

A Service of



Leibniz-Informationszentrum Wirtschaft Leibniz Information Centre

Westermeier, Christian; Tiefensee, Anita; Grabka, Markus M.

#### **Article**

Inheritances in Europe: High earners reap the most benefits

**DIW Economic Bulletin** 

#### **Provided in Cooperation with:**

German Institute for Economic Research (DIW Berlin)

Suggested Citation: Westermeier, Christian; Tiefensee, Anita; Grabka, Markus M. (2016): Inheritances in Europe: High earners reap the most benefits, DIW Economic Bulletin, ISSN 2192-7219, Deutsches Institut für Wirtschaftsforschung (DIW), Berlin, Vol. 6, Iss. 16/17, pp. 185-195

This Version is available at: https://hdl.handle.net/10419/130719

#### Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

#### Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



## Inheritances in Europe: High Earners Reap the Most Benefits

By Christian Westermeier, Anita Tiefensee and Markus M. Grabka

By 2010, 27 to 40 percent of all households in euro countries had inherited or received gifts. This only includes transfers from outside their own household. The present value of these transfers averaged between 85,000 and 274,000 euros, depending on the relevant country. The sum of all inheritances and gifts in western Germany corresponds to one-third of the current net worth of households—and is the highest of all euro countries included in this study. Based on recipient households only, the share in western Germany is 52 percent. In Austria, Belgium, France, and western Germany, individuals from high-income households inherit more frequently and receive much higher amounts than those from low-income households. Since intergenerational income mobility is low, high-income households can build wealth, both from regular income and from substantial capital transfers.

Private assets are far more unequally distributed than disposable household income. This is reflected in the fact that large amounts of net assets are owned by very few individuals. The present report examines the roles played by inheritances and gifts in the asset positions of households and in wealth inequality in the euro area.

The results presented in the present report are based on a research project funded by the Hans Böckler Foundation to analyze the distribution of wealth in Germany.<sup>2</sup> The empirical basis of the present study is data from the Household Finance and Consumption Survey (HFCS) collected by the European Central Bank (ECB) in cooperation with the national central banks of the euro area.3 The HFCS is a representative survey of individuals in households in the majority of euro countries. It contains questions on current net worth and income positions, sociodemographic characteristics, and inheritances and gifts received in the past. Intergenerational transfers within a household are not covered by the HFCS's survey instruments. Not all information is available for all the countries in the study and the quality of the data varies.4 Consequently, this analysis is limited to eight countries from the first survey wave in 2010: western Germany,<sup>5</sup> Belgium, France, Greece, Austria, Portugal,

<sup>1</sup> See, most recently, M. M Grabka and C. Westermeier, "Persistently High Wealth Inequality in Germany," *DIW Economic Bulletin*, no. 6 (2014): 3–15.

<sup>2 &</sup>quot;Vermögen in Deutschland – Status quo-Analysen und Perspektiven" (Project no. S-2012-610-4; Project Manager: M. M. Grabka). Other DIW Berlin content on income inequality can be found in Grabka and Westermeier, "Persistently High Wealth Inequality," C. Westermeier and M. M. Grabka, "Große statistische Unsicherheit beim Anteil der Top-Vermögenden in Deutschland," DIW Wochenbericht, no. 7 (2015): 123–133, and M. M. Grabka and C. Westermeier, "Real Net Worth of Households in Germany Fell between 2003 and 2013," DIW Economic Bulletin, no. 34 (2015): 441–450.

**<sup>3</sup>** See ECB, "Methodological Report for the First Wave," *Statistics Paper Series* 1 (April, 2013a), European Central Bank, Frankfurt, and ECB, "Results from the first Wave," *Statistics Paper Series* 2 (Frankfurt: European Central Bank, April, 2013b).

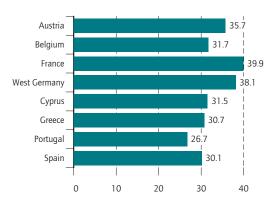
<sup>4</sup> See A. Tiefensee and M. M. Grabka, "Comparing Wealth - Data Quality of the HFCS," *DIW Discussion Paper* 1427 (2014).

**<sup>5</sup>** Eastern Germany could not be included in the analysis because no reliable figures for inflation were available before reunification. The place of residence in 1989 was the decisive factor.

Figure 1

### Households<sup>1</sup> with a wealth transfer in country comparison

Shares of all households in percent



1 Only inheritances and gifts as well as the aquisition of the household main residence from outside the household.

Source: Household Finance and Consumption Survey, European Central Bank, own calculations.

© DIW Berlin 2016

Spain, and Cyprus. For technical reasons relating to the survey, data is only collected on the three most important inheritances and gifts received from outside the household.<sup>6</sup> This means the actual inheritance volume is underestimated considerably.<sup>7</sup>

# No substantial differences in share of households receiving inheritances and gifts across euro countries

Equality of merit and opportunity are among the basic principles of the social market economy. Since inheritances and gifts are unmerited assets,<sup>8</sup> there is public interest in the amount and distribution of inherited or gifted assets because they run contrary to the principle of merit in a market-oriented economic system. Scientific studies on the relevance of inheritances are found

**6** The typical inheritance case of a surviving widow/widower inheriting from a deceased spouse in the same household is therefore not recorded.

primarily in the US.9 There have only been a few studies on this topic in the euro area.10

The share of households that had ever been the beneficiary of an inheritance or gift at the time of survey varies little among the countries studied (see Figure 1). It was slightly more frequent in France at 40 percent, in western Germany at 38 percent, and in Austria at 36 percent. In southern European countries, however, the corresponding share was lower at around 27 to 32 percent. This is probably, in part, because households are larger in these countries and therefore the likelihood of them receiving inheritances from outside their households decreases.

As is to be expected, the share of households that had already inherited or been the beneficiary of a gift increases with age (see Table 1). However, in addition to life cycle effects, cohort effects can also be observed in this descriptive examination. On the one hand, the 45-to-64 age group report significantly higher shares of inheritances or gifts because the probability is greater that their older relatives have passed away due to the life cycle. On the other hand, declining shares are observed in the over-65 age group. The older relatives of this cohort, most of whom are likely to have died already, were, partly due to the two world wars, probably poorer and had less wealth to inherit.

#### In the core European countries, people from highincome households inherit more frequently ...

The correlation between the receipt of capital transfers and the current gross household income is presented using a further descriptive method.<sup>12</sup> Accordingly, in the core European countries of *Austria, Belgium, France, and western Germany*, the probability of being the recip-

186

**<sup>7</sup>** For more details on the differences between micro- and macro-data in inheritance volumes, see S. Bach and A. Thiemann, "Inheritance Tax Revenue Low Despite Surge in Inheritances," *DIW Economic Bulletin*, no. 3 (2016): 41–48.

**<sup>8</sup>** M. M. Grabka and S. Bach, "Stellungnahme zum Gesetzentwurf der Bundesregierung zur Anpassung des Erbschaftsteuer- und Schenkungsteuergesetzes an die Rechtsprechung des Bundesverfassungsgerichts," *BT printed papers* 18, 5923 (2015).

**<sup>9</sup>** See, for example, L. Kotlikoff and L. Summers, "The Role of Intergenerational Transfers in Aggregate Capital Accumulation," *Journal of Political Economy* 89 (1981): 706–732; F. Modigliani, "Life Cycle, Individual Thrift and the Wealth of Nations," *American Economic Review* 76 (3) (1986): 297–313, and E. Wolff and M. Gittleman, "Inheritances and the Distribution of Wealth or Whatever Happened to the Great Inheritance Boom?," *Journal of Economic Inequality* 12 (2014): 439–468.

**<sup>10</sup>** For a more detailed study on inheritance and wealth in Germany see also T. Bönke, G. Corne, and C. Westermeier, "Eigenleistung und Erbschaft im Vermögen der Deutschen: Eine Verteilungsanalyse," *Perspektiven der Wirtschaftsspolitik 17 (2016): 35 – 53.* On the frequency of inheritances for households over 50 years, see, for instance, M. Semyonov and N. Lewin-Epstein, "Ways to Richness: Determination of Household Wealth in 16 Countries," *European Sociological Review* 29 (6) (2013): 1134–1148.

**<sup>11</sup>** According to HFCS data, most sociodemographic characteristics relate to the head of the household. Here, for example, the data were sorted according to the age of the head of the household.

**<sup>12</sup>** Current gross household income refers to the calendar year prior to the date of the survey and comprises the following components: all earned income, pensions (public, occupational, and private), unemployment benefits and other regular social transfers, regular private transfers, rental income, income from financial assets, income from private companies/partnerships, plus any other income.

Table 1

Households' with a wealth transfer

Shares of households in percent

		I. Core Europ	ean countries		II. Mediterranean countries			
	Austria	Belgium	France	West Germany	Cyprus	Greece	Portugal	Spain
All households	35.7	31.7	39.9	38.1	31.5	30.7	26.7	30.1
Age classes								
21-35	22.9	16.1	24.8	22.3	28.7	22.5	12.9	16
35-44	34.8	25.3	32	36.1	31	34.3	20.8	20.4
45-54	38.6	29.2	38.3	46.8	38.3	33.8	28	33
55-64	44.4	43	51.7	46.2	33.3	33.4	30.5	40.6
65-74	37.1	40	51.9	39.9	31.5	30.4	29.9	40.7
75 and older	35.1	42.2	46.1	33.5	17.2	30.6	34.2	32.7
Income quintiles								
1st quintile	26.2	25.3	31.0	24.6	22.8	28.3	26.5	32.9
2nd quintile	29.7	32.5	33.8	32.2	30.8	33.7	30.4	29.9
3rd quintile	34.3	27.6	38.2	37.6	30.3	31.4	26.6	25.2
4th quintile	38.0	35.0	43.1	44.6	40.3	29.2	26.2	29.8
5th quintile	50.3	37.9	53.2	51.8	33.1	31.0	24.1	32.9
Sample size	2,337	2,307	14,929	2,826	1,234	2,915	4,393	6,188
Noightad in Mia	2 71	166	27.51	2064	0.2	4.06	2.02	16.07

<sup>1</sup> Only inheritances and gifts from outside the household.

Source: Household Finance and Consumption Survey, European Central Bank, own calculations.

© DIW Berlin 2016

ient of an inheritance or gift increases with rising income. In western Germany and Austria, households in the fifth quintile, that is, those in the top 20 percent in terms of income, are twice as likely to receive an inheritance or gift than households in the lowest quintile. The core countries of Europe have low levels of educational and income mobility. In other words, individuals' education, income, and social status hardly differ from those of their parents. When economic success is linked to the previous generation,13 inheritances and gifts further compound existing economic inequality within the population. In contrast, the Mediterranean countries of Greece, Portugal, Spain, and Cyprus show only slight differences by income group. This can partly be explained by the higher share of secondary and tertiary education attainment from the 1960s onward which has improved educational mobility for the current generation of inheritance recipients.

Next, the absolute levels are shown (see Box I). The average amount and median of received transfers for households that have already received a transfer varies widely from country to country (see Figure 2). The highest average intergenerational transfers are around 274,000 euros in Cyprus, followed by Austria with 230,000 euros and western Germany with 193,000 euros. By far the lowest volume was found in Portugal where the average current value is only 85,000 euros. In all countries, the median was considerably lower than the mean value, indicating the high level of inequality of transfers received.<sup>14</sup>

The present value of inheritances and gifts received is highest for the oldest cohorts only in Belgium and France (see Table 2). In Portugal and Spain, the variation across age groups is relatively low. Austria has the highest average amount in the 45-to-54 age group with 285,000 euros. In western Germany, those aged between 35 and 44 received an average of 188,000 euros, with the amount

**<sup>13</sup>** Studies have shown that 40 percent of inequality in individual labor income in Germany is due to family background. In terms of educational success, origin plays an even more important role with more than 50 percent. See D. D. Schnitzlein, "Low Level of Equal Opportunities in Germany: Family Background Shapes Individual Economic Success," *DIW Economic Bulletin*, no. 4 (2013): 3–8.

**<sup>14</sup>** See also the term *Medianeinkommen* in the DIW Glossary, http://diw.de/de/diw\_01.c.413351.de/presse/diw\_glossar/medianeinkommen.html (in German only).

#### Box 1

#### Methodological aspects of estimates of present values and shares of inheritances and gifts

The Household Finance and Consumption Survey (HFCS) contains information on net worth, income, and received inheritances and gifts for most euro countries from 2010.1

In this survey, particular efforts have been made to seek out and disproportionately frequently interview wealthy households. However, this could not be successfully implemented in all HFCS countries. Estimates show that very high fortunes are often missing from this survey.<sup>2</sup> As a result, the amount and relevance of asset transfers cannot be determined for particularly high-income households.

Data on inheritances and gifts were collected in the "intergenerational transfers" module and only include transfers received from outside the household. Consequently, the extent of intergenerational transfers overall is underestimated. The information was surveyed retrospectively and respondents were asked to name the three most important inheritances or gifts for their current financial circumstances as well as the aquisition of the household main residence. The information includes both the value of the inheritance, the year in which it occurred, the components of the portfolio, the family relationship to the testator, and whether it was an inheritance or a gift.<sup>3</sup>

The calculations of transfer sums in this study and their relative importance for households are based on the intertemporal budget constraint of the household.<sup>4</sup> The joint distribution of

1 ECB, "Methodological Report for First Wave," and ECB, "Results from first Wave."

capital transfers and net worth was observed in all the countries studied at a particular point in time y during 2010. The value of past inheritances is capitalized at real annual interest rate r. This determines the present value GW of all capital transfers received VT by all households i in a particular country at time y. Each household has the option of investing an inheritance or gift received at time t with a secure interest rate of r. We can then calculate the present value<sup>5</sup> in accordance with current literature.

$$GW_{yi} = \sum_{t=t_0y} VT_{ti} \cdot e^{r(y-t)}$$
.

There are three cases for determining the ratio of capital transfers and net worth NV for each household. (1) If net worth exceeds the capitalized inheritance, this resulting residuum is household savings  $(NV_{yi}-GW_{yi})$ . (2) If net worth is less than the present value of the inheritance, the conclusion is that some of the inheritances were consumed and not invested. Since no additional assets were saved, the remaining present value of the inheritance in relation to the net worth of these households is  $(NV_{yi}=GW_{yi})$ . (3) For all households that have not received any transfers to date or have a negative net worth  $(GW_{vi}=0)$ .

The total present value within a country and/or age class or income bracket at time y is therefore given as:

$$GGW_v = \sum_i \min(GW_{vi}, NV_{vi})$$
.

The corresponding quotient can then be determined in the next step. It establishes the relevance of the inheritances and gifts in relation to current net worth:

$$\beta_{yj} = \frac{GGW_y}{\sum_i NV_{yi}} \ .$$

- **5** This is used for the analyses of the transfer values.
- 6 Wolff and Gittleman, "Inheritances and Distribution of Wealth."

only rising slightly across the cohorts—gifts are far more relevant for the younger cohorts than inheritances. In Germany and in Austria since recently, large amounts of assets can be transferred tax-free to the next generation, which is then reflected in the financial circumstances of the younger generations (see Box 2). What effect this transfer of assets has on cohort-specific wealth inequality cannot yet be adequately assessed due to the data situation and low numbers of cases in both countries. Over-

all, Austria, Greece, western Germany, and Cyprus have an inverted U-shaped pattern over the life cycle. This means that the cohorts of the mid age groups in these countries are both more frequently the recipients of inheritances and gifts and can expect higher capital transfers. If this descriptive approach is taken, the cohort effect dominates the life cycle effect.

<sup>2</sup> P. Vermeulen, "How Fat is the Top Tail of the Wealth Distribution," Working Paper Series 1692 (Frankfurt: European Central Bank, 2014) and Westermeier and Grabka, "Große statistische Unsicherheit beim Anteil der Top-Vermögenden."

**<sup>3</sup>** See original questionnaire for the German part of the HFCS: Deutsche Bundesbank, *Fragenprogramm – Private Haushalte und ihre Finanzen (PHF)*.

**<sup>4</sup>** T. Piketty, G. Postel-Vinay, and J.-L. Rosenthal, "Inherited vs self-made wealth: Theory & Evidence from a Rentier Society (Paris 1872–1927)," *Explorations in Economic History* 51 (2014): 21–40.

In the first case, the resulting quotient is always less than 100 percent. In the second case, a share of 100 percent is always assumed under this convention although the present value of the inheritances received may be greater than current net worth (cap).

The most arbitrary assumption in this analysis is in determining the real interest rate r. We selected the benchmark for a safe interest rate of r=3 percent, the standard figure in literature. Eastern Germany was not included in the analysis because no reliable figures for inflation were available prior to reunification. Alternatively, it could be assumed that the ten-year government bonds of each country were also safe but these are not available for all countries studied and for the entire period since the 1950s. There are no structural differences for the core European countries resulting from this alternative capitalization and, as a result, consistency was given preference here. In addition, the robustness was verified by capitalization dependent on the amount of assets which also resulted in no significant deviations from the results reported here.

The analyses are limited to all households with a householder aged 21 or older. In order to complete the missing values, multiply imputed data are provided by the data provider. <sup>10</sup> All analyses were performed using standard procedures for these data with the aid of provided replication weights.

- 7 Wolff and Gittleman, "Inheritances and Distribution of Wealth."
- **8** The time series for the Mediterranean countries Greece, Portugal, Spain, and Cyprus are not available for historical reasons.
- **9** See also T. Bönke, G. Corne, and C. Westermeier, "Eigenleistung und Erbschaft im Vermögen der Deutschen: Eine Verteilungsanalyse," *Perspektiven der Wirtschaftspolitik 17 (2016): 35–3.*
- 10 ECB, "Methodological Report for First Wave."

### ... but in all countries individuals from highincome households receive higher amounts

Among all households that have already received a transfer of assets, the present value is also highest in the top income quintile (see Table 2). This indicates a strong correlation between private income and expected transfers due to low intergenerational mobility. While the share value for the group of high-income households in the

Figure 2

### Amount of transfers<sup>1</sup> received for each household in country comparison

In 1,000 euros



1 Only inheritances and gifts from outside the household. Recipients only. In prices of 2010, capitalized with r = 3%, with a cap at 100% of the net worth of the household.

Source: Household Finance and Consumption Survey, European Central Bank, own calculations.

© DIW Berlin 2016

Mediterranean countries is not significantly higher in the first part of the analysis, this is the case for the value of intergenerational transfers received, however. For the Mediterranean countries, the value of an inheritance or gift that supplements household wealth is indeed considerably higher for high-income households.

### Differences in the relative importance of intergenerational transfers

The relevance of intergenerational transfers can, on the one hand, be described in absolute terms, and, on the other hand, be based on relative current net worth. Before compiling a representation of the relative importance of intergenerational transfers, we need to detail the amount of net household worth in the countries studied (see Figure 3). This figure shows that households in Cyprus have the highest net worth with an average of 671,000 euros, followed by Belgium with 339,000 euros. The less wealthy countries are Greece with 148,000 euros and Portugal

 $<sup>{\</sup>bf 15}$   $\,$  For further information and explanations, see ECB, "Results from the first Wave."

Table 2

Amount of transfers¹ received for each household in country comparison
In 1,000 euros

		I. Core European countries				II. Mediterranean countries			
	Austria	Belgium	France	West Germany	Cyprus	Greece	Portugal	Spain	
Recipients households	230	155	137	193	274	152	85	174	
Age classes									
21-35	176	60	45	116	244	139	42	149	
35-44	197	131	97	188	287	152	81	164	
45-54	285	136	133	196	296	193	65	171	
55-64	239	154	141	201	310	191	83	190	
65-74	245	170	176	233	242	93	104	173	
75 and older	181	226	200	182	154	109	104	185	
Income quintiles									
1st quintile	119	116	73	97	157	98	50	98	
2nd quintile	140	114	95	130	154	119	60	126	
3rd quintile	205	142	95	158	266	151	63	148	
4th quintile	226	173	113	194	344	167	65	180	
5th quintile	361	208	252	304	389	226	201	310	

<sup>1</sup> Only inheritances and gifts from outside the household. Recipients only. In prices of 2010, capitalized with r = 3%, with a cap at 100% of the net worth of the household

Figure 3

Source: Household Finance and Consumption Survey, European Central Bank, own calculations.

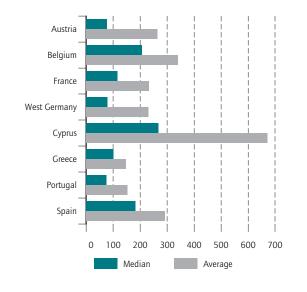
© DIW Berlin 2016

with an average of 153,000 euros. Due to the high wealth inequality, the mean is considerably different from the median in all countries. The median is particularly low in Portugal at 75,000 euros, Austria at 76,000 euros, and western Germany at 79,000 euros.

If we look at the relative importance of intergenerational transfers, there are two groups of countries with different levels (see Table 3). In Austria, western Germany, and Greece, the share of intergenerational transfers relative to current net household worth is around 31 percent (see Box I). Far lower shares were calculated for Belgium, Portugal, Spain, and Cyprus at between 13 and 18 percent. Compared to other European countries, both the frequency and the present value of inheritances and gifts are particularly low in Portugal. In Spain, the present value is as high as the rest of Europe, but the predominant owner-occupied properties are rarely transferred prematurely; gifts are virtually irrelevant here. Consequently, the low share figure is the result of high asset values and a generally high ownership ratio. Cyprus also has a high net household worth, which is why the relative importance here of received intergenerational transfers compared to other euro countries is low.

The relative importance of past capital transfers for net household worth generally increases with age, which is particularly the case in Belgium, France, Portugal,

Net worth in country comparison In 1,000 euros



Source: ECB (2013a), a.a.O.; Deutsche Bundesbank (2013): Vermögen und Finanzen privater Haushalte in Deutschland – Ergebnisse der Bundesbankstudie. monthly report, june, 25–51.

© DIW Berlin 2016

Table 3

Share of transfers¹ of net worth
In percent

		I. Core European countries				II. Mediterranean countries			
	Austria	Belgium	France	West Germany	Cyprus	Greece	Portugal	Spain	
All households	30.9	14.4	23.2	31.4	12.8	31.4	14.8	18.0	
Recipient households only	49.7	32.5	37.3	52.4	30.6	78.1	44.4	38.8	
Age classes									
21-35	35.7	8.9	16.3	34.5	23.4	32.1	8.5	16.5	
35-44	24.0	12.6	15.9	36.7	13.3	33.1	13.2	15.3	
15-54	28.0	10.7	18.6	34.5	11.6	35.3	12.2	16.4	
55-64	34.9	15.1	21.0	24.2	11.2	31.3	11.0	17.5	
55-74	37.3	13.6	27.7	32.1	12.3	21.2	18.9	21.4	
75 and older	34.8	21.9	38.5	31.7	11.5	30.2	25.7	22.3	
ncome quintiles									
Ist quintile	41.4	18.7	26.8	39.3	13.3	36.8	19.5	22.6	
2nd quintile	30.6	14.7	26.8	36.1	14.5	40.1	21.5	20.8	
Brd quintile	34.0	12.4	23.0	39.6	19.2	33.9	15.2	15.8	
Ith quintile	30.3	15.8	21.5	39.2	19.5	30.1	12.5	18.5	
5th quintile	29.2	13.3	22.7	22.6	8.0	26.1	13.2	16.7	

<sup>1</sup> Only inheritances and gifts from outside the household. All households. In prices of 2010, capitalized with r = 3%, with a cap at 100% of the net worth of the household.

Source: Household Finance and Consumption Survey, European Central Bank, own calculations.

© DIW Berlin 2016

and Spain. In Austria, Greece, western Germany, and Cyprus, the shares of transfers for some of the younger cohorts are surprisingly high. This is the result of the number of gifts and their high present values as compared to the low net worth of young cohorts in Austria and western Germany.

The correlation between income level and the relative importance of inheritances is less clear. The present value rises considerably with the level of income yet, at the same time, there is an increase in a household's opportunities to save assets (see Table 2). This means that, for instance, in Belgium or France, intergenerational transfers calculated using this method vary little over the income quintiles (see Table 3). No significant differences between the income groups are found in Austria. For the highest income group in western Germany, the corresponding figure is almost 15 percent lower than for the other quintiles. This means that these households have inherited both considerably larger amounts and, at the same time, can save assets due to their higher incomes. Hence, the importance of these capital transfers as a whole is lower for their investment position.

Using a fractional logit regression, sociodemographic characteristics can be utilized to explain the relative importance of intergenerational transfers and analyze the particular relevance of actual income (see Table 4). The

analyses refer to households that received at least one inheritance or gift.<sup>16</sup>

The findings also show that the importance of inherited assets for the current wealth position of households decreases with increasing income, although the absolute amount of capital transfers is rising. It is easier for households to save and build wealth if they already have high incomes.

If we look at the different age groups, it can be seen for the over-65s that transfers as a share of net worth are higher than in the mid age group of between 45 and 54 years. This is partly because older people have already consumed assets or transferred them to the next generation.

#### **Conclusions**

High-income households in European countries have, in the past, inherited significantly higher amounts than lowincome households. At the same time, capital transfers

**<sup>16</sup>** The fractional logit model was used to examine the share of intergenerational transfers, based on current household worth, for all households that have received at least one transfer. The advantage of this model is that it explicitly takes the shares in the interval (0, 1) into account. See R. M. W. Wedderburn, "Quasi-Likelihood Functions, Generalized Linear Models, and the Gauss Newton Method," *Biometrika*, vol. 61 (3) (1974): 439–447.

#### Box 2

#### Inheriting in Europe—a comparison of inheritance and gift tax systems

Taxes on inheritances and gifts vary widely among the euro countries. Nevertheless, based on the legal frameworks (see table) and/or receipts from inheritance and gift taxes (see figure) in each country, some similarities are evident. We have defined three types of inheritance and gift tax regimes: (1) little or no inheritance and gift tax, (2) moderate inheritance and gift tax with moderate or high allowances, and (3) high inheritance and gift tax with low or moderate allowances. Between 1965 and 2010, revenue from inheritance and gift tax as a share of GDP differs considerably between the countries (see figure). Portugal and Greece, and to a certain extent France, indicate

volatile patterns. Over the entire period, Austria recorded low revenues and Belgium high ones. Fundamental changes were determined, particularly in the previous decade from 2000 to 2010. Consequently, the primary legislation during this period is outlined below.

*Cyprus, Austria*, and *Portugal* (see table) are in the first group (little or no inheritance and gift tax). Cyprus and Austria have levied no inheritance or gift taxes since 2000 and 2008, respectively, only a single-digit real estate transfer tax. Previously, tax rates in Austria were moderate to high depending on the family

Table

#### Inheritance and gift tax between 2000 and 2010

	Reference period: 2000-2010 <sup>1</sup>	Tax depending on level of r	elation <sup>2</sup>	Max. tax rate threshold	Max. tax allowance (renewed)	Exemptions/ special regulations					
(1) No or low inhe	eritance & gift	tax			•						
		No inheritance or gift tax, but land transfer tax for gifts									
Cyprus	since 2000	Spouses & Children	3-8%	€170,860 (since 2008,		business transfers within					
		Other Persons	3-8%	€100.000 before)	_	families					
		No inheritance or gift tax, bu	t land transfer tax								
	since 2008	Spouses & Children	2%	_	€1,100	business transfers					
Austria		Other Persons	2-3,5%		€1,100	Dusiness transfers					
Hustiia		Moderate inheritance & gift t	ax with low allowances								
	before 2008	Spouses & Children	2-15%	— €4,380,000	€2,200 (10 yrs.)	- business transfers					
		Other Persons	4-60%	64,360,000	€110/440/2,200 (10 yrs.)	טעטווופטט נומווטופוט					
	since 2004	Stamp duty									
		Spouses & Children	0% inheritance / 0.8% property gift	_		business transfers					
Danton al		Other Persons	0/10% inheritance / 0.8/10.8% property gift		-	(tax rate 25%)					
Portugal		Moderate inheritance & gift tax with low allowances									
	before 2004	Spouses & Children	3-24%	6255.242	€3,641 tax free, children under age tax free (never)						
		Other Persons	7–50%	— €355,343	€374, plus €1,820 if inheritance in ascending line (never)						
(2) Moderate inhe	eritance & gift	tax rate with moderate or hig	gh allowances								
		inheritance & gift tax									
Greece	since 2010	Spouses & Children	1-10%	€600,000	€400,000 if inheritance—married at least 5 years, only children under age	primary residence, shares and business transfers					
	311CE 2010	Other Persons	1-40%	€267,000	€6,000-€30,000 from this amount on taxes are due, depending on level of relation	shares and business transfers					
Greece	before 2010	Numerous changes, e.g. tax a		& children), tax rates (2004: 5		transfers					

<sup>1</sup> Legislation between 2000 and 2010.

Source: Legislative texts of countries, Mennel, A. and J. Förster (2014) Steuern in Europa, Amerika und Asien. NWB: Hamm. Schupp, J. and M. Szydlik (2004) Erbschaften und Schenkungen in

<sup>2</sup> Inheritances and gift tax or land transfer tax. In some countries spouses and partners have the same legal rights.

relationship and transfer sum. These rates were combined with low allowances. In Portugal, stamp duty¹ has been payable in lieu of inheritance and gift tax since 2004. Transfers between spouses and direct relatives such as children or parents are largely exempt from the tax. Rates were moderate and allowances low before the taxes were repealed.

The second group (moderate inheritance and gift taxes with moderate or high allowances) includes *Greece* and *Germany*. In both countries, the tax varies according to the family relationship and the amount being transferred. The tax rates are lower in Greece and the allowances are higher in Germany where they can be reapplied every ten years.

	Reference period: 2000-2010 <sup>1</sup>	Tax depending on level of relation <sup>2</sup>		Max. tax rate threshold	Max. tax allowance (renewed)	Exemptions/ special regulations						
(2) Moderate in	heritance & gift	tax rate with moderate or high	allowances									
		inheritance & gift tax										
Germany	since 2010	Spouses & Children	7-30%	€26,000,000	€500,000, €400,000 for children, (10 yrs.)	owner-occupied property, business transfers						
		Other Persons	7–50%		€20,000/100,000/200,000 (10 yrs.)	business transfers						
	before 2010	less exemptions, lower tax allov	less exemptions, lower tax allowances, thresholds in tax brackets lower, lower tax rate for some "other persons"									
(3) High or mod	derate inheritano	e & gift tax rate with low or mo	oderate allowances									
		inheritance & gift tax (on natio	nal level, regional differences)									
		Spouses & Children	7.65-34% + multiplier: 1-1.2%*	€797,555, multi- plier depending on heir's	€15,956, €47.858 for children under age (3 yrs.)	business transfers,						
Spain	since 2010	Other Persons	7.65-34% + multiplier: 1.59-2.4%*	wealth (max. threshold €4,020,770)	€0/7.993/15,956 (3 yrs.)	property						
		* The corresponding tax rate (amount of transfer relevant) is applied to the taxable amount. The resulting balance is then multiplied with the corresponding multiplie (results from the existing assets of the heir and the degree of relationship).										
	before 2010	hardly changes (e.g. lower allowances), but regional governments may deviate from national legislation since 2004, this resulted in tax exemptions of up to 99% of estate value										
		inheritance & gift tax										
France	since 2000*	Spouses & Children	5-45% (except for spouses since 2008)	€1,805,677	€156,956 (10 yrs.)	business transfers, tax reduced if three children						
		Other Persons	5-60%	€0-1,805,677	€1,520-€156,359 (10 yrs.)	under age						
		* only slight adjustments of the allowances and the limit for the maximum tax rates										
		inheritance tax (regional differe	nces)									
Belgium	since 2010	Spouses & Children	3-30%	€250,000-€500,000	€15,000-€25,000, €65,000-75.000 for children under age (3 yrs.)	owner-occupied property, business assets, and oth-						
		Other Persons	3-80%	€75,000-€500,000	€620-1,250/€15,000-25,000 (3 yrs.)	ers depending on region						
		gift tax (regional differences)										
	since 2010	Spouses & Children	1–30% (max. 7.7% for movable assets)	€500,000	-	owner-occupied property,						
		Other Persons	1–80% (max. 7.7% for movable assets)	€75,000-€500,000	-	- business assets, and oth- ers depending on region						
	before 2010	Regional legislation of gift tax possible since 2001, inheritance tax since 2002										

Deutschland. DIW-Wochenbericht 5/2004. 59-65. EY (2014) Cross-country Review of Taxes on Wealth and Transfers of Wealth. Revised Final report for the European Commission. Brussels.

© DIW Berlin 2016

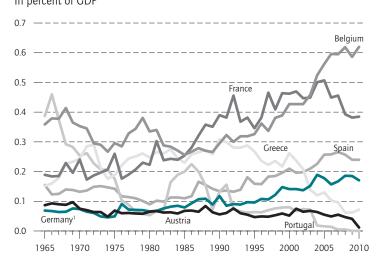
 $<sup>{</sup>f 1}$  Stamp duty is levied when documents are stamped, in this case, an individual's will.

**<sup>2</sup>** For an overview or detailed regulations of inheritance and gift tax, see S. Bach, "Inheritance Tax: Limit Corporate Privileges and Spread Tax Burden," *DIW Economic Bulletin*, no. 7 (2015): 91–99.

#### Box 2 (continuation)

Figure

### **Inheritance and gift tax revenue in country comparison** In percent of GDP



1 Data for Cyprus is not available on OECD.Stat. Data for Germany until 1990 only West Germany Source: OECD.Stat, own calculations.

© DIW Berlin 2016

Spain, France, and Belgium are in the third group (high inheritance and gift tax with low or moderate allowances). In Spain, the tax is linked to the family relationship, the transfer sum, and the existing assets of the heirs. However, the regions have been able to adopt their own regulations since 2004. Some have used this legislation to virtually eliminate the tax within families. The tax system in France is similar to in Germany although it imposes higher tax rates and lower allowances. In Belgium, gift tax and inheritance tax have varied by region, family relationship, and transfer sum since 2001 and 2002, respectively. The rules on inheritances and gifts vary comparatively widely.

In almost all the countries observed, there were more or less extensive special arrangements for the transfer of corporate and owner-occupied housing.

are less relevant to the current asset position for highincome households. Through their strong income positions and low intergenerational mobility, these households are able to build wealth both from their regular incomes and from inheritances and gifts.

Inheritances and gifts may be considered a channel through which the existing inequality of opportunity<sup>17</sup> and the resulting economic inequality<sup>18</sup> are amplified. In Germany, however, taxes on inheritances and gifts are virtually regressive due to its comprehensive exemptions on large assets.<sup>19</sup> High allowances that renew themselves after ten years mean that even private assets can be transferred to the next generation almost tax-free.<sup>20</sup> In

Austria, Cyprus, Portugal, and some regions of Spain, inheritance and gift tax has since been abolished or abandoned de facto.<sup>21</sup>

German tax policy over the past two decades was marked by tax relief for large fortunes and high income: abolishing the wealth tax, relief on corporate and capital gains tax, and low top rates of tax on high incomes have all served to increase economic inequality. The taxation of inheritances and gifts is not currently effective in reducing the chasm between rich and poor. If, however, social background ought to lose its importance as a determining factor for economic status, policy tools must be chosen accordingly. Additional funding from wealth-related taxes<sup>22</sup> might also be used to finance tools that improve equal opportunities.

<sup>17</sup> Schnitzlein, "Low Level of Equal Opportunities."

**<sup>18</sup>** Grabka and Westermeier "Persistently High Wealth Inequality," and J. Goebel, M. M. Grabka, and C. Schröder, "Income Inequality Remains High in Germany— Young Singles and Career Entrants Increasingly At Risk of Poverty," *DIW Economic Bulletin*, no. 25 (2015): 325–339.

<sup>19</sup> Bach and Thiemann, "Inheritance Tax Revenue."

**<sup>20</sup>** Parents can each transfer 400,000 euros to their children every ten years, while grandparents can transfer 200,000 euros. Therefore, in theory, by the age of 21, an individual may already have been gifted 4,800,000 euros tax-free.

**<sup>21</sup>** In Portugal, this does not apply to transfers within the family and in certain regions of Spain, up to 99 percent of transfers within the family are tax-free.

**<sup>22</sup>** Bach/Thiemann show that the effect of a moderate wealth tax on wealth inequality is low. See S. Bach and A. Thiemann, "Reviving Germany's Wealth Tax Creates High Revenue Potential," *DIW Economic Bulletin*, no. 4/5 (2016): 50–59.

Table 4 Relevance<sup>1</sup> of inheritances and gifts<sup>2</sup> for the net worth of households

	Austria	Belgium	France	West Germany	Cyprus	Greece	Portugal	Spain
1st income quintile	0.457*	0.271	0.621***	0.006	1.059***	0.208	0.545***	0.382***
2nd income quintile	0.105	-0.004	0.342***	0.12	0.419	0.222	0.266	0.123
4th income quintile	-0.038	0.083	-0.001	-0.265**	0.211	-0.184	-0.28	-0.019
5th income quintile	-0.295	-0.174	-0.158***	-0.670***	-0.393*	-0.147	-0.277	-0.349***
Age 21-34	-0.092	0.468*	0.059	-0.608**	0.216	-0.684**	0.069	0.035
Age 35-44	-0.244	-0.059	-0.066	0.018	-0.133	-0.526**	0.286	0.199*
Age 55-64	-0.051	0.068	-0.045	-0.069	-0.042	0.071	0.14	-0.079
Older than 65	0.256	0.463	0.502***	0.232	0.44	0.14	0.661 * * *	0.173
primary education	0.162	0.031	0.138***	0.026	-0.084	0.326	-0.275	-0.116
secondary education	0.159	-0.103	0.156***	-0.177	0.11	0.055	-0.31	-0.137
self-employed	-0.176	-0.401	-0.477***	-0.079	-0.275	-0.727**	-0.274	0.186*
unemployed/other	-0.19	0.023	0.196*	-0.025	0.123	-0.51	-0.367*	0.099
retired	0.029	-0.221	-0.073	-0.247	-0.074	-0.04	0.225	0.075
single	0.005	0.448**	0.188**	0.291	-0.075	0.728*	0.466*	0.435***
widowed	0.08	0.729***	0.118	0.288	-0.449	0.726*	-0.075	0.216*
divorced	0.054	0.609***	0.116	0.420**	0.726	0.616	0.21	0.114
man	-0.178	-0.095	-0.108**	-0.044	-0.331	-0.478**	-0.421 * *	-0.170**
Households size 1 person	-0.027	0.035	0.126*	-0.028	-0.206	-0.696**	0.253	-0.03
3 persons	0.145	0.211	-0.058	0.012	-0.216	0.054	0.259*	0.069
4 persons	0	0.188	-0.006	-0.212	0.116	0.041	0.355*	0.031
5 persons and more	0.103	-0.125	0.035	0.034	0.009	0.164	0.882***	0.229
Constant	0.688**	-0.703***	-0.394***	0.747 * * *	-0.003	2.363***	0.26	-0.204

<sup>1</sup> Fractional logit regression. Reference groups: 3rd income quintile, age 45–54, secondary education, employed, married, woman, households size 2 persons. Standard errors in parentheses. Significant at \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.
2 Only inheritances and gifts from outside the household. Recipients only. In prices of 2010, capitalized with r = 3%, with a cap at 100% of the net worth

Source: Household Finance and Consumption Survey, European Central Bank, own calculations.

© DIW Berlin 2016

Christian Westermeier is Ph.D. Student at the Research Infrastructure Socio-Economic Panel (SOEP) at DIW Berlin | cwestermeier@diw.de

Anita Tiefensee is Research Associate and Ph.D. Student at the Hertie School of Governance | tiefensee@hertie-school.org

Markus M. Grabka is Research Associate in the Research Infrastructure Socio-Economic Panel (SOEP) at DIW Berlin | mgrabka@diw.de

**JEL**: D64, D31, D14

Keywords: inheritances, gifts, wealth, income, HFCS, Europe

of the household.



#### DIW Berlin – Deutsches Institut für Wirtschaftsforschung e.V. Mohrenstraße 58, 10117 Berlin

+49 30 897 89 -0 +49 30 897 89 -200

#### **Publishers**

Prof. Dr. Pio Baake Prof. Dr. Tomaso Duso Dr. Ferdinand Fichtner Prof. Marcel Fratzscher, Ph.D. Prof. Dr. Peter Haan Prof. Dr. Claudia Kemfert

Dr. Kati Krähnert Prof. Dr. Lukas Menkhoff

Prof. Karsten Neuhoff, Ph.D. Prof. Dr. Jürgen Schupp

Prof. Dr. C. Katharina Spieß Prof. Dr. Gert G. Wagner

Dr. Stefan Bach

#### **Editors in chief**

Sabine Fiedler Dr. Gritje Hartmann

Dr. Wolf-Peter Schill

#### **Editorial staff**

Renate Bogdanovic

Dr. Franziska Bremus Sebastian Kollmann

Dr. Peter Krause

Marie Kristin Marten

Ilka Müller

#### Translation

HLTW Übersetzungen GbR

#### Layout and Composition

eScriptum GmbH & Co KG, Berlin

#### Press office

Renate Bogdanovic Tel. +49-30-89789-249 presse@diw.de

#### Sale and distribution

DIW Berlin

Reprint and further distribution - including extracts – with complete reference and consignment of a specimen copy to DIW Berlin's Communication Department (kundenservice@diw.berlin) only. Printed on 100 % recycled paper.