

Wealth Inequalities across Generations

Agnese Vitali^a, Arnstein Aassve^{a,b}, Frank F. Furstenberg^c

^a Carlo F. Dondena Centre for Research on Social Dynamics, Bocconi University, Milan, Italy

^b Department of Policy Analysis and Public Management, Bocconi University, Milan, Italy

^c Department of Sociology, University of Pennsylvania

Paper prepared for the 2013 Meeting of the Population Association of America,
New Orleans 10-13 April 2013

Preliminary Draft – Please do not cite or quote without the authors' permission.

Abstract

The distribution of income and wealth across age groups is changing in many countries worldwide. Young people today are more likely to experience financial difficulties and are more exposed to poverty as compared to young people in the past. The elderly, on the other hand, live longer and wealthier than they used to. This paper studies the distribution of wealth across age groups in different countries using harmonized micro-level data from the Luxembourg Wealth Study Database. Our analysis is applied to the latest cross-sectional data for seven countries belonging to different welfare regimes and different family models: the United States, Germany, Italy, Sweden, Finland, the United Kingdom, and Japan. Our findings show that in the US as well as in several European countries and Japan, the distribution of wealth is concentrated among the older age groups. We find evidence that wealth increases with age, irrespectively of the welfare state. This means that the older age groups have command of a disproportionate share the economic resources, compared to young adults.

1. Introduction

Since the monumental review, *Aging and Society*, was first published by Matilda Riley and her colleagues (1972) a half century ago, the broad outlines of a theory of age stratification have been widely accepted in social science (1968-1972). Riley and her colleagues observed that age and aging organize access to social resources much like what occurs within socio-economic strata. The idea that age groups that have greater or lesser access to resources and power is more widely acknowledged than actually investigated empirically. Indeed the predominant approach in studies of income inequality is to treat age and aging as a confounding factor in social inequality because it has long been established that in most, if not all, modern societies wealth increases with age. Such an approach, while legitimate, tends to ignore the consequences of concentrations of wealth among the older segments of the population and difficulties of acquiring income and wealth among the young.

Nonetheless, there are some important exceptions. The notion of age stratification, for example, was central to the stream of research that flowed from Preston (1984) PAA Presidential Address on the growing political power of the elderly in contrast to the limited power of the young and children in particular. This topic remains an urgent concern to governments trying the balance support of the elderly while providing sufficient investment in the young. Yet, there is a paucity of comparative research on how economic resources are distributed by age strata within and across societies owing partly to the absence of comparable data.

We exploit a source of data, the Luxembourg Survey of Wealth, that allows us to examine how wealth is related to age at both an individual level, that is the timing of wealth accumulation, and how wealth is concentrated across age groups in different societies with advanced economies. This is an initial step in a broader program of research that will examine how macro-level distributions of wealth by age groups might affect the timing of life course transitions such as educational completion, home leaving, and family formation. How and when wealth is accumulated and transferred from one generation to the next has been extensively explored by economists and sociologists in studies of intergenerational transfers. However, there is virtually no research on how accumulations of wealth in different age strata affect the timing of transitions in early adulthood because the distribution of wealth by age groups in different societies is not known. The objective of this paper is examine this basic question. Our analysis examines similarities and differences across societies in the pattern of age and wealth accumulation. In subsequent papers, we will begin to explore the consequences of wealth distributions across age groups.

2. Accumulation of Wealth over the Lifecycle

According to the life-cycle hypothesis (Modigliani, 1986), wealth increases with age because people save for retirement during their working life, while they decumulate savings for consumption during retirement. The relation between age and wealth is therefore predicted to be hump-shaped, with a peak around retirement age. Empirical applications have confirmed the existence of a hump-shaped relation between age and wealth, but have also shown that in many societies and time periods, retirement age did not coincide with the predicted increased consumption and the consequent drop in wealth for retirees (Klevmarken, 2004). Intergenerational solidarity, economic uncertainty and increasing life expectancy have been accepted as the main explanations for the lack of wealth decumulation at old ages.

Studies based on cohort analyses have shown that since the 1970s younger generations gained more wealth compared to previous generations at the same age (Jappelli, 1999). However, in the past three decades this trend has inverted, in that young people today are poorer than they were in the past. The PEW Research Center (2011), considering the US, documented an unprecedented increase in intergenerational inequality measured in terms of wealth and economic wellbeing. Using data from 1984 to 2009, they show that the wealth gap between the young and the old has doubled manifold, implying that from a relative perspective (i.e. relative to the older generations), young people today are more likely to experience financial difficulties and are more exposed to poverty as compared to young people in the past. Whereas young people have become significantly poorer in recent decades, the elderly, on the other hand, live longer and wealthier than they used to.

Wealth inequalities might be very different with respect to income inequalities. For example, among the countries considered in this study, Sweden presents the most unequal wealth distribution and the most equal income distribution. The opposite is found for Italy, with the highest income inequality and the lowest wealth inequality. The US instead present high inequality for both wealth and income (Fredriksen, 2012 and Jantti et al., 2008 on LWS data). For an extensive review of differences and similarities in wealth across the countries used in our study see US National Research Council (2001), and Fredriksen (2012) for more recent findings.

3. Data and Methods

The Luxembourg Wealth Study Database (LWS) provides micro-level data on household wealth and provides household and personal-level information for various countries worldwide. A detailed description of the LWS database can be found in Niskanen (2007) and Sierminska et al. (2006).

The LWS was not expressly designed to ensure cross-country comparisons since it harmonizes existing national datasets which were initially designed for slightly different purposes. It follows that the reference period, the unit of collection, and the recoded measures of wealth might differ across samples. We restrict our attention to the samples which show a certain degree of comparability for what concerns the measurement of the various aspects of wealth. Our analysis on LWS is applied to the latest cross-sectional data for seven countries: the United States, Germany, Italy, Sweden, Finland, the United Kingdom, and Japan. The survey year varies between 1998 (Finland) to 2006 (the US and Germany). National sample sizes vary from about 4,000 households (Finland) to about 58,000 (Germany). Householders' age range also varies across samples. The lowest age is 15 in the UK, 16 in Finland, 17 in Germany and Sweden, 18 in Italy and the US, and 19 in Japan. The upper age is 69 in Japan, while it is above 95 in all other countries (95 in the US, 97 in Italy, 98 in Finland and Germany, 99 in the UK, and 101 in Sweden).

To limit comparability issues, we use aggregate variables provided by LWS. Wealth is measured by the aggregate variable net worth, constructed as the sum of all financial and non financial assets net of total debts. In detail, total financial assets encompass deposit account and risky assets (bonds, stocks and funds), while non financial assets encompass principal residence and investments in real estate. Total debt encompasses home secured debt (principal residence mortgage, other property mortgage and other home secured debt) and non-housing debt (vehicle loans, total investment debt, educational loans, other loans from investment and informal debt).

Net worth for Germany is not entirely comparable to net worth measured in the other countries, because in the case of Germany the survey asks about individual rather than household wealth, hence we only have information on wealth held by the householder, which is necessarily lower than household wealth, i.e. the sum of wealth held by all the household members.

We measure wealth inequalities across generations following two approaches. First, we test the association between the distribution of net worth and age of householder. In this first step, we aim at understanding how wealth is concentrated across age groups in different societies. We go beyond the comparison of mean or median values of wealth across ages by considering the quintile distribution of wealth. In this way we are able to investigate inequality within and between generations. We investigate how the probability of membership to each quintile of the distribution of net worth changes as membership to each age group changes. We compute the probability that the householder is member of each quintile of the distribution of net worth. Hence, the dependent variable is an ordinal variable taking value from 1 to 5 depending on the householder membership to the first, second up to the fifth quintile of the distribution. We estimate a generalized order logistic model separately for each country.¹ The main independent variable is the age of householder, divided into 6 age groups (<35, 35-44, 45-44, 45-54, 55-64, 65+ –ref.–). We use two control variables measured at the individual level, i.e. gender (woman is the reference category) and educational level achieved by the householder (low –ref.–, medium, high). We use two control variables measured at the household level, i.e. the number of earners and the number of dependent persons (i.e. the total number of persons net of the total number of earners) in the household, by country. Finally, we compute predicted probabilities of being in a given quintile of the distribution of net worth by age group for a typical householder –i.e. man with medium education– in a typical household –i.e. with mean number of earners and mean number of dependent persons (means are country-specific).² By comparing these probabilities across age groups we are able to establish whether it is true that old householders are more often found in the upper part of the distribution of wealth, whereas young householders are more often found in the bottom part of the distribution. By comparing predicted probabilities across countries, we are able to establish the existence of country differences in intergenerational wealth inequalities.

If it is true that young people are less wealthy than older generations, in a second step of the analysis, we are interested in understanding what is the timing of wealth accumulation across different societies. To accomplish this goal, we estimate linear regression models separately for each country, where household net worth is modelled as a function of age. Age is modeled by a linear, a quadratic, and a cubic term, in order to

¹ The advantage of relying on generalized rather than traditional ordered logistic models lies in the fact that the former do not impose the constraints of parallel regression, i.e. they let the effect of age (and of the other control variables) to be quintile-specific.

² The mean number of earners per household is 0.99 in the US and Italy, 1.10 in the UK, 0.92 in Germany, 1.13 in Sweden, 0.87 in Finland, 1.29 in Japan. The mean number of dependent persons is 1.43 in the US, 1.23 in the UK, 1.12 in Germany, 0.81 in Sweden, 1.28 in Finland, 1.54 in Italy, 2.35 in Japan

capture eventual non-linearities in the association between age and wealth. The results of this analysis are age-wealth profiles for each country. Using country-specific quintiles of net worth, we are able to predict the mean age at leaving/entering each quintile of the distribution of net worth.

In order to ease comparison, all monetary values are converted into 2005 US\$ using a PPP conversion factor for private consumption and a deflator for GDP provided by the World Bank. Outliers are excluded from the analyses (we exclude households whose net worth lies outside 1.5 times the inter-quartile range of the country-specific net worth).

4. Results

4.1 Wealth across Ages: Description of the LWS sample

The countries in this study are characterized by dissimilar age distributions of householders. Table 1 shows the mean age of householder and the proportion of householders in each age group by country. The mean age of the householder varies between 49 in Finland to 55 in Italy. About one fifth of the households in the two Scandinavian countries are held by young householders under 35 years of age (23% and 24% in Sweden and Finland, respectively). In the US and the UK the proportions are slightly lower (22% and 18%, respectively).³ Germany follows with 15% of the households held by a young householder. Italy shows the lowest proportion of householders among young people, with only 10% of householders below age 35. Among young adults, those below age 25 are only rarely householders, though we observe country differences. In Italy only less than 1% of the households are held by householders younger than 25. In Germany and the UK the proportion is 3% and 4%, respectively, while in Sweden, Finland and Japan it is 7%.

[Table 1 about here]

Figure 1 and Figure 2 show, respectively, the mean and the median net worth held by householders in each age group, by country. One consideration is in order. Comparability across national samples is limited by the fact that LWS data were collected at the national level in different years and for slightly different purposes. It follows that the components of net worth might differ across samples. With these premises in mind, if we look the mean net worth for all ages, i.e. the white bar in Figure 1, the US is the most wealthy country (173,142\$), followed by Italy (154,441\$), Japan (127,565\$), the UK (85,156\$), Germany (74,286\$), and finally Finland (58,086\$) and Sweden (39,881\$).

[Figure 1 about here]

[Figure 2 about here]

In all seven countries young adults hold substantially less wealth than older generations. Interestingly, mean net worth increases in a linear fashion with age. In fact, householders below age 35 hold the least amount of mean net worth, followed by those aged 35-44, in turn followed by those aged 45-54. Householders in the oldest age group (65+) are the most wealthy group in terms of mean net worth in the US and in Japan, while for all other countries the most wealthy group is represented by householders aged 44-64.

A rather different picture in terms of international comparisons emerges if we then consider the median rather than the mean net worth held by householders in each age group. The most wealthy countries in terms of median net worth are Italy (120,194\$) and Japan (78,449\$), followed by the UK (57,261\$), the US (54,526\$), Finland (42,858\$), Sweden (15,107\$) and Germany (12,079\$). Further, median net worth is equal to zero for young adults in the US, Germany and Sweden, it is positive but very low in Finland (686\$) and the UK (4,709\$), while it is higher in Japan (13,643\$) and Italy (28,639\$). This means that, in many countries, 50% of young people aged less than 35 do not hold wealth. Age patterns in median net worth also exists and are fairly similar to those discussed for mean net worth. We conclude that young people represent the least wealthy age group in all countries in our sample. Mean net worth for young people is substantially below the country average, while their median net worth is zero in many samples. Italy and Japan represent the only two

³ In Japan the proportion of young householders equals to 26% and the mean age of householders is 45, i.e. much lower than in other samples because by sample design, individuals older than 69 are excluded from the sample.

exception. In these two countries young people, while holding less wealth than older generations, are much wealthier than their peers in other countries. For example a young Italian holds, on average, almost three times more mean net worth than a young American. However, as Table 1 shows, only 10% of young adults in Italy have become householders by the age of 35. This means that those few that have established their own household by age 35 in Italy are by any comparison very rich.

Italy shows the highest homeownership rate (79%), followed by Japan (76%) and the UK (70%), while the lowest homeownership rate is found in Germany (41%) (Table 2). Young householders have a low homeownership rate if compared to older householders in all countries. For example, in the US only 41% of households held by a young adult are owned, compared to 66% of households held by a 35-44 years old, 77% by a 45-54, and 81% by a householder above 55. The difference in homeownership rates between young and older people is less pronounced in Italy and Japan, i.e. the two countries with the highest homeownership rate. 62% and 59% of the households held by a young Italian and Japanese, respectively, are owned, compared to 75% and 72% of the household held by a 35-44, respectively. Two considerations are in order. First, Italy and Japan share a strong preference for owned versus rented accommodations. Second, both countries are characterized by a patriarchal family system with strong ties with the family of origin. This implies that young adults frequently receive financial help from their parents for the first house acquisition, which makes it easier to become home owners.

[Table 2 about here]

Figure 3 shows the decomposition of median net worth in its components, i.e. total non financial assets, total financial assets, and total debt. In all countries, wealth is mainly constituted by non financial assets, i.e. value of main residence and investments in real estate. Non financial assets, i.e. deposit accounts and risky assets (bonds, stocks, and funds) represent only a marginal component of wealth. Among the countries considered, Japan has the highest amount of non financial assets held by households. Total debt is extremely low in Italy for all age groups, followed by Japan, while it is high in Anglo-Saxon and Scandinavian countries. We interpret the absence of debts in Italy as a signal of general lack of a functioning credit market. Consequently, the way young people depend on the older generations is by far the strongest in Italy. In Anglo-Saxon and Scandinavian countries where the level of debt is high, in addition to having a generous welfare state, young people can in a greater extent rely on credit institutions, lowering the intergenerational dependency.

[Figure 3 about here]

4.2 Age-Wealth Profiles across Countries

In this section, we go beyond the description of wealth by age group. By the means of multivariate analysis techniques, we are able to test the association between the distribution of net worth and age of householder, controlling for socio-demographic characteristics of both the household and the householder.

We do not comment on regression results (Table A in the Appendix) per se, but they are functional for computing predicted probabilities. Our main interest, in fact, is to evaluate how likely it is that a householder in a given age group belongs to the first quintile of net worth –i.e., his/her household is among the 20% poorest households in the country–, and how likely it is that he/she belongs to the fifth quintile –i.e., his/her household is among the 20% richest households in the country. Figure 4 shows the predicted probability of being in a given quintile of the distribution of net worth by age group for a typical householder –i.e. man with medium education– in a typical household –i.e. with mean number of earners and mean number of dependent persons (means are country-specific). Descriptive results are confirmed by the multivariate analyses shown in Figure 4. Household wealth increases with age. People above age 65 represent the wealthiest age group, i.e. the group which is more likely found in the highest quintiles of the distribution of net worth. Young people, instead, are most likely found at the other extreme of the distribution.

[Figure 4 about here]

Intergenerational differences in wealth are present in all countries, in the sense that older age groups always hold more wealth than younger age groups. This means that the vast majority of young families are

found in the two lowest quintiles of the distribution of net worth, i.e. they belong to the poorest 40% of the population in terms of wealth (59% in the UK, 62% in Germany, Italy and Japan, 77% in Sweden, 79% in the US up to 88% in Finland). On the other hand, the vast majority of families with a 65+ householder are found in the two upper quintiles of the distribution of net worth, i.e. they represent the richest 40% of the population (46% in Germany, 63% in Finland, 64% in Japan, 66% in the US, 69% in Sweden, 71% in Italy up to 81% in the UK).

What differs across countries is where, along the distribution of net worth, is the majority of young people situated. Our estimates indicate that the majority of young people are found in the first quintile of the distribution in Scandinavian countries, followed by Anglo-Saxon countries. In Finland, 68% of householders below age 35 are in the lowest quintile of the distribution of net worth. This means that almost 70% of the Finnish households held by a young adults are among the 20% poorest households in the country. In Sweden, 58% of young households are found in the first quintile, 56% in the US, 45%, in the UK. In Italy, Germany and Japan, young householders are more likely to be wealthy if compared to their peers in other countries, as the proportions of young households in the first quintile is equal to 35%, 24% and 20%, respectively. Similarly, very few young householders are found among the 20% richest households (2% in the US and Finland, 3% in Germany, 4% in Sweden, 6% in the UK). It is not like this in Japan and Italy, where 10 and 11% of young families are among the richest households.

Our analyses so far have shown that, in all countries, young adults have substantially less wealth than older adults. In particular, we have shown that the majority of young families are found in the two lowest quintiles of the distribution of net worth. The next step is to understand at what age, on average, young people leave the first and the second quintile of the distribution of net worth, i.e. at what age young people start to accumulate wealth. Figure 5 shows the age-wealth profiles for each country.

[Figure 5 about here]

Discussion

This paper shows that intergenerational differences exist in the allocation of wealth across generations in all countries, irrespectively of the welfare system. In general young adults hold less wealth than middle and older adults. In all countries considered we see an age gap in the allocation of household wealth: the older the age group, the wealthier. Young adults are less likely to be householders with respect to middle adults and to the elderly, less likely to be homeowners, and have considerably lower wealth.

Our findings portray many similarity between the US, the UK, Germany and the Scandinavian countries, while Italy and Japan appear very different. Achieving a certain amount of wealth, for example, seems to be a precondition to start an independent household for young people in Italy and Japan, while this is not the case in other countries where young people are more likely to be indebted. Of course we are not able to establish causal mechanisms between living arrangement decisions of young adults and individual economic resources. Vertical transfers from parents to young people, and in particular financial transfers related to housing, might also explain the relative higher wealth of young Italians.

These considerations on wealth accumulation among young people can be of help to explain cross-country differences observed in the transition to adulthood. The way wealth is accumulated across different age strata might in fact affect the timing of transitions to adulthood. How does wealth accumulation affect e.g. educational completion, home leaving, and family formation across different societies? These are open questions that we leave for future research and that we believe might help shedding light on why and how young people today find it difficult to become adults.

Cross-country research on wealth is constrained by unavailability of up-to-date comparable data. Results in this paper refer to data measured during the 2000s. The economic situation of young people at the beginning of the 2010s, however, has changed considerably. During the great recession which, starting from the late 2000s has hit all advanced economies worldwide, young people were found to be the most vulnerable group in terms of worsened economic conditions and lost opportunities (Aassve et al., 2013; Bell et al., 2011). Despite all age groups suffered the economic uncertainty brought about by the recession, the wealth gap between the young and the old has widened even further (Pew Research Center 2011).

References

- Aassve, A., Cottini, E., and Vitali, A. (2013). Youth Prospects in a Time of Economic Recession. *Fortcoming*
- Atkinson, A. B. (1971). The Distribution of Wealth and the Individual Life-Cycle. *Oxford Economic Papers*, 23(2): 239–254.
- Bell, D.N. and Blanchflower, D.G. (2011). Young People and the Great Recession. *Oxford Review of Economic Policy* 27(2): 241–267.
- Fredriksen, K. (2012). Less Income Inequality and More Growth—Are They Compatible? Part 6. The Distribution of Wealth. OECD Economics Department Working Paper, No. 929.
- Klevmarken, N. A. (2004). On the wealth dynamics of Swedish families, 1984–98. *Review of Income and Wealth*, 50(4): 469–491.
- Jantti, M., Sierminska, E., and Smeeding, T. (2008). The joint distribution of household income and wealth: Evidence from the Luxembourg Wealth Study (No. 65). OECD Publishing.
- Jappelli, T. (1999). The age-wealth profile and the life-cycle hypothesis: a cohort analysis with a time series of cross-sections of Italian households. *Review of Income and Wealth*, 45(1): 57–75.
- Modigliani, F. (1986). Life cycle, individual thrift, and the wealth of nations. *American Economic Review*, 76: 297–312.
- Niskanen, E. (2007). The Luxembourg Wealth Study: Technical Report on LWS Income Variables. LIS. *Luxembourg Income Study Technical Paper Series*, Technical Paper No. 1.
- Pew Research Center (2011). The Rising Age Gap in Economic Well-Being: The Old Prosper Relative to the Young. Available at: <http://pewresearch.org/pubs/2124/age-gap-silent-generation-millennials-wealth-gap>.
- Riley, M. W., Johnson, M., Foner, A.(1972). *Aging and Society*, Vol. 3: A Sociology of Age Stratification. New York: Russell Sage Foundation.
- Shorrocks, A.F. (1975). The Age-Wealth Relationship: A Cross-Section and Cohort Analysis. *The Review of Economics and Statistics*, 57(2): 155–163.
- Sierminska, E., Brandolini, A. and Smeeding, T. (2006). The Luxembourg Wealth Study – A cross-country comparable database for household wealth research. *Journal of Economic Inequality*, 4(3): 375–383.
- US National Research Council. (2001). *Preparing for an Aging World: The Case for Cross-National Research*. Washington, DC: The National Academies Press.

Tables and Figures

Table 1: Age Distribution of Householders (column percentages) by country

	US	Sweden	Italy	UK	Finland	Germany	Japan
Mean Age of Householders	50	51	55	53	49	54	45*
% Householders by age group:							
<35	21.7	23.5	10.1	17.6	24.0	15.1	25.9
35-44	19.6	17.7	22.4	19.3	20.0	20.5	20.9
45-54	20.8	17.5	18.5	17.6	21.0	17.8	22.4
55-64	16.8	16.6	16.0	14.9	13.8	15.2	22.1
65+	21.1	24.7	33.0	30.6	21.3	31.4	8.6
<i>N.</i>	22,090	17,954	8,012	4,867	3,893	57,760	4,005

Note: National samples have different lower and higher ages. In particular, the lower age is 16 for Finland and the UK, it is 17 for Germany and Sweden, 18 for Italy and US while it is 19 for Japan.

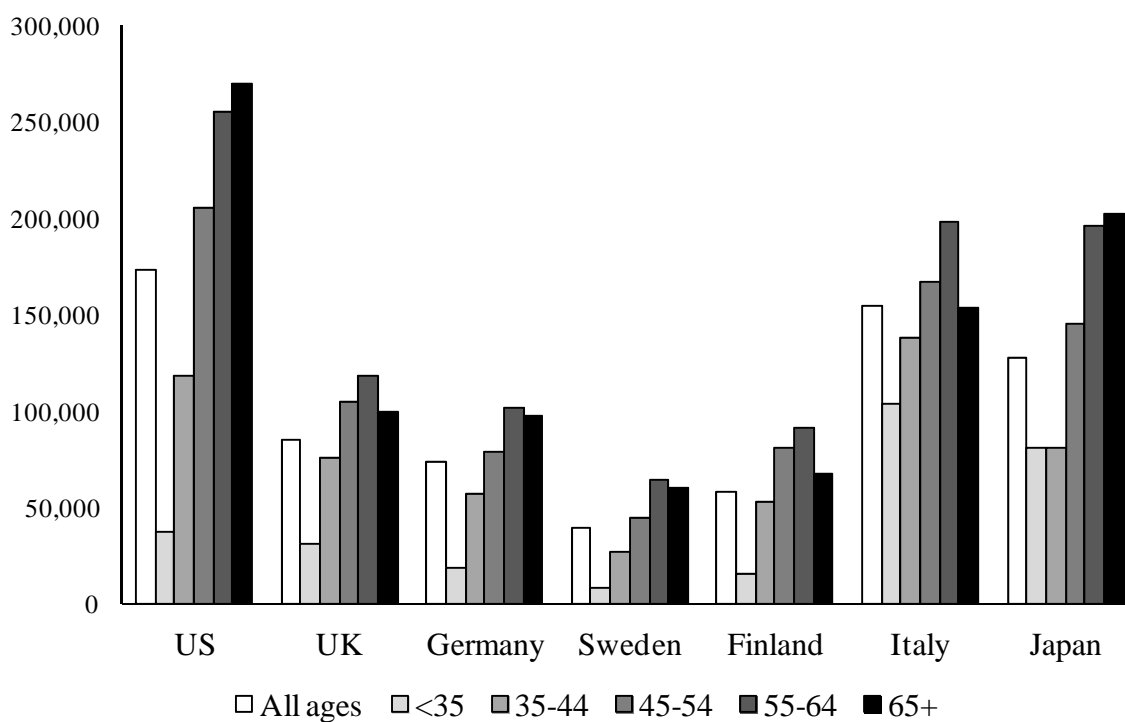
*The Japanese sample comprises individuals aged 19 to 69. Hence the age group “65-74” refers to individuals aged 65-69 in this case.

Table 2: Homeownership Rate by Age of Householder and by country

	US	Sweden	Italy	UK	Finland	Germany	Japan
<35	40.6	22.0	62.3	55.2	29.6	15.0	58.9
35-44	66.1	41.5	74.6	77.5	65.1	38.1	71.6
45-54	77.2	44.6	78.7	81.2	76.2	44.6	83.8
55-64	80.9	50.4	82.4	78.0	81.9	52.6	87.1
65+	81.2	37.0	84.7	64.8	72.6	47.0	89.3
All ages	68.5	37.8	78.7	70.4	62.9	40.8	76.0
<i>N.</i>	22,090	17,954	8,012	4,867	3,893	57,760	4,005

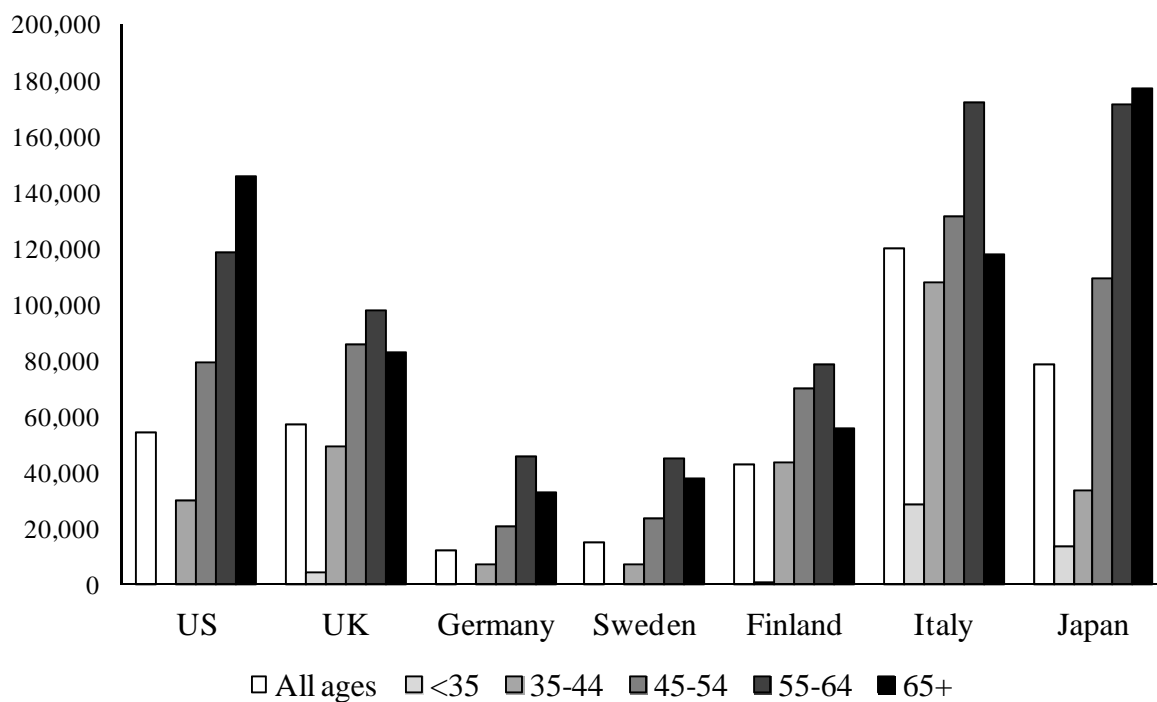
Note: Home-ownership rates comprise also ownership with payment pending. For some countries home ownership rate encompasses different categories: for US and Germany “owned”; for Sweden: “partly owned/right of residence”, “owner occupied house/co-op”, “own apartment in apartment block”, “owned farm”; for Italy “home owner”, “with right of redemption”, “occupied in usufruct, use without charge”; for UK “owned outright”, “owned with mortgage”.; for Finland: “own house, own land”, “own house in rented land”, “own apartment”; for Japan: “owned detached house”, “owned apartment(owned land)”, “owned apartment/house(general leased land)”, “owned apartment/ house(fixed term leased land)”.

Figure 1: Mean Net Worth by age of householder, 2005 US\$



Note: In order to ease comparison across currencies and time, values are converted into 2005 US\$ using a PPP conversion factor for private consumption and a deflator for GDP provided by the World Bank. Germany is the only country where wealth is measured at the individual rather than at the household level.

Figure 2: Median Net Worth by age of householder, 2005 US\$



Note: In order to ease comparison across currencies and time, values are converted into 2005 US\$ using a PPP conversion factor for private consumption and a deflator for GDP provided by the World Bank. Germany is the only country where wealth is measured at the individual rather than at the household level.

Figure 3: Components of median net worth by age of householder, 2005 US\$

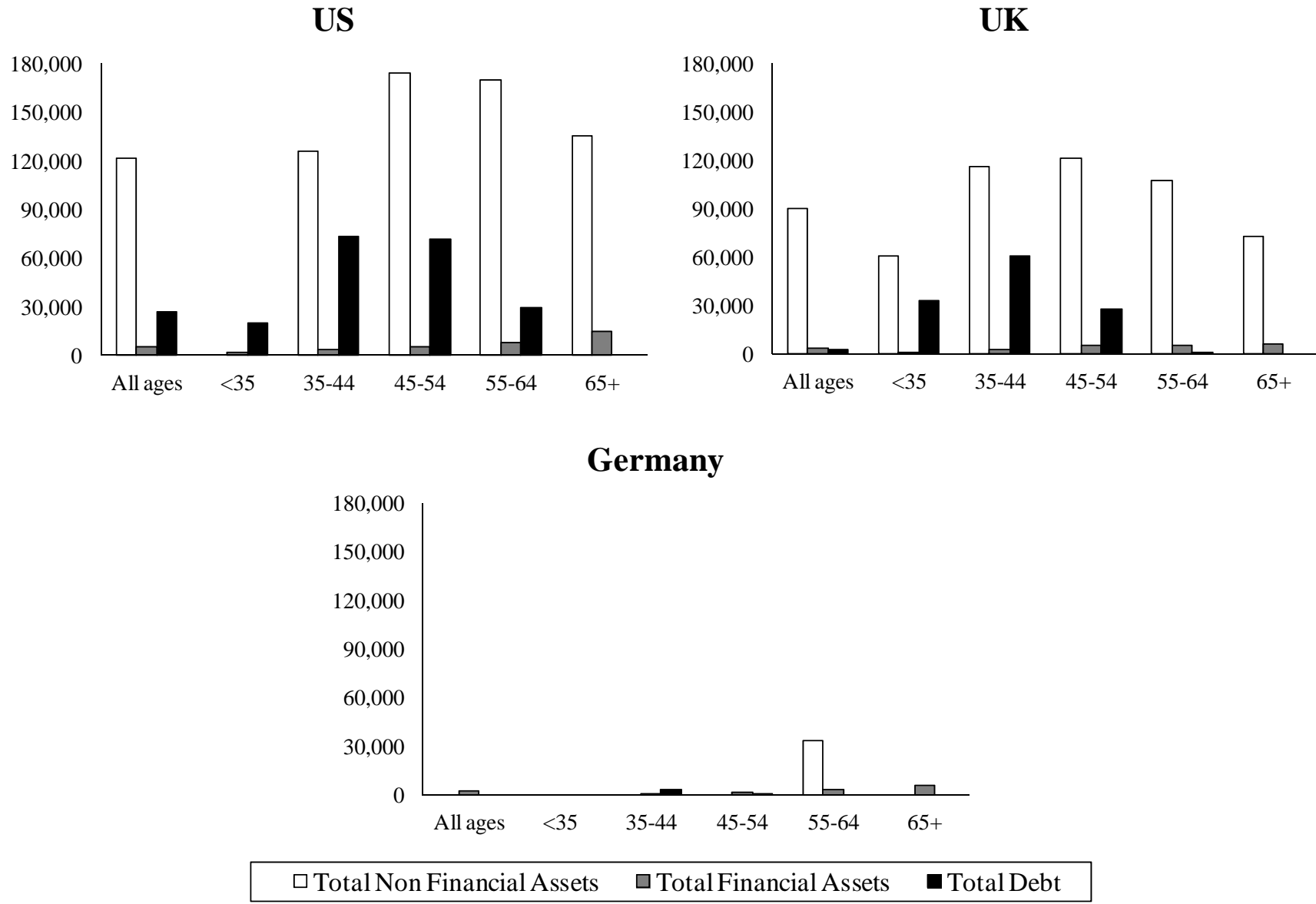


Figure 3: Components of median net worth by age of householder, 2005 US\$ (Continued)

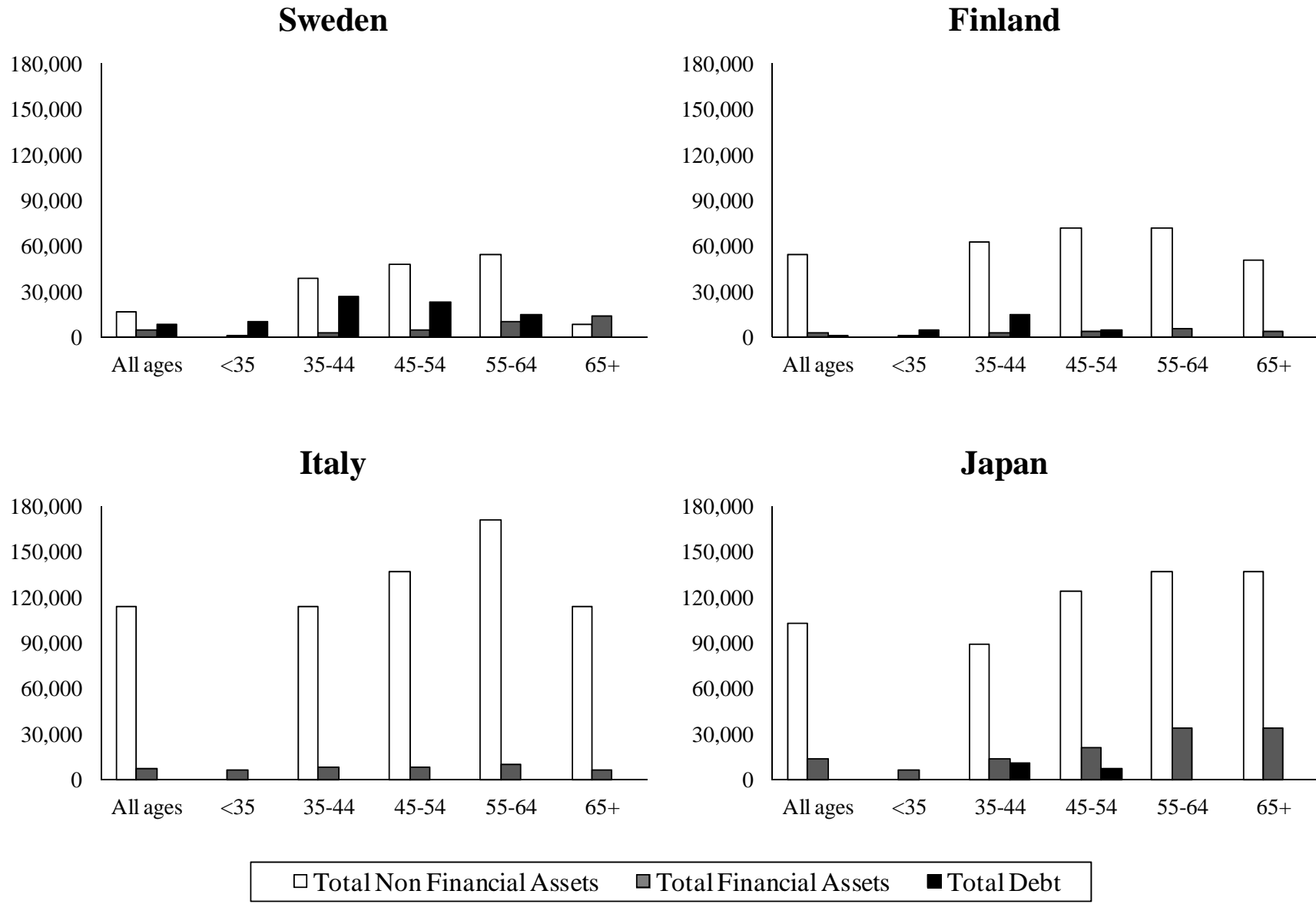


Figure 4: Predicted probability of being in a given quintile of the distribution of net worth by age of householder

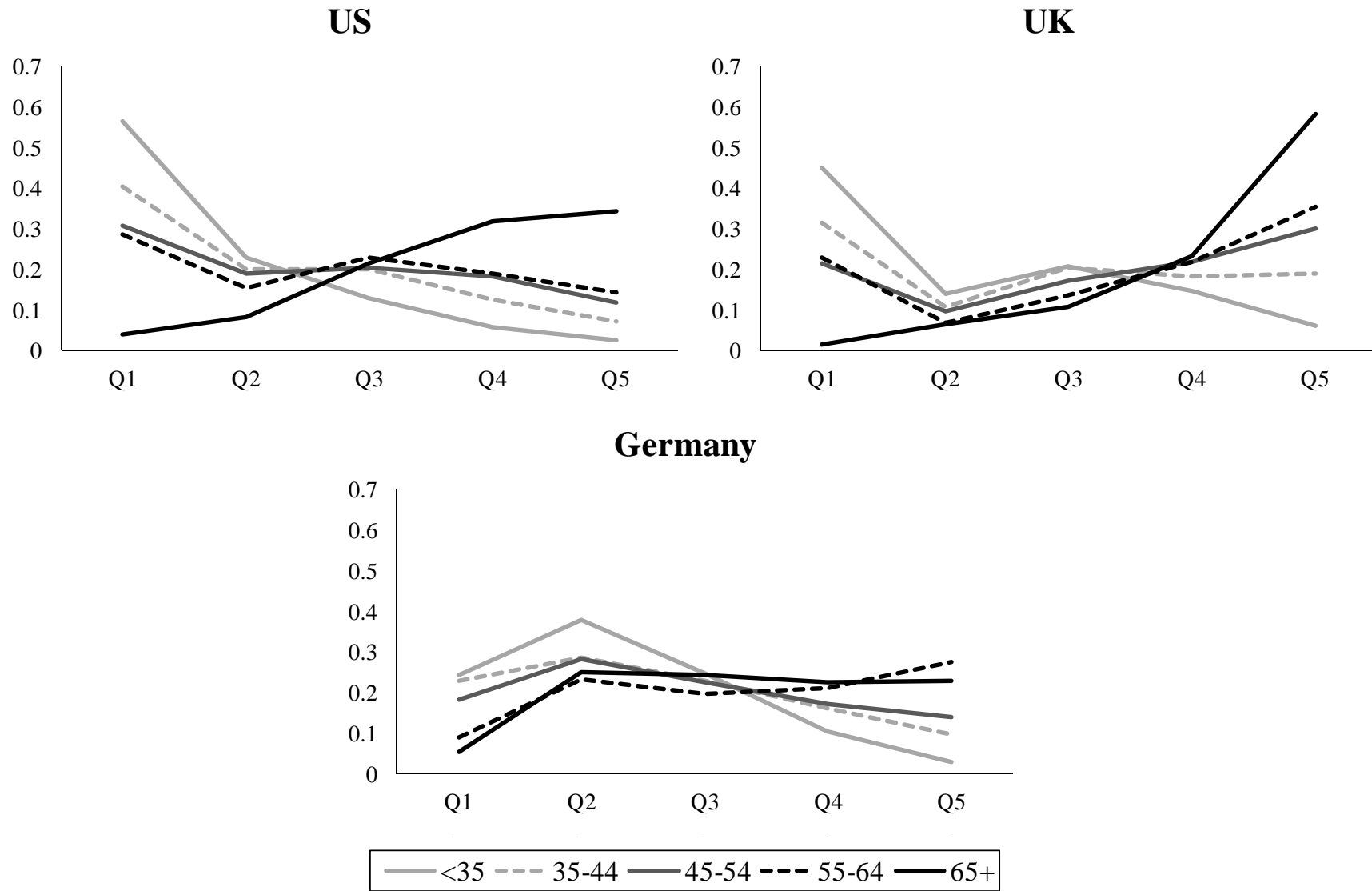
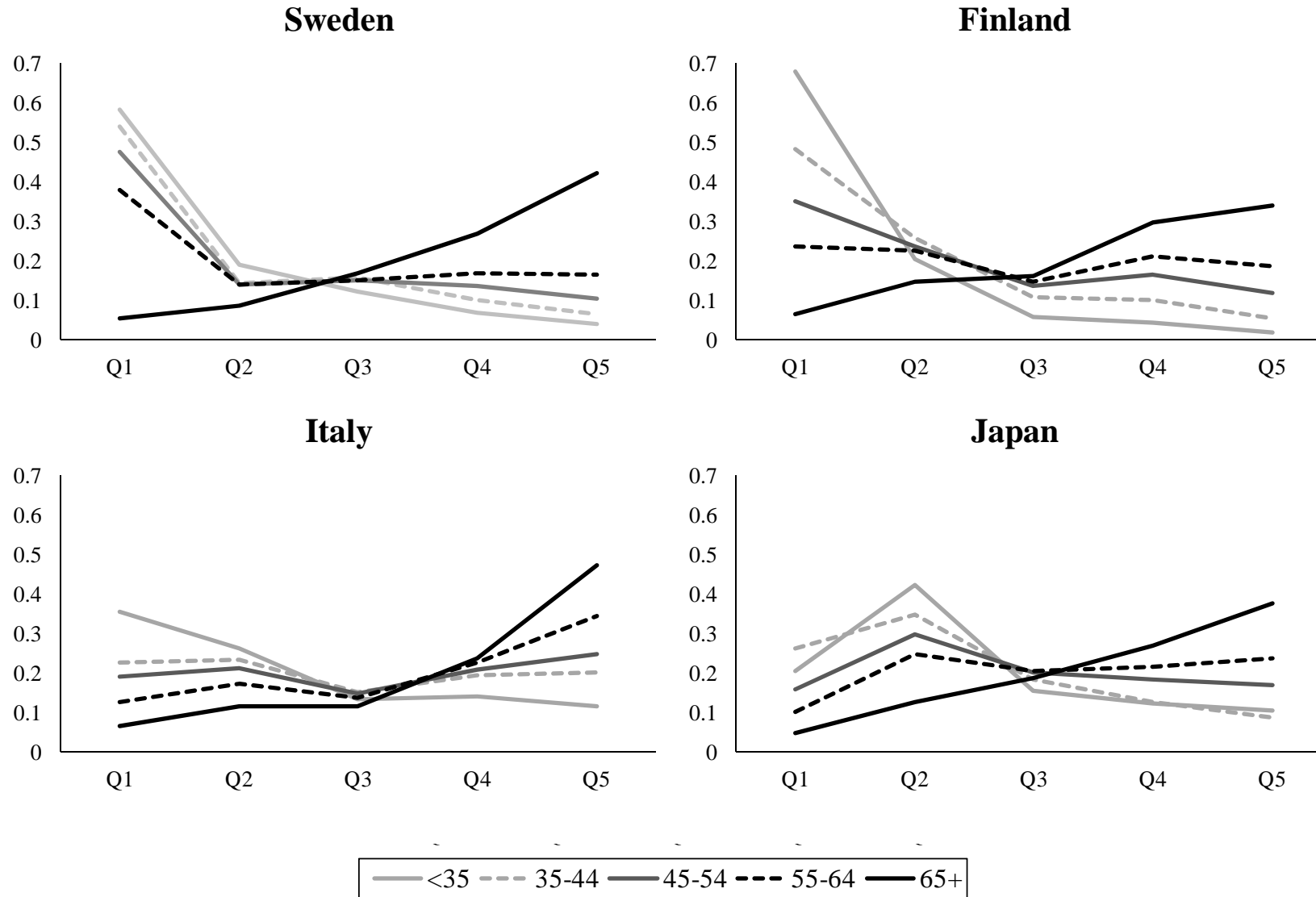
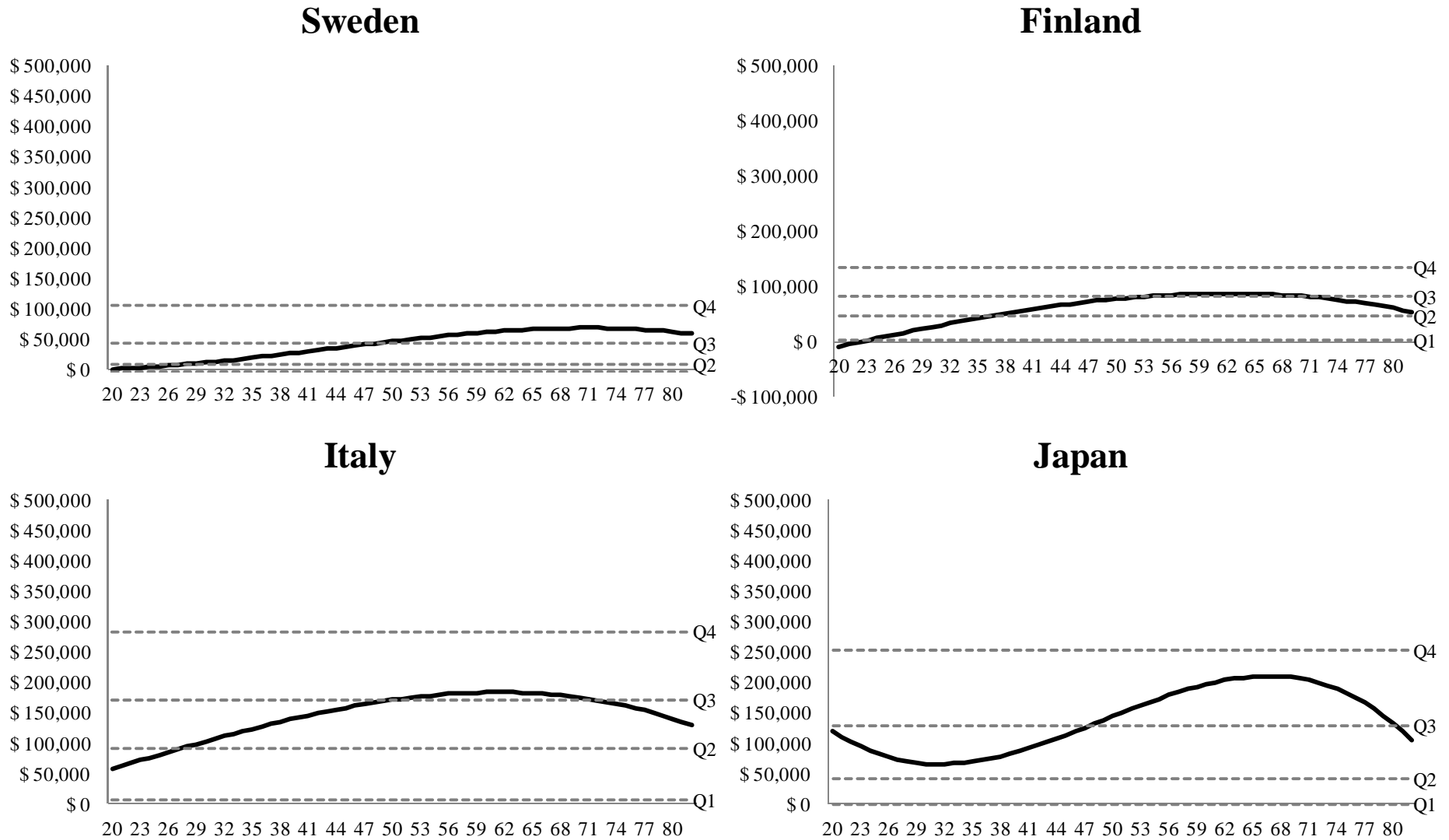


Figure 4: Predicted probability of being in a given quintile of the distribution of net worth by age of householder (Continued)



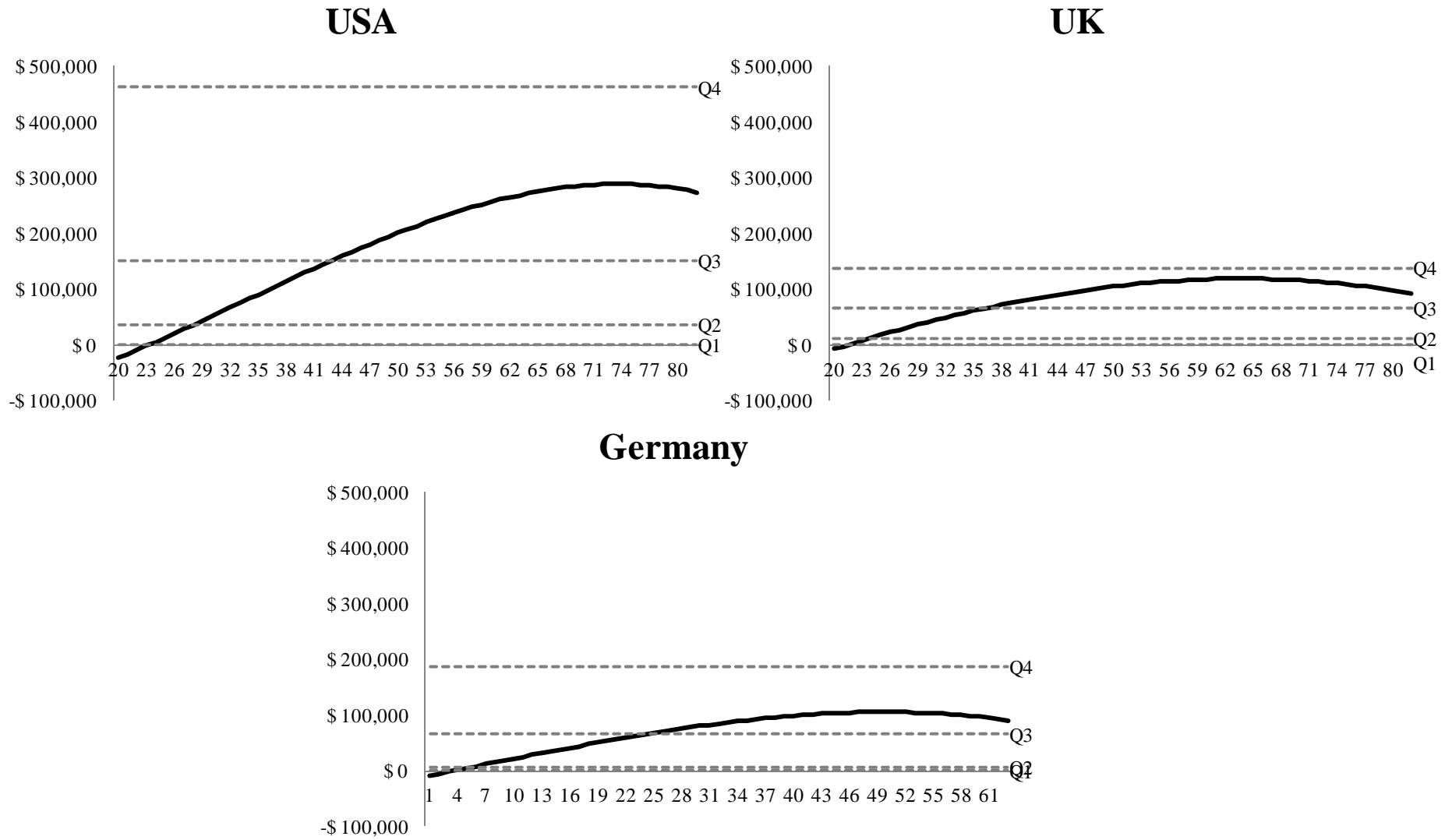
Note: Results are obtained computing the predicted probabilities of being in the n^{th} quintile of the distribution of net worth obtained after having estimated a generalized ordinal logistic regression model for each country separately. Controls in the model are: age (<35, 35-44, 45-54, 55-64, 65+), educational attainment (high, medium, and low –ref.), number of earners in the household, number of dependent persons in the household. Predictions are presented for: man, middle educated, mean number of earners and dependent persons (by country).

Figure 5: Predicted Net Worth by age of householder, 2005 US\$



Note: Net Worth in national currencies. Results are obtained computing the predicted net worth obtained after having estimated a linear regression model. Controls in the model are: age (linear), age², and age³.

Figure 5: Predicted Net Worth by age of householder, 2005 US\$ (Continued)



Appendix

Table A: Results from Generalized Ordered Logistic Model used to compute Figure 3

	US	UK	Germany*	Sweden	Finland	Italy	Japan
Q1 VS <=Q2							
Woman	-0.428 *** (0.054)	-0.287 *** (0.066)	-0.042 (0.033)	-0.010 (0.048)	-0.276 *** (0.085)	-0.302 *** (0.062)	0.056 (0.083)
Age: <35	-2.764 *** (0.064)	-3.117 *** (0.193)	-1.032 *** (0.059)	-2.487 *** (0.060)	-3.067 *** (0.160)	-1.688 *** (0.134)	-1.067 *** (0.213)
Age: 35-44	-1.810 *** (0.053)	-2.271 *** (0.200)	-1.043 *** (0.048)	-2.076 *** (0.073)	-1.889 *** (0.155)	-1.097 *** (0.102)	-1.545 *** (0.169)
Age: 45-54	-1.035 *** (0.070)	-1.208 *** (0.177)	-0.522 *** (0.049)	-1.595 *** (0.074)	-0.759 *** (0.148)	-0.675 *** (0.096)	-0.524 *** (0.164)
Age: 55-64	-0.820 *** (0.079)	-1.262 *** (0.232)	1.191 *** (0.081)	-0.931 *** (0.083)	0.131 (0.147)	-0.047 (0.085)	0.119 (0.166)
Medium Education	0.209 *** (0.061)	0.360 ** (0.172)	-0.147 *** (0.053)	-0.246 *** (0.068)	0.272 * (0.151)	0.819 *** (0.112)	0.440 *** (0.113)
High Education	0.681 *** (0.070)	0.434 ** (0.179)	0.418 *** (0.060)	-0.524 *** (0.077)	0.807 *** (0.167)	1.603 *** (0.141)	0.826 *** (0.141)
N. earners	0.000 (0.032)	0.429 *** (0.066)	0.047 ** (0.020)	0.319 *** (0.027)	1.005 *** (0.089)	0.360 *** (0.045)	-0.264 * (0.137)
N. dependent persons	0.046 *** (0.016)	-0.031 (0.045)	0.050 *** (0.016)	0.015 (0.021)	0.254 *** (0.035)	0.070 ** (0.031)	0.116 *** (0.040)
Constant	2.728 *** (0.086)	3.248 *** (0.151)	2.256 *** (0.074)	2.860 *** (0.068)	1.067 *** (0.146)	1.337 *** (0.083)	2.526 *** (0.278)
<=Q2 VS >=Q3							
Woman	-0.657 *** (0.044)	-0.287 *** (0.066)	-0.110 *** (0.025)	-0.344 *** (0.042)	-0.276 *** (0.085)	-0.302 *** (0.062)	0.056 (0.083)
Age: <35	-3.056 *** (0.061)	-2.469 *** (0.138)	-1.298 *** (0.046)	-2.487 *** (0.060)	-3.067 *** (0.160)	-1.688 *** (0.134)	-1.700 *** (0.172)
Age: 35-44	-1.810 *** (0.053)	-1.574 *** (0.143)	-0.785 *** (0.039)	-1.806 *** (0.068)	-1.889 *** (0.155)	-1.097 *** (0.102)	-1.545 *** (0.169)
Age: 45-54	-1.012 *** (0.059)	-0.732 *** (0.147)	-0.443 *** (0.041)	-1.330 *** (0.070)	-0.759 *** (0.148)	-0.675 *** (0.096)	-0.524 *** (0.164)
Age: 55-64	-0.552 *** (0.064)	-0.596 *** (0.148)	0.593 *** (0.042)	-0.722 *** (0.071)	0.131 (0.147)	-0.047 (0.085)	0.119 (0.166)
Medium Education	0.697 *** (0.054)	0.923 *** (0.115)	0.508 *** (0.034)	0.252 *** (0.052)	0.146 (0.125)	0.747 *** (0.086)	0.440 *** (0.113)
High Education	1.657 *** (0.062)	1.317 *** (0.117)	1.318 *** (0.040)	0.348 *** (0.063)	0.866 *** (0.125)	1.603 *** (0.141)	0.826 *** (0.141)
N. earners	0.305 *** (0.027)	0.632 *** (0.060)	0.536 *** (0.019)	0.539 *** (0.026)	0.952 *** (0.070)	0.360 *** (0.045)	0.155 * (0.085)
N. dependent persons	0.109 *** (0.015)	0.106 *** (0.038)	0.221 *** (0.012)	0.096 *** (0.020)	0.254 *** (0.035)	0.070 ** (0.031)	0.343 *** (0.037)
Constant	0.505 *** (0.066)	0.382 *** (0.108)	-0.787 *** (0.049)	0.814 *** (0.052)	-0.140 (0.128)	0.247 *** (0.080)	-0.001 (0.196)
<=Q3 VS >=Q4							
Woman	-0.554 *** (0.050)	-0.287 *** (0.066)	-0.163 *** (0.026)	-0.428 *** (0.042)	-0.276 *** (0.085)	-0.302 *** (0.062)	0.056 (0.083)
Age: <35	-3.069 *** (0.080)	-2.625 *** (0.145)	-1.803 *** (0.059)	-2.487 *** (0.060)	-3.067 *** (0.160)	-1.688 *** (0.134)	-1.500 *** (0.174)
Age: 35-44	-1.810 *** (0.053)	-1.611 *** (0.136)	-0.921 *** (0.040)	-1.852 *** (0.070)	-1.889 *** (0.155)	-1.097 *** (0.102)	-1.545 *** (0.169)
Age: 45-54	-0.876 *** (0.057)	-0.616 *** (0.136)	-0.506 *** (0.040)	-1.207 *** (0.071)	-0.759 *** (0.148)	-0.675 *** (0.096)	-0.524 *** (0.164)
Age: 55-64	-0.567 *** (0.058)	-0.284 ** (0.136)	0.439 *** (0.041)	-0.531 *** (0.066)	0.131 (0.147)	-0.047 (0.085)	0.119 (0.166)
Medium Education	0.741 *** (0.067)	0.833 *** (0.105)	0.325 *** (0.036)	0.301 *** (0.051)	0.502 *** (0.127)	1.067 *** (0.084)	0.440 *** (0.113)
High Education	1.912 *** (0.071)	1.228 *** (0.110)	0.843 *** (0.040)	0.660 *** (0.061)	1.226 *** (0.122)	1.603 *** (0.141)	0.826 *** (0.141)
N. earners	0.261 *** (0.029)	0.323 *** (0.052)	0.580 *** (0.019)	0.554 *** (0.026)	0.816 *** (0.070)	0.360 *** (0.045)	-0.049 (0.082)
N. dependent persons	0.101 *** (0.017)	0.125 *** (0.037)	0.302 *** (0.013)	0.164 *** (0.021)	0.254 *** (0.035)	0.070 ** (0.031)	0.295 *** (0.036)
Constant	-0.884 *** (0.078)	-0.200 * (0.106)	-1.490 *** (0.050)	-0.362 *** (0.050)	-1.253 *** (0.127)	-0.735 *** (0.082)	-0.633 *** (0.199)
<=Q4 VS Q5							
Woman	-0.694 *** (0.076)	-0.287 *** (0.066)	-0.295 *** (0.034)	-0.487 *** (0.053)	-0.276 *** (0.085)	-0.302 *** (0.062)	0.056 (0.083)
Age: <35	-3.089 *** (0.129)	-2.948 *** (0.214)	-2.498 *** (0.091)	-2.487 *** (0.060)	-3.067 *** (0.160)	-1.688 *** (0.134)	-1.350 *** (0.196)
Age: 35-44	-1.810 *** (0.053)	-1.468 *** (0.156)	-1.155 *** (0.051)	-1.851 *** (0.088)	-1.889 *** (0.155)	-1.097 *** (0.102)	-1.545 *** (0.169)
Age: 45-54	-0.965 *** (0.071)	-0.548 *** (0.151)	-0.587 *** (0.048)	-1.182 *** (0.086)	-0.759 *** (0.148)	-0.675 *** (0.096)	-0.524 *** (0.164)
Age: 55-64	-0.534 *** (0.068)	-0.178 (0.140)	0.331 *** (0.047)	-0.482 *** (0.075)	0.131 (0.147)	-0.047 (0.085)	0.119 (0.166)
Medium Education	0.954 *** (0.128)	0.763 *** (0.118)	0.222 *** (0.045)	0.347 *** (0.061)	0.362 ** (0.152)	1.088 *** (0.096)	0.440 *** (0.113)
High Education	2.427 *** (0.126)	1.231 *** (0.119)	0.793 *** (0.048)	0.838 *** (0.069)	1.438 *** (0.143)	1.603 *** (0.141)	0.826 *** (0.141)
N. earners	0.147 *** (0.036)	0.251 *** (0.057)	0.539 *** (0.022)	0.500 *** (0.030)	0.763 *** (0.078)	0.360 *** (0.045)	-0.165 * (0.091)
N. dependent persons	0.142 *** (0.023)	0.161 *** (0.047)	0.356 *** (0.016)	0.168 *** (0.028)	0.254 *** (0.035)	0.070 ** (0.031)	0.247 *** (0.041)
Constant	-2.774 *** (0.141)	-1.309 *** (0.121)	-2.333 *** (0.064)	-1.521 *** (0.062)	-2.426 *** (0.145)	-1.781 *** (0.092)	-1.492 *** (0.219)
N	18,101	3,765	53,561	16,604	3,679	7,580	1,977

* $p < 0.1$, ** $p < 0.05$, *** $p > 0.01$ **Note:** Reference category for Germany is 55-64 rather than 65+, estimates for the age group "55-64" in the case of Germany refer to the age group 65+. Mean n. earners and mean n. dependent persons are respectively equal to 18,101 and 0.99 in the US, 1.1 and 1.23 in the UK, 0.92 and 1.12 in Germany, 1.13 and 0.81 in Sweden, 0.87 and 1.28 in Finland, 0.99 and 1.54 in Italy, 1.29 and 2.35 in Japan.