our paper we discuss some of these differences and their implications for accounting cross country differences in wealth inequality.

The measure of wealth that we use in this paper is total household net worth (the NW1 LWS variable). This is constructed as the sum of financial and non-financial assets of the households minus total household debt (i.e. sum of housing debt and non-housing debt – thereafter we will refer to the latter measures as financial debt). Financial assets include deposit accounts, stocks, bonds and mutual funds. Non-financial assets (housing assets thereafter) include own principal residence and investment real estate. Total debt refers to all outstanding loans, both home secured and non-home secured (including informal debt). A limitation of our study is that the measure of net worth that we use excludes business and pension assets (since data on these assets is only available for a subset of countries). Given the differential importance of these types of wealth in different countries, our comparison would – at least partly – reflect the omissions of these types of assets (Sierminska et al. 2006 provides a detailed discussion on this issue and a reconciliation between LWS and the national definitions of net worth). In addition to total net worth, we analyse wealth differences for four wealth components: gross financial assets, gross housing assets, net financial assets, housing equity as well as housing and financial debt. For some countries we are able

1 The SCF covers around 4,500 families. A booster sample, chosen on the basis of information contained in tax returns, is selected to disproportionately sample wealthy families (but excluding the wealthiest 400 families, defined by Forbes magazine).

to look into even more disaggregated wealth components though the degree of disaggregation we can achieve with the data at hand is limited. All wealth data (as all monetary values in this paper) are transformed to constant 2005 prices (using the national CPI) and are converted at 2005 PPP-adjusted Euros (Euro area 16 countries) using the purchasing power parities for gross domestic product (GDP).²

Throughout our paper the unit of analysis is the household. In most of the countries this is defined as a group of people living in the same dwelling (irrespective of their kinship) and share household expenses. The only exception here is BHPS which does not incorporate the share of expenses requirement in its definition of household units. In Sweden although the household unit definition is very close to the one adopted in the other surveys, for individuals non-responding to the telephone interview (around 30 per cent), it was not possible to identify if they were cohabiting through registry data unless they had children in common. In this case, these individuals were classified as single person households. This means that in the Swedish survey the number of single person and single parent households is somewhat overestimated (Statistics Sweden, 2006).

Table 1 reports the mean and selected percentiles of household net worth for each of our five countries. For the reasons outlined above, for the US we present results based on PSID and the SCF. Confirming results from previous studies, the results of this table show that there exist very large cross-country differences in household net worth, differences that vary across the distribution. The US has the highest average levels of wealth (€207.0k based on SCF and €158.1k based on PSID), followed in descending order by Italy (€163.6k), the UK (€116.7k), Finland (€66.5k) and Sweden (€50.9k). At lower wealth percentiles the lowest wealth levels are observed in Sweden, the US and Finland (in this order) while the highest in Italy and the UK. At higher points of the distribution on the other hand, the highest wealth levels are observed in the US and Italy while the lowest in Sweden and Finland. To illustrate how wealth varies across the whole distribution, in Figure 1 we plot the percentile distribution of net worth for each country.

Table 2 presents summary inequality indices for household net worth for each country. In terms of the Gini coefficient, Sweden and the US have the highest levels of inequality (at 0.89 and 0.83 (SCF) respectively) while Italy has the lowest (0.60). Finland (0.68) and the UK (0.63) are positioned in the middle of these extremes. A similar picture emerges when percentile ratios are considered (see columns 3 and 4 of Table 2). Once again Sweden³ and the US exhibit the highest levels of wealth inequality while Italy the lowest. The ranking of Finland and the UK however depends on which wealth dispersion measures we consider. Finland has higher inequality than

2 Data source OECD Dataset 4: PPPs and exchange rates: Data extracted from http://stats.oecd.org/OECDStat_Metadata/ShowMetadata.ashx?Dataset=SNA_TABLE4&ShowOnWeb=true&Lang=en (extracted on 11/10/2010 from OECD.stat)

3 It is not possible to compute the P25/P50 ratio for Sweden as household net worth at P25 is negative (see Table 1).

the UK in terms of measures that focus on the lower tail of distribution (the 25/50 percentile ratio) but lower for those that focus on the upper tail of the distribution (the 90/50 percentile ratio).

Table 3 presents summary statistics for net financial and net housing wealth as well as for the main subcomponents comprising these assets (total financial assets, total housing assets, financial debt, housing debt, total debt and total gross wealth). We are not able to compute net financial and net housing wealth for Sweden as it is not possible to separately identify housing debt and financial debt in the Swedish data. As can be seen here in all countries housing equity is the dominant asset in households' portfolios. It accounts for about 85 to 87 per cent of total net worth in Finland and Italy and around 81 per cent of total net worth in the UK. The respective estimate for US households is between 57 and 61 per cent depending on the dataset source (with the PSID providing the upper estimate). House ownership is most prevalent in Italy (at 72 per cent) and least so in Sweden (at just 58 per cent). Italy also exhibits the highest levels of housing equity at all points of the distribution (reflecting mainly that Italian households hold very little housing debt). The second highest levels of housing equity at lower points of the distribution is observed in the UK whereas at higher percentile points in the US, although P90 housing equity in the UK falls between US(SCF) and US(PSID) estimates.

Although financial wealth accounts for a smaller share of total household net worth in all countries, cross-country differences in net financial wealth are striking. The US stands out as the country with the highest average levels of net financial wealth with an estimated mean of €90,000 based on data from SCF and €62,000 based on PSID. Italy and the UK follow with a mean at around €24,000 and €22,000 respectively while Finland ranks at the bottom at around €9,000. These differences arise mainly from differences at the tails of the distributions. At lower wealth percentiles the US and Finland have the highest absolute levels of negative financial wealth while at the upper tail the US has around twice as high or even higher wealth levels than the UK (which is the country with the next highest net financial wealth levels).

Table 4 presents inequality measures for each wealth component. As can be seen here in all countries the distribution of net financial wealth is considerably more skewed than that of net housing wealth. The highest levels of inequality in net financial assets, measured by the Gini coefficient, is observed in Finland (1.39), followed by the US (at 1.02) and the UK (0.99) while Italy ranks at the bottom (at 0.81)⁴. In terms of housing equity inequality Italy ranks again at the bottom as the least unequal country while the US at the top as the most unequal country. It is noteworthy that the distribution of the gross components of these assets is considerably less skewed than the distribution of the corresponding net components. Looking at gross wealth as a total (i.e. defined as the sum of gross financial and non-financial assets) we note that

4 As noted in Cowell, Karagiannaki and McKnight (2012) while the Gini coefficient can be computed across the whole number range, i.e. including zero and negative values, in this case it is not bound by the unit interval as it is when computed over strictly positive values.

this is especially the case for Sweden where inequality in gross wealth, in terms of Gini coefficient, is more than 0.20 points lower than the inequality in net worth (0.66 compared to 0.89).

As we mentioned in the introduction our interest in this paper is in understanding the source of cross-country differences in the distribution of wealth and in particular in characterising the contribution of socio-economic differences in explaining differences in the distribution of wealth and observed levels of wealth inequality. We consider five separate factors: 1) age 2) household structure 3) educational attainment 4) working status and 5) household income (net of capital gains and interest rate payments).

To illustrate the main differences across countries in Table 5 we present statistics describing cross-country differences in the distribution of the main household characteristics used in the analysis. The most notable differences, according to the statistics in this table, are the substantially lower proportion of younger aged households in Italy, the lower proportion of older aged households and the higher proportion of lone parent households in the US (in terms of lone parent household the US is followed closely by the UK, Sweden and Finland) and the higher proportion of more educated households in the US and Sweden. As expected, differences in the level and the distribution of household disposable income are striking. The US is the country with the highest mean income levels but also the more dispersed income distribution followed by the UK. On the other end of the spectrum Finland and Sweden have lower average income levels but also substantially lower income inequality. Mean income levels in Italy are similar to that of the two Nordic countries but levels of income inequality similar to the UK.

3. Methodology

Following DiNardo, Fortin and Lemieux (1996) we use semi-parametric decomposition methods to estimate the portion of cross-country differences which is attributable to differences in the distribution of household characteristics.⁵ We begin by defining $i=1\dots 5$ to be a variable indicating country. Further, let w denote wealth and z a vector of wealth determinants. The distribution of wealth for each country i can be thought to be given by:

5 As stressed by Bover (2010) “An advantage of comparing conditional distributions rather than conditional densities is that one avoids the critical issue of choice of smoothing method and the differences in the results that may ensue. This is particularly relevant in the case of wealth (as compared to income), given that there is often a marked spike at zero because a non-negligible proportion of the population has no wealth. Capturing these spikes complicates the estimation of densities and the results often depend on the smoothing method adopted.”

$$\begin{aligned}
F(w|i = 1, \dots, 5) &= \int_z F(w, z|i = 1, \dots, 5) dz \\
&= \int_z F(w|z, i = 1, \dots, 5) dF_z(z|i = 1, \dots, 5) \quad (1)
\end{aligned}$$

The counterfactual distribution of interest can be thought of as the distribution that mixes the distribution of characteristics of one country - let's say country 1 - with the wealth generating function from another country - here country 2.

$$\begin{aligned}
&F(w|i = 1) \\
&= \int_z F(w|z, i = 2) dF(z|i = 1) \quad (2)
\end{aligned}$$

Following DiNardo, Fortin and Lemieux (DFL, hereafter) equation (2) can be rewritten as:

$$\begin{aligned}
&F(w|i = 1) \\
&= \int_z F(w|z, i = 2) \Psi(z) dF(z|i = 2) \quad (3)
\end{aligned}$$

where $\Psi(z) = \frac{dF(z|i=1)}{dF(z|i=2)}$ is a reweighting factor. The reweighting factor is simply a function of z and can be easily estimated using standard methods such as probit or logit.

The basic idea of the DFL approach is to start with one country (let's say country 1) and then replace the distribution of z , $F(z|i=1)$, with the distribution of characteristics in country 2 ($F(z|i=2)$) using the reweighting factor $\Psi(\cdot)$:

$$\Psi(z) = \frac{\Pr(z|i=1)}{\Pr(z|i=2)} = \frac{\Pr(i=1|z)/\Pr(i=2)}{\Pr(i=2|z)/\Pr(i=1)} \quad (4)$$

This reweighting factor can be easily computed by estimating a probability model for $\Pr(i=2)$ and using the predicted probabilities to compute a value $\hat{\Psi}(z)$ for each observation. Following DFL we use a flexible probit model to derive the reweighting function $\Psi(z)$. In principle the reweighted function could also be derived using non-parametric specifications (for applications using non-parametric specifications see Barsky et al. 2002; Bover, 2010; Sierminska et al. 2010). However with z including five variables estimating the reweighting function using a non-parametric specification is practically infeasible in our application.

In addition to considering the aggregate compositional effect in our decompositions we also consider the effect of each covariate separately. This analysis allows us to consider the source of the compositional effect. Following Cobb-Clark and Hildebrand (2006) we begin by expressing the distribution of wealth as follows:

$$\begin{aligned}
F(w) &\equiv F(w|i = 1, \dots, 5) \\
&= \int F(w|y, p, e, d, c, i = 1, \dots, 5) \cdot dF(y|p, e, d, c, i = 1, \dots, 5) \\
&\quad \cdot dF(p|e, d, c, i = 1, \dots, 5) \cdot dF(e|d, c, i = 1, \dots, 5) \cdot dF(d|c, i = 1, \dots, 5) \\
&\quad \cdot dF(c|i = 1, \dots, 5)
\end{aligned} \tag{5}$$

Equation (5) captures six conditional expectations. The first is the conditional expected wealth function given the wealth determinants (z), the second is the conditional expected income function (y) given working status (p), education (e), household structure (d) and age composition (c) while the third is conditional labour force participation functions. Similarly the fourth and the fifth functions capture the conditional expected education and household structure functions respectively while final terms capture the age composition.

Following the methodology of Cobb-Clark and Hildebrand (2006) we can use equation (5) to define a series of counterfactual wealth distributions. For expositional simplicity let's assume for the moment that we want to compare country 1 and 2. To make this comparison we can define the wealth distribution that would prevail if country 2 retained its own conditional wealth, working status, educational attainment, household structure and age composition but had the same conditional income functions as country 1.⁶

Specifically

$$\begin{aligned}
F^A(w) &= \int F(w|y, p, e, d, c, i = 2) \cdot dF(y|p, e, d, c, i = 1) \cdot dF(p|e, d, c, i = 2) \cdot dF(e|d, c, i = 2) \\
&\quad \cdot dF(d|c, i = 2)
\end{aligned} \tag{6}$$

Comparing equation (6) with the actual distribution from country 2 we can isolate the effect of differences in conditional income distribution on cross-country differences in wealth. Similarly we can define the counterfactual wealth distribution F^B that would result if country 2 had the same income and working status distributions as country 1 but retained its own conditional wealth distribution and the distribution of the remaining characteristics. Similarly F^C , F^D , and F^E are the counterfactual wealth distribution if in addition to income and working status, country 2 had the same education, household types and age distributions as country 1 respectively.

Based on these counterfactual distributions we can decompose differences in wealth across pairs of countries in the following way:

6 Note that Cobb-Clark and Hildebrand (2006) use the opposite operationalization to define the compositional effect i.e. they define the distribution that would prevail if group 2 (in their case) had retained their income function but had the same conditional wealth, income etc. function as the comparison group.

$$F^2 - F^1 = [F^2(w) - F^A(w)] + [F^A(w) - F^B(w)] + [F^B(w) - F^C(w)] + [F^C(w) - F^D(w)] + [F^D(w) - F^E(w)] + [F^E(w) - F^1(w)] \quad (7)$$

To estimate the counterfactual distributions described in equation (7) we use the reweighting approach proposed by DFL. In our application we reweight the wealth distributions of each of our countries in order for the distribution of characteristics to match that of our comparison country (country 1).

$$\begin{aligned} & F^A(w) \\ &= \int \Psi_{y,p,e,d,c} F(w|y,p,e,d,c,i=2) \cdot dF(y|p,e,d,c,i=2) \cdot dF(p|e,d,c,i=2) \\ & \cdot dF(e|d,c,i=2) \cdot dF(d|c,i=2) \\ & \cdot dF(c|i=2) \end{aligned} \quad (8)$$

where

$$\Psi_{y,p,e,d,c,i} = \frac{\Pr(i=1|y,e,p,d,c,i) \cdot P(i=2|e,p,d,c,i)}{\Pr(i=2|y,e,p,d,c,i) \cdot P(i=1|e,p,d,c,i)} \quad (9)$$

The remaining counterfactuals can be constructed similarly.

As discussed in Cobb-Clark and Hildebrand (2006) - and earlier by DFL - the difficulty with the decomposition as the one described by equation (4) is that the effect attributed to each factor would always depend on the sequence at which its effect is evaluated. Equation (7) describes just one of the many possible sequences. Using 5 components to decompose wealth differences leads to 120 relevant sequences. With no particular preference over the relevant sequence we follow Cobb-Clark and Hildebrand (2006) and calculate each in turn and present results of the simple average across all possible sequences.⁷

In all our decompositions we use the UK as our base country and compare it to each of the remaining four countries. Each of the counterfactual distributions is then constructed by reweighting the distributions of characteristics in each of the countries in order to mirror the distributions of characteristics in the UK. The difference in the observed and the counterfactual distribution in each of the countries captures the contribution of characteristics to the observed differences in net worth. We first implement our decompositions for net worth and then in section 5 we move to implement the decomposition for each of its subcomponents separately considering both differences in the extent of ownership of different types of assets, the degree of indebtedness as well as levels of wealth holdings.

7 Fortin et al. (2010) propose an alternative method for estimating the individual effects.

4. Analysing cross-country differences in the distribution of net worth

4.1 Cumulative wealth distributions

Table 6 and Figure 2 show that although differences in characteristics account for some of the observed differences in the distribution of net worth, a significant differences remain unexplained. The exact share of the difference accounted for by characteristics varies across the distribution and across countries. Differences in characteristics can contribute both positively and negatively to explaining the overall observed difference. At some points in the distribution, for some countries, differences in characteristics appear to account for more than 100% of the difference with the UK. In Figure 2 this can be observed where the reweighted distribution lies above or below the UK *and* the actual distribution. That is to say that if the distribution characteristics across the distribution of net worth was the same as that observed in the UK the difference in the predicted value of net worth at a particular percentile of the net worth distribution would be even greater than that observed between the actual distributions. Table 6 shows the detail for five points (P10, P25, P50, P90 and P95) in the distributions. For Finland, differences in the distribution of characteristics account for between 28 and more than 600% of the differential with the UK at these five points with the magnitude of the effect first increasing and then decreasing as we move towards higher wealth percentiles. At the 10th percentile for example characteristics account for about €2,180 out of the €2,370 differential (or 92% of total wealth difference with the UK). At the 25th percentile its contribution increases even further (accounting for more than 600% of the wealth difference with the UK; i.e. reaching a level higher than that in the UK) but then falls to 28% at the 95th percentile. Some strong effects are also estimated for the US where the effect of household characteristics operates towards reducing net worth at lower wealth percentiles and towards increasing it at mid and higher wealth percentiles. On the other hand, the characteristics play a very small role in explaining differences in net worth holdings in Sweden relative to the UK, even at the lower end of the distribution where we might expect to find stronger effects. Similarly, household characteristics appear to play a very small role in explaining Italian wealth holdings. If anything the results appear to suggest that the distribution of household characteristics in Italy predict lower net worth at higher wealth percentiles relative to what would have prevailed if the distribution of characteristics was similar to the UK.

Table 7 moves to the next step of the decomposition to attribute the contribution of each set of covariates to the compositional effect at four points in the net worth distributions (P10, P25, P50 and P90). In each panel of the table, the first row shows the total (unadjusted) differences in net worth with the UK, the second row shows the total compositional effect (i.e. the part of the difference which can be explained by differences in the distribution of characteristics) while rows 3-7 divide the compositional effect into the contribution of the five main factors (i.e. income, working status, education, household structure and age). In most countries the greatest differences in the compositional effects in terms of magnitude are accounted for by differences in age, income and household structure distributions of the populations. The exceptions being the US where differences in education are greater than

differences in household structure and Sweden where educational differences are greater than age for the top half of the wealth distribution. There is some variation across the wealth distributions. Education is greater than age at P90 in the UK-US comparison, working status is greater than household structure or age in the UK-Finland comparison and education is greater than household structure at P90 in the UK-Sweden comparison. Also working status at P10 is greater in the UK-Finland and UK-Sweden comparisons than for UK-US or UK-Italy.

In most countries the factor with the largest contribution in the compositional effect is household income. It accounts for much of the lower wealth holdings in Finland (relative to the UK), especially at the lower tail of the distributions and is the dominant factor in explaining the high wealth holdings of the US households in the upper tail of the distribution (PSID; education for SCF). The effect of income differences has been to reduce the observed differences in net worth between Italy and the UK (this means that if Italian households had the same income distribution as the UK net worth holdings would have been even higher). Interestingly income differences explains a very small amount of the differences in net worth between Swedish and UK households. Differences in age distributions also have some important effects, especially in explaining the lower wealth holdings of Finnish households (with the relative effect being stronger in the lower tail of the distribution) and the higher wealth holdings of Italian households. Large cross country variation in the distribution of different family types, also contribute to cross-country differences in household net worth particularly in Sweden (especially in the lower tail) and Italy (median and above). Finally it is worth noting that educational attainment plays some role in explaining the higher wealth holdings in the US and Sweden with the effect in both countries, especially in the US being particularly strong in the upper tail of the distribution.

In summary, despite some important individual effects, household characteristics account for only part of the cross-country variation in household wealth and its distribution. The largest share of the differences remains unexplained pointing towards the importance of country specific effects as the main determinant of cross-country variation in wealth distributions.

4.2 *Wealth inequality*

In this section we assess the extent to which differences in the distribution of characteristics contribute to cross-country differences in the levels of wealth inequality. Table 8 presents various wealth inequality measures for the actual and counterfactual wealth distributions in each of our five countries. The difference with the UK and the amount of the difference explained by differences in the distribution of characteristics are presented in rows 3 and 4. As can be seen in this table the distribution of characteristics explains a large share of the higher net worth inequality in Finland (relative to the UK). This effect is evident in terms of all inequality measures but is particularly strong for measures that focus on the lower tail of the distribution (i.e. the 25/50 percentile ratio). It is interesting to note that in terms of the counterfactual net worth distribution Finland ranks either second (after Italy) or first

as the least unequal country (followed by Italy) for the percentile ratio measures and equal first (with Italy) when measured by the Gini coefficient. The opposite is the case in Italy, where the distribution of characteristics appear to have an equalizing effect with respect to net worth inequality in terms of all inequality measures. So, in terms of the counterfactual net worth distribution Italy ranks first or second as the least unequal country in terms of all inequality measures except from the Gini in terms of which Italy and Finland rank equal first. The UK is identified as the third least unequal country followed by the US and Sweden which once again are the most unequal countries.

5. Analysis by wealth component

5.1 Levels analysis

In order to understand better the factors that shape cross-country differences in the distribution of household net worth in this section we analyse cross country differences in the composition and size of different asset holdings. From previous analyses we know that there is substantial variation in the ownership and the levels of different asset and debt holdings both across and within countries (across different demographic groups). In this section we use a counterfactual analysis similar to the one we adopted above to examine the role of household characteristics and country specific factors (proxied by the unexplained country effects) in explaining the variation in the distribution of different wealth components. We use two main measures of wealth: net financial and net non-financial wealth (i.e. principal home equity plus the net value of investment real estates) as well as their main subcomponents - financial assets, housing assets, financial debt and housing debt. Finer disaggregation would be desirable but not feasible given data availability in LWS. Unfortunately for Sweden, we are unable to separately identify financial and housing wealth and therefore we not able to compute net financial wealth or housing equity (although we are still able to examine the gross components of these assets as well as a total debt measure).

Table 9 shows cross-country differences in ownership rates in these two types of assets as well as in three measures of household indebtedness: financial indebtedness, housing indebtedness and any type of indebtedness. Although the size and the direction of the contribution of characteristics vary both across countries and across different asset and debt types a large share of cross-country differences remains unexplained. The contribution of characteristics in explaining differences in asset ownership is rather small. There are two main exceptions however: in Finland and Sweden the distribution of characteristics appears to significantly compress homeownership. Interestingly, the counterfactual homeownership rates, suggest that Finland has the highest homeownership rates. Although counterfactual homeownership rates are higher than the actual, Sweden still has the lowest homeownership rates than any of the other countries. With the exception of the US, and especially PSID, we find a larger variation in the counterfactual financial debt ownership than we do for the actual. In terms of the effects household characteristics

have on housing debt it is interesting to note that the counterfactual US rates (PSID) are lower than the UK (contrasting to the actual mortgage rates rankings). With the exception of Finland the effect of characteristics in explaining differences in the degree of indebtedness is very small.

Table 10 presents various percentiles of the actual and counterfactual net financial and net housing wealth distributions and their subcomponents (Table A.2 reports results for the conditional distributions). The first panel shows results for net financial wealth and its two components (gross financial wealth and financial debt). Comparing the actual and counterfactual net financial wealth distributions we first can note that the distribution of characteristics make a small contribution in explaining the distribution of net financial assets in Italy. A similar comparison for Finland, shows that financial wealth is higher in the counterfactual than in the actual distribution at all points of the distribution, and especially at the middle and lower tail of the distribution, suggesting that partly the lower net financial wealth holdings in Finland can be explained by household characteristics. Results based on the SCF, suggest that although the distribution of characteristics in the US play no role in explaining the lower wealth levels at the lower wealth percentiles they do explain to some extent the higher wealth holdings in the upper tail of the distribution. Despite differences in the magnitude of the effects, the patterns in PSID are similar. Looking at the two components comprising net financial wealth we see that in all countries the contribution of characteristics are stronger for financial assets than for financial debt, pointing towards the operation of stronger unobserved country effects in the distribution of financial debt. Summarising, the results show that although household characteristics explain some of the observed variation in financial wealth across our five countries, it is predominantly unexplained country effects that drive cross-country differences especially insofar it concerns the distribution of financial debt.

The second panel of Table 10 shows results for housing equity and its sub-components (gross housing wealth and housing debt). Again the distribution of characteristics makes almost no contribution in explaining the housing wealth and mortgage debt holdings in Italy. In Finland although differences in the distribution of characteristics explain a sizeable proportion of the lower housing equity levels, especially at the middle and the lower tail of the distribution, these effects are largely driven by the impact of characteristics on homeownership probability (see Table 9) and the resulting increase in levels of housing wealth in the lower tail of the distribution. It is worth-noting here that the increase in the counterfactual Finnish housing wealth distribution is not accompanied by a similar increase in housing debt pointing again to the importance of country specific mortgage market conditions. Although the distribution of characteristics appears to explain a larger share of the substantially higher mortgage debt holdings among American households, American households are still found to hold substantially higher mortgage debt than their counterparts in any other country (followed closely by the UK). Despite the decrease in mortgage debt, housing equity in the US falls significantly at all points of the distribution when we reweight household characteristics to match the UK. As it appears American households tend to invest less in housing wealth than either UK or

Italian households at all points of the distribution and less than Finnish households up to about the 75th percentile (after around the 75th percentile US housing wealth distribution lies above the Finnish). In Sweden, although the distribution of characteristics explains a significant share of the lower housing wealth holdings - an effect that is associated with their positive impact on homeownership and to a lesser extent on wealth levels – housing wealth in Sweden is still substantially lower than in any other country. In summary, we conclude that although household characteristics play some role in explaining the observed variation in the distribution of housing wealth across our five countries, it is mostly unobserved country effects determined by cultural differences, institutional environment and the functioning of the housing and mortgage markets that drive cross-country differences in housing wealth. Country specific effects are stronger for mortgage debt than for gross housing wealth giving support for the importance of cultural and mortgage market differences in driving cross-country variation in the distribution of housing wealth.

Comparative analysis of net worth, gross wealth (i.e. the sum of financial and housing assets) and total debt (at the bottom panel of Table 10) suggests that differences in the distribution of characteristics in Sweden explain a higher share of differences in gross wealth holdings than they do for debt – a finding which again points to the strong unobserved country effect in the distribution of debt holdings. A similar observation can be made in a varying degree for all countries.

5.2 *Inequality*

In Table 11 we analyse the extent to which cross-country differences in the degree of inequality in the distribution of financial and housing wealth can be explained by differences in the distribution of characteristics (Table A.2 in the appendix reports results for the conditional distributions). Generally the results of this table suggest that the contribution of characteristics in explaining cross-country differences in net financial wealth and net housing wealth inequality is small. Imposing a common distribution of characteristics does not result in any change in the inequality rankings for neither net financial nor net housing wealth. For net financial wealth the most sizeable effects are found for Finland, where the Gini coefficient is reduced by roughly 20 per cent (from 1.39 to 1.14) and the top 1 and 10 wealth shares by roughly 65 and 77 per cent respectively when we reweight the distribution of characteristics to resemble the UK. For Italy the results suggest that the distribution of characteristics has a disequalizing effect on net financial wealth inequality in terms of the Gini coefficient but reduce the degree of concentration at the top 1% of the distribution. In the US their effects depend on the survey used. According to the SCF, the distribution of characteristics have an equalising effect in terms of Gini coefficient but an disequalizing effect in terms of the two concentration measures i.e. the top 1% and 5% wealth shares. Results from PSID suggest the opposite for the top 1%.

The effects of household characteristics on housing equity inequality are more sizeable but again their impact on country inequality ranking is small. The distribution of characteristics have an equalizing effect on the distribution of housing equity in Italy but an disequalizing effect in Finland and the US – especially if the SCF is used

instead of PSID. Again the most sizeable effects are found for Finland. Reweighting the distribution of household characteristics in Finland to resemble the UK reduces the Gini coefficient by about 8 per cent placing Finland at the top as the least unequal country (in contrast to the actual distribution where it was the second least unequal country after Italy). In Italy and the US the compositional effects are rather small and do not result to any significant change in country ranking. In Italy they work toward decreasing housing equity inequality while in the US towards increasing it. Comparisons of the two components comprising housing equity show that although the effects in Finland and Italy are exclusively related to housing assets, in the US sizeable effects are estimated for both housing assets and debts. In Sweden which along with the US is the most unequal country in terms of the distribution of housing assets, the effects of characteristics have a rather small effect in accounting for the higher degree of inequality.

6. The unexplained country effects

6.1 *Measurement issues*

As mentioned in the data section despite the substantial ex-post harmonisation process applied to the datasets included in the LWS database there are some important measurement and definitional differences which could not be accounted for and which may affect cross-country comparisons. Part of the unexplained country effect as identified above may reflect these differences.

Although it is not possible to provide an exact estimate of the extent to which the unexplained country effects, as measured in the previous section, reflect definitional and measurement issues, in this section we highlight some issues affecting data comparability and their implications for measured wealth inequality.⁸ A feature of the Swedish household survey is that it does not record deposit accounts unless the interest payments from these assets exceed 100 SEK (approximately 10 Euro in 2002). Given that the interest rate was approximately 3.75% in 2002 this implies that accounts with less than 270 euro were excluded.⁹ This will lead to an underestimate of cash savings in Sweden, most likely affecting the lower end of the distribution. To determine the importance of this restriction we apply a similar bottom coding in the deposit accounts in other countries. Although a small impact at the lower end of the distribution is clear in all countries, its impact on overall net worth inequality is trivial. In the UK for example wealth inequality in terms of the Gini coefficient remains unchanged by the application of bottom coding.

8 A more complete discussion of the differences can be found in Cowell et al. (2012).

9 Approximately 15-20 per cent of total deposits have been excluded (see LWS survey information for Sweden <http://www.lisdatacenter.org/our-data/lws-database/by-country/swedenwealth/> last accessed 19/9/2012)

Another feature of the Swedish wealth survey is that business debt cannot be disentangled from other components of debt (i.e. housing and financial debt). This means that the measure of net worth for Sweden includes business debt. For all other countries, the measure of net worth that we use in this paper (NW1) does not include business debt as part of households' liabilities. Since business debt in NW1 is not offset by business assets, its inclusion in NW1 by the Swedish wealth survey has an important impact on measured net worth inequality. This can be assessed comparing differences in net worth inequality estimates based on NW1 and NW2. The latter is the LWS measure of net worth which includes business assets and liabilities. Note that the latter measure is available only for a subset of countries (Italy, US and Sweden). Estimates of net worth inequality based on these two measures are reported in the first four columns of Table 12. As can be seen from this table, in all countries but Sweden the inequality of net worth excluding business equity (NW1) is lower than for net worth which includes it (NW2), implying that business equity has a disequalising effect on net worth inequality. The only exception to this rule is Sweden for which net worth including business equity is lower than the measure of net worth which excludes it. This reflects the fact that the former measure (NW1) includes business debt but not business assets.

A further issue which raises concerns about cross-country comparability relates to differences in the definition of household unit adopted in each survey. As mentioned earlier, in most surveys used in our analysis a household is defined as a group of individuals who live together and share expenses. The only exception is the UK which does not adopt the share of expenses restriction in its definition of household unit, which might be expected to lead to a slight underestimation of net worth inequality. In Sweden although the household unit definition is very close to the one adopted in the other surveys, for individuals non-responding to the telephone interview (around 30 per cent), it was not possible to identify cohabiting adults without common children. In this case cohabiting adults are counted as two separate households and only the sample person was included in the survey. This means that in the Swedish survey the number of single person and single parent households is somewhat overestimated (Statistics Sweden, 2006). In our counterfactual analysis we reweight household type distributions to match the UK household type distribution which means we can account for the part of the bias that this causes on family type distribution but not any bias that this causes to the wealth estimates themselves.

6.2 *The role of educational loans*

One component of debt included in the measure of net worth that we use in our analysis is debt resulting from educational loans. Unlike other forms of debt which are usually offset by the value of the asset they were used to fund, educational loans are offset by a future income stream. Since for many households educational loans are a critical step on household wealth accumulation, their inclusion in households' liabilities may be debated. Our analysis of LWS shows that there is considerable cross-country variation both in the size of educational loans and their take-up rates. In Cowell et al. (2012) we discuss in detail the institutional framework related to educational loans for the five countries we analyse and present some interesting

summary statistics describing their distribution. Here we mention the main cross-country differences and we discuss their implications on measured wealth inequality.

For the period we analyse, the take-up of student loans in both Italy and the UK were very low. For Finland and Sweden the respective take-up estimates among eligible students stand at around 35 per cent and 65 per cent respectively while for the US results from the National Longitudinal Study of Youth suggest that among young adults ever enrolled in college 46 per cent have educational loans (Dwyer et al., 2012). Matching these aggregate statistics, analysis of LWS suggest that educational loans represent about 11 per cent of overall debt holding in Sweden and around 3 and 5 per cent in Finland and the US respectively. Although educational loan data in LWS is not available for either Italy or the UK, in both countries the role of educational loans in supporting higher education at the time of the surveys was rather limited (although this has been changing rapidly in the UK during the last 10 years). As the statistics in Table 12 suggest, the exclusion of educational loans from net worth (NW1) has an important effect on net worth inequality in Sweden - where the Gini coefficient falls from 0.89 to 0.83 by the exclusion of educational loans - but its effect in both Finland and particularly the US is very small (in Finland the respective Gini coefficients for the measures of net worth which includes and excludes educational loans are 0.68 to 0.67 respectively while in the US the Gini falls from 0.83 to 0.82). The Gini coefficients of the counterfactual net worth distribution which exclude educational loans are significantly lower and educational loans explain all of the higher inequality in Sweden relative to the US. When we use the estimate of net worth which includes business equity and debt explicitly (NW2) actual and counterfactual inequality is higher in the US than in Sweden when educational loans are excluded.

7. Conclusions

One might have supposed that that there would be higher wealth inequality in countries characterised by higher income inequality; but this is not true for the countries studied here. Although unequal income is related to unequal ability to save and accumulate assets, other factors prove to be more important in shaping the distribution of wealth.

The differences between countries' wealth distributions cannot be explained away by differences in age, working status, household structure, education and income. But, taking these factors into account, some wealth inequality comparisons turn out as one might have expected. For example, the US is unambiguously more unequal than the UK which is more unequal than Italy. By contrast the position of Finland in the ranking – between the UK and Italy – may come as a surprise. But perhaps the greatest surprise is the very high level of wealth inequality in Sweden (highest in terms of the Gini coefficient, second in terms of top 1%, top 5%, top 10% and P90/P50).

The high level of wealth inequality in Sweden may be affected by survey definitions (household definition which results in too many single headed households) and the inclusion of business debt. However, in interpreting the high relative level of wealth inequality it should be noted that average gross wealth is lowest in Sweden as is P50 and P25; P90 is second lowest behind Finland. Taken together this suggests that wealth holdings are relatively low among Swedish households and what wealth is held is unequally distributed. There are good reasons for this. Home ownership is lower in Sweden and in terms of thinking about the large unexplained component of our computed cross-country differences the need to hold assets in Sweden is greatly reduced by state provision of health, education, pensions and income during periods of hardship. For many years the Swedish population has saved in the form of higher taxation and therefore private wealth holdings are likely to be less representative of Swedish households' quality of life (from a financial perspective) than say for US households. Since the 1990s changes to the Swedish welfare state have meant that Swedish households are increasingly expected to make their own provisions and this may mean that inequalities in private household wealth holdings may become increasingly important in determining people's standard of living.

Two main components of net worth are particularly important.

Housing is the largest asset that most households will ever hold. Homeownership rates are similar across four of the five countries at around 70% but Sweden stands out as having relatively low rates at 57% (2002). Housing supply in Sweden is relatively constrained in the large urban areas where there is high demand and the Swedish housing system is quite complex and idiosyncratic. Around one-third of owner occupied homes (effectively all owner occupied apartments) are in what is known as the tenant-owned co-operative sector which appears to create a number of market distortions (European Housing Review, 2011). Also the recently abolished wealth tax and a higher average property tax rate (Hilbers et al., 2008) may have created some disincentives to acquire and accumulate housing assets. Italy also stands out with much higher rates of outright homeownerships (62%), explained partly by cultural differences (later age of household formation, greater parental assistance with house purchase, multi-generational households, attitudes to debt) and institutional differences (access to credit). This contributes to positive and relatively high rates of net worth among Italian households particularly in the lower and middle parts of the net worth distributions.

Debt holdings give rise to much of the wealth inequality differences across countries. Italy has lower financial debt as well as housing debt. The fact that the Swedish data additionally include household-held business debt contributes to the higher debt holding found in Sweden. American households are the most likely to hold financial and housing debt and the average value of these debts is greater. In addition, debt-holding is comparatively more common in later life (Cowell et al., 2012). We have shown cross country differences in educational loans both in their incidence and their average value; explaining all of the difference in wealth inequality between the US

and Sweden. Cultural and institutional differences in relation to debt holdings result in greater unobserved country effects than for other wealth components.

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Table 1: Mean and various percentiles of household net worth¹ by country, thousands 2005 Euros²

	Mean	Median	P10	P25	P75	P90	N
NW1							
UK	116.7	62.3	-0.3	2.2	150.0	302.7	3988
Finland	66.5	41.0	-2.7	0.7	89.4	159.7	3893
Italy	163.6	104.0	0.0	15.9	212.2	369.2	8010
US SCF	207.0	42.4	-6.3	0.3	155.6	418.4	4442
US PSID	158.1	40.9	-3.9	0.2	150.0	368.1	5550
Sweden	50.9	15.9	-13.1	-0.7	69.9	151.5	17819

Notes: (1) Net worth (NW1) equal to the sum of net financial assets (TFA1) and housing equity (TNF1). Net financial assets equal to total financial assets (TFA1) minus financial debt - non-housing debt (NHD) in LWS wording. Housing equity equals to the sum of own principal residence, investment real estate (TNF1) minus mortgage debt. (2) All monetary values are expressed in 2005 Euros (Euro 16 ppp).

Source: Own calculations based on LWS database.

Table 2: Gini and GE(2) for household total net worth (NW1) by country

	Gini	GE(2)	P90/P50	P25/P50
NW1				
UK	0.66	1.18	4.86	0.04
Finland	0.68	1.61	3.90	0.02
Italy	0.60	1.16	3.55	0.15
US SCF	0.83	15.23	9.88	0.01
US PSID	0.80	10.07	9.00	0.00
Sweden	0.89	5.30	9.51	na

Note: Net worth (NW1) equal to the sum of net financial assets (TFA1) and housing equity (TNF1). Net financial assets equal to total financial assets (TFA1) minus financial debt - non-housing debt (NHD) in LWS wording. Housing equity equals to the sum of own principal residence, investment real estate (TNF1) minus mortgage debt. All monetary values are expressed in 2005 Euros (Euro 16 ppp).

Source: Own calculations based on LWS database.

Table 3: Mean and various percentiles of household net worth components by country and year, thousands 2005 Euros

	All					% non-zero	Owners			
	Mean	P50	P25	P90	Mean		P50	P25	P90	
Net financial wealth										
UK	21.9	1.9	0.0	63.6	0.88	25.0	4.2	-0.4	72.2	
Finland	8.8	1.3	-0.5	27.0	0.95	9.3	1.6	-0.8	28.3	
Italy	24.2	6.4	0.7	51.5	0.83	29.3	9.7	3.2	58.6	
US SCF 2001	90.0	1.0	-4.3	150.7	0.95	94.9	1.6	-5.0	158.3	
US PSID 2001	62.1	1.5	-1.0	121.7	0.88	70.3	2.9	-2.1	144.1	
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Net housing wealth										
UK	94.8	54.9	0.0	245.6	0.70	136.3	92.4	49.1	288.9	
Finland	57.6	37.1	0.0	137.2	0.69	83.8	61.3	35.5	163.0	
Italy	139.4	92.8	0.0	318.2	0.73	192.0	133.1	79.6	376.6	
US SCF 2001	117.1	35.1	0.0	255.8	0.69	169.4	77.1	31.2	325.8	
US PSID 2001	96.0	33.1	0.0	228.9	0.66	146.3	77.9	34.1	292.2	
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Gross financial assets										
UK	25.5	4.2	0.1	66.4	0.80	31.7	8.3	1.4	82.3	
Finland	12.8	2.7	0.3	28.6	0.92	13.9	3.2	0.6	30.9	
Italy	25.1	7.1	1.6	52.1	0.81	31.0	10.6	4.2	60.6	
US SCF	99.9	5.8	0.9	156.0	0.92	109.2	7.4	1.5	169.5	
US PSID	68.4	3.9	0.4	126.6	0.83	82.0	7.8	1.6	152.9	
Sweden	22.0	4.7	0.1	53.1	0.79	27.9	9.0	2.3	63.4	
Gross housing assets										
UK	122.3	86.7	0.0	288.9	0.70	175.1	130.0	82.3	332.2	
Finland	66.2	48.4	0.0	151.7	0.68	96.9	72.6	48.4	177.6	
Italy	143.5	95.5	0.0	318.2	0.72	198.2	142.1	84.9	384.0	
US SCF	163.6	77.9	0.0	340.9	0.69	235.7	126.6	73.0	425.6	
US PSID	134.7	77.9	0.0	303.9	0.66	203.9	132.5	77.9	375.0	
Sweden	56.3	19.4	0.0	149.4	0.58	97.9	68.9	35.8	196.0	
Financial debt										
UK	3.5	0.0	0.0	11.6	0.46	7.7	3.6	0.8	19.1	
Finland	4.0	0.0	0.0	9.7	0.38	10.4	4.8	1.9	21.0	
Italy	0.9	0.0	0.0	1.6	0.12	7.6	5.3	2.6	15.9	
US SCF	10.0	1.8	0.0	25.3	0.65	15.3	7.9	2.0	31.2	
US PSID	6.3	0.06	0.0	14.6	0.50	12.6	4.9	2.0	27.3	
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Housing debt										
UK	27.6	0.0	0.0	86.7	0.40	69.8	57.8	36.1	124.2	
Finland	8.5	0.0	0.0	32.3	0.28	30.1	24.2	10.5	63.9	
Italy	3.8	0.0	0.0	1.4	0.10	36.7	26.5	9.5	79.6	
US SCF	46.5	0.0	0.0	126.6	0.47	100.1	71.6	34.1	188.0	
US PSID	38.7	0.0	0.0	124.7	0.44	88.6	70.1	39.0	175.3	
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Total gross wealth										
UK	147.8	101.1	6.1	346.7	0.89	165.7	115.6	54.3	364.5	
Finland	79.0	56.6	3.1	173.5	0.96	82.3	59.7	6.5	176.0	
Italy	168.6	106.9	18.0	376.6	0.92	183.3	118.5	43.0	397.8	
US SCF	263.5	93.0	6.6	513.7	0.94	281.4	102.1	19.6	537.6	
US PSID	203.1	93.0	2.9	445.1	0.90	226.2	114.4	18.5	472.4	
Sweden	78.3	36.8	2.0	192.0	0.84	92.8	55.4	11.7	209.4	
Total debt										
UK	31.1	1.4	0.0	96.8	0.60	52.3	39.1	5.1	118.3	
Finland	12.5	0.7	0.0	40.4	0.52	24.0	12.9	4.3	59.4	
Italy	4.7	0.0	0.0	9.6	0.20	23.3	9.5	4.2	63.6	
US SCF	56.5	14.6	0.1	143.9	0.76	74.5	38.0	7.8	163.6	
US PSID	45.0	9.7	0.0	132.5	0.68	66.4	42.9	7.8	159.7	
Sweden	27.5	7.8	0.0	75.6	0.71	38.9	20.0	6.2	91.3	

Note: Net financial wealth equals the sum of gross financial assets (TFA1) and financial debt (non-housing debt) (NHD). Net non-financial equals to the sum of own principal residence and investment real estate (TNF1) minus mortgage debt (HSD). The sample includes households with non-missing data on net worth and the various variables used in the decomposition analysis. Household weights are used. n.a. indicates not applicable/not available. Not available indicates that the particular wealth components is missing (relevant mainly for Sweden and US-PSID).

Table 4: Inequality measures for different wealth components

	All				Owners			
	P90/50	Top10%	Top 1%	Gini	P90/50	Top 10%	Top 1%	Gini
Net financial wealth								
UK	33.8	74.8	22.7	0.99	17.4	71.0	20.8	0.96
Finland	20.9	93.5	38.9	1.39	17.5	92.0	38.1	1.38
Italy	8.1	66.5	28.9	0.81	6.1	62.6	26.1	0.76
US SCF	154.7	91.1	51.4	1.02	100.3	90.3	50.8	1.01
US PSID	83.3	88.4	41.7	1.02	49.3	86.0	39.8	1.00
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Net housing wealth								
UK	4.5	43.9	10.0	0.65	3.1	35.3	7.5	0.49
Finland	3.7	42.4	11.6	0.64	2.7	34.2	9.5	0.47
Italy	3.4	41.3	10.1	0.61	2.8	34.5	8.2	0.46
US SCF	7.3	61.2	25.2	0.76	4.2	53.7	21.2	0.66
US PSID	6.9	56.3	20.5	0.74	3.7	46.9	16.9	0.61
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Gross financial assets								
UK	16.0	65.2	19.5	0.80	9.9	59.5	17.0	0.75
Finland	10.7	66.3	26.9	0.79	9.6	64.5	26.1	0.77
Italy	7.3	64.3	27.9	0.77	5.7	60.2	25.1	0.71
US SCF	26.9	83.8	47.1	0.90	22.8	82.4	45.7	0.89
US PSID	32.5	80.8	38.2	0.88	19.6	77.4	35.5	0.86
Sweden	11.3	62.5	23.3	0.78	7.0	56.9	21.2	0.72
Gross housing assets								
UK	3.3	38.6	8.8	0.58	2.6	31.3	6.9	0.40
Finland	3.1	39.0	10.4	0.59	2.4	31.2	8.3	0.41
Italy	3.3	40.7	9.9	0.60	2.7	33.9	7.9	0.45
US SCF	4.4	54.1	20.9	0.70	3.4	47.0	17.6	0.57
US PSID	3.9	47.4	15.6	0.67	2.8	38.9	12.8	0.49
Sweden	7.7	47.7	12.8	0.70	2.8	34.9	9.5	0.48
Financial debt								
UK	n.a.	66.9	18.5	0.83	5.3	44.6	11.7	0.63
Finland	n.a.	72.9	28.8	0.86	4.3	51.6	16.7	0.63
Italy	n.a.	98.1	33.3	0.94	3.0	36.6	10.5	0.50
US SCF	14.0	57.2	22.5	0.76	3.9	47.3	19.2	0.63
US PSID	251.9	69.1	26.4	0.83	5.6	53.2	18.7	0.67
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Housing debt								
UK	n.a.	50.9	11.9	0.76	2.1	28.1	6.4	0.39
Finland	n.a.	66.4	13.4	0.84	2.6	29.0	5.3	0.44
Italy	n.a.	100.0	32.7	0.95	3.0	33.0	3.5	0.50
US SCF	n.a.	55.6	17.0	0.77	2.6	38.2	10.9	0.50
US PSID	n.a.	50.1	10.9	0.75	2.5	28.8	6.5	0.42
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total gross wealth								
UK	3.4	39.4	8.6	0.58	3.2	36.9	7.9	0.53
Finland	3.1	40.2	11.2	0.59	2.9	39.4	11.0	0.58
Italy	3.5	41.2	10.6	0.59	3.3	39.4	10.0	0.56
US SCF	5.5	61.8	27.5	0.75	5.3	60.5	26.8	0.73
US PSID	4.8	53.7	20.2	0.70	4.1	51.4	19.7	0.67
Sweden	5.2	45.9	13.5	0.66	3.8	42.0	12.4	0.60
Total debt								
UK	67.0	48.6	11.2	0.74	3.0	34.8	8.2	0.56
Finland	62.1	56.8	12.4	0.78	4.6	38.3	8.3	0.57
Italy	n.a.	90.5	26.9	0.92	6.7	41.8	8.1	0.62
US SCF	9.8	51.1	15.6	0.72	4.3	44.3	13.3	0.63
US PSID	13.6	46.9	10.5	0.71	3.7	36.2	8.3	0.57
Sweden	9.7	52.3	15.3	0.73	4.6	43.4	12.8	0.61

Note: Net financial wealth equals to the sum of gross financial assets (TFA1) and financial debt (non-housing debt) (NHD). Net non-financial wealth equals to the sum of own principal residence and investment real estate (TNF1) minus mortgage debt (HSD). The sample includes households with non-missing data on net worth and the various variables used in the decomposition analysis. Household weights are used. n.a. indicates not applicable/not available. Not applicable indicates either a negative ratio or a zero denominator. Not available indicates that the particular wealth components is missing (relevant mainly for the Sweden and the US-PSID).

Table 5: Cross-country differences in the distribution of various demographic characteristics

	UK	Finland	Italy	US SCF	US PSID	Sweden
Age of household head						
16-24	3.83	7.26	0.68	5.59	5.25	6.61
25-34	14.29	16.70	9.40	17.14	18.63	16.91
35-44	19.29	19.97	21.47	22.31	22.16	17.73
45-54	17.37	21.00	18.80	20.61	22.40	17.51
55-64	14.89	13.81	16.90	13.24	12.55	16.57
65-74	14.02	11.73	18.21	10.77	10.92	10.87
75-84	12.01	7.70	11.66	8.31	6.32	9.72
85+	4.29	1.82	2.88	2.03	1.79	4.07
Household type						
Single no children	30.13	38.99	23.29	28.61	33.04	48.06
Single with children	7.50	4.79	1.31	9.93	8.11	5.57
Single with other adults	8.90	4.37	9.66	1.74	5.18	2.21
Couple no children	25.02	25.67	20.35	30.16	23.11	23.11
Couple with children	20.42	21.88	26.45	26.78	25.06	17.82
Couple with other adults	8.02	4.30	18.94	2.78	5.50	3.23
Working status of household head						
Working	54.17	58.00	49.09	72.31	70.55	65.61
Unemployed-inactive	14.29	11.94	10.35	9.73	10.65	5.80
Retired	31.55	30.07	40.56	17.96	18.8	28.58
Educational attainment of household head						
Low	52.04	37.91	36.19	47.71	48.34	22.71
Mid	35.64	49.81	55.80	22.76	22.65	54.03
High	12.33	12.28	8.01	29.54	29.00	23.26
Home-ownership status						
% of homeowners	70.15	68.30	72.22	69.42	65.38	57.24
Income						
Mean income by income quartile group						
Bottom	6,533	6,875	5,942	7,301	9,326	7,571
2 nd	12,147	10,864	10,438	14,928	19,403	12,199
3 rd	17,730	14,685	15,240	24,101	29,174	16,651
Top	31,641	22,330	27,597	59,638	60,647	25,617
Mean	17,025	13,511	14,739	25,644	29,343	15,420
Median	14,651	12,709	12,495	18,617	24,045	14,225
Gini	0.34	0.27	0.33	0.49	0.41	0.27
Number of household with non-missing data on wealth						
	4,185	3,893	8,010	4,442	5,834	17,953

Note: The sample includes households with non-zero weight with non-missing information on net worth. Sample size may differ for different variables because of missing values. Household weights are used. The Swedish survey does not record education for persons older than 75 years old.

Table 6: DFL decomposition of the distribution of net worth (figures in thousands of 2005 Euros)

	P10	P25	P50	P90	P95
UK					
Actual	-0.29	2.24	62.26	302.65	439.86
Finland					
Actual	-2.66	0.73	40.99	159.66	222.78
Counterfactual	-0.48	9.90	59.93	210.21	284.13
Difference with the UK	-2.37	-1.51	-21.27	-142.99	-217.08
Explained by characteristics	-2.18	-9.17	-18.94	-50.55	-61.35
Italy					
Actual	0.00	15.91	103.96	369.15	533.36
Counterfactual	0.26	12.73	98.97	376.07	554.79
Difference with the UK	0.29	13.67	41.70	66.51	93.51
Explained by characteristics	-0.27	3.18	4.99	-6.91	-21.43
US SCF					
Actual	-6.30	0.27	42.37	418.40	700.45
Counterfactual	-6.17	0.11	31.98	312.68	505.58
Difference with the UK	-6.01	-1.97	-19.89	115.76	260.59
Explained by characteristics	-0.13	0.16	10.38	105.72	194.86
US PSID					
Actual	-3.90	0.19	40.90	368.14	613.57
Counterfactual	-3.41	0.00	28.24	302.79	516.18
Difference with the UK	-3.61	-2.04	-21.35	65.49	173.71
Explained by characteristics	-0.49	0.19	12.66	65.35	97.39
Sweden					
Actual	-13.12	-0.69	15.92	151.46	215.28
Counterfactual	-12.72	-0.09	24.33	175.65	255.69
Difference with the UK	-12.83	-2.93	-46.34	-151.19	-224.57
Explained by characteristics	-0.40	-0.60	-8.41	-24.20	-40.40

Note: Counterfactual distributional statistics are estimated using the DFL decomposition re-weighting procedure. The explanatory variables included in the reweighting function include age education and working status of the household head, household structure, and household income net of capital gains and interest payments. All counterfactual distributions are estimated using UK as a base country i.e. they represent the distribution that would prevail in each of the countries if the distribution of characteristics was similar to the UK. The sample includes households with non-missing data on wealth and in any of the variables used to estimate weighting function.

Table 7: Detailed decompositions: Differences in selected percentiles of net worth distribution (figures in thousand 2005 Euros)

	P10		P25		P50		P90							
	bs	se	bs	se	bs	se	bs	se						
UK-Finland														
Unadjusted difference	-2.4	***	0.3		-1.5	*	0.8		-21.3	***	3.4	-143.0	***	10.4
Compositional effect	-2.2	***	0.4		-9.2	**	3.2		-18.9	***	3.6	-50.5	***	11.7
Income	-1.1	***	0.2		-4.4	**	1.4		-10.9	***	1.8	-34.0	***	6.8
Working status	0.2		0.1		-0.1		0.3		-0.2		0.5	-7.9	**	2.9
Education	-0.2	*	0.1		-0.3		0.3		-0.2		0.5	-0.1		2.3
Household structure	0.0		0.1		-1.8	*	0.9		-3.9	**	1.3	-6.6	*	2.7
Age	-1.0	***	0.2		-2.5	**	0.9		-3.7	***	1.0	-1.9		2.0
UK-Italy														
Unadjusted difference	0.3		0.3		13.7	***	2.0		41.7	***	3.2	66.5	***	13.1
Compositional effect	-0.3		0.3		3.2		2.1		5.0		4.0	-6.9		13.3
Income	-1.0	***	0.2		-7.7	***	1.5		-15.3	***	1.8	-54.2	***	9.4
Working status	0.0		0.0		0.8	*	0.3		0.4		0.6	-5.9		3.4
Education	0.1		0.1		1.3		0.8		6.0	***	1.4	16.1	**	6.2
Household structure	0.3	**	0.1		4.1	***	0.9		7.5	***	1.6	19.8	***	5.2
Age	0.3	*	0.1		4.6	***	1.2		6.3	***	1.6	17.4	***	4.0
UK-US SCF														
Unadjusted difference	-6.0	***	0.6		-2.0	**	0.7		-19.9	***	3.5	115.8	***	16.0
Compositional effect	-0.1		0.5		0.2		0.1		10.4	***	2.5	105.7	***	22.7
Income	1.0	***	0.2		0.2	*	0.1		8.5	***	1.0	54.7	***	9.9
Working status	-0.2		0.2		0.1		0.0		0.0		0.8	-9.9		6.9
Education	0.6	*	0.3		0.2	**	0.1		8.4	***	1.3	67.6	***	12.7
Household structure	0.1		0.4		0.1		0.1		3.1	*	1.5	30.5	***	8.9
Age	-1.6	***	0.3		-0.4	*	0.2		-9.5	***	1.2	-37.1	***	6.1
UK-US PSID														
Unadjusted difference	-3.6	***	0.6		-2.0	**	0.7		-21.4	***	3.4	65.5	***	18.5
Compositional effect	-0.5		0.5		0.2		0.1		12.7	***	2.7	65.4	**	20.3
Income	1.3	***	0.3		0.4	***	0.1		19.2	***	1.8	59.0	***	10.9
Working status	-0.2		0.1		0.0		0.0		-0.1		0.5	-3.7		3.2
Education	-0.3		0.2		0.1	*	0.0		4.7	***	1.0	44.2	***	7.7
Household structure	0.0		0.1		0.0		0.0		-0.9		1.0	2.3		4.0
Age	-1.3	***	0.3		-0.3	***	0.1		-10.2	***	1.7	-36.4	***	9.1
UK-Sweden														
Unadjusted difference	-12.8	***	0.5		-2.9	***	0.7		-46.3	***	2.3	-151.2	***	10.4
Compositional effect	-0.4		0.7		-0.6	**	0.2		-8.4	***	1.4	-24.2	***	3.6
Income	-0.7	**	0.2		-0.5	***	0.1		-5.7	***	0.5	-22.1	***	2.2
Working status	0.7	**	0.2		0.5	***	0.1		2.0	***	0.3	1.3	**	0.4
Education	-0.6	**	0.2		0.1		0.1		3.2	***	0.4	13.6	***	1.3
Household structure	0.8	**	0.3		-0.2	*	0.1		-5.0	***	0.5	-13.1	***	1.4
Age	-0.6	**	0.2		-0.5	***	0.1		-2.9	***	0.5	-3.9	***	1.0

Note: Counterfactual distributional statistics are estimated using the DFL decomposition re-weighting procedure. The explanatory variables included in the reweighting function include age education and working status of the household head, household structure, and household income net of capital gains and interest payments. All counterfactual distributions are estimated using UK as a base country i.e. they represent the distribution that would prevail in each of the countries if the distribution of characteristics was similar to the UK. The sample includes households with non-missing data on wealth and in any of the variables used to estimate the weighting function. Standard errors based on 50 replications.

Table 8: DFL decomposition of net worth inequality

	P90/50	P25/50	Gini	Top 10%	Top 5%	Top 1%
UK						
Actual	4.86	0.04	0.66	45.36	29.83	9.98
Finland						
Actual	3.90	0.02	0.68	45.34	31.19	13.03
Counterfactual	3.51	0.17	0.62	41.20	28.05	11.28
Difference with the UK	-0.96	-0.02	0.02	-0.02	1.36	3.05
Explained by characteristics	0.39	-0.15	0.06	4.14	3.14	1.75
Italy						
Actual	3.55	0.15	0.60	42.07	28.64	10.76
Counterfactual	3.80	0.13	0.62	43.88	29.70	11.58
Difference with the UK	-1.31	0.11	-0.06	-3.29	-1.19	0.78
Explained by characteristics	-0.25	0.02	-0.02	-1.81	-1.06	-0.82
US SCF						
Actual	9.88	0.01	0.83	70.30	57.31	32.68
Counterfactual	9.78	0.00	0.81	64.40	49.75	27.26
Difference with the UK	5.02	-0.03	0.17	24.94	27.48	22.70
Explained by characteristics	0.10	0.01	0.02	5.90	7.56	5.42
US PSID						
Actual	9.00	0.00	0.80	63.47	48.61	25.24
Counterfactual	10.72	0.00	0.81	64.27	49.42	25.94
Difference with the UK	4.14	-0.04	0.14	18.11	18.78	15.26
Explained by characteristics	-1.72	0.00	-0.01	-0.80	-0.81	-0.70
Sweden						
Actual	9.51	-0.04	0.89	58.10	40.53	17.52
Counterfactual	7.22	0.00	0.85	56.04	40.10	17.77
Difference with the UK	4.65	-0.08	0.23	12.74	10.70	7.54
Explained by characteristics	2.29	-0.04	0.04	2.06	0.43	-0.25

Note: Counterfactual distributional statistics are estimated using the DFL decomposition re-weighting procedure. The explanatory variables included in the reweighting function include age education and working status of the household head, household structure, and household income net of capital gains and interest payments. All counterfactual distributions are estimated using UK as a base country i.e. they represent the distribution that would prevail in each of the countries if the distribution of characteristics was similar to the UK. The sample includes households with non-missing data on wealth and in any of the variables used to estimate weighting function.

Table 9: DFL decomposition of difference in in asset and debt ownership and the extent of different types of indebtedness

	Financial assets	Housing assets	Financial debt	Housing debt	Debt	NW1<0	NFA<0	THSE<0
UK								
Actual	0.803	0.699	0.462	0.395	0.595	0.117	0.252	0.003
Finland								
Actual	0.923	0.683	0.383	0.283	0.521	0.150	0.268	0.018
Counterfactual	0.931	0.768	0.339	0.295	0.497	0.105	0.221	0.013
Italy								
Actual	0.812	0.722	0.120	0.102	0.199	0.027	0.054	0.007
Counterfactual	0.826	0.693	0.118	0.103	0.199	0.024	0.042	0.006
US SCF								
Actual	0.915	0.694	0.651	0.465	0.758	0.192	0.378	0.009
Counterfactual	0.907	0.674	0.634	0.379	0.708	0.195	0.401	0.009
US PSID								
Actual	0.834	0.660	0.501	0.437	0.678	0.154	0.287	0.006
Counterfactual	0.775	0.622	0.442	0.311	0.574	0.160	0.276	0.007
Sweden								
Actual	0.789	0.575	n.a.	n.a.	0.706	0.274	n.a.	n.a.
Counterfactual	0.794	0.621	n.a.	n.a.	0.716	0.256	n.a.	n.a.

Note: Counterfactual distributional statistics are estimated using the DFL decomposition re-weighting procedure. The explanatory variables included in the reweighting function include age education and working status of the household head, household structure, and household income net of capital gains and interest payments. All counterfactual distributions are estimated using UK as a base country i.e. they represent the distribution that would prevail in each of the countries if the distribution of characteristics was similar to the UK. The sample includes households with non-missing data on wealth and in any of the variables used to estimate weighing function.

Table 10: DFL decompositions of cross country differences in the distribution of different wealth components
(thousand 2005 euros)

	Net financial wealth			Gross financial wealth			Financial debt		
	P25	P50	P90	P25	P50	P90	P25	P50	P90
UK									
Actual	-0.04	1.88	63.56	0.07	4.16	66.45	0.00	0.00	11.56
Finland									
Actual	-0.48	1.29	27.02	0.32	2.67	28.58	0.00	0.00	9.69
Counterfactual	0.00	2.66	38.50	0.65	4.36	40.94	0.00	0.00	9.69
Italy									
Actual	0.74	6.36	51.45	1.59	7.11	51.98	0.00	0.00	1.59
Counterfactual	1.17	7.10	52.12	1.82	7.43	53.04	0.00	0.00	1.33
US SCF									
Actual	-4.30	0.97	150.67	0.94	5.80	155.95	0.00	1.80	25.28
Counterfactual	-5.11	0.34	99.34	0.55	3.51	102.08	0.00	1.17	23.18
US PSID									
Actual	-0.97	1.46	121.74	0.39	3.90	126.61	0.00	0.06	14.61
Counterfactual	-0.49	0.39	97.39	0.04	1.95	100.31	0.00	0.00	11.69
Sweden									
Actual	-	-	-	0.14	4.69	53.12	-	-	-
Counterfactual	-	-	-	0.23	6.39	68.18	-	-	-
	Net housing wealth			Gross housing wealth			Housing debt		
	P25	P50	P90	P25	P50	P90	P25	P50	P90
UK									
Actual	0.00	54.89	245.57	0.00	86.67	288.90	0.00	0.00	86.67
Finland									
Actual	0.00	37.13	137.22	0.00	48.43	151.75	0.00	0.00	32.29
Counterfactual	6.46	51.82	177.58	16.14	64.57	193.72	0.00	0.00	37.13
Italy									
Actual	0.00	92.82	318.24	0.00	95.47	318.24	0.00	0.00	1.38
Counterfactual	0.00	84.86	318.24	0.00	90.17	319.30	0.00	0.00	2.12
US SCF									
Actual	0.00	35.06	255.75	0.00	77.91	340.87	0.00	0.00	126.61
Counterfactual	0.00	29.22	194.79	0.00	66.81	251.27	0.00	0.00	93.50
US PSID									
Actual	0.00	33.11	228.87	0.00	77.91	303.86	0.00	0.00	124.66
Counterfactual	0.00	23.37	194.79	0.00	53.57	243.48	0.00	0.00	77.91
Sweden									
Actual	-	-	-	0.00	19.39	149.43	-	-	-
Counterfactual	-	-	-	0.00	32.43	175.04	-	-	-
	Net worth			Gross wealth			Total debt		
	P25	P50	P90	P25	P50	P90	P25	P50	P90
UK									
Actual	2.24	62.26	302.65	6.07	101.12	346.68	0.00	1.45	96.78
Finland									
Actual	0.73	40.99	159.66	3.10	56.65	173.54	0.00	0.65	40.36
Counterfactual	9.90	59.93	210.21	19.81	72.65	217.49	0.00	0.00	46.99
Italy									
Actual	15.91	103.96	369.15	18.03	106.77	376.07	0.00	0.00	9.55
Counterfactual	12.73	98.97	376.07	13.79	103.59	388.57	0.00	0.00	10.18
US SCF									
Actual	0.27	42.37	418.40	6.62	93.01	513.74	0.08	14.61	143.85
Counterfactual	0.11	31.98	312.68	4.28	76.45	354.86	0.00	6.95	112.14
US PSID									
Actual	0.19	40.90	368.14	2.92	93.01	445.08	0.00	9.74	132.45
Counterfactual	0.00	28.24	302.79	0.97	64.77	353.05	0.00	0.97	87.65
Sweden									
Actual	-0.69	15.92	151.46	2.01	36.79	191.97	0.00	7.80	75.58
Counterfactual	-0.09	24.33	175.65	2.95	52.09	226.66	0.00	9.33	87.16

Note: As in Table 9.

Table 11: DFL decompositions of cross country differences in inequality of different wealth components

	Net financial wealth			Gross financial wealth			Financial debt		
	Top 10%	Top 1%	Gini	Top 10%	Top 1%	Gini	Top 10%	Top 1%	Gini
UK									
Actual	74.80	22.68	0.99	65.18	19.54	0.80	66.93	18.45	0.83
Finland									
Actual	93.50	38.88	1.39	66.35	26.93	0.79	72.88	28.83	0.86
Counterfactual	76.76	27.17	1.14	60.09	20.54	0.75	75.65	28.28	0.87
Italy									
Actual	66.53	28.93	0.81	64.34	27.89	0.77	98.11	33.27	0.94
Counterfactual	65.98	29.21	0.79	64.09	28.25	0.76	97.96	34.59	0.94
US SCF									
Actual	91.12	51.38	1.02	83.76	47.14	0.90	57.15	22.53	0.76
Counterfactual	93.08	44.35	1.08	81.32	38.68	0.88	53.97	14.58	0.75
US PSID									
Actual	88.43	41.65	1.02	80.77	38.21	0.88	69.07	26.37	0.83
Counterfactual	91.30	45.40	1.02	85.11	42.15	0.91	72.24	25.74	0.85
Sweden									
Actual	-	-	-	62.47	23.29	0.78	-	-	-
Counterfactual	-	-	-	62.62	24.17	0.81	-	-	-
	Net housing wealth			Gross housing wealth			Housing debt		
	Top 10%	Top 1%	Gini	Top 10%	Top 1%	Gini	Top 10%	Top 1%	Gini
UK									
Actual	43.85	9.95	0.65	38.59	8.77	0.58	50.87	11.90	0.76
Finland									
Actual	42.42	11.59	0.64	39.02	10.35	0.59	66.39	13.43	0.84
Counterfactual	39.96	10.92	0.59	37.23	9.67	0.55	73.38	13.59	0.83
Italy									
Actual	41.28	10.09	0.61	40.70	9.93	0.60	99.95	32.29	0.95
Counterfactual	43.12	10.33	0.63	42.45	10.11	0.62	99.90	27.76	0.95
US SCF									
Actual	61.22	25.17	0.76	54.12	20.94	0.70	55.61	17.01	0.77
Counterfactual	55.45	21.02	0.73	48.64	17.49	0.67	57.11	14.65	0.80
US PSID									
Actual	56.27	20.54	0.74	47.43	15.61	0.67	50.09	10.89	0.75
Counterfactual	54.09	17.80	0.74	47.51	14.35	0.68	60.41	11.47	0.81
Sweden									
Actual	-	-	-	47.73	12.78	0.70	-	-	-
Counterfactual	-	-	-	46.83	13.76	0.68	-	-	-
	Net worth			Total gross wealth			Total debt		
	Top 10%	Top 1%	Gini	Top 10%	Top 1%	Gini	Top 10%	Top 1%	Gini
UK									
Actual	45.36	9.98	0.66	39.39	8.60	0.58	48.63	10.93	0.74
Finland									
Actual	45.34	13.03	0.68	40.24	11.22	0.59	56.80	12.42	0.78
Counterfactual	41.20	11.28	0.62	37.82	9.93	0.55	64.14	12.62	0.77
Italy									
Actual	42.07	10.76	0.60	41.33	10.60	0.59	90.47	26.90	0.92
Counterfactual	43.88	11.58	0.62	43.06	11.18	0.61	91.51	24.07	0.92
US SCF									
Actual	70.30	32.68	0.83	61.78	27.53	0.75	51.06	15.63	0.72
Counterfactual	64.40	27.26	0.81	55.22	22.80	0.71	50.65	12.74	0.73
US PSID									
Actual	63.47	25.24	0.80	53.73	20.22	0.70	46.88	10.51	0.71
Counterfactual	64.27	25.94	0.81	56.49	22.27	0.73	53.48	10.76	0.77
Sweden									
Actual	58.10	17.52	0.89	45.91	13.46	0.66	52.27	15.26	0.73
Counterfactual	56.04	17.77	0.85	45.81	14.38	0.65	53.48	16.35	0.73

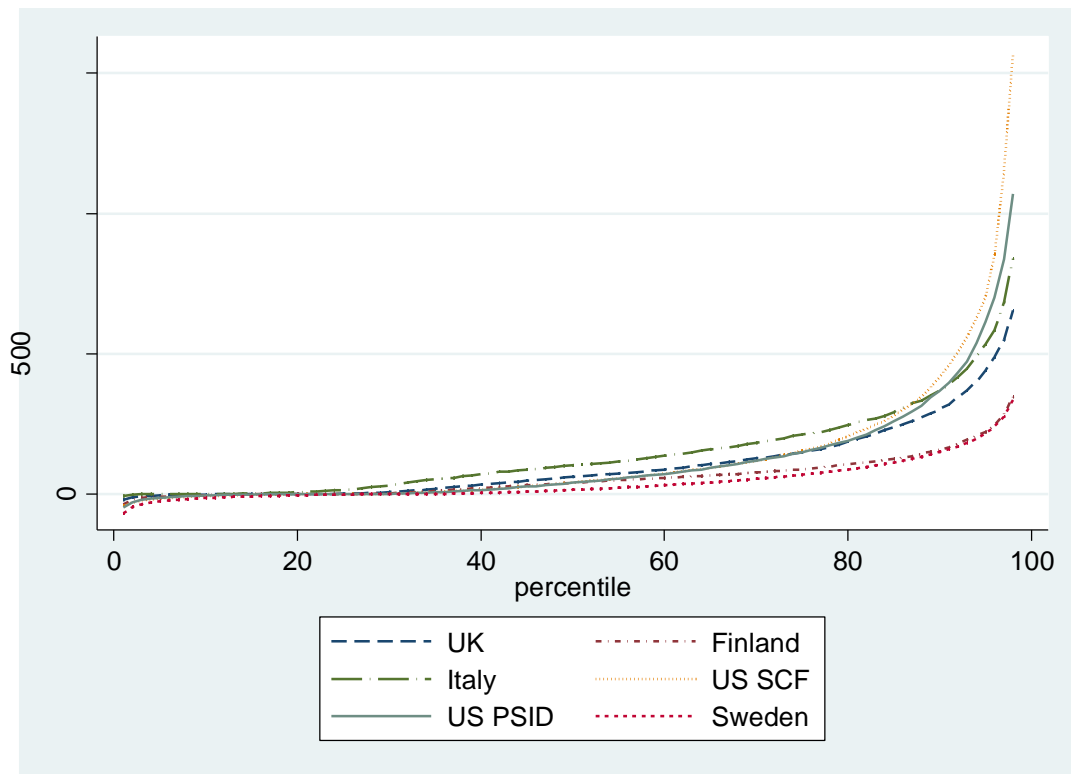
Note: As in Table 9.

Table 12: Actual and counterfactual inequality measures for NW1 and NW2 and the role of educational loans

	NW1		NW2		NW1 Excluding educational loans		NW 2 Excluding educational loans	
	Gini	Top 1%	Gini	Top 1%	Gini	Top 1%	Gini	Top 1%
UK								
Actual	0.66	9.98	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Finland								
Actual	0.68	13.03	n.a.	n.a.	0.67	12.92	n.a.	n.a.
Counterfactual	0.61	11.28	n.a.	n.a.	0.61	11.22	n.a.	n.a.
Italy								
Actual	0.60	10.76	0.62	12.26	n.a.	n.a.	n.a.	n.a.
Counterfactual	0.62	11.57	0.64	12.14	n.a.	n.a.	n.a.	n.a.
US SCF								
Actual	0.83	32.68	0.85	37.46	0.82	32.43	0.85	37.25
Counterfactual	0.81	27.39	0.82	30.46	0.80	27.02	0.81	29.99
US PSID								
Actual	0.80	25.24	0.82	30.33	n.a.	n.a.	n.a.	n.a.
Counterfactual	0.81	26.04	0.81	27.07	n.a.	n.a.	n.a.	n.a.
Sweden								
Actual	0.89	17.52	0.86	17.34	0.83	16.57	0.80	16.53
Counterfactual	0.85	17.77	0.82	17.31	0.80	17.12	0.79	16.76

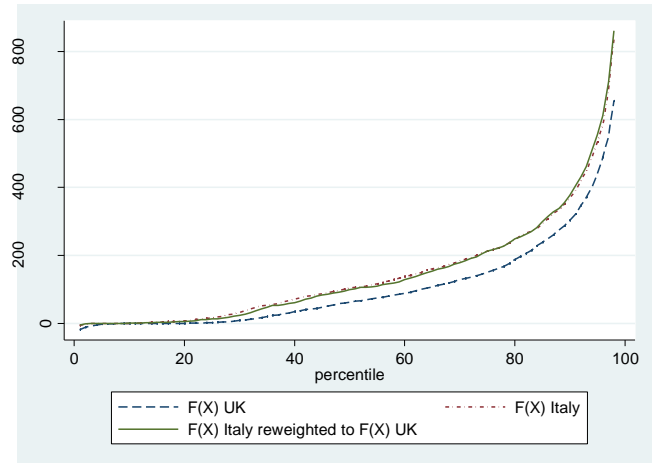
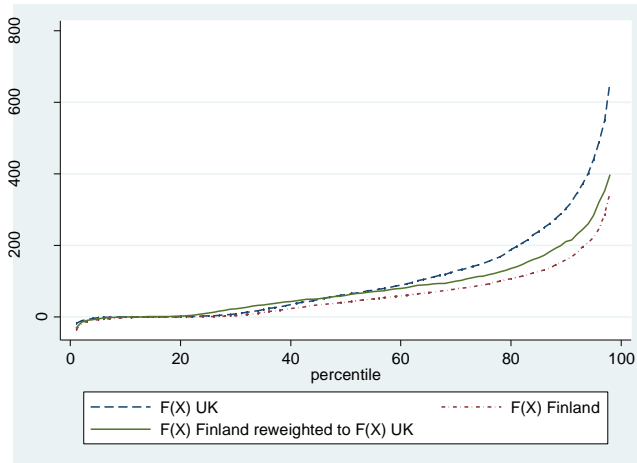
Note: NW1 and NW2 are the two net worth measures which excludes and includes bussing equity respectively. NW2 measure is available

Figure 1: Cross country differences in net worth distributions

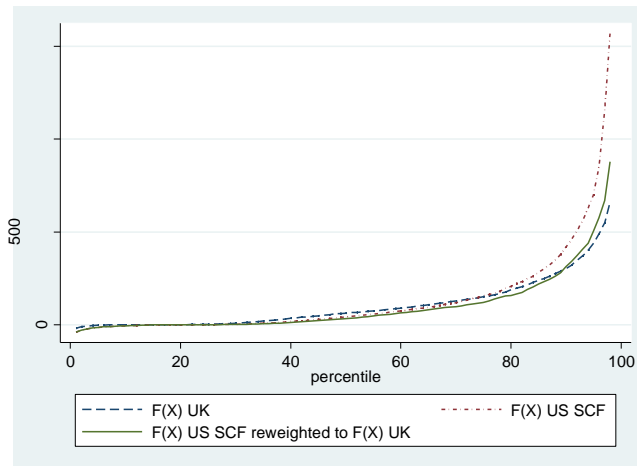


Note: The figure reflects wealth up to the 98th percentile.

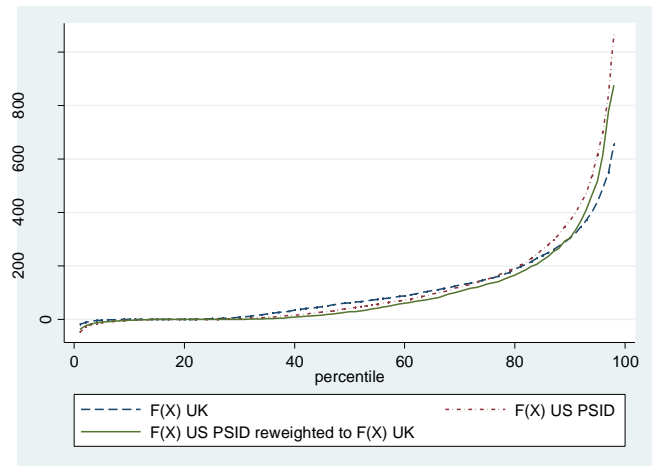
Figure 2: Actual and counterfactual net worth distribution
UK- Finland **UK-Italy**



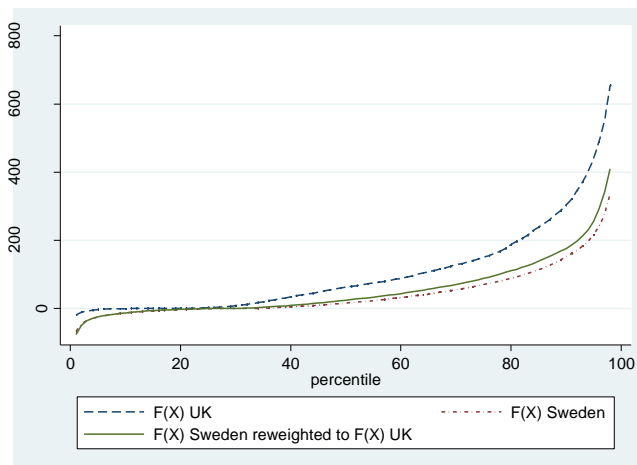
UK-US SCF



UK-US PSID



UK-Sweden



Note: Counterfactual distributional statistics are estimated using the DFL decomposition re-weighting procedure. The explanatory variables included in the reweighting function include age education and working status of the household head, household structure, and household income net of capital gains and interest payments. All counterfactual distributions are estimated using UK as a base country i.e. they represent the distribution that would prevail in each of the countries if the distribution of characteristics was similar to the UK.

Appendix

Table A1: Mean and median net worth¹ by country and household characteristics (thousands 2005 Euros²)

	Mean net worth						Median net worth					
	UK	Finland	Italy	US SCF	US PSID	Sweden	UK	Finland	Italy	US SCF	US PSID	Sweden
Age of household head												
16-24	12.5	5.7	86.2	28.8	2.8	5.0	-0.2	0.3	13.3	-0.2	0.0	0.0
25-34	44.9	23.0	92.5	36.8	29.2	12.1	12.4	1.0	47.7	1.3	1.0	0.0
35-44	100.3	56.2	135.5	113.4	106.5	35.6	47.7	40.4	93.4	27.4	26.8	8.0
45-54	136.1	86.8	196.2	234.4	189.6	58.1	88.8	65.2	135.8	61.1	61.4	23.7
55-64	178.2	106.9	221.5	364.3	258.8	81.6	114.8	76.2	144.1	87.1	112.8	46.3
65-74	170.6	93.1	177.8	402.3	302.1	87.9	103.6	59.7	105.6	118.0	151.0	52.6
75-84	119.5	78.2	129.7	338.0	255.8	69.7	79.5	49.6	79.6	119.6	126.1	34.8
85+	62.5	59.3	118.6	287.0	155.9	53.7	30.3	27.1	43.8	101.3	97.4	18.4
Household types												
Single no children	81.3	39.8	93.5	133.5	91.1	28.9	27.2	14.7	53.0	24.7	9.7	4.7
Single with children	59.3	22.4	98.4	37.8	28.8	16.1	4.7	1.0	53.0	0.0	0.1	0.0
Single with adults	116.9	69.9	159.4	64.4	105.4	50.1	65.4	49.3	89.1	25.5	31.2	21.8
Couple no children	165.8	101.1	189.0	354.3	302.6	91.1	102.1	66.2	112.3	99.7	124.7	58.8
Couple with children	111.1	71.7	167.2	180.7	161.4	59.5	54.7	55.0	111.9	34.5	43.8	25.0
Couples with adults	177.5	120.6	224.2	313.9	175.9	101.7	122.8	89.7	160.7	98.4	112.8	66.9
Household head working status												
Working	117.3	72.8	168.9	181.5	139.2	48.4	61.7	47.6	111.4	32.4	31.2	14.2
Unemployed/inactive	64.1	14.1	146.1	94.9	55.6	8.0	1.0	0.1	69.0	0.8	0.5	-1.4
Retired	139.3	75.1	161.7	370.3	283.4	65.2	86.7	53.3	101.3	128.0	146.1	29.5
Education of household head												
Low	89.4	56.2	111.7	85.1	82.2	39.4	45.4	43.2	74.3	19.9	19.5	13.0
Mid	135.4	56.8	174.3	148.7	130.0	41.1	76.7	30.6	116.7	33.0	38.0	9.3
High	177.6	137.6	323.4	448.9	306.6	75.0	95.3	84.9	217.5	118.0	104.2	28.1
Homeownership												
Non-home owners	5.1	-2.5	13.5	6.2	7.8	1.1	0.0	0.0	2.7	0.0	0.0	0.0
Homeowners	164.8	98.5	221.3	295.5	235.4	87.7	106.3	68.6	154.9	91.3	99.3	54.4
Income												
Bottom	92.6	39.4	90.4	85.5	102.4	27.4	43.3	6.1	52.8	1.7	1.5	3.1
2 nd	79.4	48.3	120.4	97.2	86.8	34.2	28.6	31.7	84.9	18.6	19.5	7.6
3 rd	109.6	61.6	162.7	122.8	129.8	45.0	60.0	48.6	119.9	50.5	46.8	18.4
Top	182.9	105.8	282.4	415.4	298.0	92.6	109.1	78.3	195.2	142.0	129.5	53.9

Note: The sample includes households with non-missing data on net worth and the various variables used in the decomposition analysis. Household weights are used.

Table A2: DFL decomposition of difference in the distribution of different wealth components for owners only

	Net financial wealth			Gross financial wealth			Financial debt		
	P25	P50	P90	P25	P50	P90	P25	P50	P90
UK									
Actual	-0.43	4.16	72.23	1.45	8.32	82.34	0.80	3.61	19.07
Finland									
Actual	-0.82	1.62	28.25	0.65	3.23	30.87	1.94	4.84	20.99
Counterfactual	0.04	3.23	40.94	1.13	5.33	41.96	2.42	5.33	24.22
Italy									
Actual	3.18	9.55	58.34	4.24	10.61	60.60	2.55	5.30	15.91
Counterfactual	3.18	10.61	58.34	4.24	10.72	60.99	2.33	5.30	15.91
US SCF									
Actual	-5.01	1.58	158.26	1.46	7.44	169.47	1.95	7.93	31.24
Counterfactual	-5.97	0.76	108.11	0.98	4.87	119.85	1.66	7.14	29.22
US PSID									
Actual	-2.14	2.92	144.14	1.56	7.79	152.91	1.95	4.87	27.27
Counterfactual	-1.89	1.95	121.74	0.97	4.87	132.45	1.17	4.58	22.40
Sweden									
Actual	-	-	-	2.34	9.02	63.45	-	-	-
Counterfactual	-	-	-	2.98	12.08	81.05	-	-	-
	Net housing wealth			Gross housing wealth			Housing debt		
	P25	P50	P90	P25	P50	P90	P25	P50	P90
UK									
Actual	49.11	92.45	288.90	82.34	130.01	332.24	36.11	57.78	124.23
Finland									
Actual	35.52	61.35	163.05	48.43	72.65	177.58	10.49	24.22	63.86
Counterfactual	40.36	72.65	201.79	48.43	82.96	209.87	12.27	27.12	64.57
Italy									
Actual	79.56	133.66	376.58	84.86	142.15	384.00	9.55	26.52	79.56
Counterfactual	79.56	133.66	424.31	84.86	148.51	424.31	10.61	31.82	82.74
US SCF									
Actual	31.17	77.14	325.85	73.04	126.61	425.60	34.09	71.56	187.97
Counterfactual	29.22	68.18	261.11	63.50	97.39	316.52	26.30	57.46	140.05
US PSID									
Actual	34.09	77.91	292.18	77.91	132.45	374.96	38.96	70.12	175.31
Counterfactual	31.17	73.04	267.83	63.31	107.13	311.65	29.22	58.44	136.35
Sweden									
Actual	-	-	-	35.76	68.95	195.95	-	-	-
Counterfactual	-	-	-	40.98	75.97	219.18	-	-	-
	Net worth			Total gross wealth			Total debt		
	P25	P50	P90	P25	P50	P90	P25	P50	P90
UK									
Actual	7.92	70.20	316.93	54.31	115.56	364.47	5.06	39.06	118.31
Finland									
Actual	1.29	43.02	161.43	6.46	59.68	176.05	4.26	12.91	59.41
Counterfactual	13.24	62.24	211.83	27.12	75.31	225.57	5.65	17.43	61.36
Italy									
Actual	35.75	112.02	382.92	42.96	118.73	396.73	4.24	9.55	63.65
Counterfactual	25.99	107.56	394.61	29.70	110.41	416.15	4.24	10.61	78.50
US SCF									
Actual	1.16	48.66	430.96	19.56	102.07	537.60	7.79	37.98	163.62
Counterfactual	0.63	38.18	322.74	13.01	86.19	377.10	5.26	23.83	129.68
US PSID									
Actual	2.82	51.62	389.86	18.50	114.44	472.35	7.79	42.85	159.72
Counterfactual	1.02	42.07	333.08	10.03	88.14	394.44	3.90	23.37	116.87
Sweden									
Actual	-1.29	19.28	155.75	11.66	55.39	209.44	6.24	20.02	91.26
Counterfactual	-0.46	28.58	181.01	19.62	70.40	248.14	6.64	23.25	104.47

Note: Counterfactual distributional statistics are estimated using the DFL decomposition re-weighting procedure. The explanatory variables included in the reweighting function include age education and working status of the household head, household structure, and household income net of capital gains and interest payments. All counterfactual distributions are estimated using UK as a base country. The sample includes households with non-missing data on wealth and in any of the variables used to estimate the weighting function.

Table A3: DFL decomposition of difference in the distribution of different wealth components for owners only

	Net financial wealth			Gross financial wealth			Financial debt		
	Top 10%	Top 1%	Gini	Top 10%	Top 1%	Gini	Top 10%	Top 1%	Gini
UK									
Actual	71.00	20.82	0.96	59.51	16.97	0.75	44.61	11.74	0.64
Finland									
Actual	92.03	38.06	1.38	64.50	26.11	0.77	51.57	16.67	0.63
Counterfactual	75.08	26.56	1.13	58.31	20.18	0.74	50.20	15.09	0.62
Italy									
Actual	62.57	26.15	0.76	60.18	25.21	0.71	36.64	10.50	0.50
Counterfactual	62.54	27.13	0.75	60.14	26.24	0.71	37.70	6.04	0.51
US SCF									
Actual	90.26	50.77	1.01	82.38	45.68	0.89	47.25	19.21	0.63
Counterfactual	91.83	44.35	1.08	79.49	38.68	0.87	41.88	11.26	0.60
US PSID									
Actual	86.03	39.81	1.00	77.39	35.52	0.86	53.19	18.71	0.67
Counterfactual	88.34	43.99	1.00	80.89	39.54	0.88	52.02	15.56	0.67
Sweden									
Actual	-	-	-	56.92	21.17	0.72	-	-	-
Counterfactual	-	-	-	57.30	21.73	0.72	-	-	-
	Net housing wealth			Gross housing wealth			Housing debt		
	Top 10%	Top 1%	Gini	Top 10%	Top 1%	Gini	Top 10%	Top 1%	Gini
UK									
Actual	35.26	7.54	0.49	31.30	6.86	0.40	28.11	6.36	0.39
Finland									
Actual	34.18	9.50	0.47	31.19	8.31	0.41	29.02	5.26	0.44
Counterfactual	34.29	9.28	0.46	31.72	8.18	0.42	28.66	4.30	0.43
Italy									
Actual	34.52	8.21	0.46	33.86	7.85	0.45	32.76	3.47	0.50
Counterfactual	35.01	8.26	0.47	34.26	7.71	0.46	27.76	2.45	0.48
US SCF									
Actual	53.67	21.16	0.66	47.04	17.62	0.57	38.21	10.89	0.50
Counterfactual	46.59	17.51	0.60	40.59	14.83	0.51	32.54	8.40	0.46
US PSID									
Actual	46.85	16.87	0.60	38.90	12.77	0.49	28.75	6.54	0.42
Counterfactual	42.65	14.14	0.57	37.02	11.57	0.48	27.30	4.95	0.41
Sweden									
Actual	-	-	-	34.87	9.53	0.48	-	-	-
Counterfactual	-	-	-	36.07	11.03	0.49	-	-	-
	Net worth			Total gross wealth			Total debt		
	Top 10%	Top 1%	Gini	Top 10%	Top 1%	Gini	Top 10%	Top 1%	Gini
UK									
Actual	43.61	9.48	0.64	36.90	7.85	0.53	34.84	8.21	0.56
Finland									
Actual	44.84	12.71	0.68	39.40	10.95	0.58	38.25	8.26	0.57
Counterfactual	41.02	11.28	0.62	37.24	9.93	0.55	35.81	7.39	0.56
Italy									
Actual	40.34	10.27	0.57	39.41	9.99	0.56	50.93	7.99	0.62
Counterfactual	42.17	10.64	0.59	40.96	10.21	0.57	66.85	2.95	0.61
US SCF									
Actual	69.51	32.24	0.83	60.53	26.83	0.73	44.33	13.27	0.63
Counterfactual	63.21	26.91	0.80	53.73	22.18	0.69	40.94	10.17	0.63
US PSID									
Actual	61.69	24.75	0.79	51.42	19.65	0.67	36.20	8.10	0.57
Counterfactual	61.80	24.08	0.78	53.00	20.77	0.68	36.44	7.38	0.59
Sweden									
Actual	56.67	17.10	0.88	41.95	12.37	0.60	43.39	12.77	0.61
Counterfactual	54.79	17.35	0.83	42.11	11.61	0.59	45.20	13.52	0.62

Note: Counterfactual distributional statistics are estimated using the DFL decomposition re-weighting procedure. The explanatory variables included in the reweighting function include age education and working status of the household head, household structure, and household income net of capital gains and interest payments. All counterfactual distributions are estimated using UK as a base country. The sample includes households with non-missing data on wealth and in any of the variables used to estimate weighting function.